

# Oval Pad *ZP/ZP2 Series*

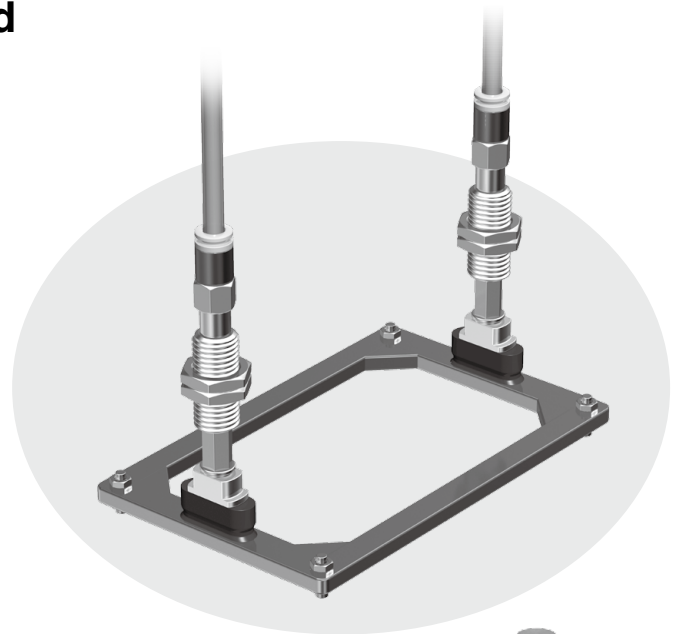
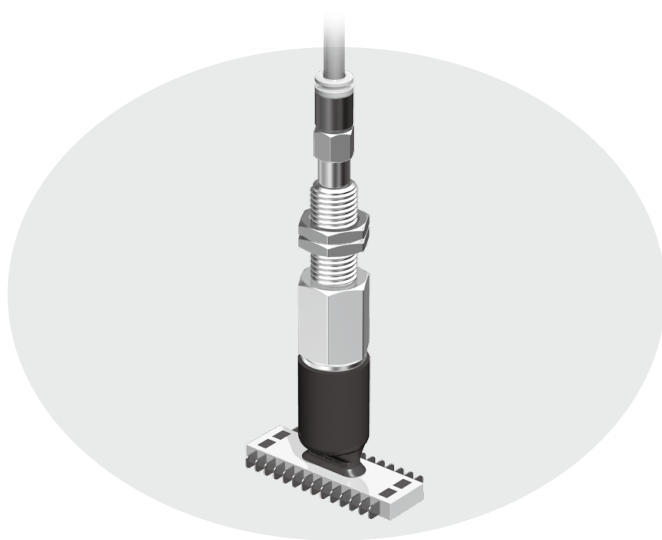
RoHS

Model Selection

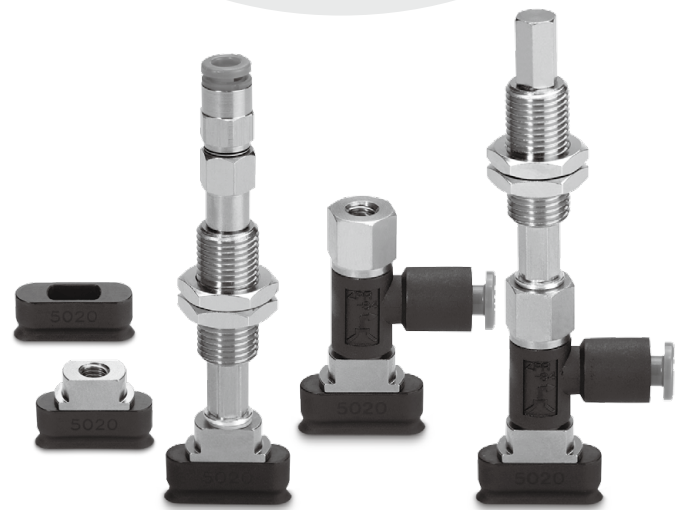
2 x 4, 3.5 x 7, 4 x 10, 4 x 20, 4 x 30, 5 x 10, 5 x 20, 5 x 30, 6 x 10, 6 x 20, 6 x 30, 8 x 20, 8 x 30

## Oval Flat Type

For rectangular, vertically long, and horizontally long workpieces



ZP Series



ZP2 Series

ZP Oval

ZP2 Oval

Construction

Mounting Bracket Assembly

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Precautions

## ZP Series

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Vertical	ZPT With adapter		p. 171
Lateral	ZPR With adapter		p. 172 p. 173
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Vertical	ZPT With buffer		p. 176
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	ZPY With buffer		p. 178

## ZP2 Series

		Vacuum inlet direction	Oval flat type
Vacuum inlet direction	Single unit		p. 180
Vertical	ZP2-T With adapter		p. 180
Lateral	ZP2-R With adapter		p. 181 p. 182
Vertical	ZP2-T With buffer		p. 183
Lateral	ZP2-R With buffer		p. 184

# Oval Pad *ZP/ZP2* Series Specifications

## Pad Material: ZP/ZP2 Series

Material	NBR (Nitrile rubber)	Silicone rubber*1	Urethane rubber	FKM (Fluoro rubber)	Conductive NBR (Nitrile rubber)	Conductive silicone rubber
Color of rubber	Black	White	Brown		Black	
Rubber hardness HS (±5°)	A50/S	A40/S	A60/S		A50/S	
Identification (Dot)	—	—	—	· 1 green dot	· 1 silver dot	· 2 silver dots

\*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"

## Adapter Specifications: ZP Series

### Vacuum Inlet Direction **Vertical** T Type/ZPT

Connection	Male thread	Female thread
Pad size	2004, 3507, 4010	2004, 3507, 4010
Connection thread	M5 x 0.8 M6 x 1	M4 x 0.7 M5 x 0.8
Vacuum inlet	Use the connection thread.	

Vertical



### Vacuum Inlet Direction **Lateral** R Type/ZPR

Connection	Male thread	Female thread
Pad size	2004, 3507, 4010	2004, 3507, 4010
Connection thread	M5 x 0.8 M6 x 1	M4 x 0.7 M5 x 0.8
Vacuum inlet	One-touch fitting	ø4, ø6

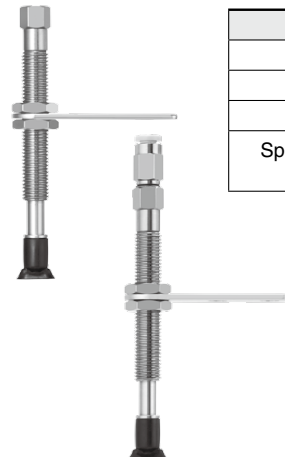
Lateral



### Vacuum Inlet Direction **Lateral** Y Type/ZPY

Connection	Male thread	Female thread
Pad size	2004, 3507, 4010	2004, 3507, 4010
Connection thread	M5 x 0.8 M6 x 1	M4 x 0.7 M5 x 0.8
Vacuum inlet	Barb fitting (Nylon tubing)	ø4, ø6
	Barb fitting (Soft tubing)	

Lateral Vertical



## Buffer Specifications: ZP Series

Pad size	2004, 3507, 4010
Non-rotating specification	J: Rotating, K: Non-rotating
Stroke [mm]	6, 10, 15, 25
Connection thread	M8 x 1
Spring reactive force [N]	At 0 stroke
	At full stroke

**Adapter Specifications: ZP2 Series**

Vertical



Vacuum Inlet Direction **Vertical** T Type/ZP2-T

Connection	Female thread
Pad size	3507 to 8030
Connection thread	M5 x 0.8
Vacuum inlet	Use the connection thread.

Lateral



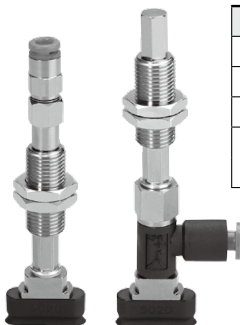
Vacuum Inlet Direction **Lateral** R Type/ZP2-R

Connection	Male thread	Female thread
Pad size	3507 to 8030	3507 to 8030
Connection thread	M5 x 0.8	M5 x 0.8
Vacuum inlet	One-touch fitting	ø4, ø6

**Buffer Specifications: ZP2 Series**

Vertical

Lateral



Pad diameter	3507 to 8030	
Non-rotating specification	K: Non-rotating	
Stroke [mm]	10, 20, 30, 40, 50	
Connection thread	M10 x 1	
Spring reactive force [N]	At 0 stroke	1.0
	At full stroke	3.0



# Oval Pad

## Oval Flat Type

# ZP Series



Model Selection

### How to Order

	Dimensions/Models	Construction	Mounting Bracket Assembly
<b>Pad unit</b>	ZP 20 04 UN	p. 171	p. 185 From p. 189
<b>With adapter</b>	ZP T 20 04 UN - A5 -	From p. 171 p. 185	From p. 189
<b>With buffer</b>	ZP T 20 04 UN J 6 - B3 - A8	From p. 176 p. 186	From p. 192

①
②
③
④
⑤
⑥
⑦
⑧

● Oval flat type

#### ① Vacuum inlet direction

Symbol	Pad unit
Nil	Pad unit
T	Vertical
R	Lateral (With One-touch fitting)
Y	Lateral (With barb fitting)

#### ②/③ Pad size

Symbol	③ Length		
	04	07	10
② Breadth	20	● (2 x 4)	—
	35	—	● (3.5 x 7)
	40	—	— ● (4 x 10)

#### ④ Material

N	NBR
S	Silicone rubber*1
U	Urethane rubber
F	FKM
GN	Conductive NBR
GS	Conductive silicone rubber

\*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"

#### ⑤ Buffer specification

J	Rotating
K	Non-rotating

#### ⑥ Buffer stroke

Stroke [mm]	Pad size
	All sizes
6	●
10	●
15	●
25	●

#### With adapter

#### ⑦ Vacuum inlet

○: ZPT/Vertical ●: ZPR/Lateral (With One-touch fitting) △: ZPY/Lateral (With barb fitting)

Type	Symbol	Size	Pad diameter
			All sizes
Male thread	A5	M5 x 0.8	○
	A6	M6 x 1	○
Female thread	B4	M4 x 0.7	○
	B5	M5 x 0.8	○
One-touch fitting	04	ø4	●
	06	ø6	●
Barb fitting	N4	For ø4 nylon tubing	△
	N6	For ø6 nylon tubing	△
	U4	For ø4 soft tubing	△
	U6	For ø6 soft tubing	△

#### ⑧ Connection thread ●: ZPR/Lateral (With One-touch fitting) △: ZPY/Lateral (With barb fitting)

Type	Symbol	Size	Pad diameter
			All sizes
Male thread	A5	M5 x 0.8	●△
	A6	M6 x 1	●△
Female thread	B4	M4 x 0.7	●△
	B5	M5 x 0.8	●△

It is not necessary to select a connection thread for ○: ZPT/Vertical. Use the vacuum inlet.

