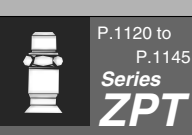


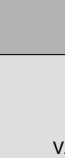
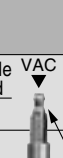

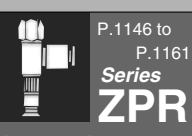


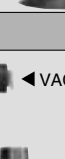



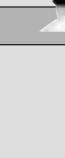









Vacuum Pad

Series ZP


Type	Without buffer			With buffer		
	Vacuum entry port	Mounting	VAC	Vacuum entry port	Mounting	VAC
 <p>P.1120 to P.1145 Series ZPT</p> <p>Vertical vacuum entry</p>	Male thread	(Common)		Female thread	Buffer body	
	Female thread	(Common)		Barb fitting	Buffer body	
				One-touch fitting	Buffer body	
 <p>P.1146 to P.1161 Series ZPR</p> <p>Lateral vacuum entry with One-touch fitting</p>	One-touch fitting	Male thread		One-touch fitting	Buffer body	
	One-touch fitting	Female thread				
 <p>P.1162 to P.1177 Series ZPY</p> <p>Lateral vacuum entry with Barb fitting</p>	Barb fitting	Male thread		Barb fitting	Buffer body	
	Barb fitting	Female thread				

Pad form (Compatible with all models)	Flat (U)  Flat with ribs (C)  Deep (D)  Bellows (B)  Thin flat (UT)  Thin flat with ribs (CT) 
---	--

Pad diameter	2 x 4	3.5 x 7	4 x 10	ø2	ø4	ø6	ø8	ø10	ø13	ø16	ø20	ø25	ø32	ø40	ø50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

Pad diameter (ø2 to ø125)	
-------------------------------------	--

Pad material	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with green mark), Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)
---------------------	--

 **Pad selection** Refer to the vacuum equipment model selection on pages 828 to 834 for the calculation of lift force and response time.

Pad Material and Characteristics

◎: Little or no influence ○: Can be used depending on conditions X: Not suitable

Material	Characteristics	Durometer HS (±5°)	Operating temperature range (°C)	Oil resistance gasoline	Oil resistance benzol	Base resistance	Acid resistance	Weatherability	Ozone resistance	Abrasion resistance	Waterproof	Solvent resistance (Benzene, toluene)
NBR		50°	0 to 120	◎	X	○	○	X	X	◎	○	X
Silicon rubber		40°	-30 to 200	X	X	○	X	◎	◎	X	○	X
Urethane rubber		60°	0 to 60	◎	X	X	X	○	◎	◎	X	X
Fluoro rubber		60°	0 to 250	◎	◎	X	◎	◎	◎	○	◎	◎
Conductive NBR		50°	0 to 100	○	X	○	○	○	X	○	○	X
Conductive silicon rubber		50°	-10 to 200	X	X	○	X	◎	◎	X	○	X

* The above table covers only general characteristics of subject rubber materials. Pad materials used by SMC pass the JIS standards; however the actual performance depends on operating conditions.

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment



Vacuum Pad/ Vertical Vacuum Entry Without Buffer

Series ZPT



Specifications

Vacuum entry	Direction		Vertical	
	Connection		Male thread	Female thread
Thread diameter	$\phi 2$ to $\phi 8$ Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series ($\phi 10$ to $\phi 16$)		M5 x 0.8, M6 x 1	M4 x 0.7, M5 x 0.8
	$\phi 10$ to $\phi 16$		M5 x 0.8, M6 x 1	M5 x 0.8, M6 x 1 1/8 (Rc, NPT, NPTF)
	$\phi 20$ to $\phi 32$		M6 x 1, M8 x 1	M5 x 0.8, M6 x 1, M8 x 1.25 1/8 (Rc, NPT, NPTF)
	$\phi 40, \phi 50$		M6 x 1, M8 x 1	M6 x 1, M8 x 1.25 1/8 (Rc, NPT, NPTF)
Mounting			Use connection for vacuum entry	

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows	Thin flat/Thin flat with ribs
Pad diameter (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)				
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluoro rubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)				

Mass/Male Thread (Female thread)

(g)

Model	Flat					Flat with ribs				Deep				Bellows					
	M4	M5	M6	M8	$\square 1/8$	M5	M6	M8	$\square 1/8$	M5	M6	M8	$\square 1/8$	M4	M5	M6	M8	$\square 1/8$	
ZPT02 to ZPT08	— (3.5)	2.5 (3)	3.5 (—)	—	—	—	—	—	—	—	—	—	—	— (3.5) (except $\phi 2, \phi 4$)	2.5 (3)	3.5 (—) (except $\phi 2, \phi 4$)	—	—	
ZPT10	—	—	—	—	—	—	—	—	—	10 (7)	12 (6)	— (13)	—	—	—	—	—	—	
ZPT13	—	10 (6.5)	12 (6)	—	— (13)	10 (6.5)	12 (6)	—	— (12)	—	—	—	—	—	10 (6.5)	12 (6)	—	— (13)	
ZPT16	—	—	—	—	—	—	—	—	—	11 (7)	15 (7)	15 (13)	—	—	—	—	—	—	
ZPT20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ZPT25	—	— (8.5)	15 (8)	26 (17)	— (16)	— (8.5)	15 (8)	26 (17)	— (16)	—	15 (10)	15 (10)	— (18)	— (17)	—	— (8.5)	15 (8)	16 (17)	— (16)
ZPT32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ZPT40	—	—	28 (26)	30 (25)	— (23)	—	28 (26)	30 (25)	— (16)	—	30 (28)	32 (26)	— (20)	—	—	—	28 (26)	30 (25)	— (23)
ZPT50	—	—	30 (29)	32 (27)	— (25)	—	32 (30)	34 (29)	— (27)	—	—	—	—	—	—	—	30 (29)	32 (27)	— (25)

* (): Figures for female thread connections

How to Order

Series ZPT
Without buffer

ZPT 02 U N - A5

Pad diameter
(mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Vacuum entry/Mounting thread diameter

Connection	Symbol	Thread diameter	ø2 to ø8	ø10 to ø16	ø20 to ø32	ø40, ø50
			2 x 4, 3.5 x 7, 4 x 10 ø10 to ø16 (Thin section series)			
Male thread	A5	M5 x 0.8	●	●	—	—
	A6	M6 x 1	●	●	●	●
	A8	M8 x 1	—	—	●	●
Female thread	B4	M4 x 0.7	●	—	—	—
	B5	M5 x 0.8	●	●	●	—
	B6	M6 x 1	—	●	●	●
	B8	M8 x 1.25	—	—	●	●
	B01	Rc 1/8	—	●	●	●
	N01	NPT 1/8	—	●	●	●
	T01	NPTF 1/8	—	●	●	●

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Pad type

(Refer to "Table (1)" for applications.)



U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Table (1) Pad Diameter/Pad Type

Type \ Diameter (mm)	Diameter (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

⚠ Precautions

Be sure to read before handling. Refer to front matters 38 and 39 for Safety Instructions and pages 844 to 846 for Vacuum Equipment Precautions.

Caution on Design

⚠ Warning

- In cases where workpieces are heavy or dangerous, etc., take measures to address a possible loss of adsorption force (installation of drop prevention guides, etc.).**

In the case of transportation by vacuum adsorption using vacuum pads, adsorption force is lost when there is a drop in vacuum pressure. Furthermore, since vacuum pressure can also deteriorate due to wear and cracking of pads, and vacuum leakage from piping, etc., be certain to perform maintenance on vacuum equipment.

Selection

⚠ Caution

- The pad materials differ depending upon the operating environment.**

An appropriate pad material should be selected. Furthermore, since vacuum pads are manufactured for use with industrial products, they should not have direct contact with pharmaceuticals or food products, etc.

- Depending upon the weight and shape of the workpieces, the diameter, quantity and shape of pads will vary.**

Use the pad lifting force table for reference. Also, the pads selected will differ based upon conditions other than the above, such as the condition of the workpiece surface (presence or absence of oil or water), the workpiece material and its gas permeability. Confirmation is necessary by actually performing vacuum adsorption testing on the subject workpieces.

- Use a buffer for adsorption on fragile workpieces.**

The cushioning by the buffer is necessary when there is variation in the height of workpieces. When further positioning of pads and workpieces is desired, a detent buffer can be used.

- The life of a buffer will be reduced if the lateral force is applied to the buffer shaft.**
Note that sometimes a load is applied to the buffer by a piping tube (pulling or pressing, etc. in a lateral direction).

- Do not apply an impact or large forces to a pad when adsorbing a workpiece.**

This will cause deformation, cracking and wear of the pad to be accelerated. The stiffening ribs, etc. should touch lightly, while staying within the pad skirt's deformation range. Positioning should be performed accurately. Especially in the case of small diameter pads.

- When transporting in an upward direction, factors such as acceleration, wind pressure and impact force must be considered in addition to a workpiece weight.**

Use caution particularly when lifting items such as glass plates and circuit boards, because a large force will be applied by the wind pressure. When a workpiece which is oriented vertically is transported horizontally, large forces are applied by acceleration when movement is started and stopped. Further, in cases where the pad and a workpiece can slip easily, accelerations and decelerations of horizontal movement should be kept low.

- When transporting flat workpieces that have large surface areas using multiple pads, care must be taken when arranging the pads to balance the workpiece.**

Maintenance

⚠ Caution

- Perform pad maintenance regularly.**

Since pads are essentially rubber, deterioration is unavoidable. The rate of deterioration depends upon factors such as conditions of use, environment and temperature. Regular maintenance should be performed. If any damage, splitting, cracking or abrasion has occurred in a pad which appears to be harmful, replace it immediately. Also, take care not to damage the outside of the pad.

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

AEP

HEP

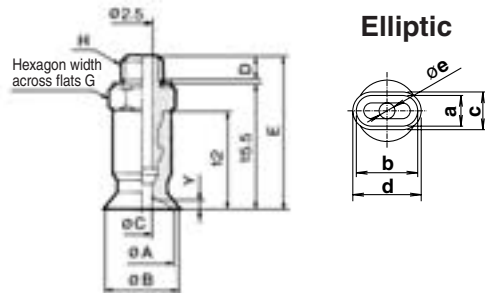
Related
Equipment

Series ZPT

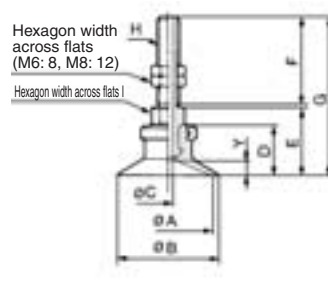
Connection	Male thread	Pad Form	Flat/Flat with ribs/Deep/Thin flat/ Thin flat with ribs/Elliptic
Vacuum Entry Port	Vertical	Mounting	Use connection for vacuum entry

Thin flat/Thin flat with ribs $\phi 10, \phi 13, \phi 16$ /Elliptic 2004, 3507, 4010
 Size/Flat $\phi 2, \phi 4, \phi 6, \phi 8$ Size/ $\phi 20, \phi 25, \phi 32$

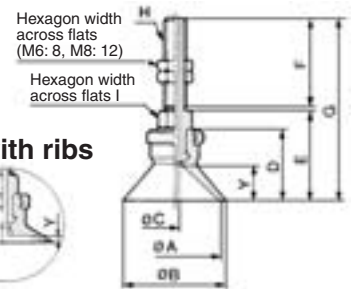
Flat/Thin flat/Thin flat with ribs



Flat



Deep: ZPT25D only



Flat with ribs



Flat/Thin Flat/Thin Flat with Ribs

Model	A	B	C	H: M5 x 0.8			H: M6 x 1			Y
				D	E	G	D	E	G	
ZPT02U	2	2.6	1.2	3	19	7	4	20	8	0.5
ZPT04U	4	4.8	1.6							0.8
ZPT06U	6	7								
ZPT08U	8	9								
ZPT10UT	10	11								
ZPT13UT	13	14								
ZPT16UT	16	17								
ZPT10CT	10	11								
ZPT13CT	13	14								
ZPT16CT	16	17								

Flat/Flat with Ribs

Model	A	B	D	H: M6 x 1					H: M8 x 1					Y	
				C	E	F	G	I	C	E	F	G	I	Flat	Flat with ribs
ZPT20 ^U _C	20	23	14	3	19	25	45	8	3.5	24	15	40	12	4	1.7
ZPT25 ^U _C	25	28													1.8
ZPT32 ^U _C	32	35	14.5		19.5		45.5			24.5		40.5		4.5	2.3

Deep

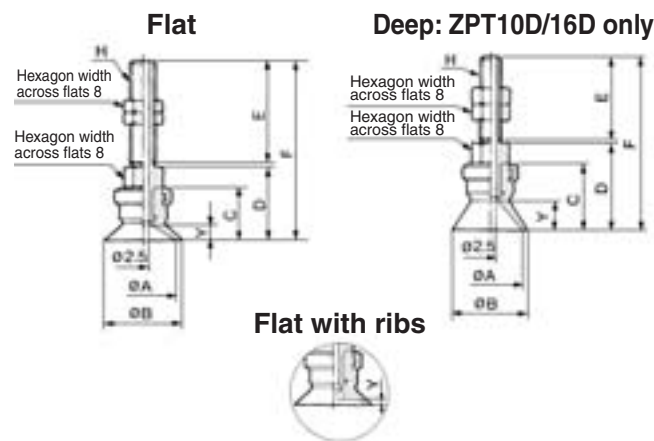
Model	A	B	D	H: M6 x 1					H: M8 x 1					Y
				C	E	F	G	I	C	E	F	G	I	
ZPT25D	25	28	20	3	25	25	51	8	3.5	30	15	46	12	10

Elliptic

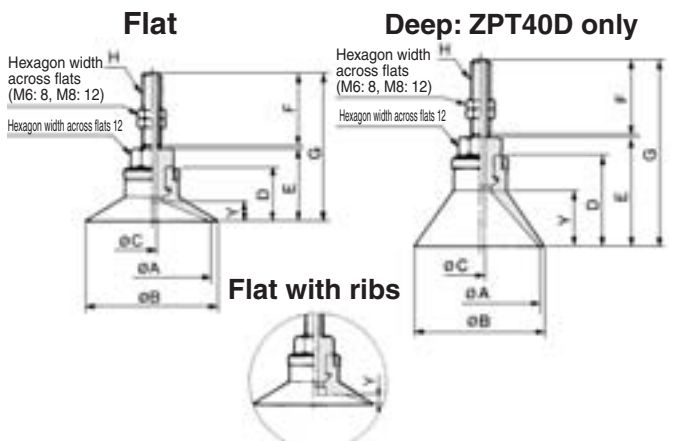
Model	a	b	c	d	e	Y
ZPT2004U	2	4	2.6	4.6	1.2	0.3
ZPT3507U	3.5	7	4.3	7.8	1.8	0.5
ZPT4010U	4	10	5	11	2	0.8

* Dimensions of D, E, G are the same.

Size/ $\phi 10, \phi 13, \phi 16$



Size/ $\phi 40, \phi 50$



Flat/Flat with Ribs

Model	A	B	C	D	H: M5 x 0.8		H: M6 x 1		Y	
					E	F	E	F	Flat	Flat with ribs
ZPT10 ^U _C	10	12	12	17	20	38	25	43	3	1.7
ZPT13 ^U _C	13	15								1.8
ZPT16 ^U _C	16	18	12.5	17.5						38.5

Flat/Flat with Ribs

Model	A	B	D	E	H: M6 x 1			H: M8 x 1			Y	
					C	F	G	C	F	G	Flat	Flat with ribs
ZPT40 ^U _C	40	43	18.5	24.5	3	25	50.5	4.5	15	40.5	6.5	3.3
ZPT50 ^U _C	50	53	19.5	25.5			51.5			41.5	7.5	3.8

Deep

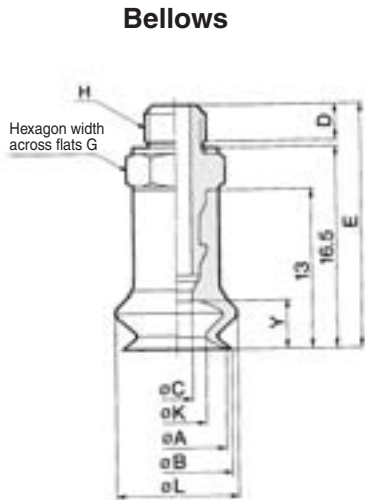
Model	A	B	C	D	H: M5 x 0.8		H: M6 x 1		Y
					E	F	E	F	
ZPT10D	10	12	15	20	20	41	25	46	6
ZPT16D	16	18	16	21	20	42	25	47	7

Deep

Model	A	B	D	E	H: M6 x 1			H: M8 x 1			Y
					C	F	G	C	F	G	
ZPT40D	40	43	29	35.5	3	25	61	4.5	15	51	17

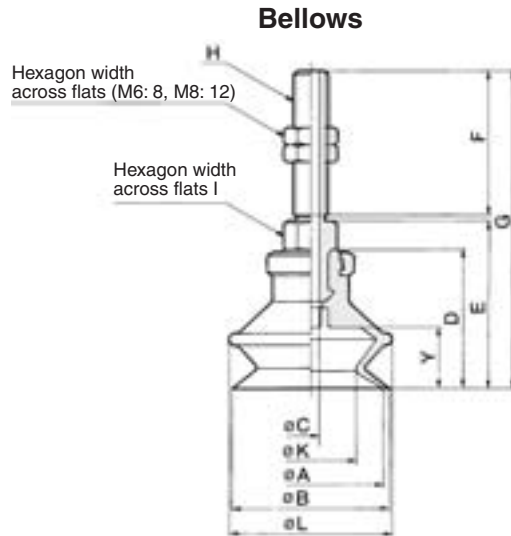
Connection	Male thread	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Use connection for vacuum entry

Size/ø6, ø8



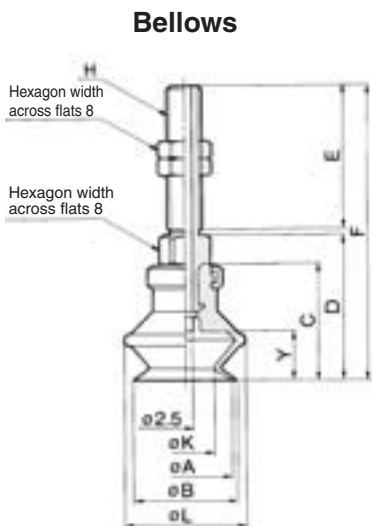
Model	A	B	C	H: M5 x 0.8			H: M6 x 1			K	L	Y
				D	E	G	D	E	G			
ZPT06B	6	7	2.5	3	20	7	4	21	8	3.3	9	4
ZPT08B	8	9		4.7	10							

Size/ø20, ø25, ø32



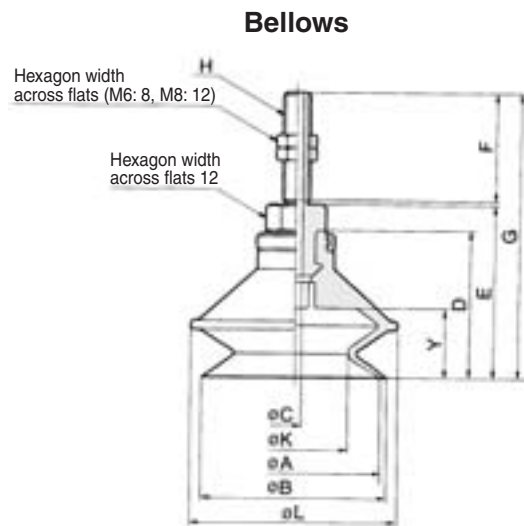
Model	A	B	D	H: M6 x 1					H: M8 x 1					K	L	Y
				C	E	F	G	I	C	E	F	G	I			
ZPT20B	20	22	23.5	3	28.5	25	54.5	8	3.5	33.5	15	49.5	12	12	25	10.5
ZPT25B	25	27	24		29	55	60		39	55	16	28		10.5		
ZPT32B	32	34	29		34	60	39		55	19	37	14				

Size/ø10, ø13, ø16



Model	A	B	C	D	H: M5 x 0.8		H: M6 x 1		K	L	Y
					E	F	E	F			
ZPT10B	10	12	16	21	20	42	47	6	14	5.5	
ZPT13B	13	15	18.5	23.5		44.5	49.5	9	19	7.5	
ZPT16B	16	18	20	25		46	51	10	21	8.5	

Size/ø40, ø50



Model	A	B	D	E	H: M6 x 1			H: M8 x 1			K	L	Y
					C	F	G	C	F	G			
ZPT40B	40	43	34	40	3	25	66	4.5	15	56	24	48	16
ZPT50B	50	53	38	44			70			60	32	57	19

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

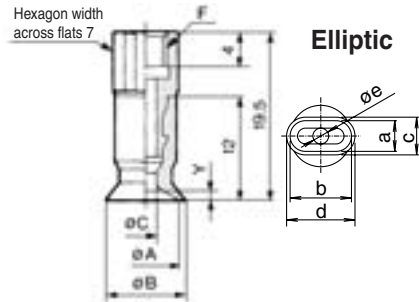
Related Equipment

Series ZPT

Connection	Female thread	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Use connection for vacuum entry

Thin flat/Thin flat with ribs $\phi 10, \phi 13, \phi 16$ /Elliptic 2004, 3507, 4010
 Size/Flat $\phi 2, \phi 4, \phi 6, \phi 8$ Size/ $\phi 20, \phi 25, \phi 32$

Flat/Thin flat/Thin flat with ribs



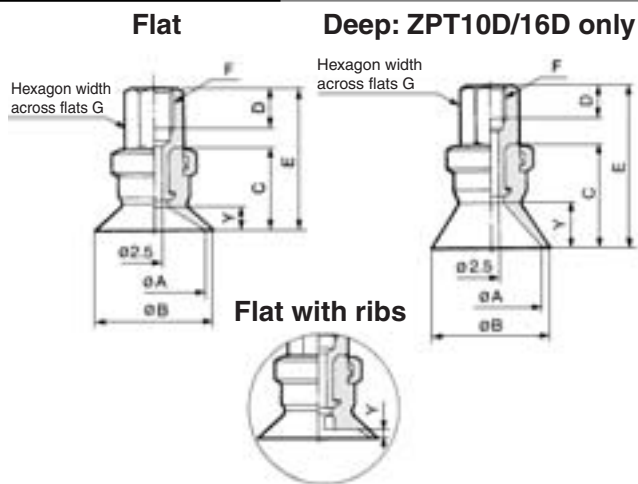
Flat

Model	A	B	C	F	Y
ZPT02U	2	2.6	1.2	M4 x 0.7	0.5
ZPT04U	4	4.8	1.6		0.8
ZPT06U	6	7	2.5		M5 x 0.8
ZPT08U	8	9		1.5	
ZPT10UT	10	11		0.8	
ZPT13UT	13	14	1	M5 x 0.8	1
ZPT16UT	16	17			0.8
ZPT10CT	10	11			1
ZPT13CT	13	14	1	M5 x 0.8	0.8
ZPT16CT	16	17			1

Elliptic

Model	a	b	c	d	e	Y
ZPT2004U	2	4	2.6	4.6	1.2	0.3
ZPT3507U	3.5	7	4.3	7.8	1.8	0.5
ZPT4010U	4	10	5	11	2	0.8

Size/ $\phi 10, \phi 13, \phi 16$



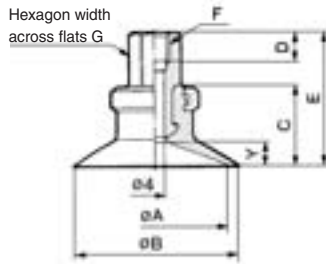
Flat/Flat with Ribs

Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: 1/8 (Rc, NPT, NPTF)		Y
				D	E	G	D	E	G	E	G	
ZPT10 _U C	10	12	12	5	21	8	6	8	12	3	1.7	
ZPT13 _U C	13	15	15								1.8	
ZPT16 _U C	16	18	12.5								21.5	21.5

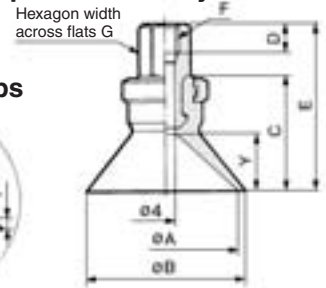
Deep

Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: 1/8 (Rc, NPT, NPTF)		Y
				D	E	G	D	E	G	E	G	
ZPT10D	10	12	15	5	24	8	6	24	8	30	12	6
ZPT16D	16	18	16		25			25		31		

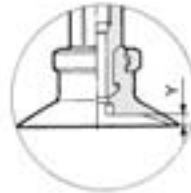
Flat



Deep: ZPT25D only



Flat with ribs



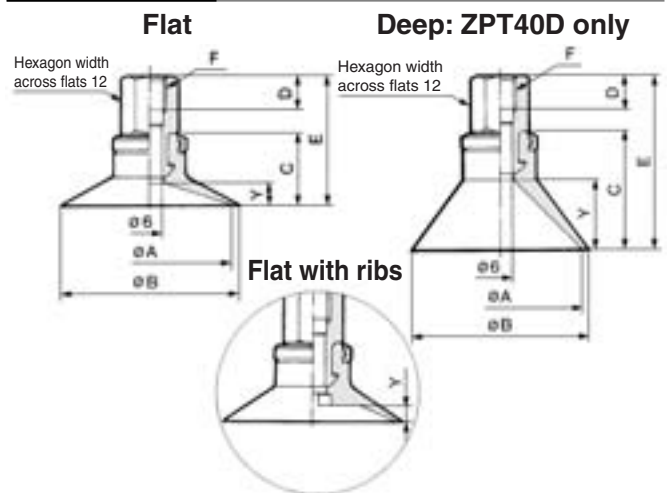
Flat/Flat with Ribs

Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: M8 x 1.25			F: 1/8 (Rc, NPT, NPTF)		Y	
				D	E	G	D	E	G	D	E	G	E	G		Flat
ZPT20 _U C	20	23	14	5	23	8	6	23	8	8	29	12	29	12	4	1.7
ZPT25 _U C	25	28	14.5													23.5
ZPT32 _U C	32	35	14.5	23.5	23.5	29.5	29.5	4.5	2.3							

Deep

Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: M8 x 1.25			F: 1/8 (Rc, NPT, NPTF)		Y
				D	E	G	D	E	G	D	E	G	E	G	
ZPT25D	25	28	20	5	29	8	6	29	8	8	35	12	35	12	10

Size/ $\phi 40, \phi 50$



Flat/Flat with Ribs

Model	A	B	C	F: M6 x 1		F: M8 x 1.25		F: Rc 1/8		Y	
				D	E	D	E	E	Flat		Flat with ribs
ZPT40 _U C	40	43	18.5	6	32	8	32	33	32	6.5	3.3
ZPT50 _U C	50	53	19.5		33		33		7.5		

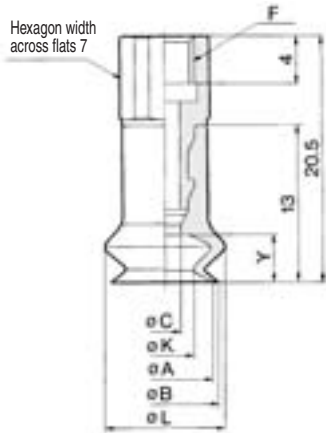
Deep

Model	A	B	C	F: M6 x 1			F: M8 x 1.25		F: 1/8 (Rc, NPT, NPTF)		Y
				D	E	G	D	E	E		
ZPT40D	40	43	29	6	42.5	8	42.5	42.5	17		

Connection	Female thread	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Use connection for vacuum entry

Size/ø6, ø8

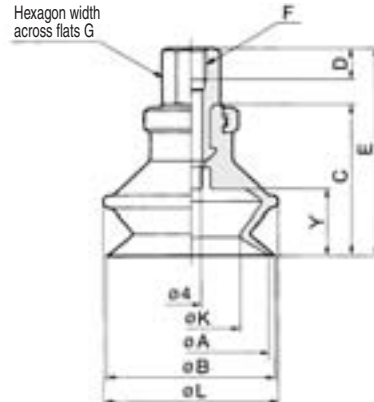
Bellows



Model	A	B	C	F	K	L	Y
ZPT06B	6	7	2.5	M4 x 0.7	3.3	9	4
ZPT08B	8	9		M5 x 0.8	4.7	10	

Size/ø20, ø25, ø32

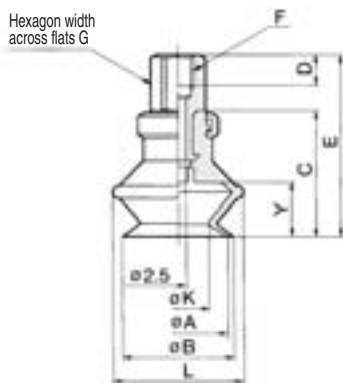
Bellows



Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: M8 x 1.25			F: 1/8 (Rc, NPT, NPTF)			K	L	Y
				D	E	G	D	E	G	D	E	G	E	G				
ZPT20B	20	22	23.5		32.5			32.5			38.5			38.5		12	25	10.5
ZPT25B	25	27	24	5	33	8	6	33	8	8	39	12	39	12	16	28	10.5	
ZPT32B	32	34	29		38			38			44		44		19	37	14	

Size/ø10, ø13, ø16

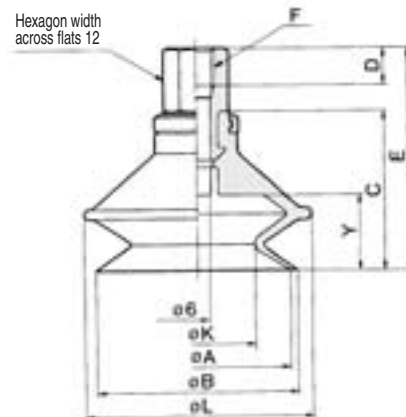
Bellows



Model	A	B	C	F: M5 x 0.8			F: M6 x 1			F: 1/8 (Rc, NPT, NPTF)			K	L	Y	
				D	E	G	D	E	G	E	G					
ZPT10B	10	12	16		25			25			31			6	14	5.5
ZPT13B	13	15	18.5	5	27.5	8	6	27.5	8	33.5	12	33.5	12	9	19	7.5
ZPT16B	16	18	20		29			29			35		35	10	21	8.5

Size/ø40, ø50

Bellows



Model	A	B	C	F: M6 x 1			F: M8 x 1.25			F: 1/8 (Rc, NPT, NPTF)			K	L	Y	
				D	E	G	D	E	G	E	G					
ZPT40B	40	43	34		47.5			47.5			47.5			24	48	16
ZPT50B	50	53	38	6	51.5	8		51.5			51.5		51.5	32	57	19

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment



Vacuum Pad/ Vertical Vacuum Entry With Buffer

Series ZPT



Specifications

Vacuum entry direction		Vertical					
Vacuum entry	Connection	Female thread		Barb fitting	One-touch fitting		
		Applicable tube dia.	ø2 to ø8 Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16)		M3 x 0.5 M5 x 0.8	ø4 Nylon tube ø4 Urethane tube	ø4 tube ø6 tube
			ø10 to ø32		M5 x 0.8	ø6 Nylon tube ø6 Urethane tube	ø4 tube ø6 tube
	ø40 to ø50		M5 x 0.8 1/8 (Rc, NPT, NPTF)	ø6 Nylon tube ø6 Urethane tube	ø6 tube ø8 tube		
Connection	Thread dia.	ø2 to ø8 ø10 to ø32 ø40 to ø50					
		M8 x 1 Male thread M10 x 1 Male thread M14 x 1 Male thread					

Buffer Specifications

Pad dia. (mm)	ø2 to ø8*	ø10 to ø32	ø40, ø50
Stroke (mm)	6, 10, 15, 25	10, 20, 30, 40, 50	10, 20, 30, 50
Spring Reactive Force (N)	0 stroke	0.8	2.0
	Full stroke	1.2	5.0
Non-rotating specification		Rotating (J)/Non-rotating (K)	

* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs and Elliptic.