#### With buffer

#### ⑦ Vacuum inlet

○: ZPT/Vertical ●: ZPR/Lateral (With One-touch fitting) △: ZPY/Lateral (With barb fitting)

Type	Symbol	Size	Pad diameter
			All sizes
Female thread	B3	M3 x 0.5	○
	B5	M5 x 0.8	○
One-touch fitting	04	ø4	○●
	06	ø6	○●
Barb fitting	N4	For ø4 nylon tubing*1	○△
	N6	For ø6 nylon tubing*1	△
	U4	For ø4 soft tubing*2	○△
	U6	For ø6 soft tubing*2	△

\*1 Nylon tube piping

\*2 Soft nylon/Polyurethane tube piping

#### ⑧ Connection thread

○: ZPT/Vertical ●: ZPR/Lateral (With One-touch fitting) △: ZPY/Lateral (With barb fitting)

Type	Symbol	Size	Pad diameter
			All sizes
Male thread	A8	M8 x 1	○●△

\* The pad, mounting nut, fitting, and buffer plate are shipped together but do not come assembled.

ZP Oval

ZP2 Oval

Construction

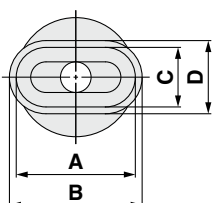
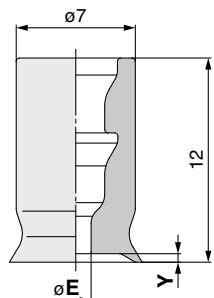
Mounting Bracket Assembly

Precautions

## Dimensions/Models

Single unit **2 x 4 to 4 x 10**

ZP **2004** U **N**  
① ②



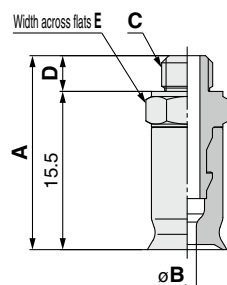
Model			A	B	C	D	E	Y	
① Pad size	Form	② Material <sup>*1</sup>							
ZP	2004	U	N S U F GN GS	4	4.6	2	2.6	1.2	0.3
	3507			7	7.8	3.5	4.3	1.8	0.5
	4010			10	11	4	5	2	0.8

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

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Mounting Bracket Assembly	From p. 189

With adapter **2 x 4 to 4 x 10**

ZPT **2004** U **N** - **A5**  
① ② ③ Vacuum inlet (Male thread)

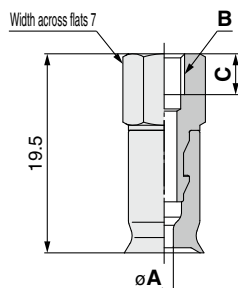


A5	M5 x 0.8
A6	M6 x 1

Model						A	B	C	D	E
Vacuum inlet direction	① Pad size	Form	② Material <sup>*1</sup>	③ Vacuum inlet						
ZP	T	U	N S U F GN GS	A5	19	1.2	M5 x 0.8	3.5	7	
						1.8				
						2				
	A6			20	1.2	M6 x 1	4.5	8		
					1.8					
					2					

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

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Adapter Assembly	p. 189



ZPT **2004** U **N** - **B4**  
① ② ③ Vacuum inlet (Female thread)

B4	M4 x 0.7
B5	M5 x 0.8

Model						A	B	C
Vacuum inlet direction	① Pad size	Form	② Material <sup>*1</sup>	③ Vacuum inlet				
ZP	T	U	N S U F GN GS	B4	4	1.2	M4 x 0.7	
						1.8		
						2		
				B5	5	1.2	M5 x 0.8	
						1.8		
						2		

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

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**Dimensions/Models**

**With adapter/One-touch fitting 2 x 4 to 4 x 10**

ZPR **2004** **U** **N** - **04** - **A5**

①

②

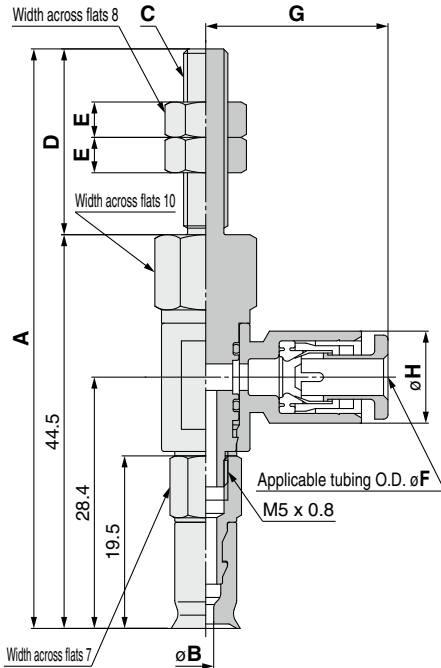
④

Connection thread  
(Male thread)

Vacuum inlet  
(One-touch fitting)

04	ø4
06	ø6

A5	M5 x 0.8
A6	M6 x 1



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Model						A	B	C	D	E
Vacuum inlet direction	① Pad size	Form	②*1 Material	③ Vacuum inlet	④ Connection thread					
ZP	R	2004	U	N S U F GN GS	04 06	A5	1.2	M5 x 0.8	21	4
		3507					1.8			
		4010					2			
		2004				A6	1.2	M6 x 1	26	4
		3507					1.8			
		4010					2			

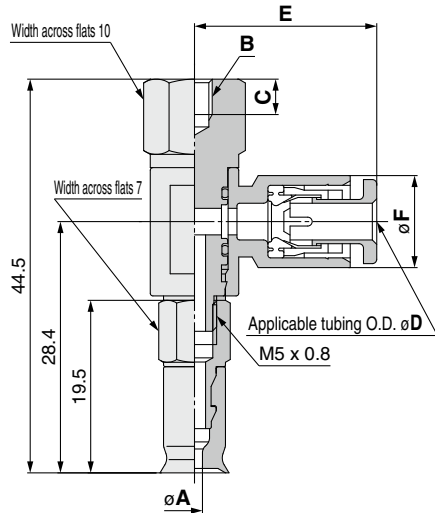
**Dimensions Per Vacuum Inlet**

Model						F	G	H	Fitting part min. hole size
Vacuum inlet direction	① Pad size	Form	②*1 Material	③ Vacuum inlet	④ Connection thread				
ZP	R	2004	U	N S U F GN GS	04	4	20.6	10.4	ø3
		3507			A5 A6				

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

## Dimensions/Models

**With adapter/One-touch fitting 2 x 4 to 4 x 10**



<b>Construction</b>	p. 185
<b>Adapter Assembly</b>	p. 190

ZPR **2004** **U** **N** - **04** - **B4**

①

②

④

Vacuum inlet  
(One-touch fitting)

④ Connection thread  
(Female thread)

<b>04</b>	ø4
<b>06</b>	ø6

<b>B4</b>	M4 x 0.7
<b>B5</b>	M5 x 0.8

		Model				A	B	C	
Vacuum inlet direction	① Pad size	Form	②*1 Material	③ Vacuum inlet	④ Connection thread				
ZP	R	2004	U	N S U F GN GS	04 06	B4	1.2	M4 x 0.7	4
		3507					1.8		
		4010					2		
		2004				B5	1.2	M5 x 0.8	5
		3507					1.8		
		4010					2		

### Dimensions Per Vacuum Inlet

		Model				D	E	F	Fitting part min. hole size	
Vacuum inlet direction	① Pad size	Form	②*1 Material	③ Vacuum inlet	④ Connection thread					
ZP	R	2004	U	N S U F GN GS	04	B4 B5	4	20.6	10.4	ø3
		3507			06		6	21.6	12.8	ø4
		4010								

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber



**Dimensions/Models**

**With adapter/barb fitting 2 x 4 to 4 x 10**

ZPY **2004** **U** **N** - **N4** - **A5**

①

②

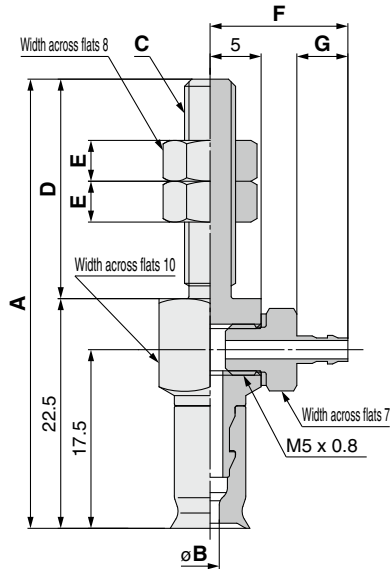
④

**Connection thread (Male thread)**

**Vacuum inlet (Barb fitting)**

<b>A5</b>	M5 x 0.8
<b>A6</b>	M6 x 1

<b>N4</b>	For ø4 nylon tubing	M-5AN-4
<b>N6</b>	For ø6 nylon tubing	M-5AN-6
<b>U4</b>	For ø4 soft tubing	M-5AU-4
<b>U6</b>	For ø6 soft tubing	M-5AU-6



<b>Construction</b>	p. 185
<b>Adapter Assembly</b>	p. 191

		Model				A	B	C	D	E
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Vacuum inlet	④ Connection thread					
ZP	Y	2004	U	N S U F GN GS	N4 N6 U4 U6	A5	M5 x 0.8	21.5	4	
		3507								44
		2004			A6	M6 x 1	27	4		
		3507							49.5	1.2 1.8 2
4010										

**Dimensions Per Vacuum Inlet**

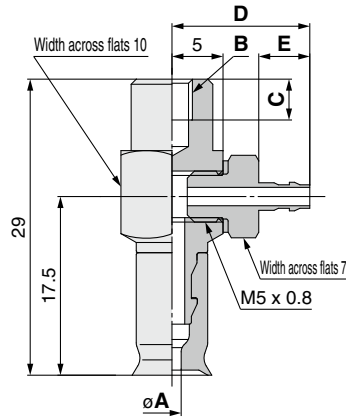
		Model				F	G	Fitting part min. hole size	
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Vacuum inlet	④ Connection thread				
ZP	Y	2004 3507 4010	U	N S U F GN GS	N4 U4 N6 U6	A5 A6	13.5	5	ø1.8
							15.5	7	ø2.5

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

## Dimensions/Models

**With adapter/barb fitting 2 x 4 to 4 x 10**

ZPY **2004** U **N** - **N4** - **B4**



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①

②

Vacuum inlet ③  
(Barb fitting)

④ Connection thread  
(Female thread)

<b>N4</b>	For ø4 nylon tubing	M-5AN-4
<b>N6</b>	For ø6 nylon tubing	M-5AN-6
<b>U4</b>	For ø4 soft tubing	M-5AU-4
<b>U6</b>	For ø6 soft tubing	M-5AU-6

<b>B4</b>	M4 x 0.7
<b>B5</b>	M5 x 0.8

	Vacuum inlet direction	Model				A	B	C	
		① Pad size	Form	② <sup>*1</sup> Material	③ Vacuum inlet				④ Connection thread
ZP	Y	2004	U	N S U F GN GS	N4 N6 U4 U6	B4	1.2	M4 x 0.7	4
		3507					1.8		
		4010					2		
		2004			B5	1.2	M5 x 0.8	5	
		3507				1.8			
		4010				2			

### Dimensions Per Vacuum Inlet

	Vacuum inlet direction	Model				D	E	Fitting part min. hole size	
		① Pad size	Form	② <sup>*1</sup> Material	③ Vacuum inlet				④ Connection thread
ZP	Y	2004 3507 4010	U	N S U F GN GS	N4 U4	B4 B5	13.5	5	ø1.8
		N6 U6			15.5		7	ø2.5	

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

**Dimensions/Models**

**With buffer 2 x 4 to 4 x 10**

ZPT **2004** **U** **N** **J** **6** - **B3** - **A8**

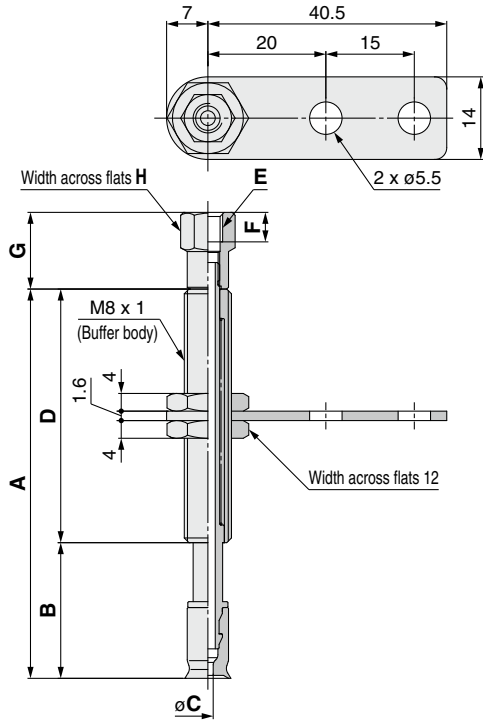
① ② ③ ④ ⑤ ⑥

**Buffer specification ③**

<b>J</b>	Rotating
<b>K</b>	Non-rotating

**⑥ Connection thread (Male thread)**

<b>A8</b>	M8 x 1
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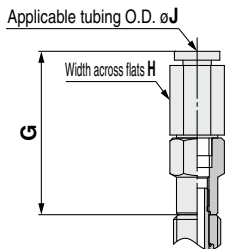


**⑤ Vacuum inlet**

<b>B3</b>	M3 x 0.5	Female thread	
<b>B5</b>	M5 x 0.8	Female thread	
<b>04</b>	ø4	One-touch fitting	KQ2H04-M5N
<b>06</b>	ø6	One-touch fitting	KQ2H06-M5N
<b>N4</b>	For ø4 nylon tubing	Barb fitting	
<b>U4</b>	For ø4 soft tubing	Barb fitting	

		Model						A	B	C	D				
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread								
ZP	T	U	N S U F GN GS	J K	6	B3	A8	33	18	1.2	15				
											10	23			
											15	28			
											25	38			
											6	33	18		
											10	23	15		
	4010	U			N S U F GN GS	J K	6	B5	A8	66	23	1.8	15		
													10	28	
													15	38	
													25	43	
													6	33	18
													10	23	15
4010	U	N S U F GN GS	J K	6	N4	A8	66	23	2	15					
										10	28				
										15	38				
										25	43				
										6	33	18			
										10	23	15			
4010	U	N S U F GN GS	J K	6	U4	A8	71	28	2	43					
										10	38				
										15	43				
										25	48				
										6	33	18			
										10	23	15			

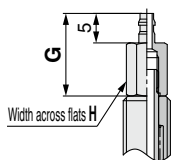
**Vacuum inlet: One-touch fitting**



**Dimensions Per Vacuum Inlet: Female Thread**

		Model						E	F	G	H		
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread						
ZP	T	U	N S U F GN GS	J K	6	B3	A8	M3 x 0.5	3	11	6		
											10	8	
											15	13	
											25	8	
											6	5	13
											10	8	
4010	U	N S U F GN GS	J K	6	B5	A8	M5 x 0.8	5	13	8			
											10		
											15		
											25		
											6		
											10		

**Vacuum inlet: Barb fitting**



**Dimensions Per Vacuum Inlet: One-touch Fitting**

		Model						G	H	J	Fitting part min. hole size			
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread							
ZP	T	U	N S U F GN GS	J K	6	04	A8	27.7	8	4	ø2.5			
												10		
												15		
												25		
												6	10	6
												10		
4010	U	N S U F GN GS	J K	6	06	A8	27.7	10	6	6	ø2.5			
												10		
												15		
												25		
												6	10	6
												10		

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<b>Buffer Assembly</b>	p. 192

**Dimensions Per Vacuum Inlet: Barb Fitting**

		Model						G	H	Fitting part min. hole size			
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread						
ZP	T	U	N S U F GN GS	J K	6	N4	A8	14	6	ø1.8			
											10		
											15		
											25		
											6	U4	
											10		
4010	U	N S U F GN GS	J K	6	10	U4	A8	14	6	ø1.8			
											15		
											25		
											6		
											10		
											15		

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

**Dimensions/Models**

**With buffer/One-touch fitting 2 x 4 to 4 x 10**

ZPR **2004** **U** **N** **J** **6** - **04** - **A8**

①

②

④

⑥

**Connection thread (Male thread)**

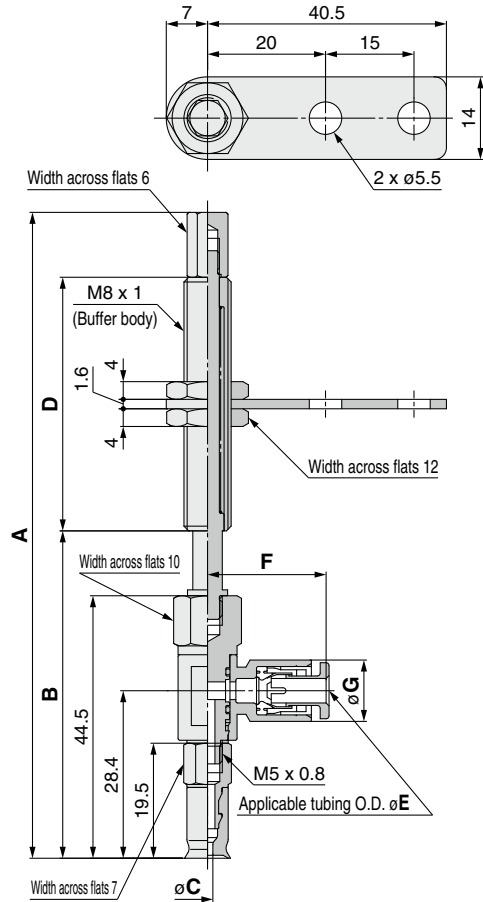
**Buffer specification ③**

<b>J</b>	Rotating
<b>K</b>	Non-rotating

<b>A8</b>	M8 x 1
-----------	--------

**⑤ Vacuum inlet (One-touch fitting)**

<b>04</b>	ø4
<b>06</b>	ø6



<b>Construction</b>	p. 186
<b>Buffer Assembly</b>	p. 193

	Vacuum inlet direction	Model						A	B	C	D		
		① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet					⑥ Connection thread	
ZP	R	2004	U	N S U F GN GS	J K	6	04	06	A8	1.2	15		
						10					78.5	52.5	43
						15					109.5	55.5	
		25				114.5					60.5		
		4010				6					78.5	52.5	15
						10					109.5	55.5	
	15		114.5		60.5	43							
	25		124.5		70.5								
	6		78.5		52.5		15						
	10		109.5		55.5								
	15	114.5	60.5		2	43							
	25	124.5	70.5										