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows
Pad diameter (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluororubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)			
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluororubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)			

Mass

(g)

Stroke (mm)	Pad form Vacuum entry port Model	Flat/Flat with ribs							Deep					Bellows							
		Female thread		One-touch fitting			Barb fitting	Female thread		One-touch fitting			Barb fitting	Female thread		One-touch fitting			Barb fitting		
		B3	B5	□01	04	06	08	N□U□	B5	□01	04	06	08	N□U□	B3	B5	□01	04	06	08	N□U□
6	ZPT2004 3507 4010 02 to 08 Thin section series 10 to 16	22	24	—	26	27	—	22	—	—	—	—	—	—	22	24	—	26	27	—	22
	ZPT 10 to 16	—	26	—	29	30	—	25	27	—	29	30	—	25	—	27	—	30	31	—	26
10	ZPT 20 to 25	—	29	—	31	33	—	27	30	—	32	33	—	28	—	31	—	34	35	—	30
	ZPT 32	—	57	—	33	34	—	30	—	—	—	—	—	—	36	—	38	39	—	34	
10	ZPT 40	—	129	132	—	133	141	129	131	134	—	134	143	129	—	141	144	—	145	153	140
	ZPT 50	—	135	138	—	139	147	133	—	—	—	—	—	—	—	148	151	—	152	160	147

Mass by Stroke

(g)

Stroke (mm)	10	15	20	25	30	40	50
ZPT2004 3507 4010 ZPT02 to 08 Thin section series 10 to 16	+6	+7	—	+8	—	—	—
ZPT10 to 25	—	—	+11	—	+13	+23	+24
ZPT40, 50	—	—	+38	—	+40	—	+67

How to Order

Series ZPT With buffer

ZPT 16 U GS K 20 - 06 - A10

Pad diameter (mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Mounting thread diameter/ Male thread
(Refer to "Table (3)" for applications.)

Vacuum entry port
(Refer to "Table (3)" for applications.)

Buffer stroke
(Refer to "Table (2)" for applications.)

Buffer type

J	Rotating
K	Non-rotating

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Pad type
(“Table (1)” for applications.)

U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Table (1) Pad Diameter/Pad Type

Type	Diameter (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	—	●	—	●	—	●	—
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

Table (2) Pad Diameter/Stroke

Stroke (mm)	Diameter (mm)																	
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	Thin flat/Thin flat with ribs			10	13	16	20	25	32	40	50
6 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
10 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
15 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
20 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
25 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
30 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
40 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—
50 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●

Table (3) Vacuum Entry/Mounting Thread Diameter

	Symbol	Thread dia./Port size	Diameter		
			ø2 to ø8 2 x 4, 3.5 x 7, 4 x 10 Thin section series ø10 to ø16	ø10 to ø32	ø40, ø50
Vacuum entry	Female thread	B3	M3 x 0.5	●	—
		B5	M5 x 0.8	●	●
		B01	Rc 1/8	—	—
		N01	NPT 1/8	—	●
		T01	NPTF 1/8	—	●
	Barb fitting	N4	ø4 Nylon tube	●	—
		N6	ø6 Nylon tube	—	●
		U4	ø4 Urethane tube	●	—
		U6	ø6 Urethane tube	—	●
		One-touch fitting	04	ø4 tube	●
06	ø6 tube		●	●	
08	ø8 tube		—	●	
Mounting	Male thread	A8	M8 x 1	●	—
		A10	M10 x 1	—	●
		A14	M14 x 1	—	●

Tightening Torque (N·m)

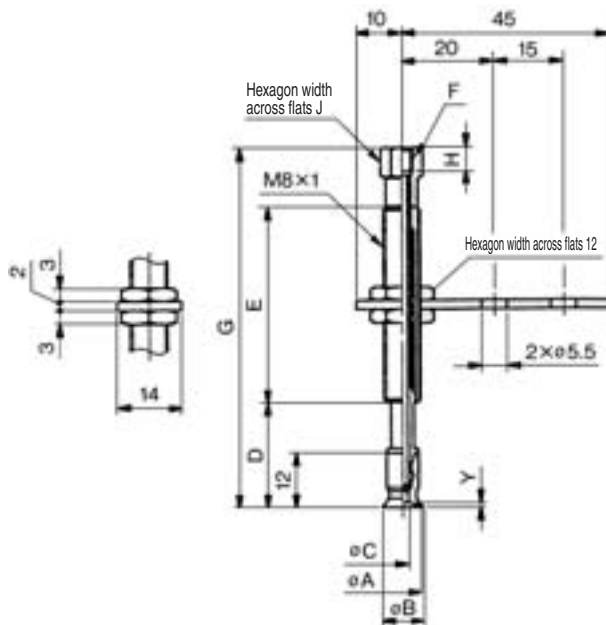
Mounting thread diameter	Torque
M8 x 1	2.0 ±0.5
M10 x 1	3.0 ±0.5
M14 x 1	7.0 ±0.5

ZA
ZX
ZR
ZM
ZMA
ZQ
ZH
ZU
ZL
ZY□
ZF□
ZP□
SP
ZCUK
AMJ
AMV
AEP
HEP
Related Equipment

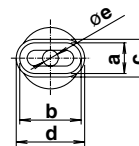
Series ZPT

Connection	Female thread (Buffer)	Pad Form	Flat/Thin flat/Thin flat with ribs/Elliptic
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/ø2, ø4, ø6, ø8, Thin flat/Thin flat with ribs/ø10, ø13, ø16, Elliptic/2004, 3507, 4010



Elliptic



Flat

Model	A	B	C	Y
ZPT02U□□□□□-B□-A8	2	2.6	1.2	0.5
ZPT04U□□□□□-B□-A8	4	4.8	1.6	0.8
ZPT06U□□□□□-B□-A8	6	7	2.5	
ZPT08U□□□□□-B□-A8	8	9		1

Elliptic

Model	a	b	c	d	e	Y
ZPT2004U	2	4	2.6	4.6	1.2	0.3
ZPT3507U	3.5	7	4.3	7.8	1.8	0.5
ZPT4010U	4	10	5	11	2	0.8

Thin Flat/Thin Flat with Ribs

Model	A	B	C	Y
ZPT10UT	10	11	2.5	1
ZPT13UT	13	14		1.5
ZPT16UT	16	17		0.8
ZPT10CT	10	11		1
ZPT13CT	13	14		
ZPT16CT	16	17		

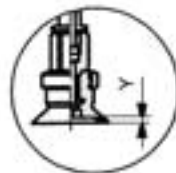
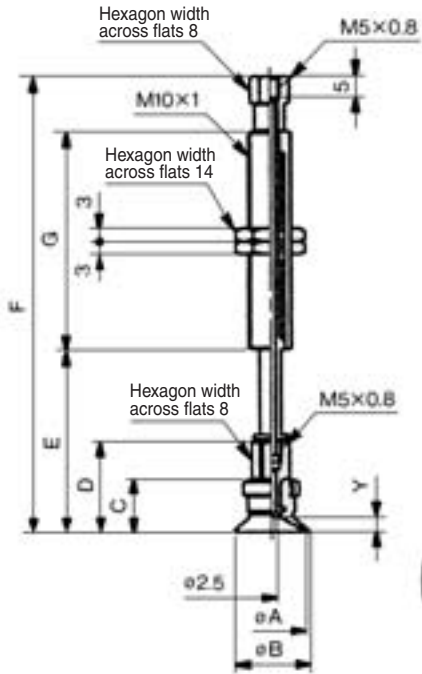
Dimensions by Stroke

Model	D	E	F: M3 x 0.5			F: M5 x 0.8		
			G	H	J	G	H	J
ZPT□□□□□6-B□-A8	18	15	44	3	6	46	5	8
ZPT□□□□□10-B□-A8	23	43	77			79		
ZPT□□□□□15-B□-A8	28		82			84		
ZPT□□□□□25-B□-A8	38		92			94		

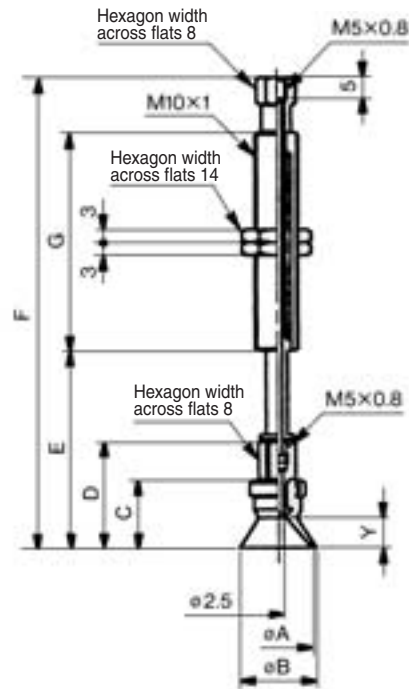
Connection	Female thread (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø10, ø13, ø16

Deep/ø10, ø16



Flat with ribs



ø10, ø13, ø16

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT10 ^U _C □□□□□-B5-A10	10	12	12	21	3	1.7
ZPT13 ^U _C □□□□□-B5-A10	13	15				1.8
ZPT16 ^U _C □□□□□-B5-A10	16	18	12.5	21.5	3.5	1.2

Dimensions by Stroke

Model	ø10, ø13		ø16		G
	E	F	E	F	
ZPT□□ ^U _C □□□□□10-B5-A10	32.5	68.5	33	69	23
ZPT□□ ^U _C □□□□□20-B5-A10	42.5	106.5	43	107	51
ZPT□□ ^U _C □□□□□30-B5-A10	52.5	116.5	53	117	
ZPT□□ ^U _C □□□□□40-B5-A10	62.5	152.5	63	153	77
ZPT□□ ^U _C □□□□□50-B5-A10	72.5	162.5	73	163	

ø10, ø16

Deep

Model	A	B	C	D	Y
ZPT10D□□□□□-B5-A10	10	12	15	24	6
ZPT16D□□□□□-B5-A10	16	18	16	25	7

Dimensions by Stroke

Model	ø10		ø16		G
	E	F	E	F	
ZPT□□D□□□□10-B5-A10	35.5	71.5	36.5	72.5	23
ZPT□□D□□□□20-B5-A10	45.5	109.5	46.5	110.5	51
ZPT□□D□□□□30-B5-A10	55.5	119.5	56.5	120.5	
ZPT□□D□□□□40-B5-A10	65.5	155.5	66.5	156.5	77
ZPT□□D□□□□50-B5-A10	75.5	165.5	76.5	166.5	

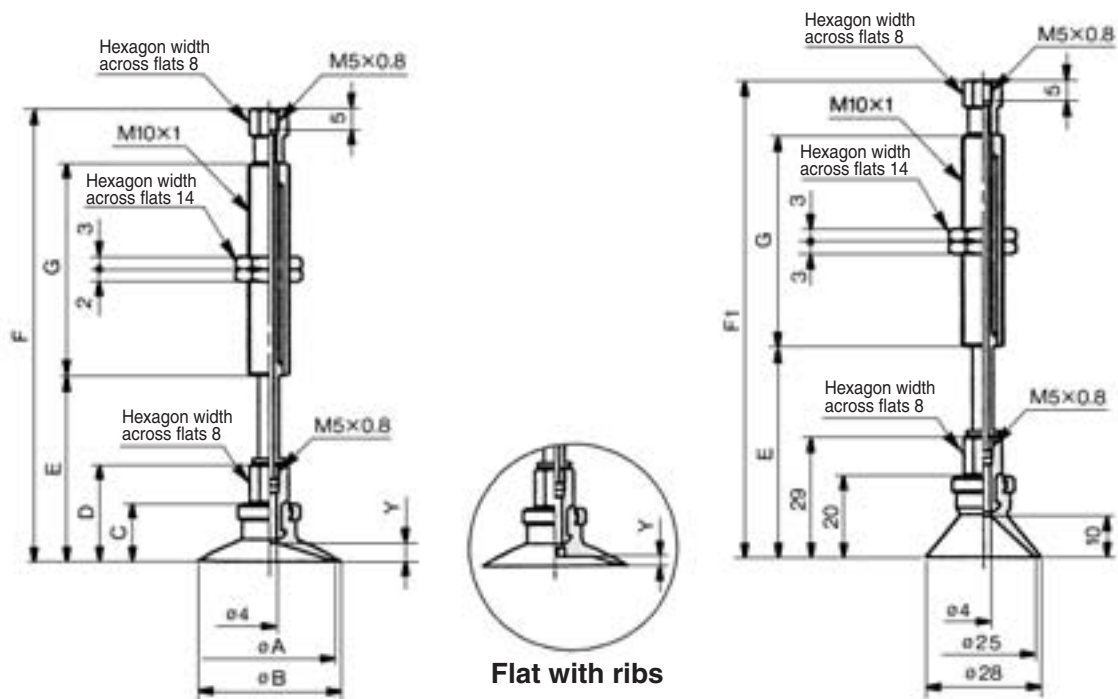
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

Series ZPT

Connection	Female thread (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø20, ø25, ø32

Deep/ø25



ø20, ø25, ø32

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT20 ^U _C □□□□□-B5-A10	20	23	14	23	4	1.7
ZPT25 ^U _C □□□□□-B5-A10	25	28				1.8
ZPT32 ^U _C □□□□□-B5-A10	32	35	14.5	23.5	4.5	2.3

Dimensions by Stroke

Model	ø20, ø25		ø32		G
	E	F	E	F	
ZPT□□ ^U _C □□□□□10-B5-A10	34.5	70.5	35	71	23
ZPT□□ ^U _C □□□□□20-B5-A10	44.5	108.5	45	109	51
ZPT□□ ^U _C □□□□□30-B5-A10	54.5	118.5	55	119	
ZPT□□ ^U _C □□□□□40-B5-A10	64.5	154.5	65	155	77
ZPT□□ ^U _C □□□□□50-B5-A10	74.5	164.5	75	165	

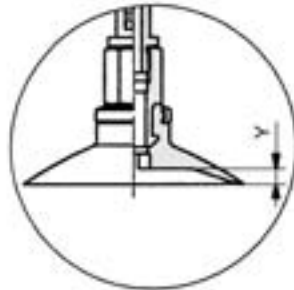
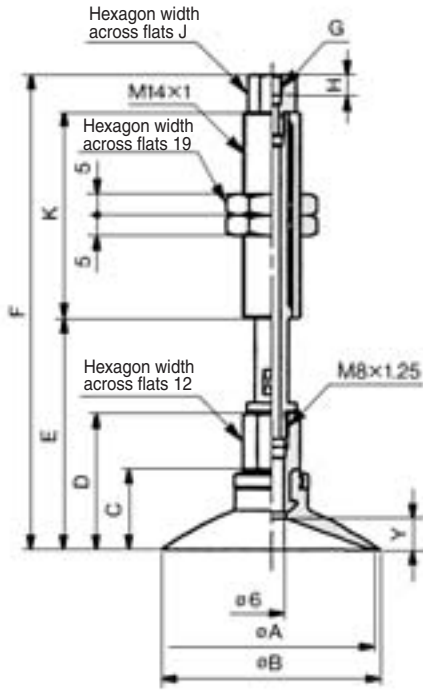
ø25

Deep

Model	E	F	G
ZPT25D□□□□10-B5-A10	40.5	76.5	23
ZPT25D□□□□20-B5-A10	50.5	114.5	51
ZPT25D□□□□30-B5-A10	60.5	124.5	
ZPT25D□□□□40-B5-A10	70.5	160.5	77
ZPT25D□□□□50-B5-A10	80.5	170.5	

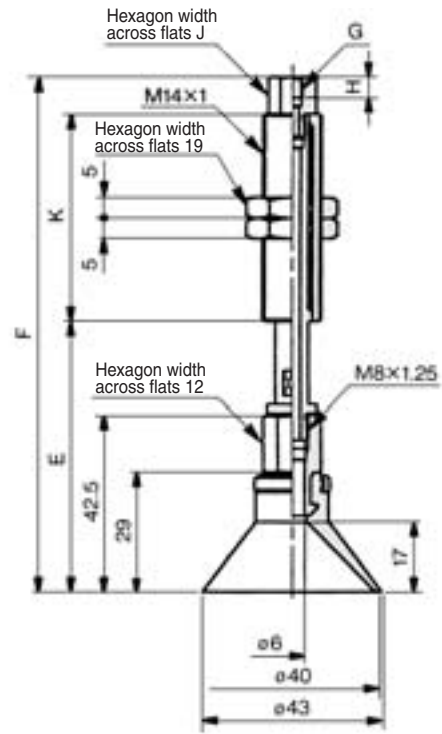
Connection	Female thread (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø40, ø50



Flat with ribs

Deep/ø40



ø40, ø50
Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT40U□□□□□□□□□□-A14	40	43	18.5	32	6.5	3.3
ZPT50U□□□□□□□□□□-A14	50	53	19.5	33	7.5	3.8

Dimensions by Stroke

Model	E		G: M5 x 0.8				G: 1/8 (Rc, NPT, NPTF)		K	
	ø40	ø50	F		H	J	J			
			ø40	ø50			ø40	ø50		
ZPT□□U□□□□□10-□□□□-A14	44.5	45.5	109.5	110.5	5	10	111	112	13	50
ZPT□□U□□□□□20-□□□□-A14	54.5	55.5	113.5	114.5			116.5	117.5		
ZPT□□U□□□□□30-□□□□-A14	64.5	65.5	123.5	124.5			126.5	127.5		
ZPT□□U□□□□□50-□□□□-A14	84.5	85.5	168.5	169.5			171.5	172.5		

ø40
Deep

Model	E	G: M5 x 0.8			G: 1/8 (Rc, NPT, NPTF)		K
		F	H	J	F	J	
					5	10	
ZPT40D□□□□10-□□□□-A14	55	120	5	10	121.5	13	50
ZPT40D□□□□20-□□□□-A14	65	124			127		
ZPT40D□□□□30-□□□□-A14	75	134			137		
ZPT40D□□□□50-□□□□-A14	95	179			182		

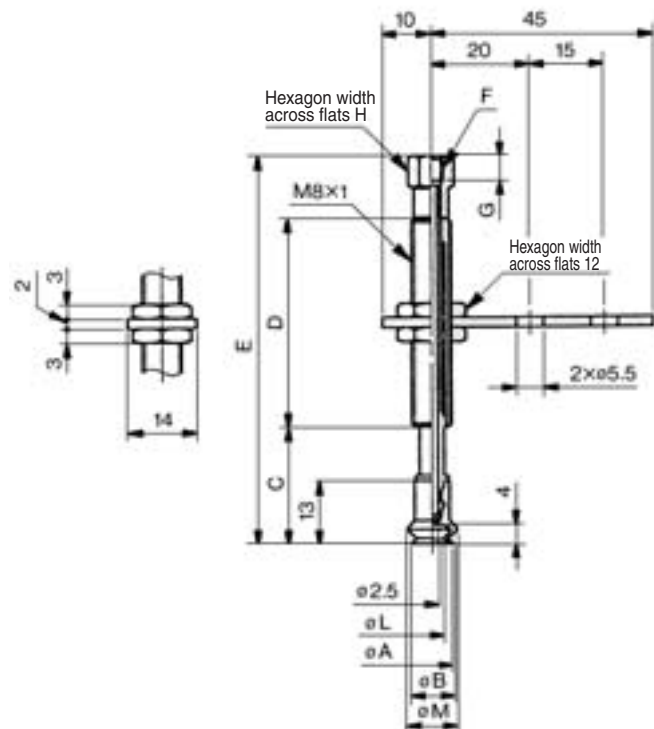
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Series ZPT

Connection	Female thread (Buffer)	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Buffer body

Bellows/ø6, ø8



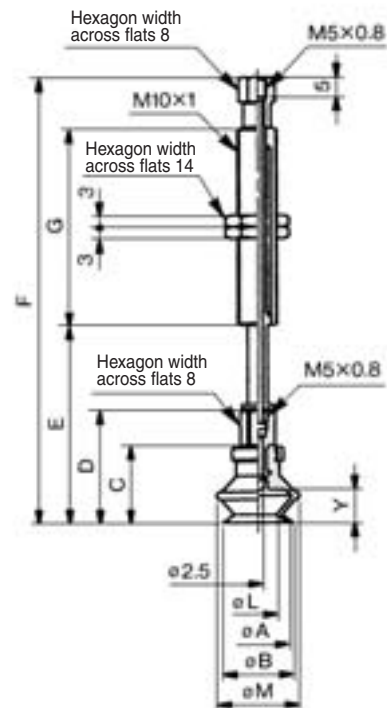
ø6, ø8 Bellows

Model	A	B	L	M
ZPT06B□□□□□-B□-A8	6	7	3.3	9
ZPT08B□□□□□-B□-A8	8	9	4.7	10

Dimensions by Stroke

Model	C	D	F: M3 x 0.5			F: M5 x 0.8		
			E	G	H	E	G	H
ZPT□□B□□□□ 6-B□-A8	19	15	45			47		
ZPT□□B□□□□ 10-B□-A8	24	43	78	3	6	80	5	8
ZPT□□B□□□□ 15-B□-A8	29		83			85		
ZPT□□B□□□□ 25-B□-A8	39		93			95		

Bellows/ø10, ø13, ø16



ø10, ø13, ø16 Bellows

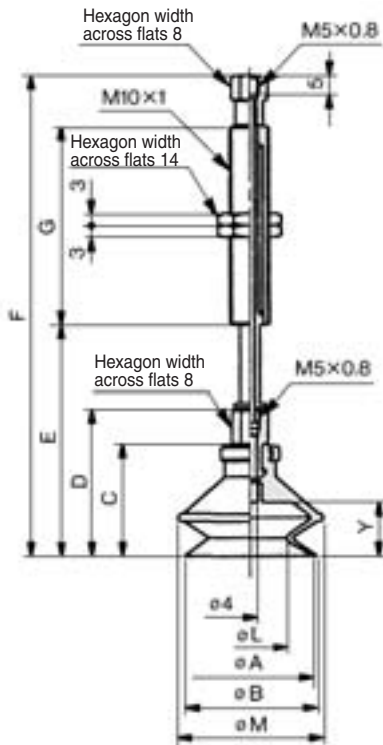
Model	A	B	C	D	L	M	Y
ZPT10B□□□□□-B5-A10	10	12	16	25	6	14	5.5
ZPT13B□□□□□-B5-A10	13	15	18.5	27.5	9	19	7.5
ZPT16B□□□□□-B5-A10	16	18	20	29	10	21	8.5

Dimensions by Stroke

Model	ø10		ø13		ø16		G
	E	F	E	F	E	F	
ZPT□□B□□□□ 10-B5-A10	36.5	72.5	39	75	40.5	76.5	23
ZPT□□B□□□□ 20-B5-A10	46.5	110.5	49	113	50.5	114.5	51
ZPT□□B□□□□ 30-B5-A10	56.5	120.5	59	123	60.5	124.5	
ZPT□□B□□□□ 40-B5-A10	66.5	158.5	69	159	70.5	160.5	77
ZPT□□B□□□□ 50-B5-A10	76.5	166.5	79	169	80.5	170.5	

Connection	Female thread (Buffer)	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Buffer body

Bellows/ø20, ø25, ø32



ø20, ø25, ø32

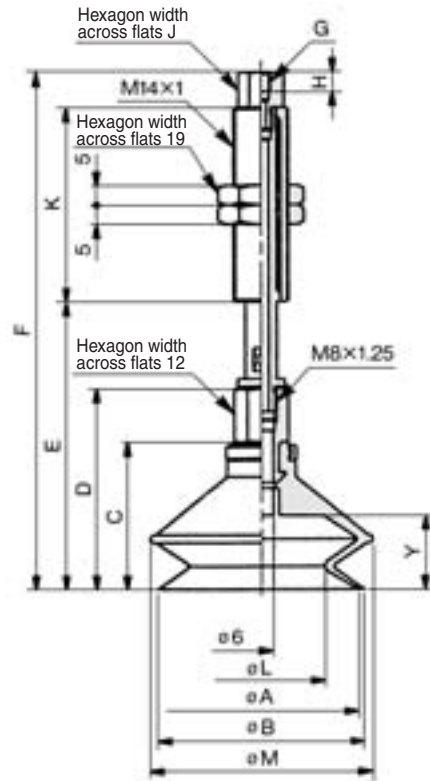
Bellows

Model	A	B	C	D	L	M	Y
ZPT□□□□□□□□-B5-A10	20	22	23.5	32.5	12	25	10.5
ZPT25B□□□□□□□□-B5-A10	25	27	24	33	16	28	
ZPT32B□□□□□□□□-B5-A10	32	34	29	38	19	37	