**Dimensions Per Vacuum Inlet**

	Vacuum inlet direction	Model						E	F	G	Fitting part min. hole size	
		① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet					⑥ Connection thread
ZP	R	2004 3507 4010	U	N S U F GN GS	J K	6	04	A8	4	20.6	10.4	ø3
						10 15 25			6	21.6	12.8	ø4

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

**Dimensions/Models**

**With buffer/barb fitting 2 x 4 to 4 x 10**

ZPY **2004** **U** **N** **J** **6** - **N4** - **A8**

① ② ③ ④

⑥ Connection thread (Male thread)

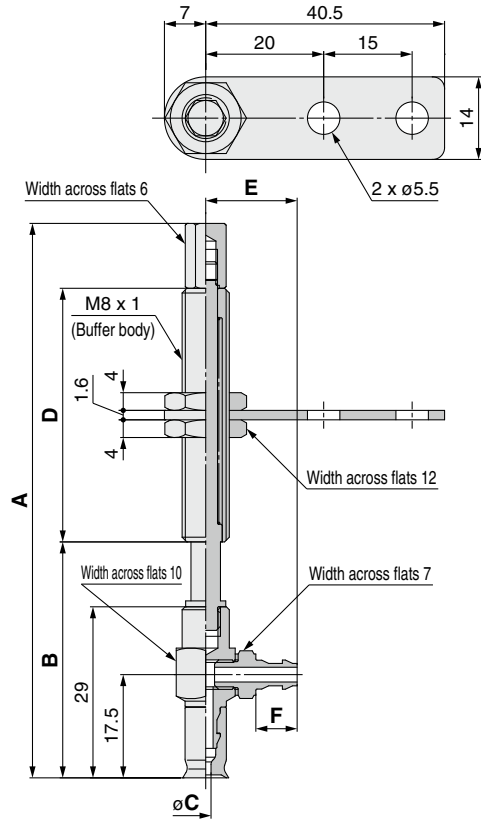
**Buffer specification** ③

<b>J</b>	Rotating
<b>K</b>	Non-rotating

<b>A8</b>	M8 x 1
-----------	--------

⑤ Vacuum inlet (Barb fitting)

<b>N4</b>	For ø4 nylon tubing	M-5AN-4
<b>N6</b>	For ø6 nylon tubing	M-5AN-6
<b>U4</b>	For ø4 soft tubing	M-5AU-4
<b>U6</b>	For ø6 soft tubing	M-5AU-6



<b>Construction</b>	p. 186
<b>Buffer Assembly</b>	p. 194

		Model						A	B	C	D	
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread					
ZP	Y	2004	U	N S U F GN GS	J K	6	N4 N6 U4 U6	A8	63	37	1.2	15
						10			94	40		43
						15			99	45		
						25			109	55		
						6			63	37		15
						10			94	40		43
	Y	3507	U	N S U F GN GS	J K	6	N4 N6 U4 U6	A8	63	37	1.8	15
						10			94	40		43
						15			99	45		
						25			109	55		
						6			63	37		15
						10			94	40		43
Y	4010	U	N S U F GN GS	J K	6	N4 N6 U4 U6	A8	63	37	2	15	
					10			94	40		43	
					15			99	45			
					25			109	55			
					6			63	37		15	
					10			94	40		43	

**Dimensions Per Vacuum Inlet**

		Model						E	F	Fitting part min. hole size	
Vacuum inlet direction	① Pad size	Form	② *1 Material	③ Buffer spec.	④ Buffer stroke	⑤ Vacuum inlet	⑥ Connection thread				
ZP	Y	2004 3507 4010	U	N S U F GN GS	J K	6	N4 U4	A8	13.5	5	ø1.8
						10 15 25			N6 U6	15.5	7

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber



# Oval Pad

## Oval Flat Type

# ZP2 Series



### How to Order

	Pad unit	With adapter	With buffer	Dimensions/Models	Construction	Mounting Bracket Assembly
	ZP2- <b>35</b> <b>07</b> <b>W</b> <b>N</b>	ZP2- <b>T</b> <b>35</b> <b>07</b> <b>W</b> <b>N</b> - <b>B5</b> -	ZP2- <b>T</b> <b>35</b> <b>07</b> <b>W</b> <b>N</b> <b>K</b> <b>10</b> - <b>B5</b>	p. 180	p. 187	From p. 195
				From p. 180	p. 187	p. 195
				From p. 183	p. 188	From p. 196

\* Pad unit's sales unit: 10 pcs.

① Vacuum inlet direction      ②/③ Pad size      ④ Material      ⑤ Buffer stroke

Oval flat type •      • Buffer specification: Non-rotating

#### ① Vacuum inlet direction

<b>N</b>	Pad unit
<b>T</b>	Vertical
<b>R</b>	Lateral

#### ②/③ Pad size

Symbol	③ Length			
	07	10	20	30
② Breadth	35 (3.5 x 7)	—	—	—
	40	(4 x 10)	(4 x 20)	(4 x 30)
	50	(5 x 10)	(5 x 20)	(5 x 30)
	60	(6 x 10)	(6 x 20)	(6 x 30)
	80	—	(8 x 20)	(8 x 30)

#### ④ Material

<b>N</b>	NBR
<b>S</b>	Silicone rubber*1
<b>U</b>	Urethane rubber
<b>F</b>	FKM
<b>GN</b>	Conductive NBR
<b>GS</b>	Conductive silicone rubber

\*1 Compliant with the FDA (USA Food and Drug Administration) regulation 21CFR§177.2600 for "Rubber articles intended for repeated use"

#### ⑤ Buffer stroke

Stroke [mm]	Pad size
	All sizes
10	●
20	●
30	●
40	●
50	●

### With adapter

#### ⑥ Vacuum inlet/⑦ Connection thread

○: ZP2-T/Vertical ●: ZP2-R/Lateral

⑥ Vacuum inlet			⑦ Connection thread			Pad size
Type	Symbol	Size	Type	Symbol	Size	All sizes
Female thread	<b>B5</b>	M5 x 0.8	—	<b>Nil</b>	—*1	○
One-touch fitting	<b>04</b>	ø4	Male thread	<b>A5</b>	M5 x 0.8	●
			Female thread	<b>B5</b>	M5 x 0.8	●
	<b>06</b>	ø6	Male thread	<b>A5</b>	M5 x 0.8	●
			Female thread	<b>B5</b>	M5 x 0.8	●

\*1 Use the vacuum inlet.

### With buffer

#### ⑥ Vacuum inlet/⑦ Connection thread

○: ZP2-T/Vertical ●: ZP2-R/Lateral

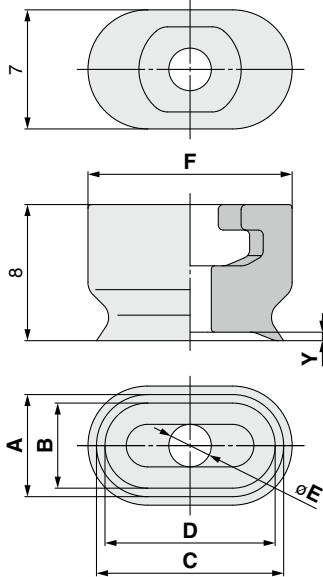
⑥ Vacuum inlet			⑦ Connection thread			Pad size
Type	Symbol	Size	Type	Symbol	Size	All sizes
Female thread	<b>B5</b>	M5 x 0.8	Male thread	<b>Nil</b>	M10 x 1	○
One-touch fitting	<b>04</b>	ø4		<b>Nil</b>		○●
	<b>06</b>	ø6		<b>Nil</b>		○●

\* The pad, mounting nut, and fitting are shipped together but do not come assembled.

**Dimensions/Models**

Single unit **3.5 x 7 to 8 x 30**

ZP2 - **3507** W **N**  
① ②



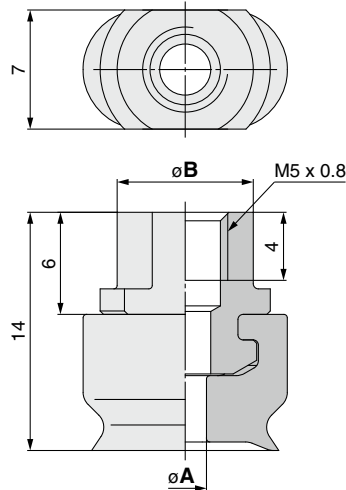
Model	① Pad size		Form	② Material	A	B	C	D	E	F	Y		
	Breadth	Length											
	ZP2	35										07	W
40		10	4.8	4	10.8	10	2.5						
50			6	5	11			20.8	2 x 1.8				
60			7	6			20			2 x 2			
40		20	4.8	4	21	20		2.5					
50			6	5			3						
60			7	6				2 x 1.8					
80		9	8	30	30	2 x 2.5	30						
40		30	4.8					4	31	30	2 x 1.8		
50			6					5					
60			7	6									
80		9	8										

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

Construction p. 187  
Mounting Bracket Assembly From p. 195

With adapter **3.5 x 7 to 8 x 30**

ZP2 - T **3507** W **N** - **B5**  
① ② ③



③ Vacuum inlet (Female thread)

**B5** M5 x 0.8

Model	Vacuum inlet direction	① Pad size		Form	② Material	③ Vacuum inlet	A	B				
		Breadth	Length									
		ZP2	T						W	N S U F GN GS	B5	B5
40	10			2.5								
50				20	2 x 1.8							
60					2 x 2							
80	30			2.5								
40				3								
60				2 x 1.8								
80	2 x 2.5			19								

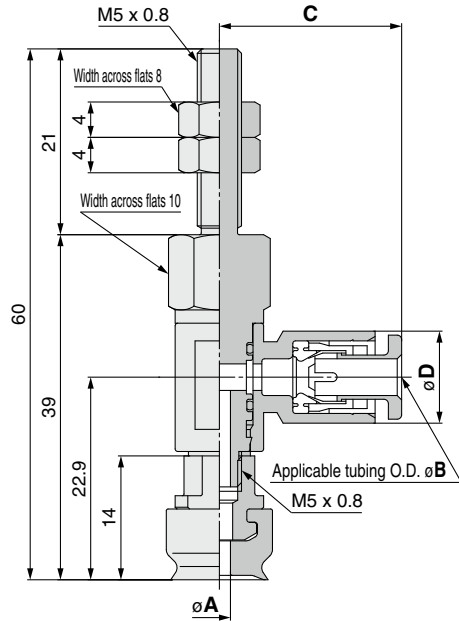
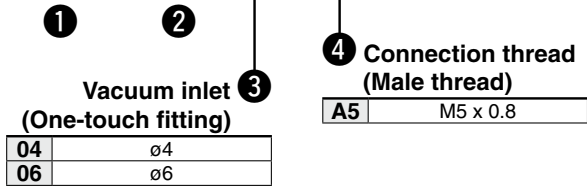
\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

Construction p. 187  
Adapter Assembly p. 195

**Dimensions/Models**

**With adapter/One-touch fitting 3.5 x 7 to 8 x 30**

ZP2 - R **3507** W **N** - **04** - **A5**



Construction	p. 187
Adapter Assembly	p. 195

Model							A	
Vacuum inlet direction	1 Pad size Breadth Length		2 Form	*1 Material	3 Vacuum inlet	4 Connection thread		
ZP2	R	35	07	W	N S U F GN GS	04	A5	2 x 1.5
		40						2.5
		50	10					2 x 1.8
		60						2 x 2
		40	20					2.5
		50						3
	60		2 x 1.8					
	80							
	40	30		2 x 1.8				
	50							
	60			2 x 2.5				
	80							

**Dimensions Per Vacuum Inlet**

Model							B	C	D	Fitting part min. hole size	
Vacuum inlet direction	1 Pad size Breadth Length		2 Form	*1 Material	3 Vacuum inlet	4 Connection thread					
ZP2	R	35	07	W	N S U F GN GS	04	A5	4	20.6	10.4	ø3
						06		6	21.6	12.4	ø4
		40	10			04		4	20.6	10.4	ø3
						06		6	21.6	12.4	ø4
		50	20			04		4	20.6	10.4	ø3
						06		6	21.6	12.4	ø4
	60		04	4		20.6	10.4	ø3			
			06	6		21.6	12.4	ø4			
	80		04	4		20.6	10.4	ø3			
			06	6		21.6	12.4	ø4			

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber



**Dimensions/Models**

**With adapter/One-touch fitting 3.5 x 7 to 8 x 30**

ZP2 - R **3507** W **N** - **04** - **B5**

①

②

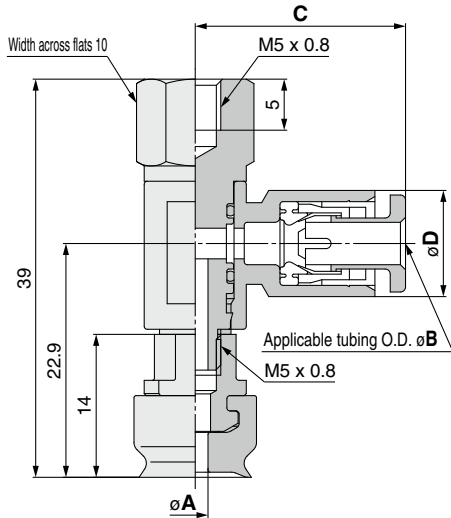
④

Connection thread (Female thread)

**B5** M5 x 0.8

Vacuum inlet (One-touch fitting)

<b>04</b>	ø4
<b>06</b>	ø6



Construction	p. 187
Adapter Assembly	p. 195

		Model						A
Vacuum inlet direction	① Pad size Breadth Length	Form	② #1 Material	③ Vacuum inlet	④ Connection thread			
ZP2	R	35 07	W	N S U F GN GS	04	B5	2 x 1.5	
		40					2.5	
		50 10					2 x 1.8	
		60					2 x 2	
		40					2.5	
		60					3	
	R	80 40			2 x 1.8			
		50 30			2 x 2.5			
		60 30						
		80 30						

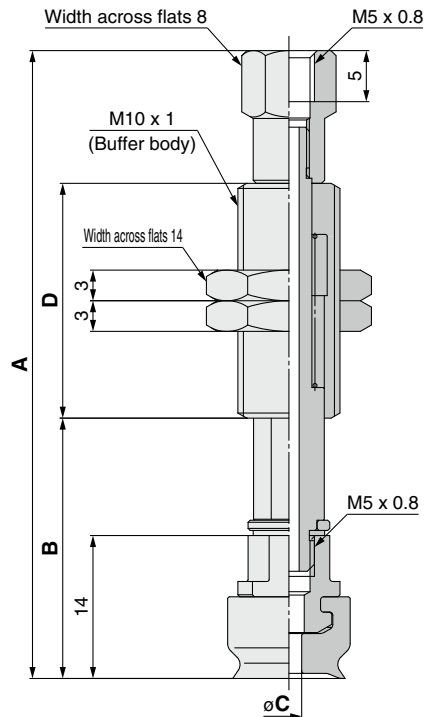
**Dimensions Per Vacuum Inlet**

		Model						B	C	D	Fitting part min. hole size
Vacuum inlet direction	① Pad size Breadth Length	Form	② #1 Material	③ Vacuum inlet	④ Connection thread						
ZP2	R	35 07	W	N S U F GN GS	04	B5	4	20.6	10.4	ø3	
					06		6	21.6	12.4	ø4	
		40 10			04		4	20.6	10.4	ø3	
					06		6	21.6	12.4	ø4	
		50 20			04		4	20.6	10.4	ø3	
					06		6	21.6	12.4	ø4	
	60 20	04			4	20.6	10.4	ø3			
		06			6	21.6	12.4	ø4			
	80 40	04			4	20.6	10.4	ø3			
		06			6	21.6	12.4	ø4			
	50 30	04			4	20.6	10.4	ø3			
		06			6	21.6	12.4	ø4			
60 30	04	4	20.6	10.4	ø3						
	06	6	21.6	12.4	ø4						
80 30	04	4	20.6	10.4	ø3						
	06	6	21.6	12.4	ø4						

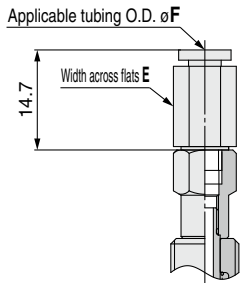
\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber

**Dimensions/Models**

**With buffer 3.5 x 7 to 8 x 30**



**Vacuum inlet: One-touch fitting**

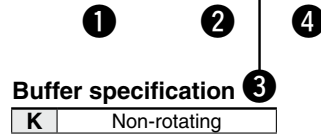


Construction	p. 188
Buffer Assembly	p. 196

**Dimensions Per Vacuum Inlet: One-touch Fitting**

		Model					E	F	Fitting part min. hole size		
Vacuum inlet direction	Pad size ① Breadth Length	Form ②	Material ③	Buffer spec. ④	Buffer stroke ⑤						
ZP2	T	35 07	W	N S U F GN GS	K	10 20 30 40 50	04	8	4	ø2.5	
							06	10	6		
		40					04	8	4		
							06	10	6		
							50 60	04	8		4
								06	10		6
	20	40					04	8	4		
							06	10	6		
		50 60 80					04	8	4		
							06	10	6		
							30	04	8		4
								06	10		6

**ZP2 - T 3507 W N K 10 - B5**



**Buffer specification ③**

<b>K</b>	Non-rotating
----------	--------------

**Vacuum inlet ⑤**

<b>B5</b>	M5 x 0.8	Female thread	
<b>04</b>	ø4	One-touch fitting	KQ2H04-M5N
<b>06</b>	ø6		KQ2H06-M5N

Vacuum inlet direction	Pad size ①		Form ②	Material ③	Buffer spec. ④	Buffer stroke ⑤	Vacuum inlet ⑤	A	B	C	D					
	Breadth	Length														
ZP2	T	35	07	W	N S U F GN GS	K	B5					10	61.5	25.5	2 x 1.5	23
												20	99.5	35.5		51
												30	109.5	45.5		77
												40	145.5	55.5		
												50	155.5	65.5		
												10	61.5	25.5		2 x 1.5
		20	99.5									35.5	51			
		30	109.5									45.5	77			
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5	2.5	23		
		20	99.5									35.5		51		
		30	109.5									45.5		77		
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5		2 x 1.8	23	
		20	99.5									35.5	51			
		30	109.5									45.5	77			
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5	2 x 2		23	
		20	99.5									35.5		51		
		30	109.5									45.5		77		
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5		2.5	23	
		20	99.5									35.5	51			
		30	109.5									45.5	77			
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5	3		23	
		20	99.5									35.5		51		
		30	109.5									45.5		77		
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5		2 x 1.8	23	
		20	99.5									35.5	51			
		30	109.5									45.5	77			
		40	145.5									55.5				
		50	155.5									65.5				
		10	61.5									25.5	2 x 2.5		23	
		20	99.5									35.5		51		
		30	109.5									45.5		77		
		40	145.5									55.5				
		50	155.5									65.5				