Dimensions by Stroke

Model	ø20		ø25		ø32		G
	E	F	E	F	E	F	
ZPT□□B□□□□□10-B5-A10	44	80	44.5	80.5	49.5	85.5	23
ZPT□□B□□□□□20-B5-A10	54	118	54.5	118.5	59.5	123.5	51
ZPT□□B□□□□□30-B5-A10	64	128	64.5	128.5	69.5	133.5	
ZPT□□B□□□□□40-B5-A10	74	164	74.5	164.5	79.5	169.5	77
ZPT□□B□□□□□50-B5-A10	84	174	84.5	174.5	89.5	179.5	

Bellows/ø40, ø50



ø40, ø50

Bellows

Model	A	B	C	D	L	M	Y
ZPT40B□□□□□□□□-□□□□-A14	40	43	34	47.5	24	48	16
ZPT50B□□□□□□□□-□□□□-A14	50	53	38	51.5	32	57	19

Dimensions by Stroke

Model	E		G: M5 x 0.8				G: 1/8 (Rc, NPT, NPTF)				K
	ø40	ø50	F		H	J	F		J		
			ø40	ø50			ø40	ø50			
ZPT□□B□□□□□10-□□□□-A14	60	64	125	129	5	10	126.5	130.5	13	50	
ZPT□□B□□□□□20-□□□□-A14	70	74	129	133			132	136			
ZPT□□B□□□□□30-□□□□-A14	80	84	139	143			142	146			
ZPT□□B□□□□□50-□□□□-A14	100	104	184	188			187	191		75	

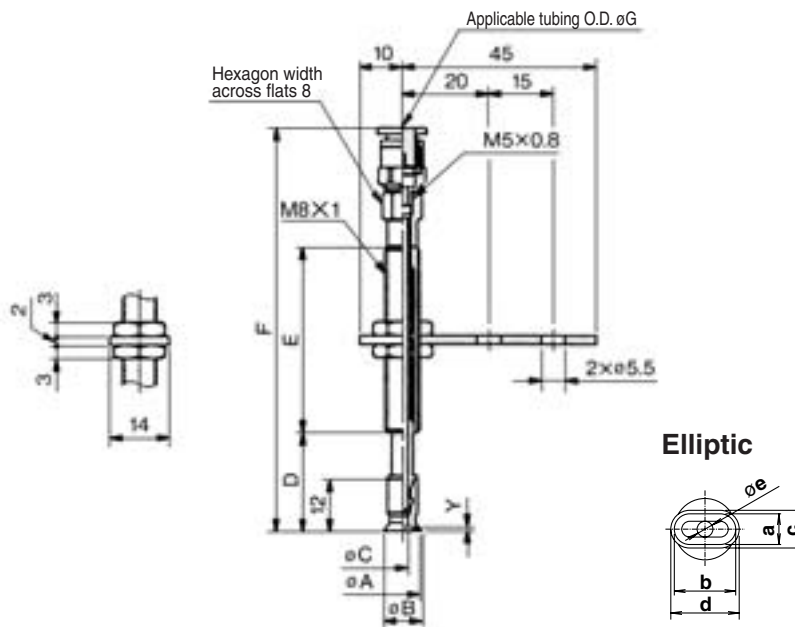
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Series ZPT

Connection	One-touch fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep/Thin flat Thin flat with ribs/Elliptic
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/ø2, ø4, ø6, ø8, Thin flat/Flat with ribs/ø10, ø13, ø16, Elliptic/2004, 3507, 4010



Flat

Model	A	B	C	Y
ZPT02U□□□□□□-0□-A8	2	2.6	1.2	0.5
ZPT04U□□□□□□-0□-A8	4	4.8	1.6	0.8
ZPT06U□□□□□□-0□-A8	6	7	2.5	
ZPT08U□□□□□□-0□-A8	8	9		1

Dimensions by Stroke

Model	D	E	F	
			G: 4	G: 6
ZPT□□□□□□ 6-0□-A8	18	15	60	61
ZPT□□□□□□ 10-0□-A8	23	43	93	94
ZPT□□□□□□ 15-0□-A8	28		98	99
ZPT□□□□□□ 25-0□-A8	38		108	109

Elliptic

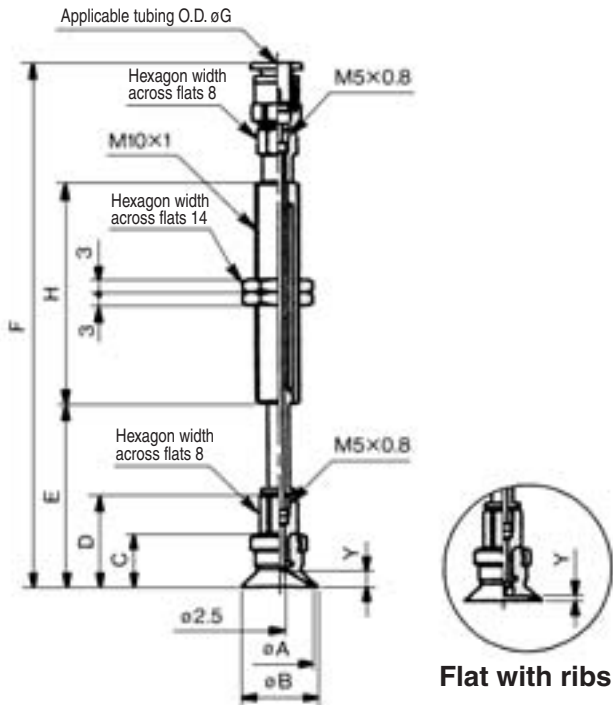
Model	a	b	c	d	øe	Y
ZPT2004U	2	4	2.6	4.6	1.2	0.3
ZPT3507U	3.5	7	4.3	7.8	1.8	0.5
ZPT4010U	4	10	5	11	2	0.8

Thin Flat/Thin Flat with Ribs

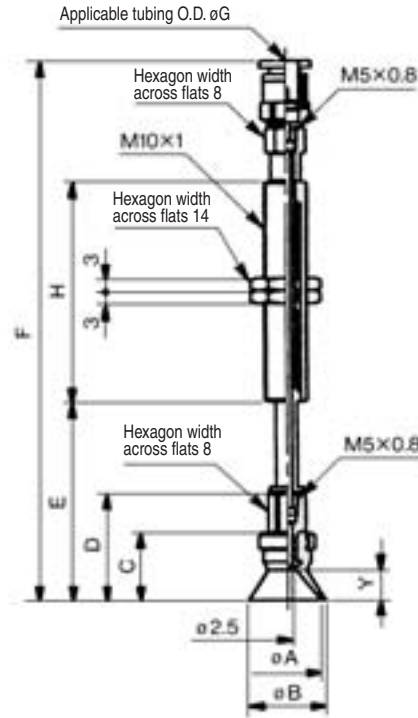
Model	A	B	C	Y
ZPT10UT	10	11	2.5	1
ZPT13UT	13	14		1.5
ZPT16UT	16	17		0.8
ZPT10CT	10	11		1
ZPT13CT	13	14		
ZPT16CT	16	17		

Connection	One-touch fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø10, ø13, ø16



Deep/ø10, ø16



ø10, ø13, ø16

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT10 ^U _C □□□□□-0□-A10	10	12	12	21	3	1.7
ZPT13 ^U _C □□□□□-0□-A10	13	15	12	21	3	1.8
ZPT16 ^U _C □□□□□-0□-A10	16	18	12.5	21.5	3.5	1.2

Dimensions by Stroke

Model	ø10, ø13			ø16			H
	E	F		E	F		
		G: 4	G: 6		G: 4	G: 6	
ZPT□□ ^U _C □□□□10-0□-A10	32.5	82.5	83.5	33	83	84	23
ZPT□□ ^U _C □□□□20-0□-A10	42.5	120.5	121.5	43	121	122	51
ZPT□□ ^U _C □□□□30-0□-A10	52.5	130.5	131.5	53	131	132	51
ZPT□□ ^U _C □□□□40-0□-A10	62.5	166.5	167.5	63	167	168	77
ZPT□□ ^U _C □□□□50-0□-A10	72.5	176.5	177.5	73	177	178	77

ø10, ø16

Deep

Model	A	B	C	D	Y
ZPT10D□□□□□-0□-A10	10	12	15	24	6
ZPT16D□□□□□-0□-A10	16	18	16	25	7

Dimensions by Stroke

Model	ø10			ø16			H
	E	F		E	F		
		G: 4	G: 6		G: 4	G: 6	
ZPT□□D□□□□10-0□-A10	35.5	85.5	86.5	36.5	86.5	87.5	23
ZPT□□D□□□□20-0□-A10	45.5	123.5	124.5	46.5	124.5	125.5	51
ZPT□□D□□□□30-0□-A10	55.5	133.5	134.5	56.5	134.5	135.5	51
ZPT□□D□□□□40-0□-A10	65.5	169.5	170.5	66.5	170.5	171.5	77
ZPT□□D□□□□50-0□-A10	75.5	179.5	180.5	76.5	180.5	181.5	77

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

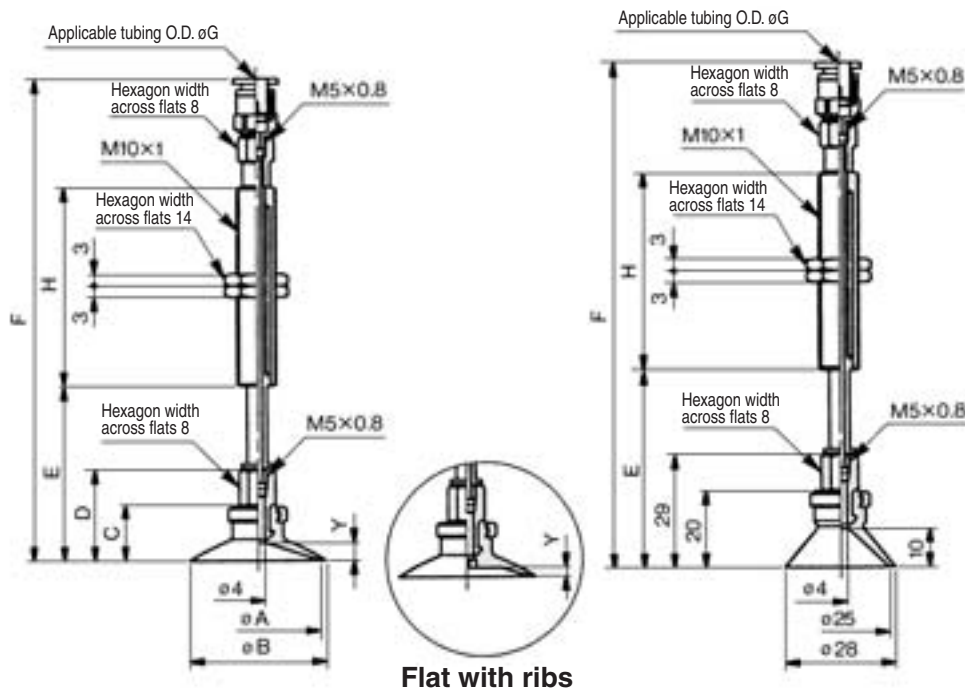
Related Equipment

Series ZPT

Connection	One-touch fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø20, ø25, ø32

Deep/ø25



ø20, ø25, ø32

Flat Type/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT20 _U □□□□□-0□-A10	20	23	14	23	4	1.7
ZPT25 _U □□□□□-0□-A10	25	28	14	23	4	1.8
ZPT32 _U □□□□□-0□-A10	32	35	14.5	23.5	4.5	2.3

Dimensions by Stroke

Model	ø20, ø25			ø32			H
	E	F		E	F		
		G: 4	G: 6		G: 4	G: 6	
ZPT□□ _U □□□□□10-0□-A10	34.5	84.5	85.5	35	85	86	23
ZPT□□ _U □□□□□20-0□-A10	44.5	122.5	123.5	45	123	124	51
ZPT□□ _U □□□□□30-0□-A10	54.5	132.5	133.5	55	133	134	77
ZPT□□ _U □□□□□40-0□-A10	64.5	168.5	169.5	65	169	170	
ZPT□□ _U □□□□□50-0□-A10	74.5	178.5	179.5	75	179	180	

ø25

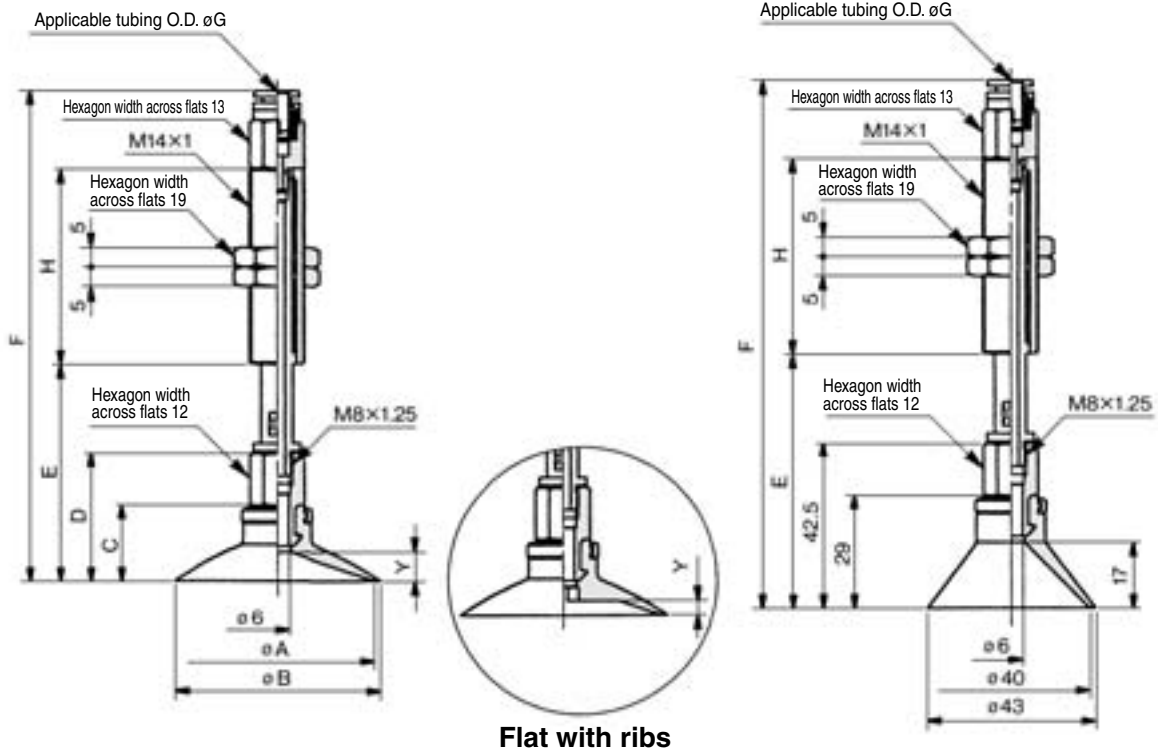
Deep

Model	E	F		H
		G: 4	G: 6	
ZPT25D□□□□10-0□-A10	40.5	90.5	91.5	23
ZPT25D□□□□20-0□-A10	50.5	128.5	129.5	51
ZPT25D□□□□30-0□-A10	60.5	138.5	139.5	
ZPT25D□□□□40-0□-A10	70.5	174.5	175.5	77
ZPT25D□□□□50-0□-A10	80.5	184.5	185.5	

Connection	One-touch fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø40, ø50

Deep/ø40



Flat with ribs

ø40, ø50

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT40 _C □□□□□-0□-A14	40	43	18.5	32	6.5	3.3
ZPT50 _C □□□□□-0□-A14	50	53	19.5	33	7.5	3.8

Dimensions by Stroke

Model	ø40			ø50			H
	E	F		E	F		
		G: 6	G: 8		G: 6	G: 8	
ZPT□□ _C □□□□10-0□-A14	44.5	129.5	135	45.5	130.5	136	50
ZPT□□ _C □□□□20-0□-A14	54.5	124.4	129.4	55.5	125.4	130.4	
ZPT□□ _C □□□□30-0□-A14	64.5	134.4	139.4	65.5	135.4	140.4	
ZPT□□ _C □□□□50-0□-A14	84.5	179.4	184.4	85.5	180.4	185.4	

ø40

Deep

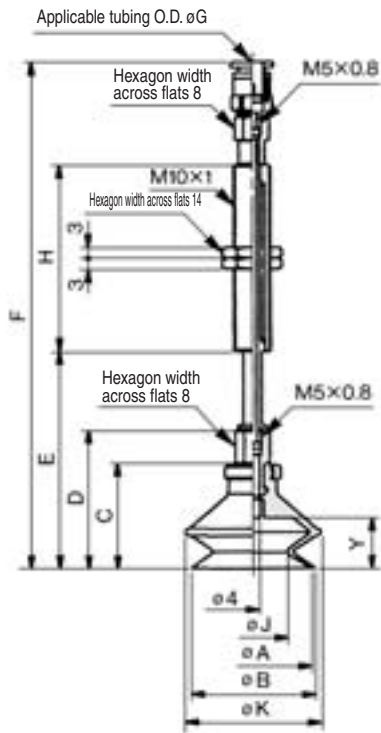
Model	E	F		H
		G: 6	G: 8	
ZPT40D□□□□10-0□-A14	55	140	145.5	50
ZPT40D□□□□20-0□-A14	65	134.9	139.9	
ZPT40D□□□□30-0□-A14	75	144.9	149.9	
ZPT40D□□□□50-0□-A14	95	189.9	194.9	

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Connection	One-touch fitting (Buffer)	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Buffer body

Bellows/ø20, ø25, ø32



ø20, ø25, ø32

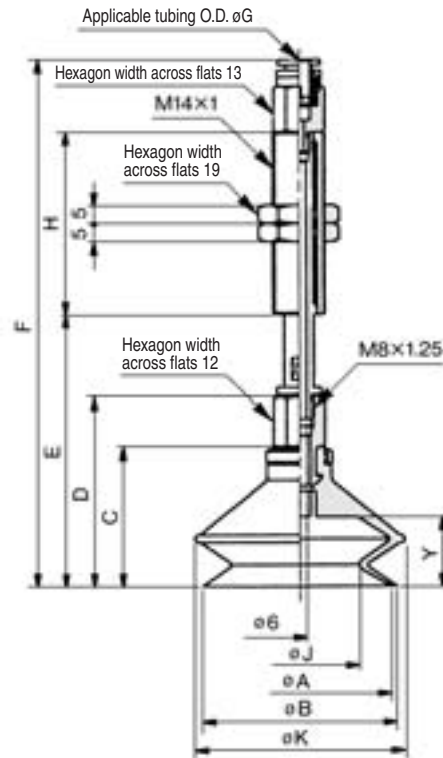
Bellows

Model	A	B	C	D	J	K	Y
ZPT20B□□□□□-0□-A10	20	22	23.5	32.5	12	25	10.5
ZPT25B□□□□□-0□-A10	25	27	24	33	16	28	
ZPT32B□□□□□-0□-A10	32	34	29	38	19	37	

Dimensions by Stroke

Model	ø20		ø25		ø32		H
	E	F	E	F	E	F	
		G: 4 G: 6		G: 4 G: 6		G: 4 G: 6	
ZPT□□B□□□□10-0□-A10	44	94 95	44.5 94.5	95.5	49.5	99.5 100.5	23
ZPT□□B□□□□20-0□-A10	54	132 133	54.5 132.5	133.5	59.5	137.5 138.5	51
ZPT□□B□□□□30-0□-A10	64	142 143	64.5 142.5	143.5	69.5	147.5 148.5	
ZPT□□B□□□□40-0□-A10	74	178 179	74.5 178.5	179.5	79.5	183.5 184.5	77
ZPT□□B□□□□50-0□-A10	84	188 189	84.5 188.5	189.5	89.5	193.5 194.5	

Bellows/ø40, ø50



ø40, ø50

Bellows

Model	A	B	C	D	J	K	Y
ZPT40B□□□□□-0□-A14	40	43	34	47.5	24	48	16
ZPT50B□□□□□-0□-A14	50	53	38	51.5	32	57	19

Dimensions by Stroke

Model	ø40		ø50		H
	E	F	E	F	
		G: 6 G: 8		G: 6 G: 8	
ZPT□□B□□□□10-0□-A14	60	145 150.5	64	149 154.5	50
ZPT□□B□□□□20-0□-A14	70	139.9 144.9	74	143.9 148.9	
ZPT□□B□□□□30-0□-A14	80	149.9 154.9	84	153.9 158.9	
ZPT□□B□□□□50-0□-A14	100	194.9 199.9	104	198.9 203.9	

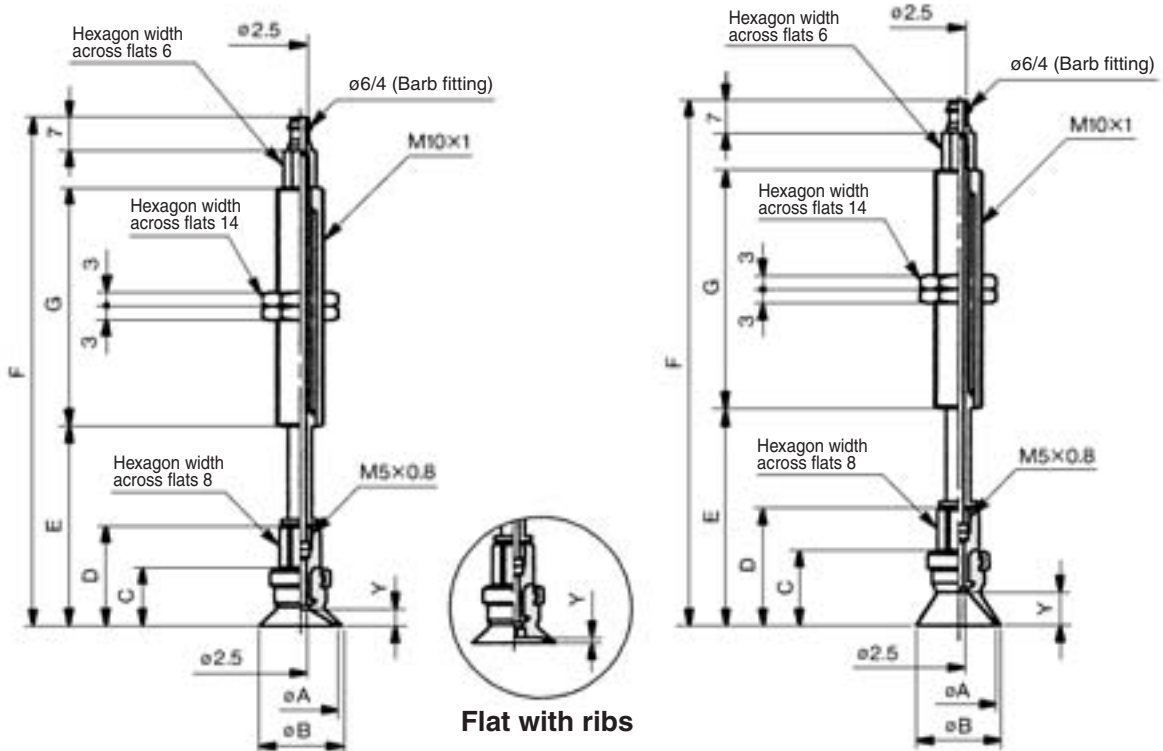
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Connection	Barb fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø10, ø13, ø16

Deep/ø10, ø16



ø10, ø13, ø16

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT10 _C □□□□□□□□□□6-A10	10	12	12	21	3	1.7
ZPT13 _C □□□□□□□□□□6-A10	13	15				1.8
ZPT16 _C □□□□□□□□□□6-A10	16	18	12.5	21.5	3.5	1.2

Dimensions by Stroke

Model	ø10, ø13		ø16		G
	E	F	E	F	
ZPT□□ _C □□□□□□□□10-□6-A10	32.5	70.5	33	71	23
ZPT□□ _C □□□□□□□□20-□6-A10	42.5	108.5	43	109	
ZPT□□ _C □□□□□□□□30-□6-A10	52.5	118.5	53	119	
ZPT□□ _C □□□□□□□□40-□6-A10	62.5	154.5	63	155	51
ZPT□□ _C □□□□□□□□50-□6-A10	72.5	164.5	73	165	
					77

ø10, ø16

Deep

Model	A	B	C	D	Y
ZPT10D□□□□□□□□□□6-A10	10	12	15	24	6
ZPT16D□□□□□□□□□□6-A10	16	18	16	25	7

Dimensions by Stroke

Model	ø10		ø16		G
	E	F	E	F	
ZPT□□D□□□□□□□□10-□6-A10	35.5	73.5	36.5	74.5	23
ZPT□□D□□□□□□□□20-□6-A10	45.5	111.5	46.5	112.5	
ZPT□□D□□□□□□□□30-□6-A10	55.5	121.5	56.5	122.5	51
ZPT□□D□□□□□□□□40-□6-A10	65.5	157.7	66.5	158.5	
ZPT□□D□□□□□□□□50-□6-A10	75.5	167.5	76.5	168.5	77

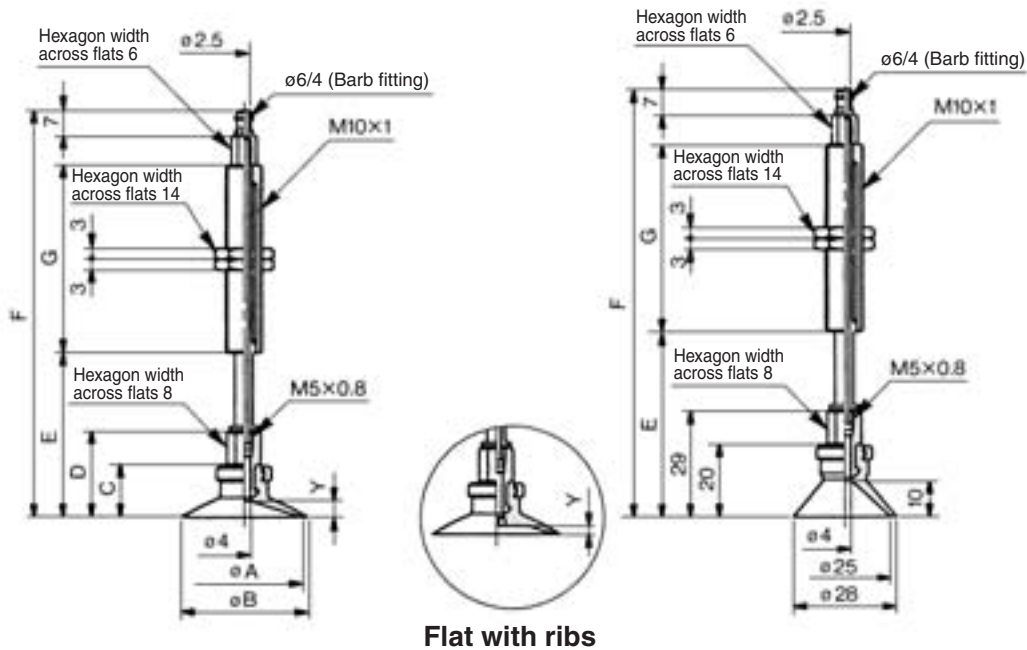
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

Series ZPT

Connection	Barb fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/ø20, ø25, ø32