\*1 N: NBR, S: Silicone rubber, U: Urethane rubber, F: FKM, GN: Conductive NBR, GS: Conductive silicone rubber



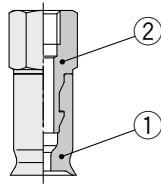
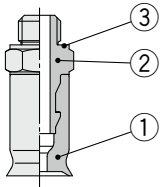
# Oval Pad *ZP Series* Construction

With adapter Oval flat type: 2004/3507/4010

Vacuum inlet direction **Vertical** T Type/ZPT

ZPT□-(A5/A6)

ZPT□-(B4/B5)



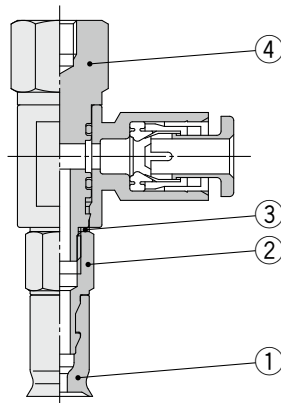
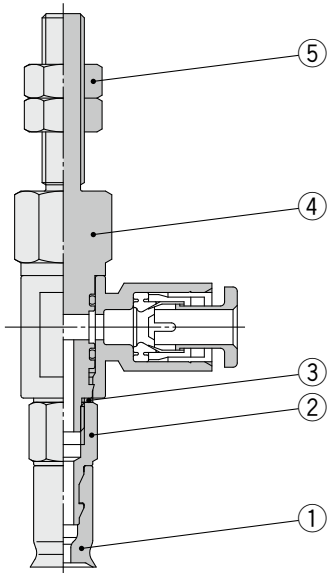
## Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel/NBR	

Vacuum inlet direction **Lateral** R Type/ZPR

ZPR□-(04/06)-(A5/A6)

ZPR□-(04/06)-(B4/B5)



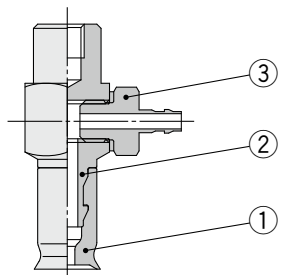
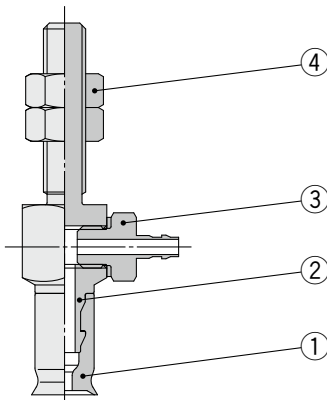
## Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel 304/NBR	
4	Adapter (With One-touch fitting)	Brass (Electroless nickel plating), PBT, NBR, Stainless steel, POM	
5	Nut	Rolled steel (Zinc chromated)	M5 x 0.8 M6 x 1

Vacuum inlet direction **Lateral** Y Type/ZPY

ZPY□-(N4/N6/U4/U6)-(A5/A6)

ZPY□-(N4/N6/U4/U6)-(B4/B5)



## Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Barb fitting	—	
4	Nut	Rolled steel (Zinc chromated)	M5 x 0.8 M6 x 1

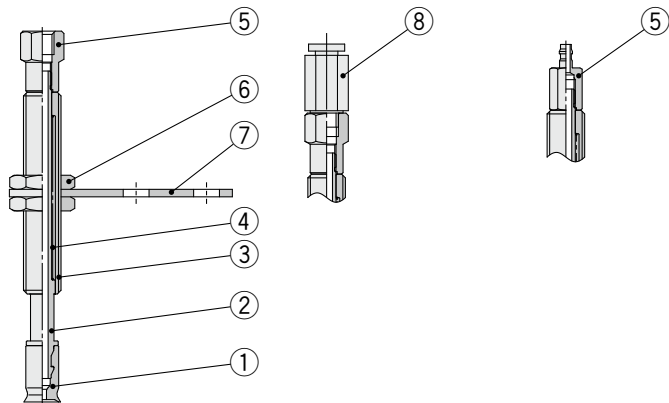
**With buffer** Oval flat type: 2004/3507/4010

Vacuum inlet direction **Vertical** T Type/ZPT

ZPT□-(B3/B5)-A8

ZPT□-(04/06)-A8

ZPT□-(N4/U4)-A8

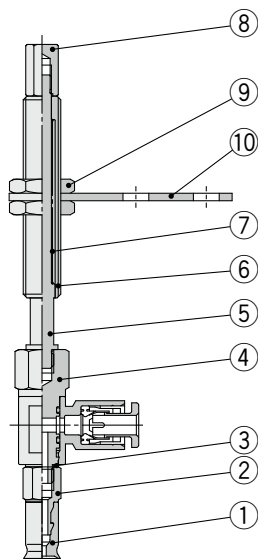


**Component Parts**

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Piston rod	Stainless steel	
3	Buffer body	Brass (Electroless nickel plating)	
4	Return spring	Stainless steel	
5	Buffer adapter	Brass (Electroless nickel plating)	
6	Nut	Carbon steel (Zinc chromated)	M8 x 1
7	Buffer plate	Steel (Trivalent chromated)	
8	One-touch fitting	—	

Vacuum inlet direction **Lateral** R Type/ZPR

ZPR□-(04/06)-A8

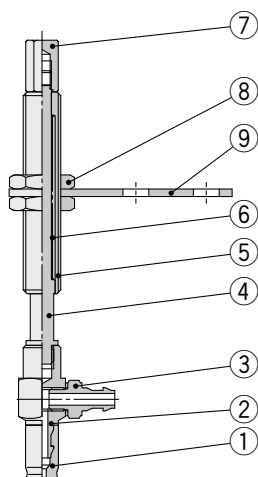


**Component Parts**

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel 304/NBR	
4	Adapter (With One-touch fitting)	Brass (Electroless nickel plating), PBT, NBR, Stainless steel, POM	
5	Piston rod	Stainless steel	
6	Buffer body	Brass (Electroless nickel plating)	
7	Return spring	Stainless steel	
8	Buffer adapter	Brass (Electroless nickel plating)	
9	Nut	Carbon steel (Zinc chromated)	M8 x 1
10	Buffer plate	Steel (Trivalent chromated)	

Vacuum inlet direction **Lateral** Y Type/ZPY

ZPY□-(N4/N6/U4/U6)-A8



**Component Parts**

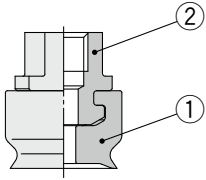
No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Barb fitting	—	
4	Piston rod	Stainless steel	
5	Buffer body	Brass (Electroless nickel plating)	
6	Return spring	Stainless steel	
7	Buffer adapter	Brass (Electroless nickel plating)	
8	Nut	Carbon steel (Zinc chromated)	M8 x 1
9	Buffer plate	Steel (Trivalent chromated)	

# Oval Pad *ZP2 Series* Construction

With adapter Oval flat type: 3507 to 8030

Vacuum inlet direction **Vertical** T Type/ZP2-T

ZP2-T□-B5



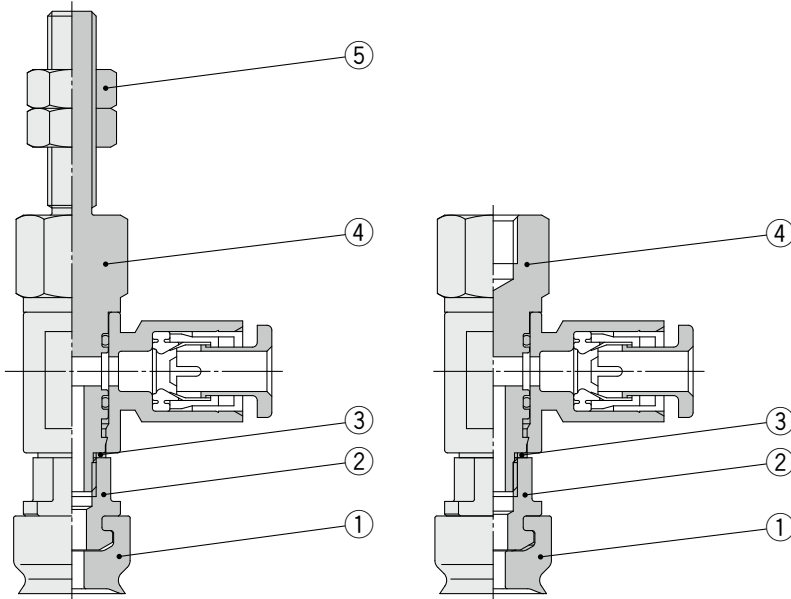
## Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	

Vacuum inlet direction **Lateral** R Type/ZP2-R

ZP2-R□-(04/06)-A5

ZP2-R□-(04/06)-B5



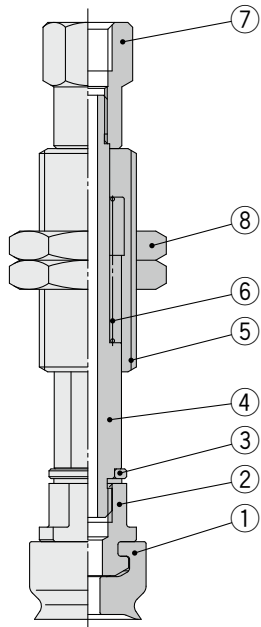
## Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel/NBR	
4	Adapter (With One-touch fitting)	Brass (Electroless nickel plating), PBT, NBR, Stainless steel, POM	
5	Nut	Rolled steel (Zinc chromated)	M5 x 0.8

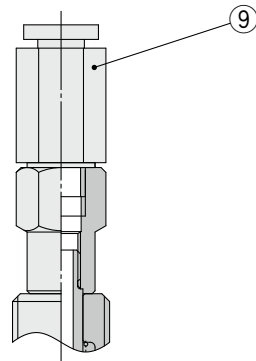
With buffer Oval flat type: 3507 to 8030

Vacuum inlet direction **Vertical** T Type/ZP2-T

ZP2-T□-B5



ZP2-T□-(04/06)

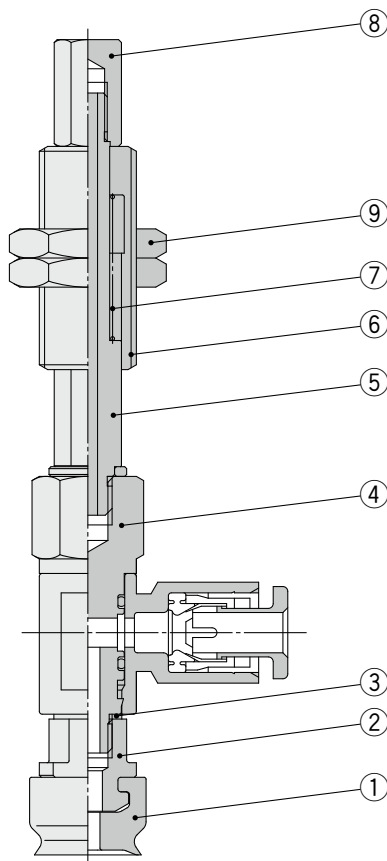


Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel/NBR	
4	Piston rod	Stainless steel	
5	Buffer body	Brass (Electroless nickel plating)	
6	Return spring	Stainless steel	
7	Buffer adapter	Brass (Electroless nickel plating)	
8	Nut	Steel (Zinc chromated)	M10 x 1
9	One-touch fitting	—	

Vacuum inlet direction **Lateral** R Type/ZP2-R

ZP2-R□-(04/06)



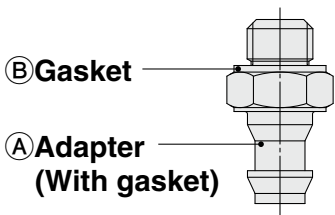
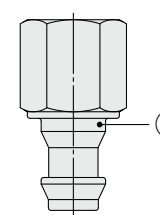
Component Parts

No.	Description	Material	Note
1	Pad	NBR, Silicone rubber, Urethane rubber, FKM, Conductive NBR, Conductive silicone rubber	Oval flat type
2	Adapter	Brass (Electroless nickel plating)	
3	Gasket	Stainless steel/NBR	
4	Adapter (With One-touch fitting)	Brass (Electroless nickel plating), PBT, NBR, Stainless steel, POM	
5	Piston rod	Stainless steel	
6	Buffer body	Brass (Electroless nickel plating)	
7	Return spring	Stainless steel	
8	Buffer adapter	Brass (Electroless nickel plating)	
9	Nut	Steel (Zinc chromated)	M10 x 1

# Oval Pad *ZP Series*

# Mounting Bracket Assembly

## Adapter Assembly: Vacuum Inlet Direction **Vertical** T Type/ZPT

Product part no.	<p style="text-align: center;">ZPT ① U □ - ②</p> <p style="text-align: center;">             Pad size ●                      ● Vacuum inlet (Male/Female thread)              ● Pad material         </p>	
Component parts	<p><b>Male thread</b></p>  <p>② Gasket</p> <p>① Adapter (With gasket)</p>	<p><b>Female thread</b></p>  <p>① Adapter</p>
<div style="border: 1px solid black; border-radius: 10px; padding: 2px 5px; display: inline-block;">Same for the ZP/Basic type</div>		

		Symbol	① Pad size symbol		
			2004	3507	4010
① Adapter	② Vacuum inlet	Male thread	M5 x 0.8	<b>A5</b>	ZPT1-A5
		Female thread	M6 x 1	<b>A6</b>	ZPT1-A6
	② Vacuum inlet	Male thread	M4 x 0.7	<b>B4</b>	ZPT1-B4
		Female thread	M5 x 0.8	<b>B5</b>	ZPT1-B5
② Gasket (Single unit)	For M5 x 0.8	10 pcs.*1			ZP-5G2
		100 pcs.*1			M-5G2
	For M6 x 1	10 pcs.*1			ZP-6G2
		100 pcs.*1			M-6G

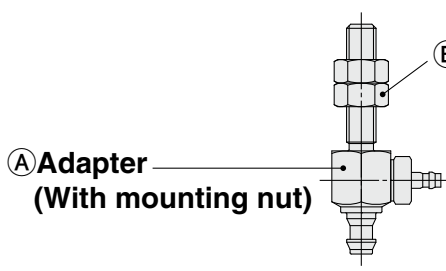
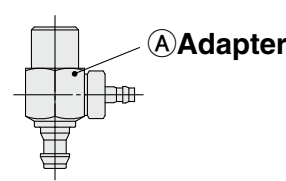
\*1 The gasket (single unit) sales unit is shown.





Oval Pad  
Mounting Bracket Assembly **ZP Series**

**Adapter Assembly: With Barb Fitting, Vacuum Inlet Direction** Lateral Y Type/ZPY

<b>Product part no.</b>	<p><b>ZPY</b> ① <b>U</b> □ - ② - ③</p> <p>Pad size ●                      Pad material ●                      Vacuum inlet (Barb fitting) ●                      Connection thread (Male/Female thread) ●</p>
<b>Component parts</b>	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><b>Male thread</b></p>  <p>① Adapter (With mounting nut)</p> </div> <div style="text-align: center;"> <p><b>Female thread</b></p>  <p>① Adapter</p> </div> </div> <p style="text-align: right; border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">Same for the ZP/Basic type</p>

		Symbol			Symbol	① Pad size symbol			
						2004	3507	4010	
① Adapter	② Vacuum inlet Barb fitting	For ø4 nylon tubing	<b>N4</b>	Male thread	M5 x 0.8	<b>A5</b>	<b>ZPY1-N4-A5</b>		
				Female thread	M6 x 1	<b>A6</b>	<b>ZPY1-N4-A6</b>		
			<b>N6</b>	Male thread	M4 x 0.7	<b>B4</b>	<b>ZPY1-N4-B4</b>		
				Female thread	M5 x 0.8	<b>B5</b>	<b>ZPY1-N4-B5</b>		
		For ø6 nylon tubing	<b>N6</b>	Male thread	M5 x 0.8	<b>A5</b>	<b>ZPY1-N6-A5</b>		
				Female thread	M6 x 1	<b>A6</b>	<b>ZPY1-N6-A6</b>		
			<b>U4</b>	Male thread	M4 x 0.7	<b>B4</b>	<b>ZPY1-N6-B4</b>		
				Female thread	M5 x 0.8	<b>B5</b>	<b>ZPY1-N6-B5</b>		
		For ø4 soft tubing	<b>U4</b>	Male thread	M5 x 0.8	<b>A5</b>	<b>ZPY1-U4-A5</b>		
				Female thread	M6 x 1	<b>A6</b>	<b>ZPY1-U4-A6</b>		
			<b>U6</b>	Male thread	M4 x 0.7	<b>B4</b>	<b>ZPY1-U4-B4</b>		
				Female thread	M5 x 0.8	<b>B5</b>	<b>ZPY1-U4-B5</b>		
		For ø6 soft tubing	<b>U6</b>	Male thread	M5 x 0.8	<b>A5</b>	<b>ZPY1-U6-A5</b>		
				Female thread	M6 x 1	<b>A6</b>	<b>ZPY1-U6-A6</b>		
			<b>U6</b>	Male thread	M4 x 0.7	<b>B4</b>	<b>ZPY1-U6-B4</b>		
				Female thread	M5 x 0.8	<b>B5</b>	<b>ZPY1-U6-B5</b>		
② Mounting nut (Single unit)				M5 x 0.8	<b>NTJ-015A</b>				
				M6 x 1	<b>SNJ-006C</b>				

**Buffer Assembly: Vacuum Inlet Direction Vertical T Type/ZPT**

<b>Product part no.</b>	<p>ZPT ① U □ (J/K) ② - ③ - A8</p> <p>Pad size ● Pad material ● J: Rotating, K: Non-rotating ● Vacuum inlet (Female thread/One-touch fitting/Barb fitting) ● Buffer stroke ●</p>	
<b>Component parts</b>		

		Symbol	① Pad size symbol		
			2004	3507	4010
② Buffer stroke	Stroke	6	●	●	●
		10	●	●	●
		15	●	●	●
		25	●	●	●
③ Vacuum inlet	Female thread	M3 x 0.5	B3	ZPB1(J/K)②-B3	
		M5 x 0.8	B5	ZPB1(J/K)②-B5	
	One-touch fitting	ø4	04	ZPB1(J/K)②-04	
		ø6	06	ZPB1(J/K)②-06	
	Barb fitting	For ø4 nylon tubing	N4	ZPB1(J/K)②-N4	
		For ø4 soft tubing	U4	ZPB1(J/K)②-U4	
④ Buffer plate (Single unit)			ZPB1		
⑤ Mounting nut (Single unit)		M8 x 1	RB08J		

**[Buffer assembly part number example]**

Product part no. ZPT2004UN J 10 - B5 - A8  
 Buffer assembly ZPB1 J 10 - B5  
 ② Buffer stroke