Deep/ø25



Flat with ribs

ø20, ø25, ø32

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT20 _C □□□□□□□□□□6-A10	20	23	14	23	4	1.7
ZPT25 _C □□□□□□□□□□6-A10	25	28				1.8
ZPT32 _C □□□□□□□□□□6-A10	32	35	14.5	23.5	4.5	2.3

Dimensions by Stroke

Model	ø20, ø25		ø32		G
	E	F	E	F	
ZPT□□ _C □□□□□□□□□□10-□□6-A10	34.5	72.5	35	73	23
ZPT□□ _C □□□□□□□□□□20-□□6-A10	44.5	110.5	45	111	51
ZPT□□ _C □□□□□□□□□□30-□□6-A10	54.5	120.5	55	121	
ZPT□□ _C □□□□□□□□□□40-□□6-A10	64.5	156.5	65	157	77
ZPT□□ _C □□□□□□□□□□50-□□6-A10	74.5	166.5	75	167	

ø25

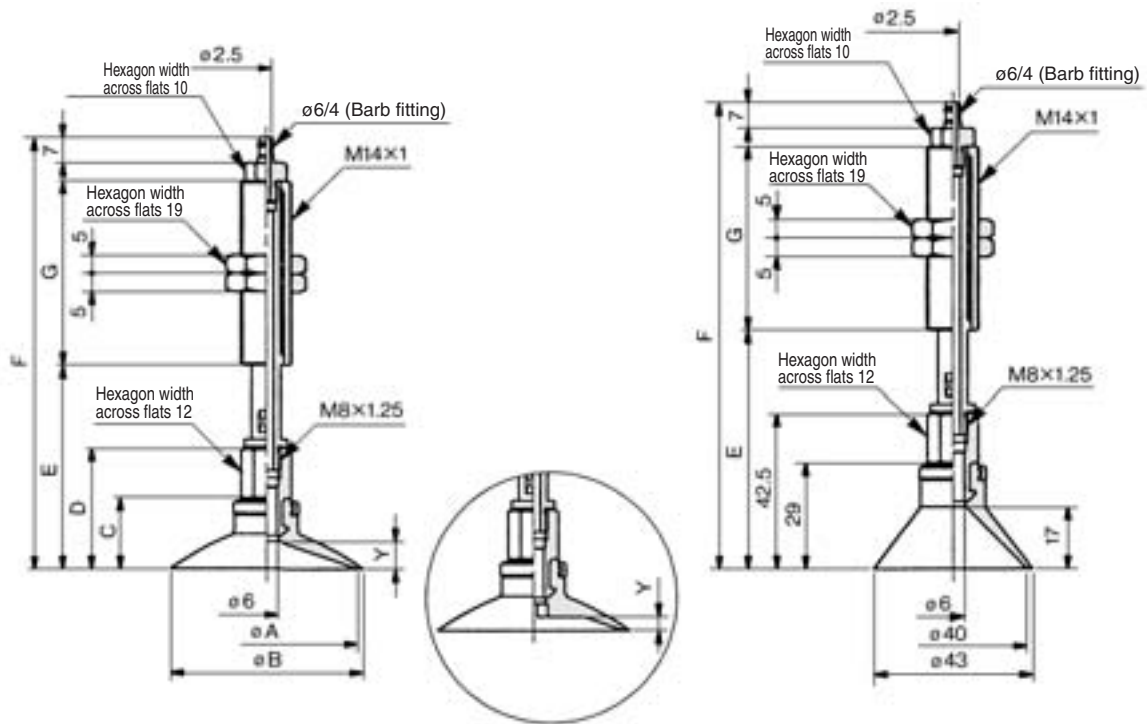
Deep

Model	E	F	G
ZPT25D□□□□□□□□□□10-□□6-A10	40.5	78.5	23
ZPT25D□□□□□□□□□□20-□□6-A10	50.5	116.5	51
ZPT25D□□□□□□□□□□30-□□6-A10	60.5	126.5	
ZPT25D□□□□□□□□□□40-□□6-A10	70.5	162.5	77
ZPT25D□□□□□□□□□□50-□□6-A10	80.5	172.5	

Connection	Barb fitting (Buffer)	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Vertical	Mounting	Buffer body

Flat/Flat with ribs/∅40, ∅50

Deep/∅40



Flat with ribs

∅40, ∅50

Flat/Flat with Ribs

Model	A	B	C	D	Y	
					Flat	Flat with ribs
ZPT40 _C □□□□□-□6-A14	40	43	18.5	32	6.5	3.3
ZPT50 _C □□□□□-□6-A14	50	53	19.5	33	7.5	3.8

Dimensions by Stroke

Model	∅40		∅50		G
	E	F	E	F	
ZPT□□ _C □□□□□10-□6-A14	44.5	113.5	45.5	114.5	50
ZPT□□ _C □□□□□20-□6-A14	54.5	116.5	55.5	117.5	
ZPT□□ _C □□□□□30-□6-A14	64.5	126.5	65.5	127.5	
ZPT□□ _C □□□□□50-□6-A14	84.5	171.5	85.5	172.5	

∅40

Deep

Model	E	F	G
ZPT40D□□□□10-□6-A14	55	124	50
ZPT40D□□□□20-□6-A14	65	127	
ZPT40D□□□□30-□6-A14	75	137	
ZPT40D□□□□50-□6-A14	95	182	75

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

AEP

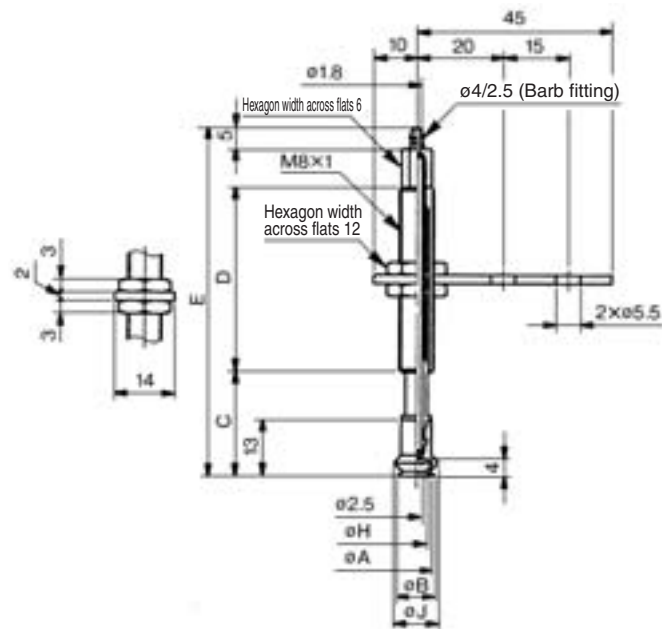
HEP

Related
Equipment

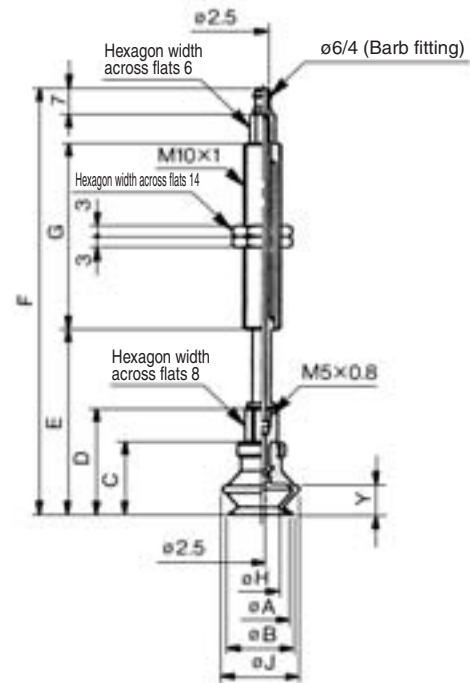
Series ZPT

Connection	Barb fitting (Buffer)	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Buffer body

Bellows/ø6, ø8



Bellows/ø10, ø13, ø16



ø6, ø8

Bellows

Model	A	B	H	J
ZPT06B□□□□□□-□4-A8	6	7	3.3	9
ZPT08B□□□□□□-□4-A8	8	9	4.7	10

Dimensions by Stroke

Model	C	D	E
ZPT□□B□□□□ 6-□4-A8	19	15	48
ZPT□□B□□□□10-□4-A8	24	43	81
ZPT□□B□□□□15-□4-A8	29		86
ZPT□□B□□□□25-□4-A8	39		96

ø10, ø13, ø16

Bellows

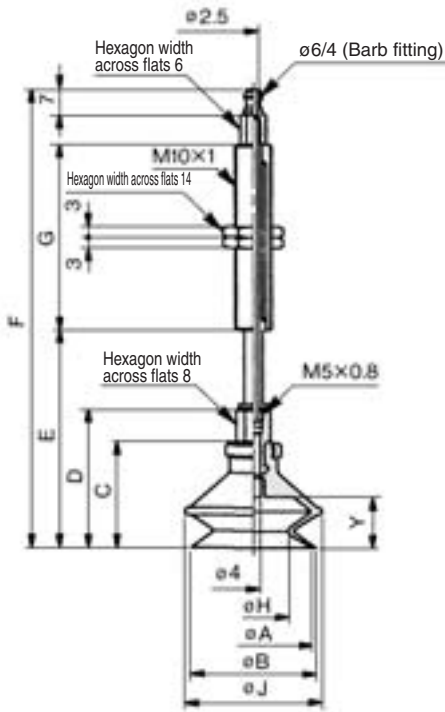
Model	A	B	C	D	H	J	Y
ZPT10B□□□□□□-□6-A10	10	12	16	25	6	14	5.5
ZPT13B□□□□□□-□6-A10	13	15	18.5	27.5	9	19	7.5
ZPT16B□□□□□□-□6-A10	16	18	20	29	10	21	8.5

Dimensions by Stroke

Model	ø10		ø13		ø16		G
	E	F	E	F	E	F	
ZPT□□B□□□□10-□6-A10	36.5	74.5	39	77	40.5	78.5	23
ZPT□□B□□□□20-□6-A10	46.5	112.5	49	115	50.5	116.5	51
ZPT□□B□□□□30-□6-A10	56.5	122.5	59	125	60.5	126.5	
ZPT□□B□□□□40-□6-A10	66.5	158.5	69	161	70.5	162.5	77
ZPT□□B□□□□50-□6-A10	76.5	168.5	79	171	80.5	172.5	

Connection	Barb fitting (Buffer)	Pad Form	Bellows
Vacuum Entry Port	Vertical	Mounting	Buffer body

Bellows/ø20, ø25, ø32



ø20, ø25, ø32

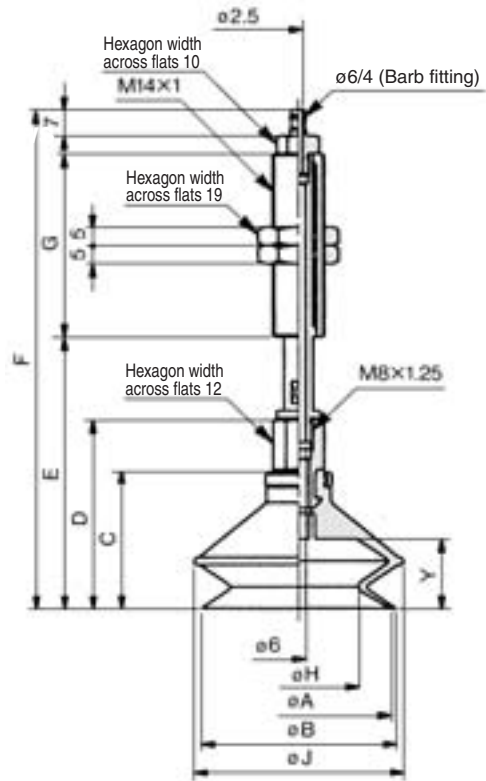
Bellows

Model	A	B	C	D	H	J	Y
ZPT20B□□□□□□□□□□-□6-A10	20	22	23.5	32.5	12	25	10.5
ZPT25B□□□□□□□□□□-□6-A10	25	27	24	33	16	28	
ZPT32B□□□□□□□□□□-□6-A10	32	34	29	38	19	37	

Dimensions by Stroke

Model	ø20		ø25		ø32		G
	E	F	E	F	E	F	
ZPT□□B□□□□□10-□6-A10	44	82	44.5	82.5	49.5	87.5	23
ZPT□□B□□□□□20-□6-A10	54	120	54.5	120.5	59.5	125.5	51
ZPT□□B□□□□□30-□6-A10	64	130	64.5	130.5	69.5	135.5	
ZPT□□B□□□□□40-□6-A10	74	166	74.5	166.5	79.5	171.5	77
ZPT□□B□□□□□50-□6-A10	84	176	84.5	176.5	89.5	181.5	

Bellows/ø40, ø50



ø40, ø50

Bellows

Model	A	B	C	D	H	J	Y
ZPT40B□□□□□□□□□□-□6-A14	40	43	34	47.5	24	48	16
ZPT50B□□□□□□□□□□-□6-A14	50	53	38	51.5	32	57	19

Dimensions by Stroke

Model	ø40		ø50		G
	E	F	E	F	
ZPT□□B□□□□□10-□6-A14	60	129	64	133	50
ZPT□□B□□□□□20-□6-A14	70	132	74	136	
ZPT□□B□□□□□30-□6-A14	80	142	84	146	
ZPT□□B□□□□□50-□6-A14	100	187	104	191	

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment



Vacuum Pad/ Lateral Vacuum Entry with One-touch Fitting Without Buffer

Series ZPR



Specifications

Vacuum entry	Direction		Lateral	
	Connection		One-touch fitting	
Applicable tube dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8		ø4, ø6 tube	
	ø10 to ø16		ø4, ø6 tube	
	ø20 to ø32		ø4, ø6, ø8 tube	
	ø40 to ø50		ø6, ø8 tube	
Mounting	Connection		Male thread	Female thread
	Thread dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8	M5 x 0.8, M6 x 1	M4 x 0.7, M5 x 0.8
		ø10 to ø16	M5 x 0.8, M6 x 1	M5 x 0.8, M6 x 1
		ø20 to ø32	M6 x 1, M8 x 1	M5 x 0.8, M6 x 1, M8 x 1.25
		ø40 to ø50	M6 x 1, M8 x 1	M6 x 1, M8 x 1.25

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows	Thin flat/Thin flat with ribs
Pad diameter (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluororubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)				
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluororubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)				

Mass/Male Thread (Female thread)

(g)

Model	Pad form		Flat				Flat with ribs			Deep			Bellows			
	Connection	M4	M5	M6	M8	M5	M6	M8	M5	M6	M8	M4	M5	M6	M8	
ZPR02 to 08 2004, 3507, 4010 Thin section series 10 to 16	— (19)	26 (20)	27 (—)	—	—	—	—	—	—	—	—	(19) (Except ø2, ø4)	26 (20) (Except ø2, ø4)	27 (—) (Except ø2, ø4)	—	
ZPR10	—	29 (23)	31 (21)	—	29 (23)	31 (22)	—	29 (23)	30 (22)	—	—	—	29 (23)	31 (22)	—	
ZPR13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ZPR16	—	—	—	—	—	—	—	—	31 (23)	31 (22)	—	—	—	—	—	
ZPR20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ZPR25	—	— (51)	57 (50)	61 (48)	— (51)	57 (50)	61 (48)	— (51)	65 (50)	68 (48)	—	— (51)	57 (50)	61 (48)	—	
ZPR32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ZPR40	—	—	64 (56)	67 (54)	—	64 (56)	67 (54)	—	65 (57)	68 (55)	—	—	64 (56)	67 (54)	—	
ZPR50	—	—	66 (58)	69 (56)	—	67 (59)	70 (57)	—	—	—	—	—	66 (58)	69 (56)	—	

(): Figures for female thread connections.

How to Order

Series ZPR
Without buffer

ZPR 02 U N - 04 - A5

Pad dia. Pad type Material Vacuum entry port Mounting thread

Pad diameter (mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Pad type



(Refer to "Table (1)" for applications.)

U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Mounting thread



(Refer to "Table (2)" for applications.)

Vacuum entry port



(Refer to "Table (2)" for applications.)

Table (2) Vacuum Entry/Mounting Thread Diameter

Connection	Symbol	Thread dia./ Port size	ø2 to ø8 2 x 4 3.5 x 7 4 x 10 ø10 to ø16 (Thin section series)	ø10 to ø16	ø20 to ø32	ø40 to ø50
Mounting	Male thread	04	ø4 tube	●	●	—
		06	ø6 tube	●	●	●
		08	ø8 tube	—	—	●
		A5	M5 x 0.8	●	●	—
	Female thread	A6	M6 x 1	●	●	●
		A8	M8 x 1	—	—	●
		B4	M4 x 0.7	●	—	—
		B5	M5 x 0.8	●	●	●
	B6	M6 x 1	—	●	●	
	B8	M8 x 1.25	—	—	●	

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Table (1) Pad Diameter/Pad Type

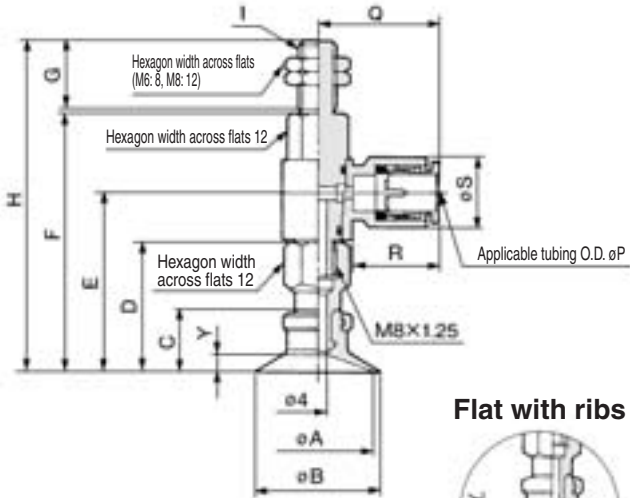
Type	Dia. (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	●	●	●	●	●	●	—
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

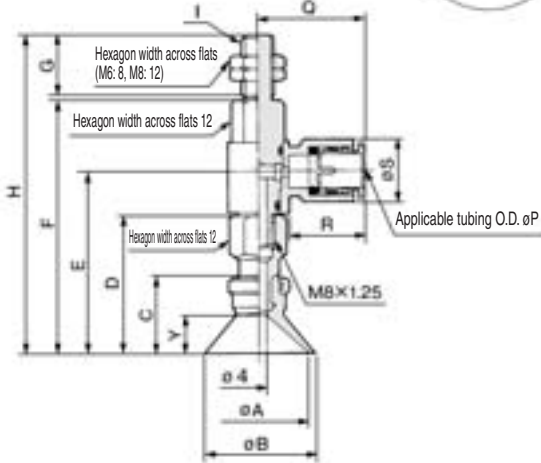
Vacuum Pad/
Lateral Vacuum Entry with One-touch Fitting without Buffer **Series ZPR**

Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

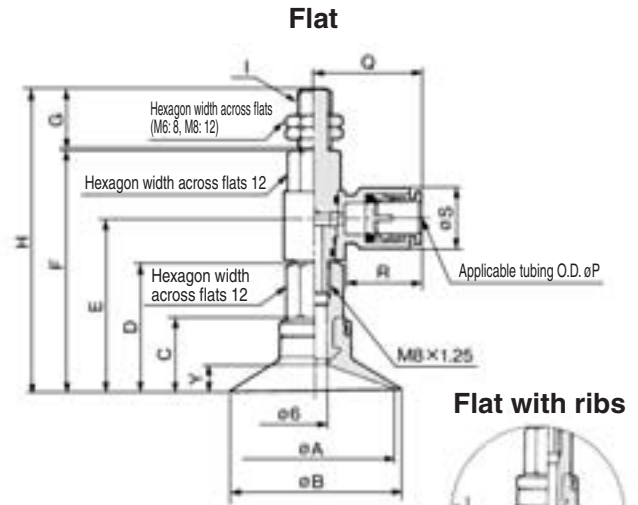
Size/ø20, ø25, ø32



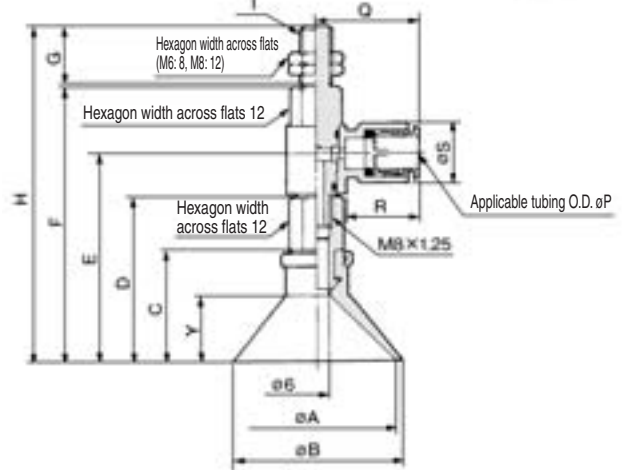
Deep: ZPR25D only



Size/ø40, ø50



Deep: ZPR40D only



Flat/Flat with Ribs

Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		Y	
							G	H	G	H	Flat	Flat with ribs
ZPR20 _{UC}	20	23										
ZPR25 _{UC}	25	28	14	29	39.8	57.6	25	83.5	15	73.5	4	1.7
ZPR32 _{UC}	32	35	14.5	29.5	40.3	58.1		84		74	4.5	2.3

Deep

Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		Y
							G	H	G	H	
ZPR25D	25	28	20	35	48.5	63.6	25	89.5	15	79.5	10

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Flat/Flat with Ribs

Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		Y	
							G	H	G	H	Flat	Flat with ribs
ZPR40 _{UC}	40	43	18.5	32	42.8	60.6						
ZPR50 _{UC}	50	53	19.5	33	43.8	61.6	25	86.5	15	76.5	6.5	3.3
								87.5		77.5	7.5	3.8

Deep

Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		Y
							G	H	G	H	
ZPR40D	40	43	29	42.5	53.3	71.1	25	97	15	87	17

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

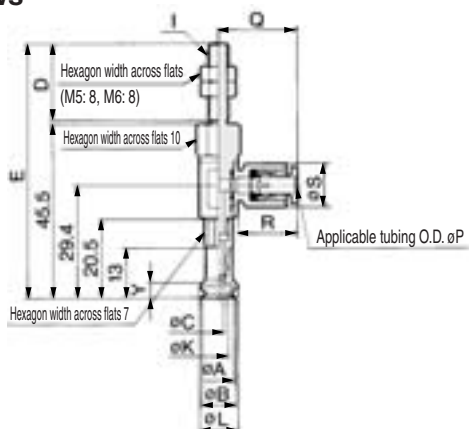
Related Equipment

Series ZPR

Connection	One-touch fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Male thread

Size/ø6, ø8

Bellows



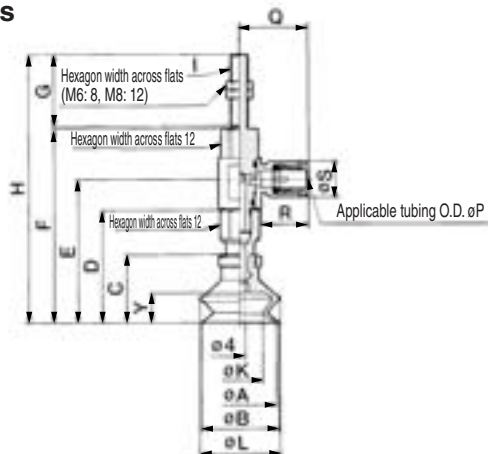
Model	A	B	C	I: M5 x 0.8		I: M6 x 1		K	L	Y
				D	E	D	E			
ZPR06B	6	7	2.5	20	66.5	25	71.5	3.3	9	4
ZPR08B	8	9		4.7	10					

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Size/ø20, ø25, ø32

Bellows



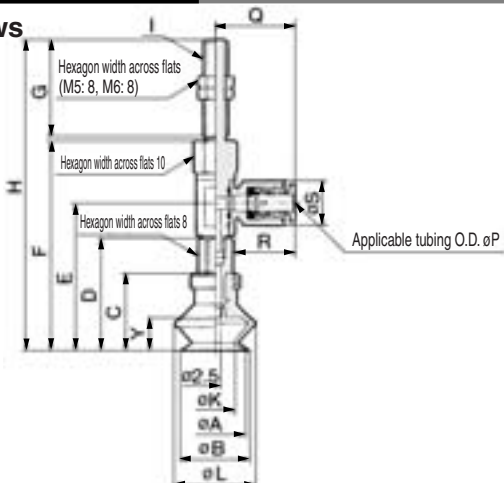
Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		K	L	Y
							G	H	G	H			
ZPR20B	20	22	23.5	38.5	49.3	67.1	25	93	15	83	12	25	10.5
ZPR25B	25	27	24	39	49.8	67.6	25	93.5	15	83.5	16	28	10.5
ZPR32B	32	34	29	44	54.8	72.6		98.5		88.5	19	37	14

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Size/ø10, ø13, ø16

Bellows



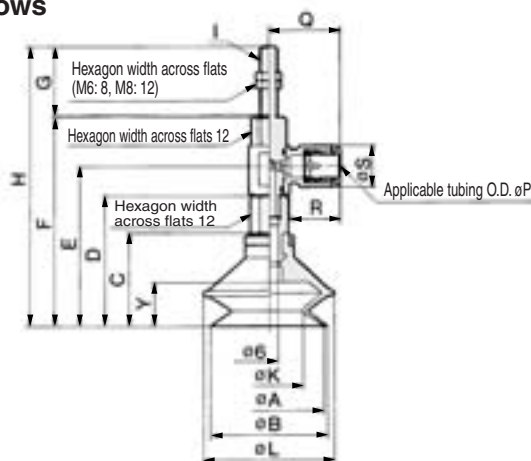
Model	A	B	C	D	E	F	I: M5 x 0.8		I: M6 x 1		K	L	Y
							G	H	G	H			
ZPR10B	10	12	16	25	33.9	50	20	71	25	76	6	14	5.5
ZPR13B	13	15	18.5	27.5	36.4	52.5		73.5		78.5	9	19	7.5
ZPR16B	16	18	20	29	37.9	54		75		80	10	21	8.5

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Size/ø40, ø50

Bellows



Model	A	B	C	D	E	F	I: M6 x 1		I: M8 x 1		K	L	Y
							G	H	G	H			
ZPR40B	40	43	34	47.5	58.3	76.1	25	102	15	92	24	48	16
ZPR50B	50	53	38	51.5	62.3	80.1		106		96	32	57	19

Applicable Tubing

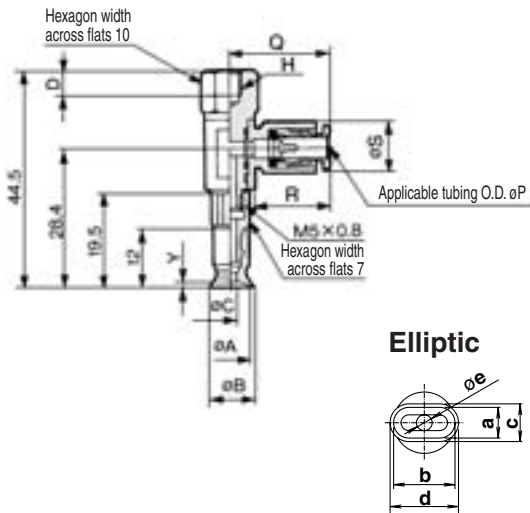
Applicable tubing O.D.	P	Q	R	S
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep/Thin flat/ Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Female thread

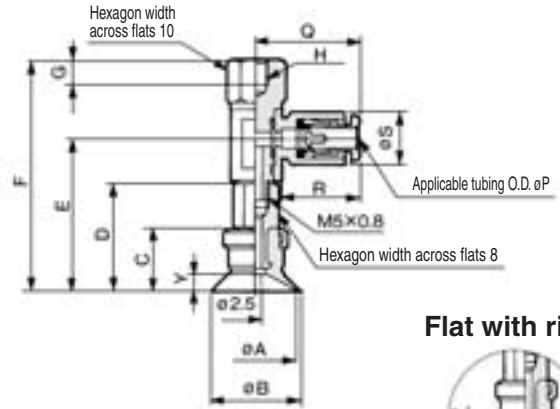
Size/Flat $\phi 2, \phi 4, \phi 6, \phi 8$ /Thin flat/Thin flat with ribs $\phi 10, \phi 13, \phi 16$ /
Elliptic 2004, 3507, 4010

Size/ $\phi 10, \phi 13, \phi 16$

Flat/Thin flat/Thin flat with ribs



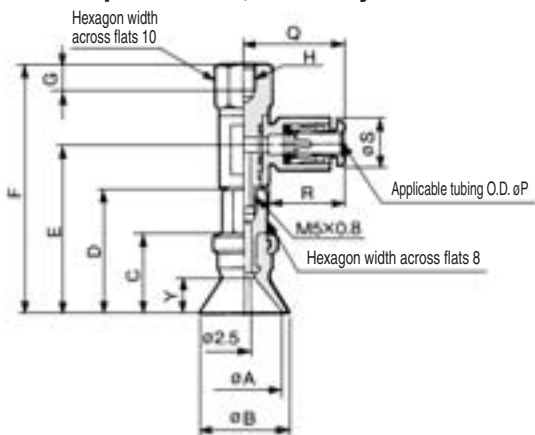
Flat



Flat with ribs



Deep: ZPR10D, 16D only



Flat

Model	A	B	C	H: M4 x 0.7	H: M5 x 0.8	Y
				D	D	
ZPR02U	2	2.6	1.2	4	5	0.5
ZPR04U	4	4.8	1.6			0.8
ZPR06U	6	7	2.5			
ZPR08U	8	9	2.5			1

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
$\phi 4$	4	20.6	15.6	10.4
$\phi 6$	6	21.6	16.6	12.8

Elliptic

Model	a	b	c	d	e	Y
ZPR2004U	2	4	2.6	4.6	1.2	0.3
ZPR3507U	3.5	7	4.3	7.8	1.8	0.5
ZPR4010U	4	10	5	11	2	0.8

* Dimensions of D are the same.

Thin Flat/Thin Flat with Ribs

Model	A	B	C	Y
ZPR10UT	10	11	2.5	1
ZPR13UT	13	14		1.5
ZPR16UT	16	17		0.8
ZPR10CT	10	11		1
ZPR13CT	13	14		
ZPR16CT	16	17		

* Dimensions of D are the same.

Flat/Flat with Ribs

Model	A	B	C	D	E	F	H: M5 x 0.8	H: M6 x 1	Y	
							G	G	Flat	Flat with ribs
ZPR10 ^U _C	10	12	12	21	29.9	46	5	6	3	1.7
ZPR13 ^U _C	13	15								1.8
ZPR16 ^U _C	16	18								12.5

Deep

Model	A	B	C	D	E	F	H: M5 x 0.8	H: M6 x 1	Y
							G	G	
ZPR10D	10	12	15	24	32.9	49	5	6	6
ZPR16D	16	18	16	25	33.9	50			7

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
$\phi 4$	4	20.6	15.6	10.4
$\phi 6$	6	21.6	16.6	12.8

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

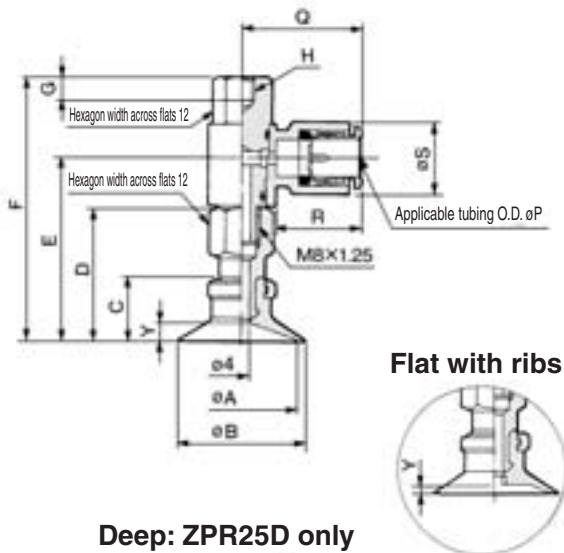
Related Equipment

Series ZPR

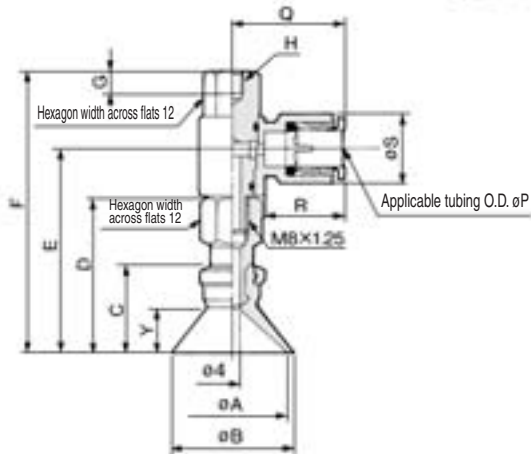
Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Female thread

Size/ø20, ø25, ø32

Flat

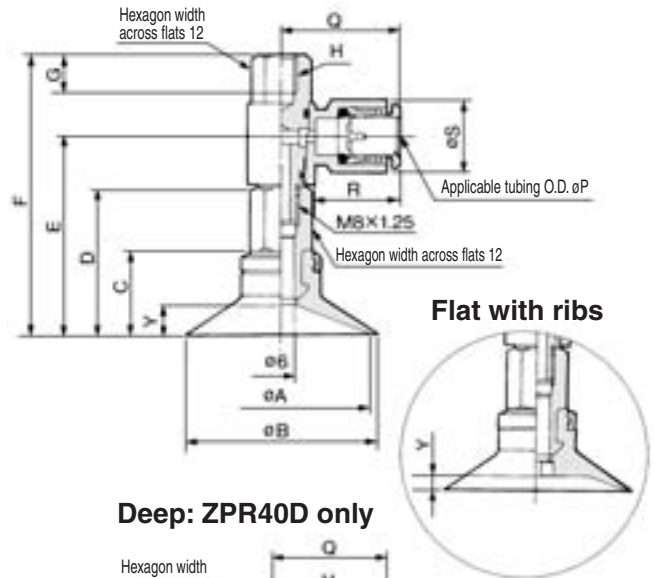


Deep: ZPR25D only

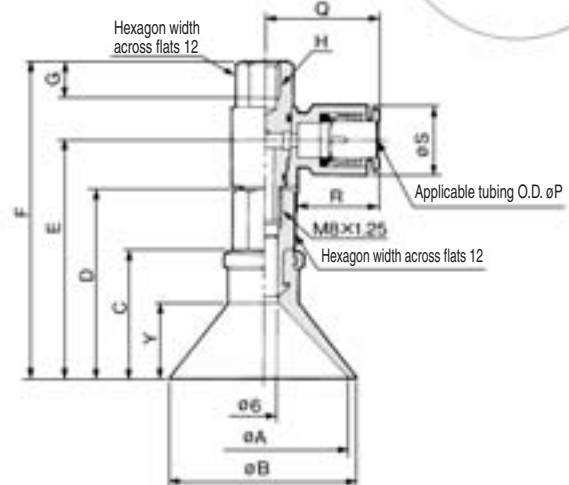


Size/ø40, ø50

Flat



Deep: ZPR40D only



Flat/Flat with Ribs

Model	A	B	C	D	E	F	H: M5 x 0.8	H: M6 x 1	H: M8 x 1.25	Y	
							G	G	G	Flat	Flat with ribs
ZPR20 _U _C	20	23	14	29	39.8	57.6	5	6	8	4	1.7
ZPR25 _U _C	25	28	14.5	29.5	40.3	58.1				4.5	1.8
ZPR32 _U _C	32	35	14.5	29.5	40.3	58.1				4.5	2.3

Deep

Model	A	B	C	D	E	F	H: M5 x 0.8	H: M6 x 1	H: M8 x 1.25	Y
							G	G	G	
ZPR25D	25	28	20	35	45.8	63.6	5	6	8	10

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Flat/Flat with Ribs

Model	A	B	C	D	E	F	H: M6 x 1	H: M8 x 1.25	Y	
							G	G	Flat	Flat with ribs
ZPR40 _U _C	40	43	18.5	32	42.8	60.6	6	8	6.5	3.3
ZPR50 _U _C	50	53	19.5	33	43.8	61.6			7.5	3.8

Deep

Model	A	B	C	D	E	F	H: M6 x 1	H: M8 x 1.25	Y
							G	G	
ZPR40D	40	43	29	42.5	53.3	71.1	6	8	17

Applicable Tubing

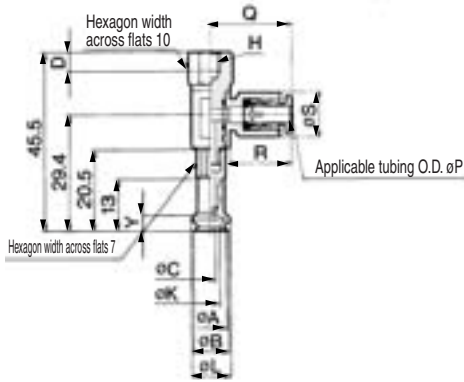
Applicable tubing O.D.	P	Q	R	S
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Vacuum Pad/ Lateral Vacuum Entry with One-touch Fitting Without Buffer **Series ZPR**

Connection	One-touch fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Female thread

Size/ø6, ø8

Bellows



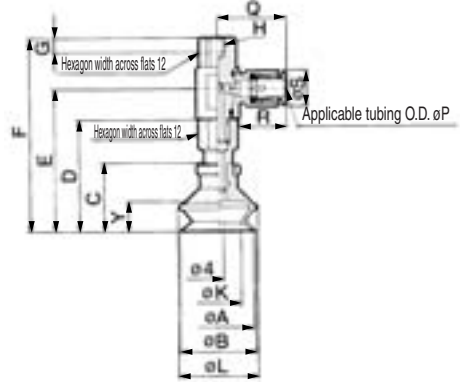
Model	A	B	C	H: M4 x 0.7		K	L	Y
				D	D			
ZPR06B	6	7	2.5	4	5	3.3	9	4
ZPR08B	8	9				4.7	10	

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Size/ø20, ø25, ø32

Bellows



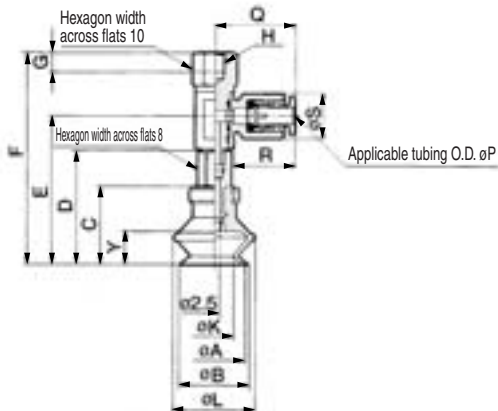
Model	A	B	C	D	E	F	H: M5 x 0.8			K	L	Y
							G	G	G			
ZPR20B	20	22	23.5	38.5	49.3	67.1	5	6	8	12	25	10.5
ZPR25B	25	27	24	39	49.8	67.6				16	28	10.5
ZPR32B	32	34	29	44	54.8	72.6				19	37	14

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Size/ø10, ø13, ø16

Bellows



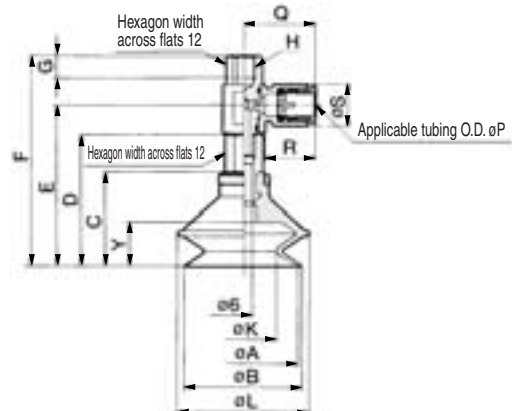
Model	A	B	C	D	E	F	H: M5 x 0.8		H: M6 x 1		K	L	Y	
							G	G	G	G				
ZPR10B	10	12	16	25	33.9	50	5	6	6	14	5.5	6	14	5.5
ZPR13B	13	15	18.5	27.5	36.4	52.5			9	19	7.5			
ZPR16B	16	18	20	29	37.9	54			10	21	8.5			

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Size/ø40, ø50

Bellows



Model	A	B	C	D	E	F	H: M6 x 1		H: M8 x 1.25		K	L	Y	
							G	G	G	G				
ZPR40B	40	43	34	47.5	58.3	76.1	6	8	24	48	16	24	48	16
ZPR50B	50	53	38	51.5	62.3	80.1			32	57	19			

Applicable Tubing

Applicable tubing O.D.	P	Q	R	S
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment



Vacuum Pad/ Lateral Vacuum Entry with One-touch Fitting With Buffer

Series ZPR



Specifications

Vacuum entry	Direction		Lateral
	Connection		One-touch fitting
Applicable tube dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8		ø4, ø6 tube
	ø10 to ø16		ø4, ø6 tube
	ø20 to ø32		ø4, ø6, ø8 tube
	ø40 to ø50		ø6, ø8 tube
Mounting	Thread dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8	M8 x 1 Male thread
		ø10 to ø16	M10 x 1 Male thread
		ø20 to ø32	M10 x 1 Male thread
		ø40 to ø50	M14 x 1 Male thread

Buffer Specifications

Dia. (mm)	ø2 to ø8	ø10 to ø32	ø40, ø50
Stroke (mm)	6, 10, 15, 25	10, 20, 30, 40, 50	10, 20, 30, 50
Spring Reactive Force (N)	0 stroke	0.8	1.0
	Full stroke	1.2	3.0
Non-rotating specification		Rotating (J)/Non-rotating (K)	

* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs and Elliptic.

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows	Thin flat/Thin flat with ribs
Pad dia. (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluororubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)				
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluororubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)				

Mass

(g)

Stroke (mm)	Pad form	Flat/Flat with ribs			Deep			Bellows		
	Vacuum entry port	04	06	08	04	06	08	04	06	08
6	Model									
	2004, 3507, 4010 ZPR02 to 08 Thin section flat series (10 to 16)	38	39	—	—	—	—	38	39	—
10	10 ZPR to 16	39	40	—	39	40	—	40	41	—
	20 ZPR 25	54	55	56	55	56	57	57	58	59
10	ZPR 32	56	57	58	—	—	—	61	62	63
	ZPR 40	—	126	127	—	—	—	—	138	139
10	ZPR 50	—	132	133	—	—	—	—	145	146

Mass by Stroke

(g)

Stroke (mm)	10	15	20	25	30	40	50
Model							
ZPR02 to 08	+7	+8	—	+9	—	—	—
ZPR10 to 25	—	—	+12	—	+14	+26	+28
ZPR40, 50	—	—	-6	—	-2	—	+30

How to Order

Series ZPR With buffer

ZPR 16 U GS K 20 - 06 - A10

Pad diameter (mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Mounting thread/Male thread
(Refer to "Table (3)" for applications.)

Vacuum entry port
(Refer to "Table (3)" for applications.)

Buffer stroke
(Refer to "Table (2)" for applications.)

Buffer type

J	Rotating
K	Non-rotating

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Pad type
(Refer to "Table (1)" for applications.)

U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Table (1) Pad Diameter/Pad Type

Type	Dia. (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

Table (2) Pad Diameter/Stroke

Stroke (mm)	Diameter (mm)																	
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	Thin flat/ Thin flat with ribs			10	13	16	20	25	32	40	50
								10	13	16								
6 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
10 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
15 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
20 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
25 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
30 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
40 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—
50 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●

Table (3) Vacuum Entry/Mounting Thread Diameter

	Symbol	Thread dia./ Port size	ø2 to ø8 2 x 4, 3.5 x 7, 4 x 10 ø10 to ø16 (Thin section series)	ø10 to ø16	ø20 to ø32	ø40, ø50
Vacuum entry	One-touch fitting	04	ø4 tube	●	●	—
		06	ø6 tube	●	●	●
		08	ø8 tube	—	—	●
Mounting	Male thread	A8	M8 x 1	—	—	—
		A10	M10 x 1	—	●	—
		A14	M14 x 1	—	—	●

Tightening Torque (N·m)

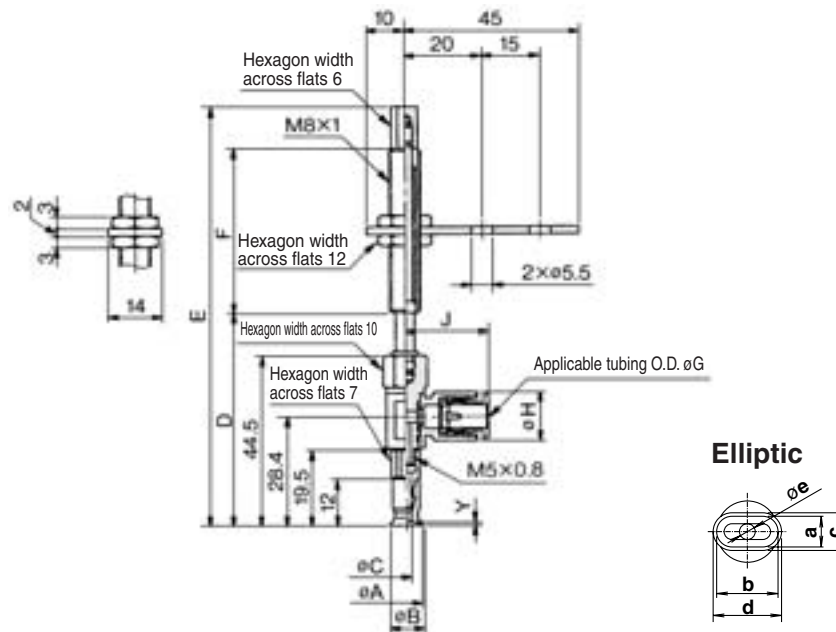
Mounting thread diameter	Torque
M8 x 1	2.0 ±0.5
M10 x 1	3.0 ±0.5
M14 x 1	7.0 ±0.5

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

Series ZPR

Connection	One-touch fitting	Pad Form	Flat/Thin flat/Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/ø2, ø4, ø6, ø8, Thin flat/Thin flat with ribs/ø10, ø13, ø16, Elliptic/2004, 3507, 4010



Flat

Model	A	B	C	Y
ZPR02U□□□□□-0□-A8	2	2.6	1.2	0.5
ZPR04U□□□□□-0□-A8	4	4.8	1.6	0.8
ZPR06U□□□□□-0□-A8	6	7	2.5	
ZPR08U□□□□□-0□-A8	8	9		1

Elliptic

Model	a	b	c	d	e	Y
ZPR2004U	2	4	2.6	4.6	1.2	0.3
ZPR3507U	3.5	7	4.3	7.8	1.8	0.5
ZPR4010U	4	10	5	11	2	0.8

Thin Flat/Thin Flat with Ribs

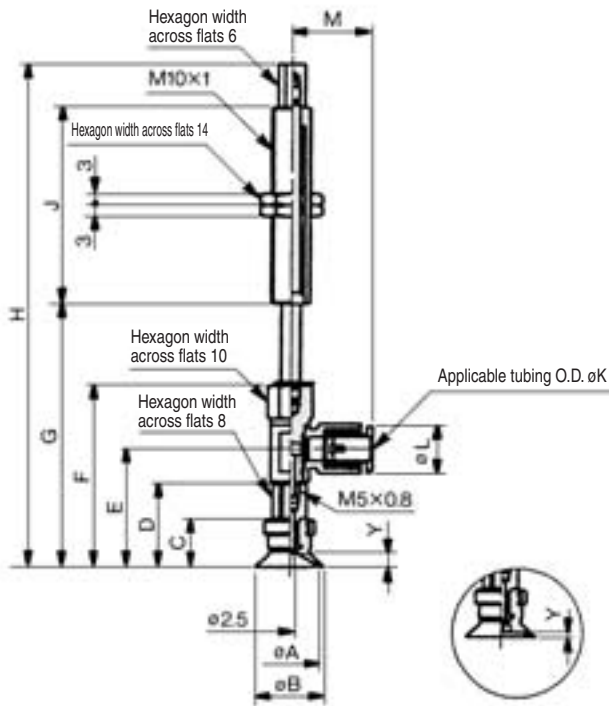
Model	A	B	C	Y
ZPR10UT	10	11	2.5	1
ZPR13UT	13	14		1.5
ZPR16UT	16	17		0.8
ZPR10CT	10	11	2.5	1
ZPR13CT	13	14		
ZPR16CT	16	17		

Dimensions by Stroke

Model	D	E	F	G: 4		G: 6	
				H	J	H	J
ZPR□□□□□ 6-0□-A8	52.5	78.5	15	10.4	20.6	12.8	21.6
ZPR□□□□□10-0□-A8	55.5	109.5	43				
ZPR□□□□□15-0□-A8	60.5	114.5					
ZPR□□□□□25-0□-A8	70.5	124.5					

Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/ø10, ø13, ø16



Flat with ribs

ø10, ø13, ø16

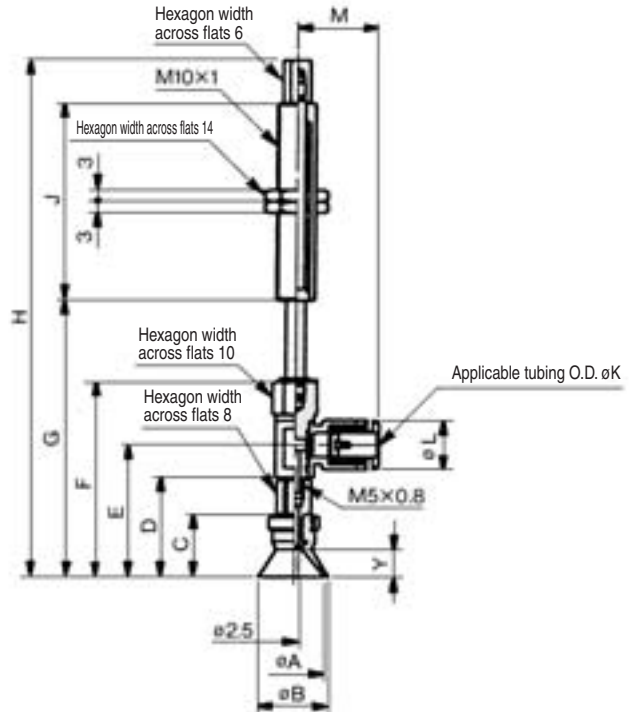
Flat/Flat with Ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat with ribs
ZPR10 ^U _C □□□□□-0□-A10	10	12	12	21	29.9	46	3	1.7
ZPR13 ^U _C □□□□□-0□-A10	13	15	12	21	29.9	46	3	1.8
ZPR16 ^U _C □□□□□-0□-A10	16	18	12.5	21.5	30.4	46.5	3.5	1.2

Dimensions by Stroke

Model	ø10, ø13		ø16		J
	G	H	G	H	
ZPR□□ ^U _C □□□□10-0□-A10	57	91	57.5	91.5	23
ZPR□□ ^U _C □□□□20-0□-A10	67	129	67.5	129.5	51
ZPR□□ ^U _C □□□□30-0□-A10	77	139	77.5	139.5	
ZPR□□ ^U _C □□□□40-0□-A10	87	175	87.5	175.5	77
ZPR□□ ^U _C □□□□50-0□-A10	97	185	97.5	185.5	

Deep/ø10, ø16



ø10, ø16

Deep

Model	A	B	C	D	E	F	Y
ZPR10D□□□□□-0□-A10	10	12	15	24	32.9	49	6
ZPR16D□□□□□-0□-A10	16	18	16	25	33.9	50	7

Dimensions by Stroke

Model	ø10		ø16		J
	G	H	G	H	
ZPR□□D□□□□10-0□-A10	60	83	61	84	23
ZPR□□D□□□□20-0□-A10	70	132	71	133	51
ZPR□□D□□□□30-0□-A10	80	142	81	143	
ZPR□□D□□□□40-0□-A10	90	178	91	179	77
ZPR□□D□□□□50-0□-A10	100	188	101	189	

One-touch Fitting

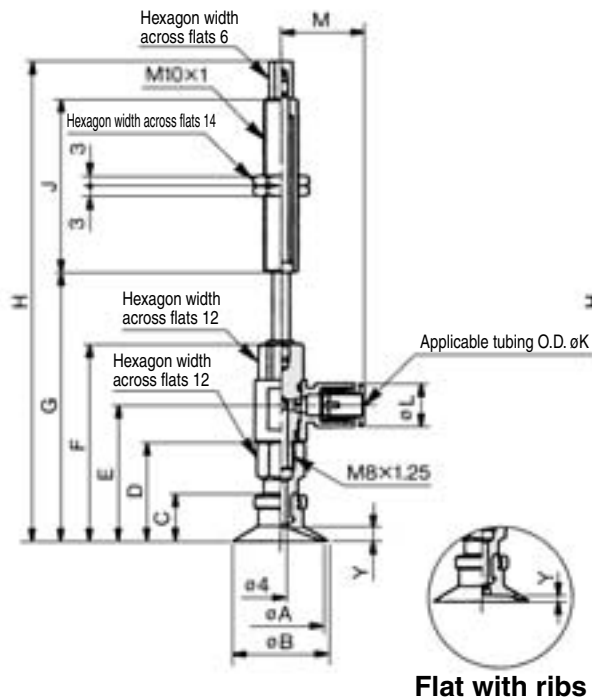
Model	K	L	M
ZPR□□□□□□□□-04-A10	4	10.4	20.6
ZPR□□□□□□□□-06-A10	6	12.8	21.6

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

Series ZPR

Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/ø20, ø25, ø32



Flat with ribs

ø20, ø25, ø32

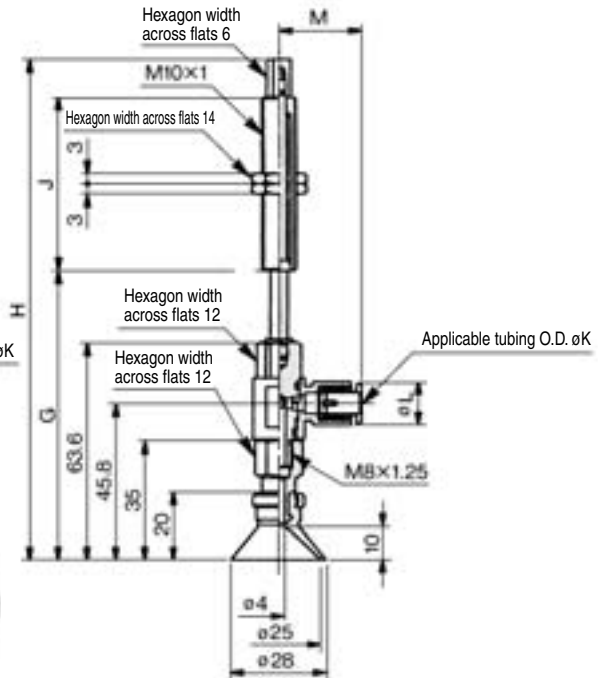
Flat/Flat with Ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat with ribs
ZPR20 ^U _C □□□□□-0□-A10	20	23	14	29	39.8	57.6	4	1.7
ZPR25 ^U _C □□□□□-0□-A10	25	28						1.8
ZPR32 ^U _C □□□□□-0□-A10	32	35	14.5	29.5	40.3	58.1	4.5	2.3

Dimensions by Stroke

Model	ø20, ø25		ø32		J
	G	H	G	H	
ZPR□□ ^U _C □□□□10-0□-A10	68.6	102.6	69.1	103.1	23
ZPR□□ ^U _C □□□□20-0□-A10	78.6	140.6	79.1	141.1	51
ZPR□□ ^U _C □□□□30-0□-A10	88.6	150.6	89.1	151.1	
ZPR□□ ^U _C □□□□40-0□-A10	98.6	186.6	99.1	187.1	77
ZPR□□ ^U _C □□□□50-0□-A10	108.6	196.6	109.6	197.1	