**Buffer Assembly: With Barb Fitting, Vacuum Inlet Direction** Lateral Y Type/ZPY

<b>Product part no.</b>	<p>ZPY <span style="border: 1px solid black; padding: 0 2px;">①</span> U <span style="border: 1px solid black; padding: 0 2px;">□</span> (J/K) <span style="border: 1px solid black; padding: 0 2px;">②</span> - <span style="border: 1px solid black; padding: 0 2px;">③</span> - A8</p> <p>Pad size ● Pad material ● J: Rotating, K: Non-rotating ● Vacuum inlet (Barb fitting) ● Buffer stroke ●</p>
<b>Component parts</b>	<p>① Buffer (With buffer plate / With mounting nut) ② Mounting nut ③ Buffer plate ④ Pad mounting adapter</p> <p style="text-align: right; border: 1px solid black; border-radius: 10px; padding: 2px;">Same for the ZP/Basic type</p>

		Symbol	① Pad size symbol			
			2004	3507	4010	
<b>② Buffer stroke</b>	Stroke	6	●	●	●	
		10	●	●	●	
		15	●	●	●	
		25	●	●	●	
<b>③ Buffer</b>			ZPB1(J/K)②			
<b>④ Pad mounting adapter</b>	<b>⑤ Vacuum inlet</b> Barb fitting	For ø4 nylon tubing	N4	ZPY1-N4-B5		
		For ø6 nylon tubing	N6	ZPY1-N6-B5		
		For ø4 soft tubing	U4	ZPY1-U4-B5		
		For ø6 soft tubing	U6	ZPY1-U6-B5		
<b>⑥ Buffer plate (Single unit)</b>			ZPB1			
<b>⑦ Mounting nut (Single unit)</b>	M8 x 1		RB08J			

**[Buffer assembly part number example]**

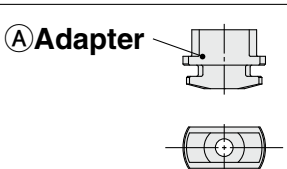
Product part no. ZPY4010UF K 10 - 06 - A8

Buffer assembly ZPB1 K 10

② Buffer stroke

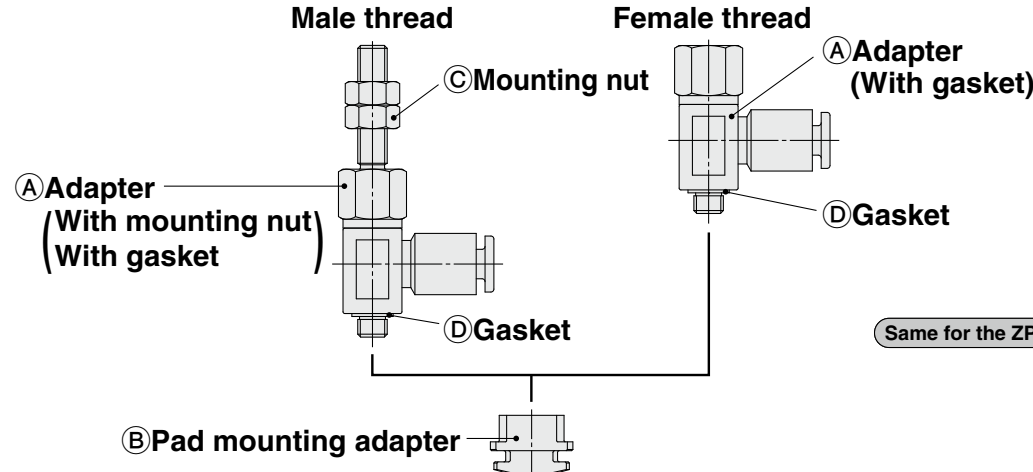
# Oval Pad **ZP2 Series** Mounting Bracket Assembly

## Adapter Assembly: Vacuum Inlet Direction **Vertical** T Type/ZP2-T

Product part no.	<p>ZP2 - T ① W □ - ②</p> <p>Pad size ● Vacuum inlet (Female thread)</p> <p>Oval flat type ● Pad material</p>											
Component parts	<p>Ⓐ Adapter</p> 											

		Symbol	① Pad size symbol															
			3507	4010	5010	6010	4020	5020	6020	8020	4030	5030	6030	8030				
Ⓐ Adapter	② Vacuum inlet Female thread	M5 x 0.8	B5				ZP2A-001				ZP2A-002				ZP2A-003			

## Adapter Assembly: With One-touch Fitting, Vacuum Inlet Direction **Lateral** R Type/ZP2-R

Product part no.	<p>ZP2 - R ① W □ - ② - ③</p> <p>Pad size ● Connection thread (Male/Female thread)</p> <p>Oval flat type ● Vacuum inlet (One-touch fitting)</p> <p>Pad material ●</p>											
Component parts	<p>Male thread Female thread</p> <p>Ⓒ Mounting nut Ⓐ Adapter (With gasket)</p> <p>Ⓐ Adapter (With mounting nut) (With gasket) Ⓓ Gasket</p> <p>Ⓓ Gasket</p> <p>Ⓑ Pad mounting adapter</p> <p style="text-align: right;">Same for the ZP/Basic type</p> 											

		Symbol	Symbol	① Pad size symbol												
				3507	4010	5010	6010	4020	5020	6020	8020	4030	5030	6030	8030	
Ⓐ Adapter	② Vacuum inlet One-touch fitting	ø4	③ Connection thread	Male thread	M5 x 0.8	A5										
				Female thread	M5 x 0.8	B5										
		ø6	③ Connection thread	Male thread	M5 x 0.8	A5										
				Female thread	M5 x 0.8	B5										
Ⓑ Pad mounting adapter				ZP2A-001				ZP2A-002				ZP2A-003				
Ⓒ Mounting nut (Single unit)				M5 x 0.8				NTJ-015A								
Ⓓ Gasket (Single unit)				10 pcs.*1				ZP-5G2								
				100 pcs.*1				M-5G2								

\*1 The gasket (single unit) sales unit is shown.

**Buffer Assembly: Vacuum Inlet Direction **Vertical** T Type/ZP2-T**

<b>Product part no.</b>	<p>ZP2 - T ① W □ K ② - ③</p> <p>Pad size ● Vacuum inlet (Female thread/One-touch fitting)</p> <p>Oval flat type ● Buffer stroke</p> <p>Pad material ● Buffer specification: Non-rotating</p>
<b>Component parts</b>	<p>① Buffer (With mounting nut / With gasket)</p> <p>② Pad mounting adapter</p> <p>③ Mounting nut</p> <p>④ Gasket</p> <p>One-touch fitting</p> <p>Same for the ZP/Basic type</p>

		Symbol	① Pad size symbol													
			3507	4010	5010	6010	4020	5020	6020	8020	4030	5030	6030	8030		
② Buffer stroke	Stroke	10						●								
		20						●								
		30						●								
		40						●								
		50						●								
③ Buffer	④ Vacuum inlet	Female thread	M5 x 0.8	B5												ZPB2K②-B5
		One-touch fitting	ø4	04												ZPB2K②-04
		One-touch fitting	ø6	06												ZPB2K②-06
⑤ Pad mounting adapter				ZP2A-001		ZP2A-002		ZP2A-003								
⑥ Mounting nut (Single unit)		M10 x 1						ZPNA-M10								
⑦ Gasket (Single unit)		10 pcs.*1						ZP-5G2								
		100 pcs.*1						M-5G2								

\*1 The gasket (single unit) sales unit is shown.

**[Buffer assembly part number example]**

Product part no. ZP2-T6010WN **K** ① **10** - B5  
 Buffer assembly ZPB2 **K** ① **10** - B5  
 ② Buffer stroke

# Oval Pad Mounting Bracket Assembly **ZP2 Series**

## ■ Buffer Assembly: With One-touch Fitting, Vacuum Inlet Direction **Lateral** R Type/ZP2-R

Product part no.	<p><b>ZP2 - R</b> ① <b>W</b> □ <b>K</b> ② - ③</p> <p>● Pad size</p> <p>● Oval flat type</p> <p>● Pad material</p> <p>● Vacuum inlet (One-touch fitting)</p> <p>● Buffer stroke</p> <p>● Buffer specification: Non-rotating</p>
Component parts	<p>① Buffer (With mounting nut)</p> <p>② Buffer connection adapter (With gasket)</p> <p>③ Pad mounting adapter</p> <p>④ Mounting nut</p> <p>⑤ Gasket</p> <p>Same for the ZP/Basic type</p> <p>Same for the ZP/Basic type</p>

		Symbol	① Pad size symbol											
			3507	4010	5010	6010	4020	5020	6020	8020	4030	5030	6030	8030
② Buffer stroke	Stroke	10						●						
		20						●						
		30						●						
		40						●						
		50						●						
① Buffer			ZPB2K②											
③ Buffer connection adapter	④ Vacuum inlet One-touch fitting	ø4	04	ZPRS-04-B5										
		ø6	06	ZPRS-06-B5										
⑤ Pad mounting adapter			ZP2A-001			ZP2A-002			ZP2A-003					
⑥ Mounting nut (Single unit)		M10 x 1	ZPNA-M10											
⑦ Gasket (Single unit)		10 pcs.*1	ZP-5G2											
		100 pcs.*1	M-5G2											

\*1 The gasket (single unit) sales unit is shown.

### [Buffer assembly part number example]

Product part no. **ZP2-R8030WF** **K** **30** - 06

Buffer assembly **ZPB2** **K** **30**

② Buffer stroke





# Oval Pad Specific Product Precautions

Be sure to read this before handling the products. Refer to page 375 for safety instructions. For vacuum equipment and vacuum pad precautions, refer to pages 376 to 379.

## Mounting

### 1. Tighten the screw within the specified torque range when mounting the buffer.

Tightening with a torque outside of the specified range may cause malfunction.

#### Oval Pad ZP Series

Model	Connection thread	Tightening torque [N·m]
ZP□(J/K)□-□-A8	M8 x 1	1.5 to 2.0

#### Oval Pad ZP2 Series

Model	Connection thread	Tightening torque [N·m]
ZP2-□K□-□	M10 x 1	2.5 to 3.5