Deep/ø25



ø25

Deep

Model	G	H	J
ZPR25D□□□□10-0□-A10	74.6	108.6	23
ZPR25D□□□□20-0□-A10	84.6	146.6	51
ZPR25D□□□□30-0□-A10	94.6	156.6	
ZPR25D□□□□40-0□-A10	104.6	192.6	77
ZPR25D□□□□50-0□-A10	114.6	202.6	

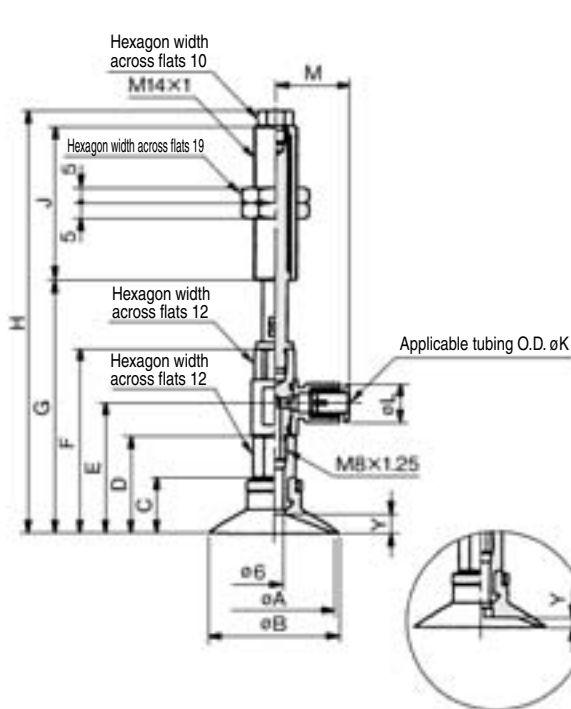
One-touch Fitting

Model	K	L	M
ZPR□□□□□□□□-04-A10	4	10.4	23.3
ZPR□□□□□□□□-06-A10	6	12.8	24.3
ZPR□□□□□□□□-08-A10	8	15.2	26.2

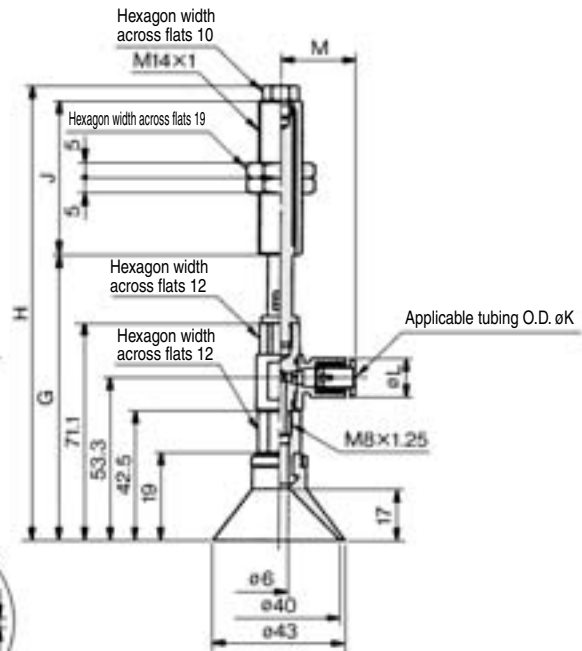
Connection	One-touch fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/ø40, ø50

Deep/ø40



Flat with ribs



ø40, ø50

Flat/Flat with Ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat with ribs
ZPR40 ^U _C □□□□□□-0□-A14	40	43	18.5	32	42.8	60.6	6.5	3.3
ZPR50 ^U _C □□□□□□-0□-A14	50	53	19.5	33	43.8	61.6	7.5	3.8

Dimensions by Stroke

Model	ø40		ø50		J
	G	H	G	H	
ZPR□□ ^U _C □□□□□□10-0□-A14	72.6	140.6	73.6	141.6	50
ZPR□□ ^U _C □□□□□□20-0□-A14	82.6	137.6	83.6	138.6	
ZPR□□ ^U _C □□□□□□30-0□-A14	92.6	147.6	93.6	148.6	
ZPR□□ ^U _C □□□□□□50-0□-A14	112.6	192.6	113.6	193.6	

ø40

Deep

Model	G	H	J
ZPR40D□□□□10-0□-A14	83.1	151.1	50
ZPR40D□□□□20-0□-A14	93.1	148.1	
ZPR40D□□□□30-0□-A14	103.1	158.1	75
ZPR40D□□□□50-0□-A14	123.1	203.1	

One-touch Fitting

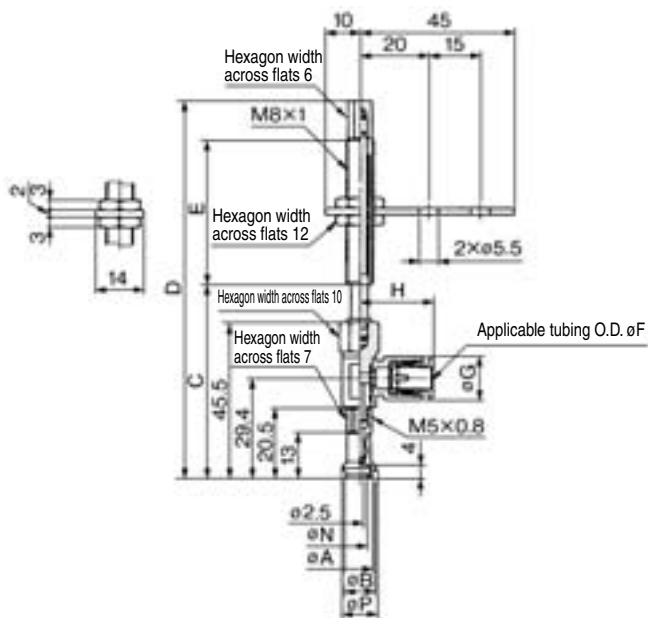
Model	K	L	M
ZPR□□□□□□□□-06-A14	6	12.8	24.3
ZPR□□□□□□□□-08-A14	8	15.2	26.2

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

Series ZPR

Connection	One-touch fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Male thread

Bellows/ $\phi 6, \phi 8$



$\phi 6, \phi 8$

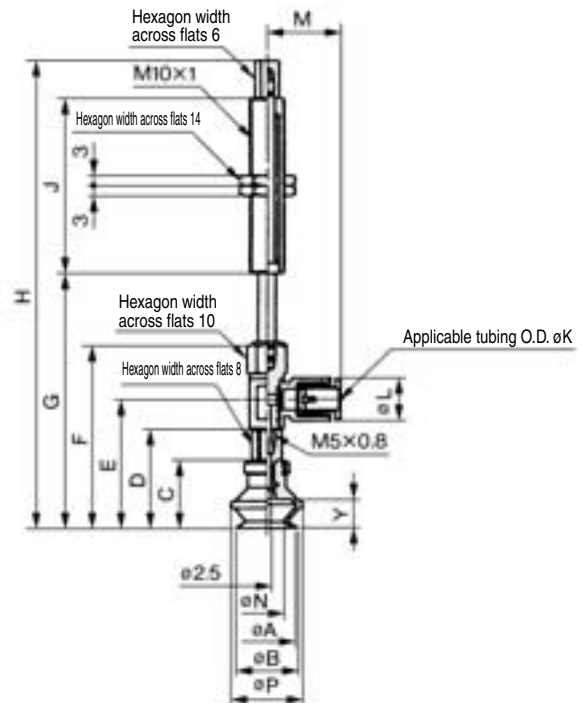
Bellows

Model	A	B	N	P
ZPR06B□□□□-0□-A8	6	7	3.3	9
ZPR08B□□□□-0□-A8	8	9	4.7	10

Dimensions by Stroke

Model	C	D	E	F: 4		F: 6	
				G	H	G	H
ZPR□□B□□□□ 6-0□-A8	53.5	79.5	15	10.4	20.6	12.8	21.6
ZPR□□B□□□□ 10-0□-A8	56.5	110.5	43				
ZPR□□B□□□□ 15-0□-A8	61.5	115.5					
ZPR□□B□□□□ 25-0□-A8	71.5	125.5					

Bellows/ $\phi 10, \phi 13, \phi 16$



$\phi 10, \phi 13, \phi 16$

Bellows

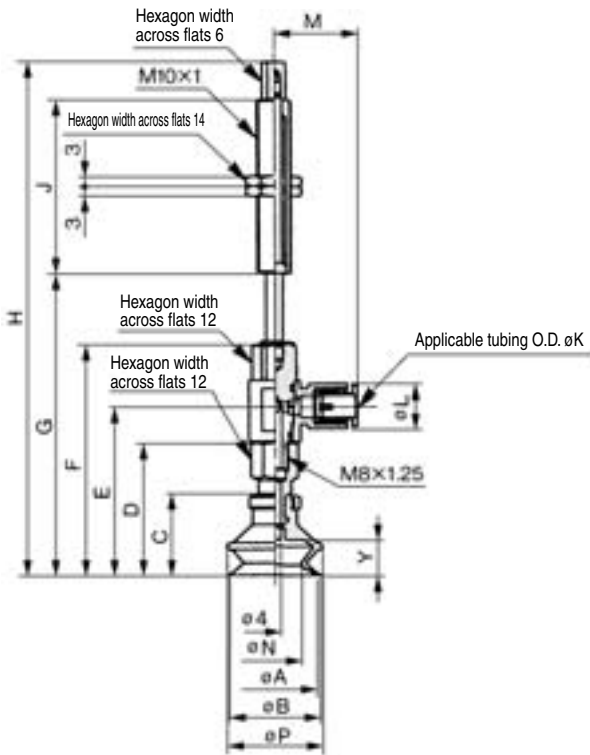
Model	A	B	C	D	E	F	N	P	Y
ZPR10B□□□□-0□-A10	10	12	16	25	33.9	50	6	14	5.5
ZPR13B□□□□-0□-A10	13	15	18.5	27.5	36.4	52.5	9	19	7.5
ZPR16B□□□□-0□-A10	16	18	20	29	37.9	54	10	21	8.5

Dimensions by Stroke

Model	$\phi 10$		$\phi 13$		$\phi 16$		J	K: 4		K: 6	
	G	H	G	H	G	H		L	M	L	M
ZPR□□B□□□□ 10-0□-A10	61	95	63.5	97.5	65	99	23	10.4	20.6	12.8	21.6
ZPR□□B□□□□ 20-0□-A10	71	133	73.5	135.5	75	137	51				
ZPR□□B□□□□ 30-0□-A10	81	143	83.5	145.5	85	147	77				
ZPR□□B□□□□ 40-0□-A10	91	179	93.5	181.5	95	183					
ZPR□□B□□□□ 50-0□-A10	101	189	103.5	191.5	105	193					

Connection	One-touch fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Male thread

Bellows/ø20, ø25, ø32



ø20, ø25, ø32

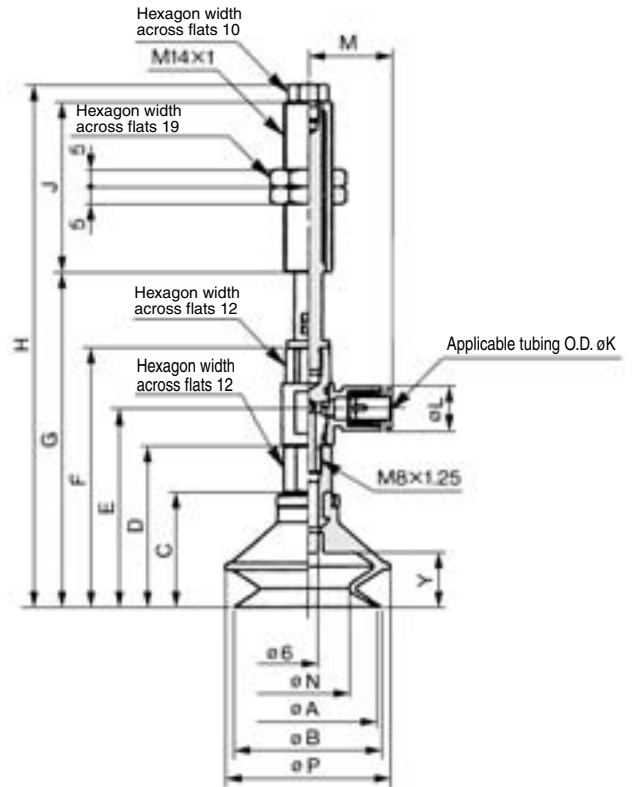
Bellows

Model	A	B	C	D	E	F	N	P	Y
ZPR20B□□□□□-0□-A10	20	22	23.5	38.5	49.3	67.1	12	25	10.5
ZPR25B□□□□□-0□-A10	25	27	24	39	49.8	67.6	16	28	
ZPR32B□□□□□-0□-A10	32	34	29	44	54.8	72.6	19	37	

Dimensions by Stroke

Model	ø20		ø25		ø32		J	K: 4		K: 6		K: 8	
	G	H	G	H	G	H		L	M	L	M	L	M
	ZPR□□B□□□□10-0□-A10	78.1	112.1	78.6	112.6	83.6		117.6	23				
ZPR□□B□□□□20-0□-A10	88.1	150.1	88.6	150.6	93.6	155.6	51	10.4	23.3	12.8	24.3	15.2	26.2
ZPR□□B□□□□30-0□-A10	98.1	160.1	98.6	160.6	103.6	165.6							
ZPR□□B□□□□40-0□-A10	108.1	196.1	108.6	196.6	113.6	201.6	77						
ZPR□□B□□□□50-0□-A10	118.1	206.1	118.6	206.6	123.6	211.6							

Bellows/ø40, ø50



ø40, ø50

Bellows

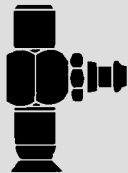
Model	A	B	C	D	E	F	N	P	Y
ZPR40B□□□□□-0□-A14	40	43	34	47.5	58.3	76.1	24	48	16
ZPR50B□□□□□-0□-A14	50	53	38	51.5	62.3	80.1	32	57	19

Dimensions by Stroke

Model	ø40		ø50		J	K: 6		K: 8	
	G	H	G	H		L	M	L	M
	ZPR□□B□□□□10-0□-A14	88.1	156.1	92.1		160.1	50	12.8	24.3
ZPR□□B□□□□20-0□-A14	98.1	153.1	102.1	157.1					
ZPR□□B□□□□30-0□-A14	108.1	163.1	112.1	167.1					
ZPR□□B□□□□50-0□-A14	128.1	208.1	132.1	212.1	75				

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment



Vacuum Pad/ Lateral Vacuum Entry with Barb Fitting Without Buffer

Series ZPY



Specifications

Vacuum entry	Direction		Lateral	
	Applicable tube dia.	Connection	Barb fitting	
Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8		ø10 to ø16	ø4, ø6 Nylon tube, ø4, ø6 Urethane tube	
		ø20 to ø32	ø4, ø6 Nylon tube, ø4, ø6 Urethane tube	
		ø40 to ø50	ø6 Nylon tube, ø6 Urethane tube	
Mounting	Thread dia.	Connection	Male thread	Female thread
		Elliptic (2 x 4, 3.5 x 7, 4 x 10) Thin section series (ø10 to ø16) ø2 to ø8	M5 x 0.8, M6 x 1	M4 x 0.7, M5 x 0.8
			M5 x 0.8, M6 x 1	M5 x 0.8, M6 x 1
			M6 x 1, M8 x 1	M5 x 0.8, M6 x 1, M8 x 1.25
			M6 x 1, M8 x 1	M6 x 1, M8 x 1.25

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows	Thin flat/Thin flat with ribs
Pad dia. (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluororubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)				
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluororubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)				

Mass/Male Thread (Female thread)

(g)

Model	Pad form		Flat			Flat with ribs			Deep			Bellows		
	Connection	Connection	M5	M6	M8	M5	M6	M8	M5	M6	M8	M5	M6	M8
ZPY02 to 08 2004 3507 4010 10 to 16 (Thin section series)			15 (11)	15	—	—	—	—	—	—	—	15 (11) except ø2, ø4	15 (11) except ø2, ø4	—
ZPY10									31 (27)	33 (26)	—			
ZPY13			32 (25)	33 (25)	—	32 (25)	33 (25)	—	—	—	—	—	33 (25)	33 —
ZPY16									32 (27)	38 (27)	—			
ZPY20									—	—	—			
ZPY25			— (30)	38 (30)	38 (29)	— (30)	38 (30)	38 (29)	— (30)	38 (30)	38 (28)	— (30)	38 (30)	38 (29)
ZPY32									—	—	—			
ZPY40			—	43 (36)	47 (34)	—	42 (35)	46 (33)	—	44 (37)	48 (35)	—	43 (36)	47 (34)
ZPY50			—	44 (38)	49 (35)	—	46 (38)	50 (37)	—	—	—	—	44 (38)	49 (35)

* (): Figures for female thread connections.

How to Order

Series ZPY
Without buffer

ZPY **02** **U** **N** - **N4** - **A5**

Pad diameter (mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Pad type



(Refer to "Table (1)" for applications.)

U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Mounting thread



(Refer to "Table (2)" for applications.)

Vacuum entry port



(Refer to "Table (2)" for applications.)

Table (2) Vacuum Entry/Mounting Thread Diameter

Connection	Symbol	Thread dia./Port size	ø2 to ø8	ø10 to ø16	ø20 to ø32	ø40 to ø50	
			2 x 4 3.5 x 7 4 x 10 ø10 to ø16 (thin section series)				
Vacuum entry	Barb fitting	N4	ø4 Nylon tube	●	●	—	
		N6	ø6 Nylon tube	●	●	●	
	Urethane tube	U4	ø4 Urethane tube	●	●	—	
		U6	ø6 Urethane tube	●	●	●	
Mounting	Male thread	A5	M5 x 0.8	●	—	—	
		A6	M6 x 1	●	●	●	
		A8	M8 x 1	—	—	●	●
		B4	M4 x 0.7	●	—	—	—
	Female thread	B5	M5 x 0.8	●	●	●	—
		B6	M6 x 1	—	●	●	●
		B8	M8 x 1.25	—	—	●	●

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Table (1) Pad Diameter/Pad Type

Type	Dia. (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	—	●	—	●	—	●	—
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

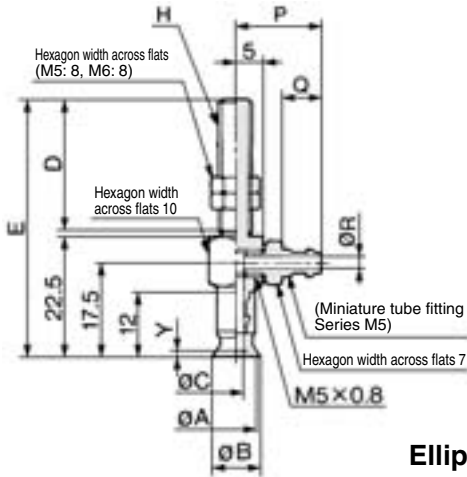
Series ZPY

Connection	Barb Fitting	Pad Form	Flat/Flat with ribs/Deep/ Thin flat/Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Male thread

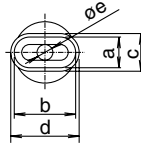
Size/Flat $\phi 2, \phi 4, \phi 6, \phi 8$ /Thin flat/Thin flat with ribs $\phi 10, \phi 13, \phi 16$ /
Elliptic 2004, 3507, 4010

Size/ $\phi 10, \phi 13, \phi 16$

Flat/Thin flat/Thin flat with ribs



Elliptic



Flat

Model	A	B	C	H: M5 x 0.8		H: M6 x 1		Y
				D	E	D	E	
ZPY02U	2	2.6	1.2	20	44	25	49.5	0.5
ZPY04U	4	4.8	1.6					0.8
ZPY06U	6	7	2.5					0.8
ZPY08U	8	9						1

Elliptic

Model	a	b	c	d	e	Y
ZPY2004U	2	4	2.6	4.6	1.2	0.3
ZPY3507U	3.5	7	4.3	7.8	1.8	0.5
ZPY4010U	4	10	5	11	2	0.8

Thin Flat/Thin Flat with Ribs

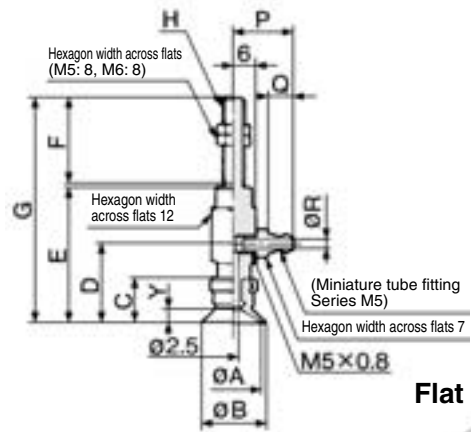
Model	A	B	C	Y
ZPY10UT	10	11	2.5	1
ZPY13UT	13	14		1.5
ZPY16UT	16	17		0.8
ZPY10CT	10	11		1
ZPY13CT	13	14		
ZPY16CT	16	17		

* Dimensions of D, E are the same.

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube $\phi 4/2.5$)	13.5	5	1.8
N6 (Nylon tube $\phi 6/4$)	15.5	7	2.5
U4 (Soft tube $\phi 4/2.5$)	13.5	5	1.8
U6 (Soft tube $\phi 6/4$)	15.5	7	2.5

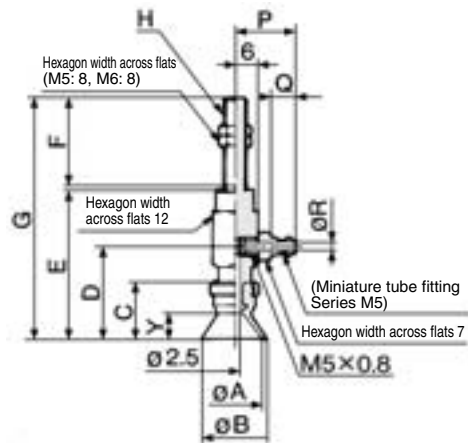
Flat



Flat with ribs



Deep: ZPY10D,16D only



Flat/Flat with Ribs

Model	A	B	C	D	E	H: M5 x 0.8		H: M6 x 1		Y	
						F	G	F	G	Flat	Flat with ribs
ZPY10U	10	12	12	22	38	20	59	25	64	3	1.7
ZPY13U	13	15									1.8
ZPY16U	16	18	12.5	22.5	38.5		59.5		64.5	3.5	1.2

Deep

Model	A	B	C	D	E	H: M5 x 0.8		H: M6 x 1		Y
						F	G	F	G	
ZPY10D	10	12	15	25	41	20	62	25	67	6
ZPY16D	16	18	16	26	42		63		68	7

Applicable Tubing

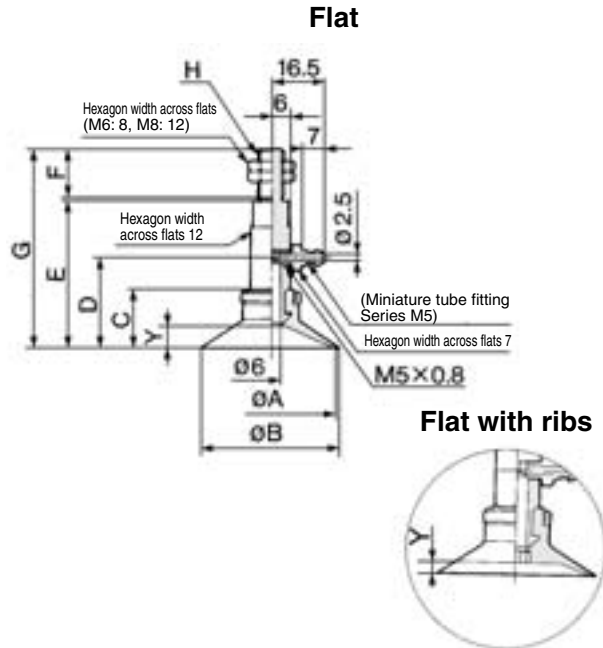
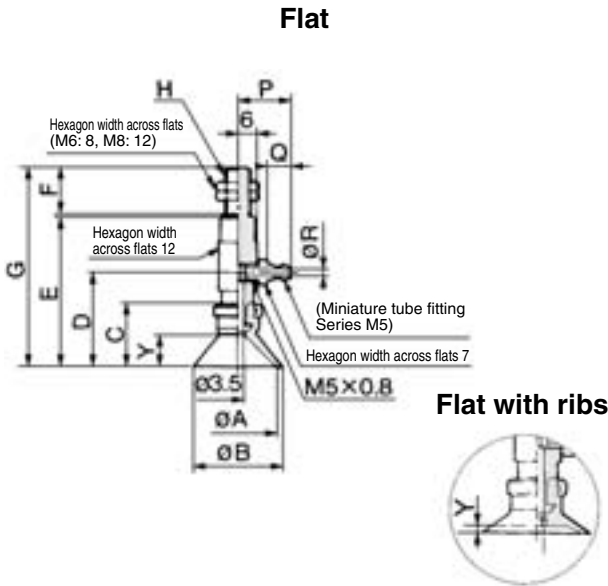
Applicable tube O.D.	P	Q	R
N4 (Nylon tube $\phi 4/2.5$)	14.5	5	1.8
N6 (Nylon tube $\phi 6/4$)	16.5	7	2.5
U4 (Soft tube $\phi 4/2.5$)	14.5	5	1.8
U6 (Soft tube $\phi 6/4$)	16.5	7	2.5

Vacuum Pad/ Lateral Vacuum Entry with Barb Fitting without Buffer **Series ZPY**

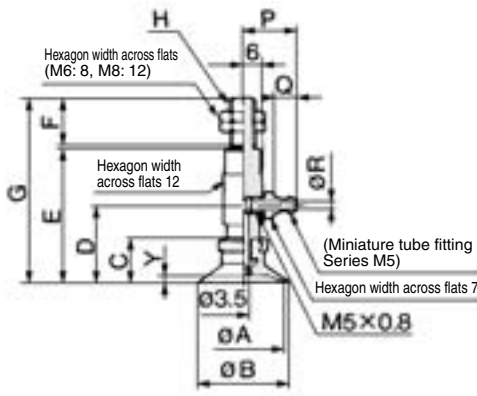
Connection	Barb Fitting	Pad Form	Flat/Flat with ribs/Deep/ Thin flat/Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Male thread

Size/ø20, ø25, ø32

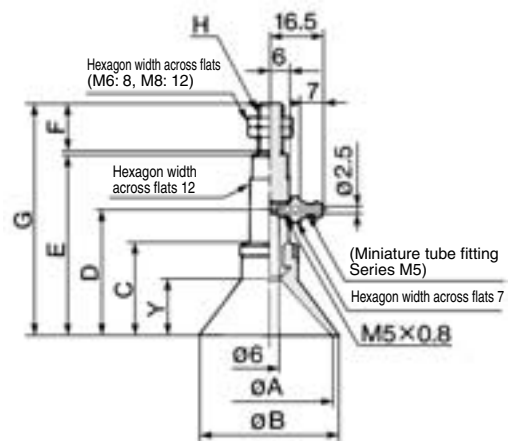
Size/ø40, ø50



Deep: ZPY25D only



Deep: ZPY40D only



Flat/Flat with Ribs

Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		Y	
						F	G	F	G	Flat	Flat with ribs
ZPY20 _U	20	23	14	24	42	25	68	15	58	4	1.7
ZPY25 _U	25	28	14	24	42	25	68	15	58	4	1.8
ZPY32 _U	32	35	14.5	24.5	42.5	25	68.5	15	58.5	4.5	2.3

Deep

Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		Y
						F	G	F	G	
ZPY25D	25	28	20	30	48	25	74	15	64	10

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Soft tube ø4/2.5)	14.5	5	1.8
U6 (Soft tube ø6/4)	16.5	7	2.5

Flat/Flat with Ribs

Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		Y	
						F	G	F	G	Flat	Flat with ribs
ZPY40 _U	40	43	18.5	28.5	46.5	25	72.5	15	62.5	6.5	3.3
ZPY50 _U	50	53	19.5	29.5	47.5	25	73.5	15	63.5	7.5	3.8

Deep

Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		Y
						F	G	F	G	
ZPY40D	40	43	29	39	57	25	83	15	73	17

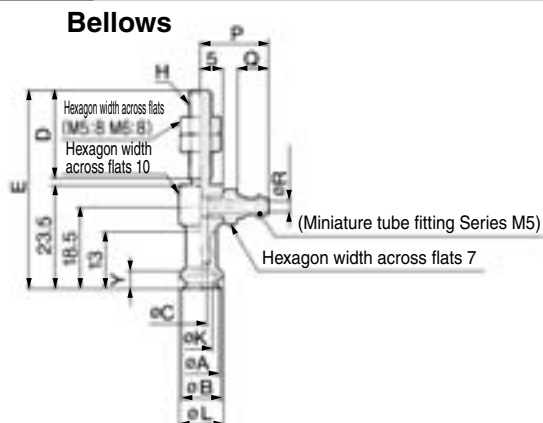
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Series ZPY

Connection	Barb Fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Male thread

Size/ø6, ø8

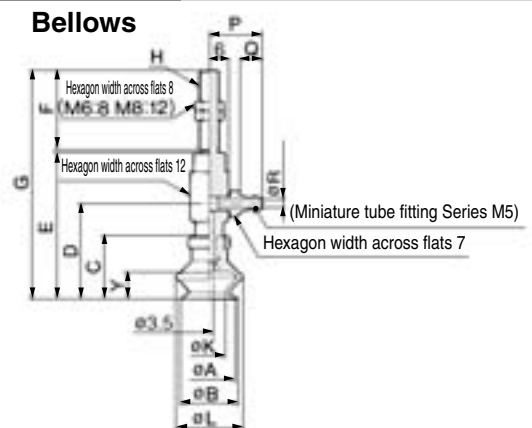


Model	A	B	C	H: M5 x 0.8		H: M6 x 1		K	L	Y
				D	E	D	E			
ZPY06B	6	7	2.5	20	45	25	50.5	3.3	9	4
ZPY08B	8	9		4.7	10					

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	13.5	5	1.8
N6 (Nylon tube ø6/4)	15.5	7	2.5
U4 (Urethane tube ø4/2.5)	13.5	5	1.8
U6 (Urethane tube ø6/4)	15.5	7	2.5

Size/ø20, ø25, ø32

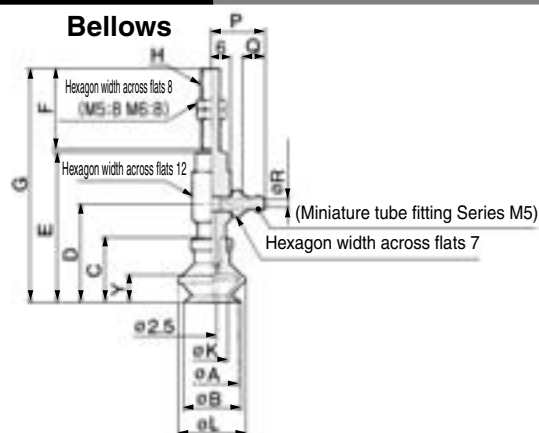


Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		K	L	Y
						F	G	F	G			
ZPY20B	20	22	23.5	33.5	51.5	25	79.5	15	69.5	12	25	10.5
ZPY25B	25	27	24	34	52	80	70	16	28			
ZPY32B	32	34	29	39	57	85	75	19	37	14		

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Urethane tube ø4/2.5)	14.5	5	1.8
U6 (Urethane tube ø6/4)	16.5	7	2.5

Size/ø10, ø13, ø16

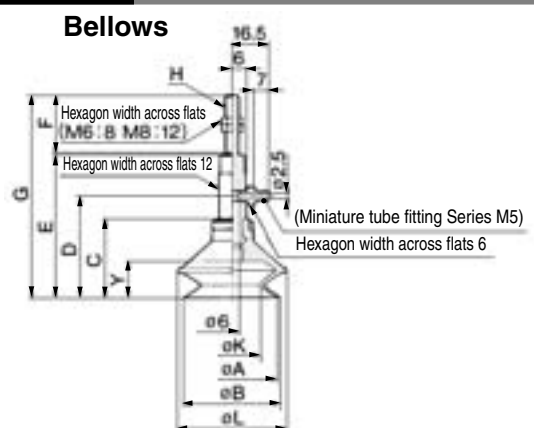


Model	A	B	C	D	E	H: M5 x 0.8		H: M6 x 1		K	L	Y
						F	G	F	G			
ZPY10B	10	12	16	26	42	20	63	25	68	6	14	5.5
ZPY13B	13	15	18.5	28.5	44.5	65.5	70.5	9	19	7.5		
ZPY16B	16	18	20	30	46	67	72	10	21	8.5		

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Urethane tube ø4/2.5)	14.5	5	1.8
U6 (Urethane tube ø6/4)	16.5	7	2.5

Size/ø40, ø50



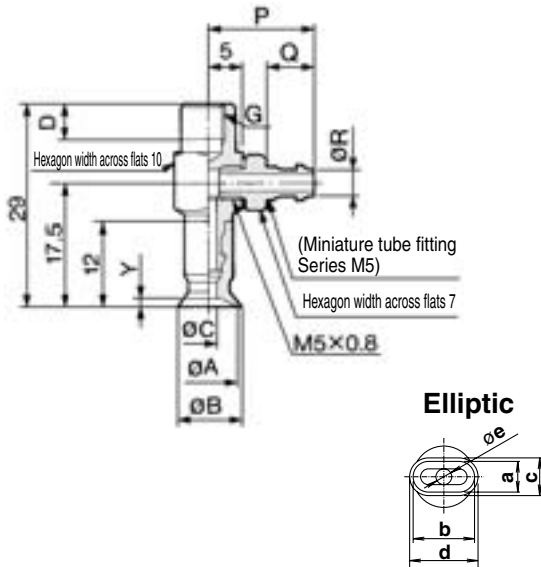
Model	A	B	C	D	E	H: M6 x 1		H: M8 x 1		K	L	Y
						F	G	F	G			
ZPY40B	40	43	34	44	62	25	88	15	78	24	48	16
ZPY50B	50	53	38	48	66	92	82	32	57	19		

Vacuum Pad/ Lateral Vacuum Entry with Barb Fitting without Buffer **Series ZPY**

Connection	Barb fitting	Pad Form	Flat/Flat with ribs/Deep/Thin flat/ Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Female thread

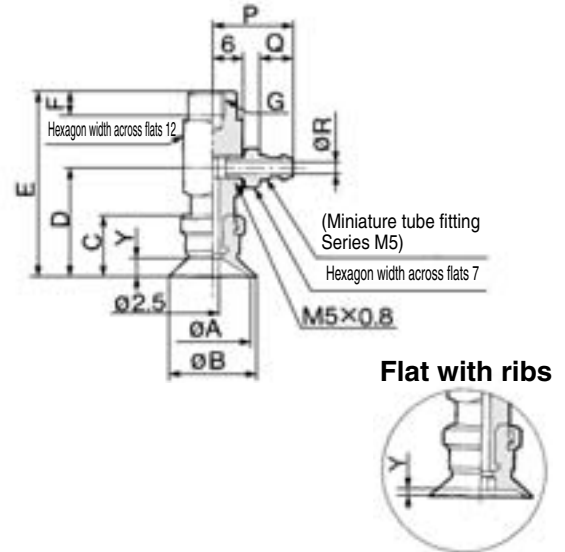
Size/Flat $\phi 2, \phi 4, \phi 6, \phi 8$ /Thin flat/Thin flat with ribs $\phi 10, \phi 13, \phi 16$ /
Elliptic 2004, 3507, 4010

Flat/Thin flat/Thin flat with ribs

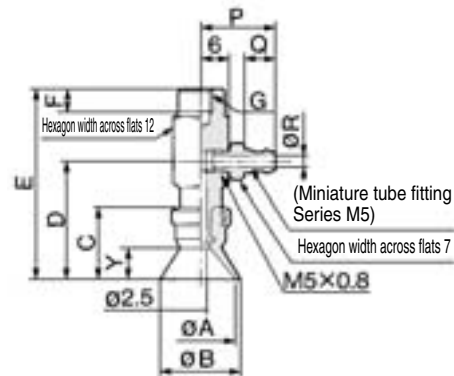


Size/ $\phi 10, \phi 13, \phi 16$

Flat



Deep: ZPY10D, 16D only



Flat/Flat with Ribs

Model	A	B	C	G: M4 x 0.7		Y
				D	D	
ZPY02U	2	2.6	1.2	4	5	0.5
ZPY04U	4	4.8	1.6			0.8
ZPY06U	6	7	2.5			1
ZPY08U	8	9				

Elliptic

Model	a	b	c	d	e	Y
ZPY2004U	2	4	2.6	4.6	1.2	0.3
ZPY3507U	3.5	7	4.3	7.8	1.8	0.5
ZPY4010U	4	10	5	11	2	0.8

Thin Flat /Thin Flat with Ribs

Model	A	B	C	Y
ZPY10UT	10	11	2.5	1
ZPY13UT	13	14		1.5
ZPY16UT	16	17		0.8
ZPY10CT	10	11		1
ZPY13CT	13	14		
ZPY16CT	16	17		

* Dimensions of D are the same.

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube $\phi 4/2.5$)	13.5	5	1.8
N6 (Nylon tube $\phi 6/4$)	15.5	7	2.5
U4 (Soft tube $\phi 4/2.5$)	13.5	5	1.8
U6 (Soft tube $\phi 6/4$)	15.5	7	2.5

Flat/Flat with Ribs

Model	A	B	C	D	E	G: M5 x 0.8		G: M6 x 1		Y	
						F	F	Flat	Flat with ribs		
ZPY10 _U	10	12	12	22	38	5	6	3	3.5	1.7	
ZPY13 _U	13	15								1.8	
ZPY16 _U	16	18	12.5	22.5	38.5					1.2	

Deep

Model	A	B	C	D	E	G: M5 x 0.8		G: M6 x 1		Y
						F	F			
ZPY10D	10	12	15	25	41	5	6	6	7	
ZPY16D	16	18	16	26	42					

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube $\phi 4/2.5$)	14.5	5	1.8
N6 (Nylon tube $\phi 6/4$)	16.5	7	2.5
U4 (Soft tube $\phi 4/2.5$)	14.5	5	1.8
U6 (Soft tube $\phi 6/4$)	16.5	7	2.5

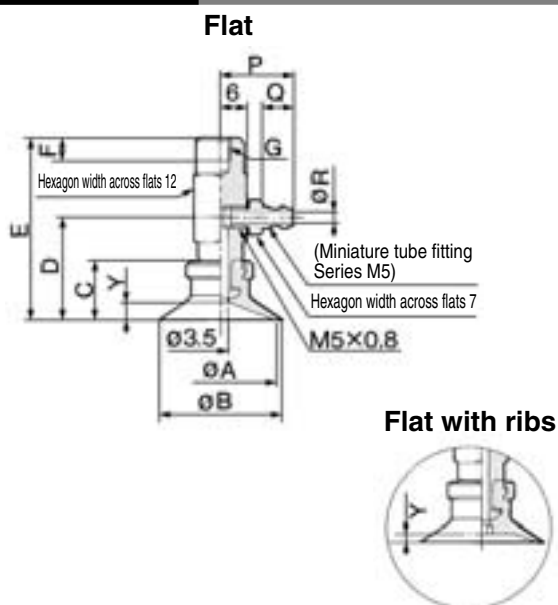
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

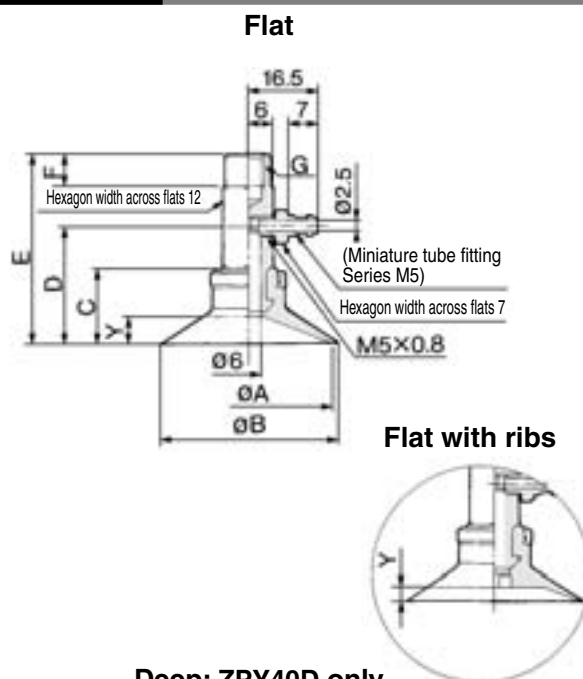
Series ZPY

Connection	Barb fitting	Pad Form	Flat/Flat with ribs/Deep/Thin flat/ Thin flat with ribs/Elliptic
Vacuum Entry Port	Lateral	Mounting	Female thread

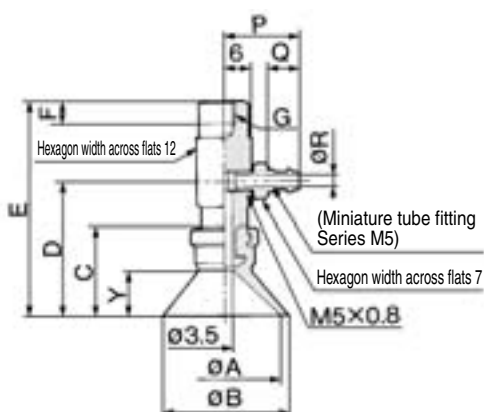
Size/ø20, ø25, ø32



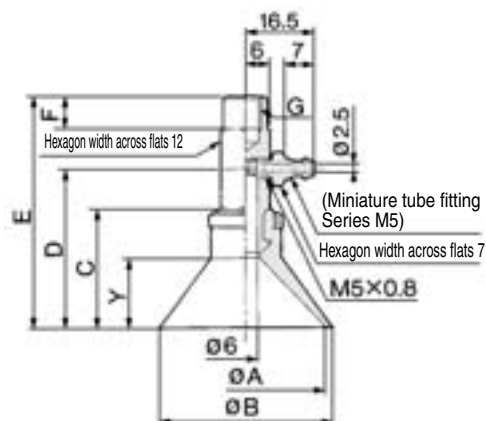
Size/ø40, ø50



Deep: ZPY25D only



Deep: ZPY40D only



Flat/Flat with ribs

Model	A	B	C	D	E	G: M5 x 0.8	G: M6 x 1	G: M8 x 1.25	Y	
						F	F	F	Flat	Flat with ribs
ZPY20 $\frac{U}{C}$	20	23	14	24	42				4	1.7
ZPY25 $\frac{U}{C}$	25	28	14	24	42	5	6	8	4	1.8
ZPY32 $\frac{U}{C}$	32	35	14.5	24.5	42.5				4.5	2.3

Deep

Model	A	B	C	D	E	G: M5 x 0.8	G: M6 x 1	G: M8 x 1.25	Y
						F	F	F	
ZPY25D	25	28	20	30	48	5	6	8	10

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylontube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Soft tube ø4/2.5)	14.5	5	1.8
U6 (Soft tube ø6/4)	16.5	7	2.5

Flat/Flat with ribs

Model	A	B	C	D	E	G: M6 x 1	G: M8 x 1.25	Y	
						F	F	Flat	Flat with ribs
ZPY40 $\frac{U}{C}$	40	43	18.5	28.5	46.5			6.5	3.3
ZPY50 $\frac{U}{C}$	50	53	19.5	29.5	47.5	6	8	7.5	3.8

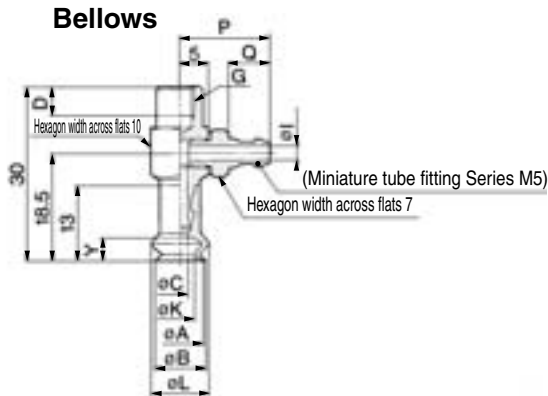
Deep

Model	A	B	C	D	E	G: M6 x 1	G: M8 x 1.25	Y
						F	F	
ZPY40D	40	43	29	39	57	6	8	17

Vacuum Pad/ Lateral Vacuum Entry with Barb Fitting without Buffer **Series ZPY**

Connection	Barb fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Female thread

Size/ø6, ø8

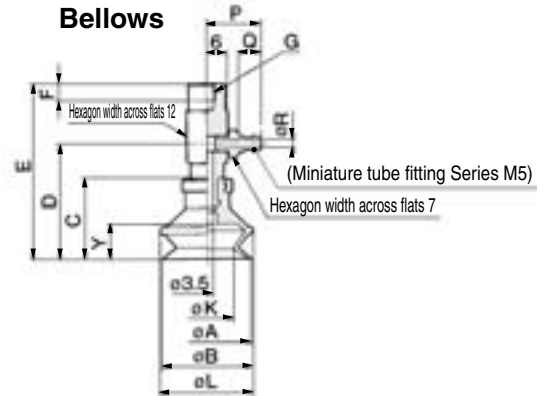


Model	A	B	C	G: M4 x 0.7	G: M5 x 0.8	K	L	Y
				D	D			
ZPY06B	6	7	2.5	4	5	3.3	9	4
ZPY08B	8	9				4.7	10	

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	13.5	5	1.8
N6 (Nylon tube ø6/4)	15.5	7	2.5
U4 (Urethane tube ø4/2.5)	13.5	5	1.8
U6 (Urethane tube ø6/4)	15.5	7	2.5

Size/ø20, ø25, ø32

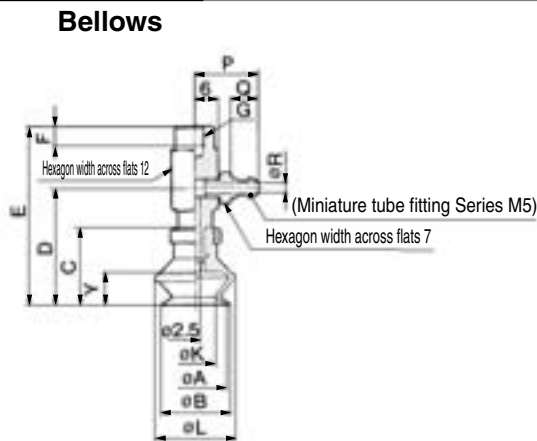


Model	A	B	C	D	E	G: M5 x 0.8	G: M6 x 1	G: M8 x 1.25	K	L	Y
						F	F	F			
ZPY20B	20	22	23.5	33.5	51.5	5	6	8	12	25	10.5
ZPY25B	25	27	24	34	52				16	28	10.5
ZPY32B	32	34	29	39	57				19	37	14

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Urethane tube ø4/2.5)	14.5	5	1.8
U6 (Urethane tube ø6/4)	16.5	7	2.5

Size/ø10, ø13, ø16

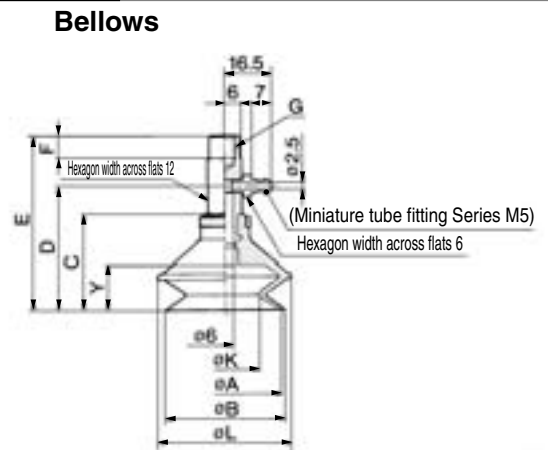


Model	A	B	C	D	E	G: M5 x 0.8	G: M6 x 1	K	L	Y
						F	F			
ZPY10B	10	12	16	26	42	5	6	6	14	5.5
ZPY13B	13	15	18.5	28.5	44.5			9	19	7.5
ZPY16B	16	18	20	30	46			10	21	8.5

Applicable Tubing

Applicable tube O.D.	P	Q	R
N4 (Nylon tube ø4/2.5)	14.5	5	1.8
N6 (Nylon tube ø6/4)	16.5	7	2.5
U4 (Urethane tube ø4/2.5)	14.5	5	1.8
U6 (Urethane tube ø6/4)	16.5	7	2.5

Size/ø40, ø50



Model	A	B	C	D	E	G: M6 x 1	G: M8 x 1.25	K	L	Y
						F	F			
ZPY40B	40	43	34	44	62	6	8	24	48	16
ZPY50B	50	53	38	48	66			32	57	19

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment



Vacuum Pad/ Lateral Vacuum Entry with Barb Fitting With Buffer

Series ZPY

Specifications

Vacuum entry	Direction		Lateral
	Connection		Barb fitting
Applicable tubing dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) ø10 to ø16 (Thin section series) ø2 to ø8		ø4, ø6 Nylon tube, ø4, ø6 Urethane tube
	ø10 to ø16		ø4, ø6 Nylon tube, ø4, ø6 Urethane tube
	ø20 to ø32		ø4, ø6 Nylon tube, ø4, ø6 Urethane tube
	ø40 to ø50		ø6 Nylon tube, ø6 Urethane tube
Mounting	Thread dia.	Elliptic (2 x 4, 3.5 x 7, 4 x 10) ø10 to ø16 (Thin section series) ø2 to ø8	M8 x 1 Male thread
		ø10 to ø16	M10 x 1 Male thread
		ø20 to ø32	M10 x 1 Male thread
		ø40 to ø50	M14 x 1 Male thread



Buffer Specifications

Pad dia. (mm)	ø2 to ø8*	ø10 to ø32	ø40, ø50
Stroke (mm)	6, 10, 15, 25	10, 20, 30, 40, 50	10, 20, 30, 50
Spring Reactive Force (N)	0 stroke	0.8	1.0
	Full stroke	1.2	3.0
Non-rotating specification		Rotating (J)/Non-rotating (K)	

* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs and Elliptic.

Pad Type

Pad form	Flat	Flat with ribs	Deep	Bellows	Thin flat/Thin flat with ribs
Pad dia. (mm)	2, 4, 6, 8, 2 x 4, 3.5 x 7, 4 x 10, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40	6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluororubber (Black with green mark) Conductive NBR (Black with one silver mark), Conductive silicon rubber (Black with two silver marks)				
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluororubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)				

Mass

(g)

Stroke (mm)	Pad form		Flat/ Flat with ribs	Deep	Bellows
	Model				
6	ZPY2004	10 to 16	33	—	33
	ZPY3507				
	ZPY4010				
	ZPY02 to 08				
	ZPY10 to 16 (Thin section series)				
10	ZPY 10 to 16	45	45	46	
10	ZPY 20 to 25	50	51	53	
	ZPY 32	52	—	58	
10	ZPY 40	115	117	127	
	ZPY 50	132	—	134	

Mass by Stroke

(g)

Model	Stroke (mm)						
	10	15	20	25	30	40	50
ZPY02 to 08	+7	+8	—	+9	—	—	—
ZPY10 to 25	—	—	+12	—	+14	+26	+28
ZPY40, 50	—	—	-5.5	—	-1.5	—	+30

How to Order

Series ZPY
With buffer

ZPY 16 U GS K 20 - U6 - A10

Pad diameter (mm)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10
02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50



(Refer to "Table (1)" for applications.)

Pad type

U	Flat
C	Flat with ribs
D	Deep
B	Bellows
UT	Thin flat
CT	Thin flat with ribs

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Buffer type

J	Rotating
K	Non-rotating

Buffer stroke



(Refer to "Table (2)" for applications.)

Vacuum entry port



(Refer to "Table (3)" for applications.)

Mounting thread/Male thread



(Refer to "Table (3)" for applications.)

Table (1) Pad Diameter/Pad Type

Type	Dia. (mm)														
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	—	—	—	●	—	●	—	●	—	●	—
Bellows	—	—	—	—	—	●	●	●	●	●	●	●	●	●	●
Thin flat	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—
Thin flat with ribs	—	—	—	—	—	—	—	●	●	●	—	—	—	—	—

Table (2) Pad Diameter/Stroke

Stroke	Dia. (mm)																	
	2 x 4	3.5 x 7	4 x 10	2	4	6	8	Thin flat/Thin flat with ribs			10	13	16	20	25	32	40	50
								10	13	16								
6 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
10 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
15 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
20 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
25 mm	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—
30 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●
40 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	—	—
50 mm	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●

Table (3) Vacuum Entry/Mounting Thread Diameter

	Symbol	Thread dia./ Port size	ø2 to ø8 2 x 4, 3.5 x 7 4 x 10 ø10 to ø16 (Thin section series)	ø10 to ø32	ø40, ø50
Vacuum entry	One-touch fitting	N4	ø4 Nylon tube	●	—
		N6	ø6 Nylon tube	●	●
		U4	ø4 Urethane tube	●	●
		U6	ø6 Urethane tube	●	●
Mounting	Male thread	A8	M8 x 1	●	—
		A10	M10 x 1	—	●
		A14	M14 x 1	—	—

Tightening Torque

(N·m)

Mounting thread diameter	Torque
M8 x 1	2.0 ±0.5
M10 x 1	3.0 ±0.5
M14 x 1	7.0 ±0.5

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

AEP

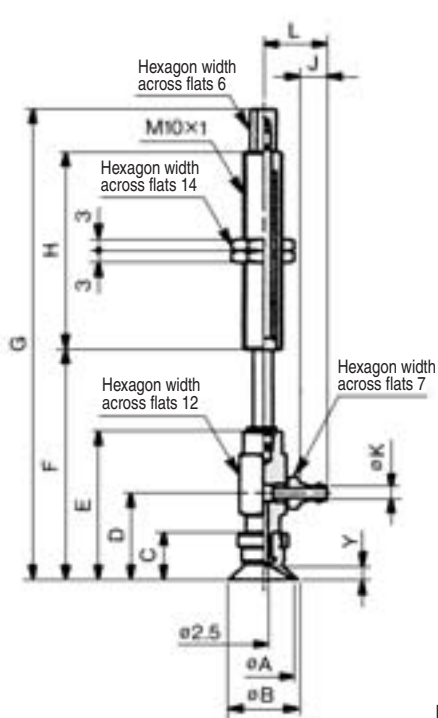
HEP

Related
Equipment

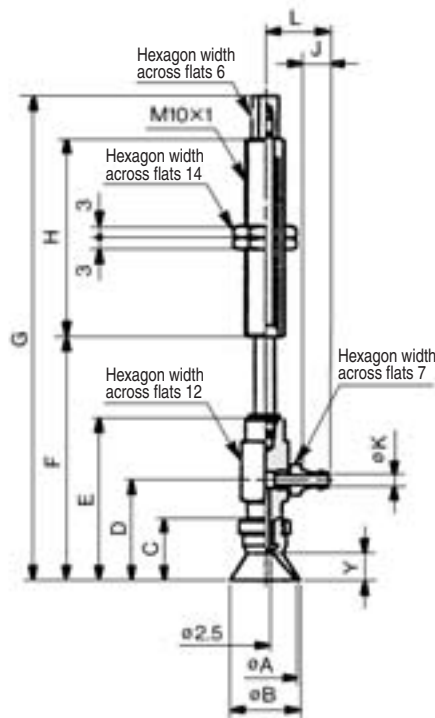
Connection	Barb fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/∅10, ∅13, ∅16

Deep/∅10, ∅16



Flat with ribs



∅10, ∅13, ∅16

Flat/Flat with Ribs

Model	A	B	C	D	E	Y	
						Flat	Flat with ribs
ZPY10 ^U _C □□□□□□□□□□-□□-A10	10	12	12	22	38	3	1.7
ZPY13 ^U _C □□□□□□□□□□-□□-A10	13	15					
ZPY16 ^U _C □□□□□□□□□□-□□-A10	16	18					

Dimensions by Stroke

Model	∅10, ∅13		∅16		H
	F	G	F	G	
ZPY□□ ^U _C □□□□□□□□□□-□□-A10	49	83	49.5	83.5	23
ZPY□□ ^U _C □□□□□□□□□□-20-□□-A10	59	121	59.5	121.5	51
ZPY□□ ^U _C □□□□□□□□□□-30-□□-A10	69	131	69.5	131.5	
ZPY□□ ^U _C □□□□□□□□□□-40-□□-A10	79	167	79.5	167.5	77
ZPY□□ ^U _C □□□□□□□□□□-50-□□-A10	89	177	89.5	177.5	

∅10, ∅16

Deep

Model	A	B	C	D	E	Y
ZPY10D□□□□□□□□□□-□□-A10	10	12	15	25	41	6
ZPY16D□□□□□□□□□□-□□-A10	16	18	16	26	42	7

Dimensions by Stroke

Model	∅10		∅16		H
	F	G	F	G	
ZPY□□D□□□□□□□□□□-□□-A10	52	86	53	87	23
ZPY□□D□□□□□□□□□□-20-□□-A10	62	124	63	125	51
ZPY□□D□□□□□□□□□□-30-□□-A10	72	134	73	135	
ZPY□□D□□□□□□□□□□-40-□□-A10	82	170	83	171	77
ZPY□□D□□□□□□□□□□-50-□□-A10	92	180	93	181	

Dimensions by Tubing

Model	J	K	L
ZPY□□□□□□□□□□□□□□-□4-A10	5	1.8	14.5
ZPY□□□□□□□□□□□□□□-□6-A10	7	2.5	16.5

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

AEP

HEP

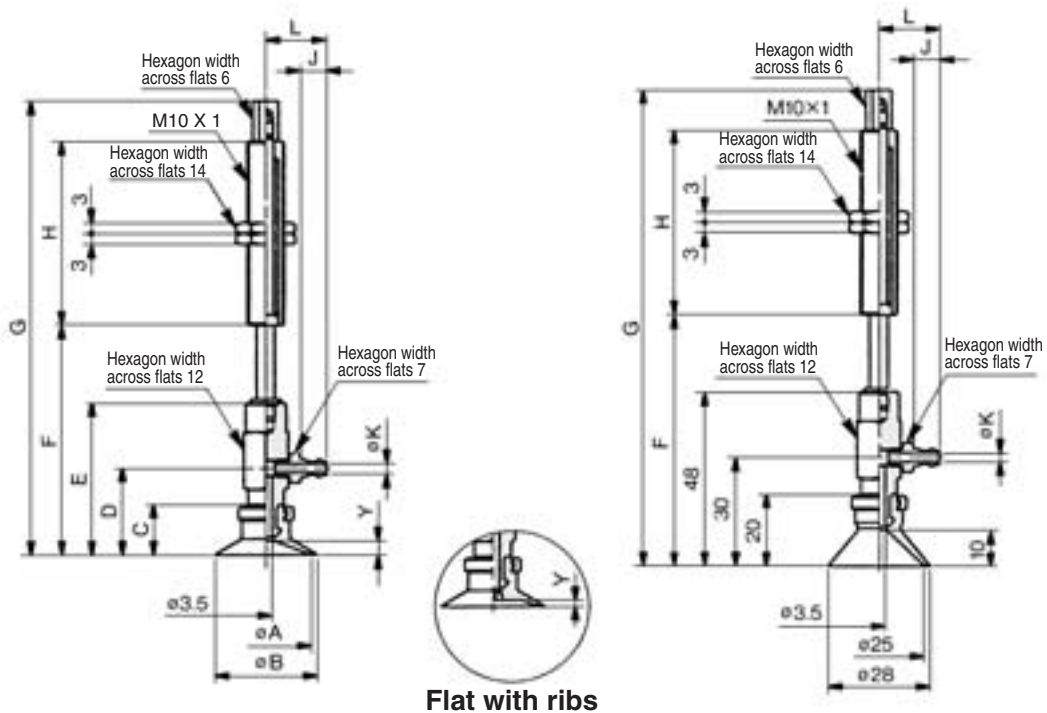
Related Equipment

Series ZPY

Connection	Barb fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/ø20, ø25, ø32

Deep/ø25



ø20, ø25, ø32

Flat/Flat with Ribs

Model	A	B	C	D	E	Y	
						Flat	Flat with ribs
ZPY20 _C □□□□□□□□-□□A10	20	23	14	24	42	4	1.7
ZPY25 _C □□□□□□□□-□□A10	25	28					1.8
ZPY32 _C □□□□□□□□-□□A10	32	35	14.5	24.5	42.5	4.5	2.3

Dimensions by Stroke

Model	ø20, ø25		ø32		H
	F	G	F	G	
ZPY□□□□□□□□□□□□□□-□□A10	53	87	53.5	87.5	23
ZPY□□□□□□□□□□□□□□-□□A10	63	125	63.5	125.5	51
ZPY□□□□□□□□□□□□□□-□□A10	73	135	73.5	135.5	
ZPY□□□□□□□□□□□□□□-□□A10	83	171	83.5	171.5	77
ZPY□□□□□□□□□□□□□□-□□A10	93	181	93.5	181.5	

ø25

Deep

Model	F	G	H
ZPY25D□□□□□□□□□□□□□□-□□A10	59	93	23
ZPY25D□□□□□□□□□□□□□□-□□A10	69	131	51
ZPY25D□□□□□□□□□□□□□□-□□A10	79	141	
ZPY25D□□□□□□□□□□□□□□-□□A10	89	177	77
ZPY25D□□□□□□□□□□□□□□-□□A10	99	187	

Dimensions by Tubing

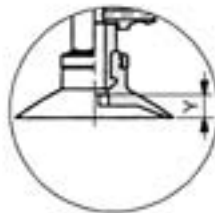
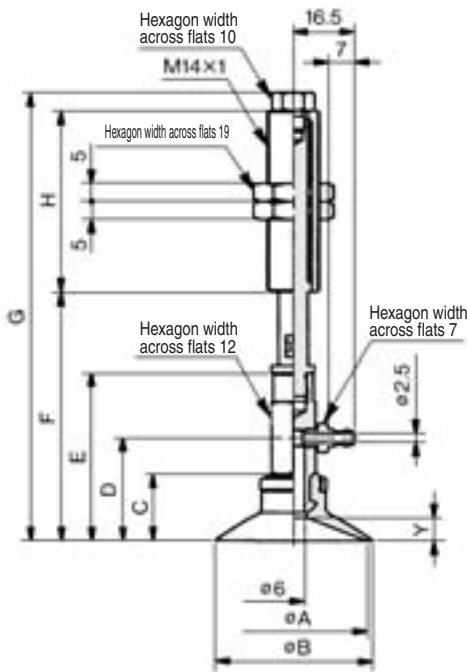
Model	J	K	L
ZPY□□□□□□□□□□□□□□-□□A10	5	1.8	14.5
ZPY□□□□□□□□□□□□□□-□□A10	7	2.5	16.5

Vacuum Pad/
Lateral Vacuum Entry with Barb Fitting with Buffer **Series ZPY**

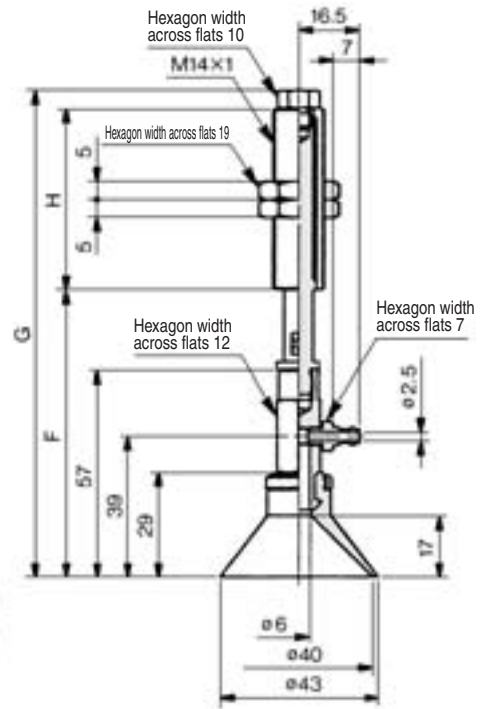
Connection	Barb fitting	Pad Form	Flat/Flat with ribs/Deep
Vacuum Entry Port	Lateral	Mounting	Male thread

Flat/Flat with ribs/ø40, ø50

Deep/ø40



Flat with ribs



ø40, ø50

Flat/Flat with Ribs

Model	A	B	C	D	E	Y	
						Flat	Flat with ribs
ZPY40 ^U _C □□□□□□□□□□6-A14	40	43	18.5	28.5	46.5	6.5	3.3
ZPY50 ^U _C □□□□□□□□□□6-A14	50	53	19.5	29.5	47.5	7.5	3.8

Dimensions by Stroke

Model	ø40		ø50		H
	F	G	F	G	
ZPY□□ ^U _C □□□□□□□□□□10-□□6-A14	58.5	126.5	59.5	127.5	50
ZPY□□ ^U _C □□□□□□□□□□20-□□6-A14	68.5	123.5	69.5	124.5	
ZPY□□ ^U _C □□□□□□□□□□30-□□6-A14	78.5	133.5	79.5	134.5	
ZPY□□ ^U _C □□□□□□□□□□50-□□6-A14	98.5	178.5	99.5	179.5	

ø40

Deep

Model	F	G	H
ZPY40D□□□□□□□□□□10-□□6-A14	69	137	50
ZPY40D□□□□□□□□□□20-□□6-A14	79	134	
ZPY40D□□□□□□□□□□30-□□6-A14	89	144	
ZPY40D□□□□□□□□□□50-□□6-A14	109	189	

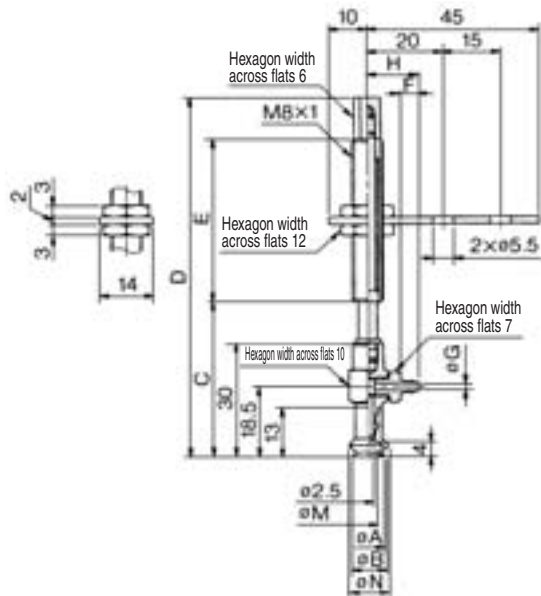
- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

Series ZPY

Connection	Barb fitting	Pad Form	Bellows
Vacuum Entry Port	Lateral	Mounting	Male thread

Bellows/ $\phi 6$, $\phi 8$



$\phi 6$, $\phi 8$

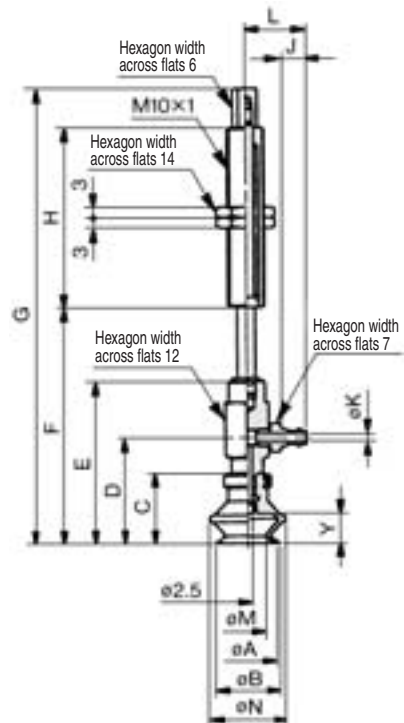
Bellows

Model	A	B	M	N
ZPY06B□□□□□□-□□- A8	6	7	3.3	9
ZPY08B□□□□□□-□□- A8	8	9	4.7	10

Dimensions by Stroke

Model	C	D	E	$\phi 4$ tube			$\phi 6$ tube		
				F	G	H	F	G	H
ZPY□□B□□□□□ 6-□□- A8	38	64	15	5	1.8	13.5	7	2.5	15.5
ZPY□□B□□□□□ 10-□□- A8	41	95	43						
ZPY□□B□□□□□ 15-□□- A8	46	100							
ZPY□□B□□□□□ 25-□□- A8	56	110							

Bellows/ $\phi 10$, $\phi 13$, $\phi 16$



$\phi 10$, $\phi 13$, $\phi 16$


Bellows

Model	A	B	C	D	E	M	N	Y
ZPY10B□□□□□□-□□- A10	10	12	16	25	42	6	14	5.5
ZPY13B□□□□□□-□□- A10	13	15	18.5	28.5	44.5	9	19	7.5
ZPY16B□□□□□□-□□- A10	16	18	20	30	46	10	21	8.5

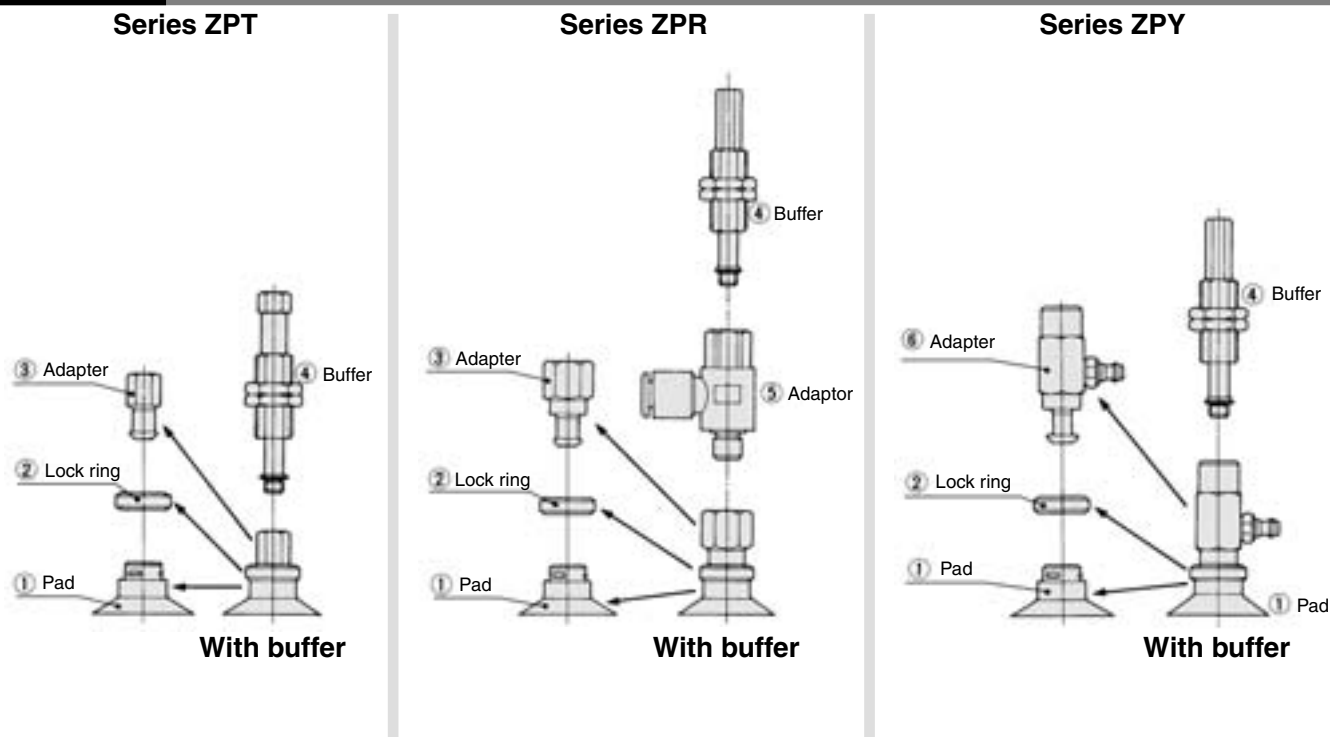
Dimensions by Stroke

Model	$\phi 10$			$\phi 13$			$\phi 16$			H	$\phi 4$ tube			$\phi 6$ tube		
	F	G	F	G	F	G	F	G	J		K	L	J	K	L	
ZPY□□B□□□□□ 10-□□- A10	53	87	55.5	89.5	57	91	23	5	1.8	14.5	7	2.5	16.5			
ZPY□□B□□□□□ 20-□□- A10	63	125	65.5	127.5	67	129	51									
ZPY□□B□□□□□ 30-□□- A10	73	135	75.5	137.5	77	139										
ZPY□□B□□□□□ 40-□□- A10	83	171	85.5	173.5	87	175	77									
ZPY□□B□□□□□ 50-□□- A10	93	181	95.5	183.5	97	185										

Vacuum Pad/Components

 Refer to pages 1182 to 1187 for part numbers of ③ to ⑥.

Construction

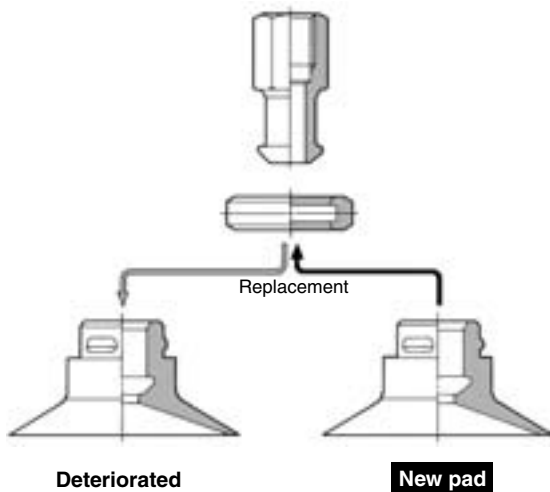


Component Parts

No.	Description	Material	Note
1	Pad	Conductive NBR, Conductive silicon rubber, NBR, Silicon rubber, Urethane rubber, Fluoro rubber	
2	Lock ring	Brass	Electroless nickel plated
3	Adapter	Brass	Electroless nickel plated
4	Buffer	Brass	Electroless nickel plated
5	Adapter (with one-touch fitting)	Brass, PBT	Electroless nickel plated
6	Adapter (with barb fitting)	Brass	Electroless nickel plated

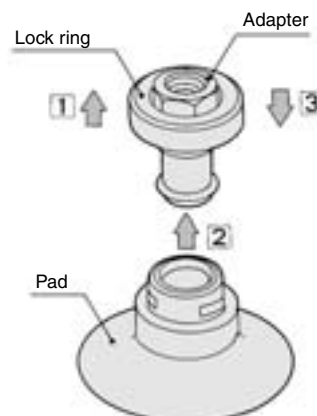
Maintenance of Pad

Since pads are essentially rubber, deterioration is unavoidable. The rate of deterioration depends upon factors such as conditions of use, environment and temperature. Regular maintenance should be performed. If any damage, splitting, cracking or abrasion has occurred in a pad which appears to be harmful, replace it immediately. Also, take care not to damage the outside surface of the pad.



How to Replace

1. Pull the lock ring upward, and after lifting it to the adapter, remove the old pad by pulling it downward.
2. While holding the lock ring in the raised position, place a new pad onto the adapter.
3. Confirm that the pad is securely in place, and then return the lock ring to its original position.



Replacement Parts: Pad Unit (With lock ring/Without lock ring)

How to Order Pad Unit

How to Order Lock Ring Unit

ZP 10 U N - X19

ZPL 1

Pad dia. (mm)

02	2
04	4
06	6
08	8
10	10
13	13
16	16
20	20
25	25
32	32
40	40
50	50

Lock ring

Nil	With lock ring
-X19	Without lock ring (ø10 or larger)

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

Pad type

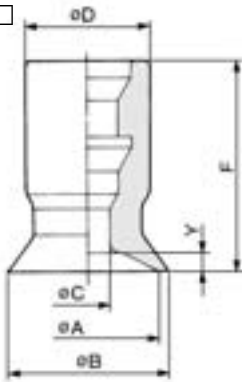
U	Flat
C	Flat with ribs
D	Deep
B	Bellows

Applicable pad dia. (mm)

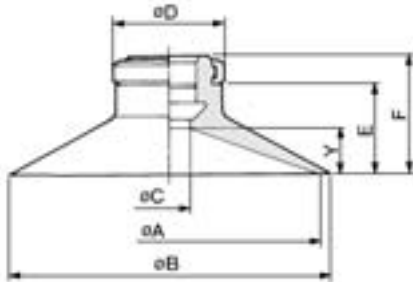
1	10 to 16
2	20 to 32
3	40, 50

Flat (U) Refer to page 1181 for the Elliptic.

ZP02U□ to 08U□



ZP10U□ to 50U□

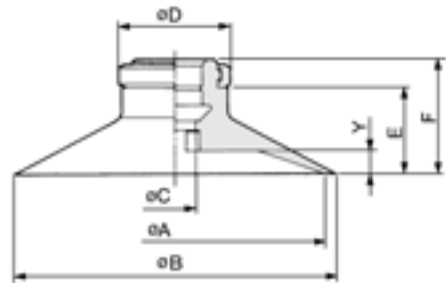


Model	Size	A	B	C	D	E	F	Y
ZP02U□	U02	2	2.6	1.2	7	—	12	0.5
ZP04U□	U04	4	4.8	1.6	7	—	12	0.8
ZP06U□	U06	6	7	2.5	7	—	12	0.8
ZP08U□	U08	8	9	2.5	7	—	12	1
ZP10U□	U10	10	12	4	13	7.7	12	3
ZP13U□	U13	13	15	4	13	7.7	12	3
ZP16U□	U16	16	18	4	13	8.2	12.5	3.5
ZP20U□	U20	20	23	4	15	9.5	14	4
ZP25U□	U25	25	28	4	15	9.5	14	4
ZP32U□	U32	32	35	4	15	10	14.5	4.5
ZP40U□	U40	40	43	7	18	13.7	18.5	6.5
ZP50U□	U50	50	53	7	18	14.7	19.5	7.5

* Put in the symbol for material at the end of model no.

Flat with Ribs (C)

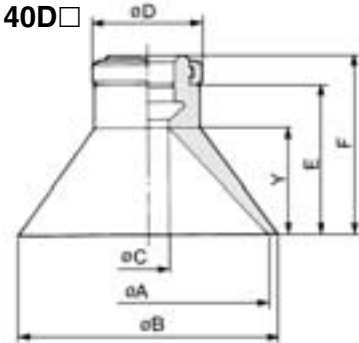
ZP10C□ to 50C□



Model	Size	A	B	C	D	E	F	Y
ZP10C□	C10	10	12	4	13	7.7	12	1.7
ZP13C□	C13	13	15	4	13	7.7	12	1.8
ZP16C□	C16	16	18	4	13	8.2	12.5	1.2
ZP20C□	C20	20	23	4	15	9.5	14	1.7
ZP25C□	C25	25	28	4	15	9.5	14	1.8
ZP32C□	C32	32	35	4	15	10	14.5	2.3
ZP40C□	C40	40	43	7	18	13.7	18.5	3.3
ZP50C□	C50	50	53	7	18	14.7	19.5	3.8

Deep (D)

ZP10D□ to 40D□



Model	Size	A	B	C	D	E	F	Y
ZP10D□	D10	10	12	4	13	10.7	15	6
ZP16D□	D16	16	18	4	13	11.7	16	7
ZP25D□	D25	25	28	4	15	15.5	20	10
ZP40D□	D40	40	43	7	18	24.2	29	17

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

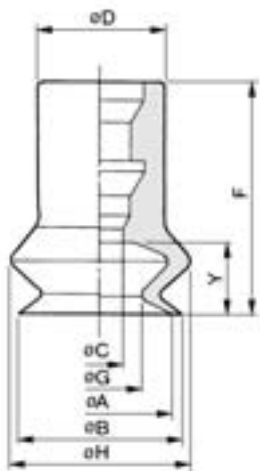
Related Equipment

Series ZP

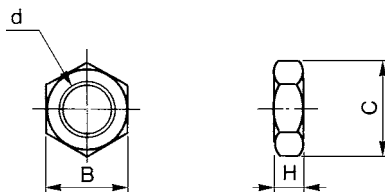
Replacement Parts: Pad Unit (With lock ring/Without lock ring)

Bellows (B)/With Lock Ring

Pad diameter: $\phi 6$ to $\phi 8$
ZP06B□ to 08B□

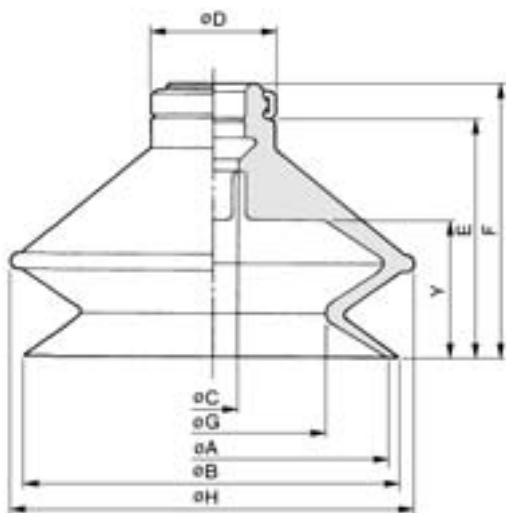


Buffer Mounting Nut



Model	d	H	B	C
ZPNA-M5	M5 x 0.8	4	8	9.2
ZPNA-M6	M6 x 1	3	8	9.2
ZPNA-M8	M8 x 1	3	12	13.9
ZPNA-M10	M10 x 1	3	14	16.2
ZPNA-M14	M14 x 1	5	19	21.9

Pad diameter: $\phi 10$ to $\phi 50$
ZP10B□ to 50B□



Model	Size	A	B	C	D	E	F	G	H	Y
ZP06B□	B06	6	7	2.5	7	—	13	3.3	9	4
ZP08B□	B08	8	9	2.5	7	—	13	4.7	10	4
ZP10B□	B10	10	12	4	13	11.7	16	6	14	5.5
ZP13B□	B13	13	15	4	13	14.2	18.5	9	19	7.5
ZP16B□	B16	16	18	4	13	15.7	20	10	21	8.5
ZP20B□	B20	20	22	4	15	19	23.5	12	25	10.5
ZP25B□	B25	25	27	4	15	19.5	24	16	28	10.5
ZP32B□	B32	32	34	4	15	24.5	29	19	37	14
ZP40B□	B40	40	43	7	18	29.2	34	24	48	16
ZP50B□	B50	50	53	7	18	33.2	38	32	57	19

* Put in the symbol for material at the end of model no.

Replacement Parts: Pad Unit (With lock ring/Without lock ring)

How to Order/Pad Unit

Thin flat (UT), Thin flat with ribs (CT)

ZP 10 UT N

Pad diameter

10	10
13	13
16	16

Pad type

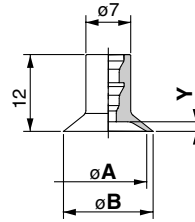
UT	Thin flat
CT	Thin flat with ribs

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

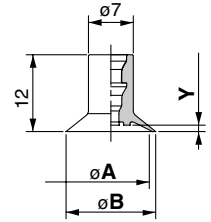
Dimensions

Thin flat



ZP□□UT□□

Thin flat with ribs



ZP□□CT□□

Dimensions (mm)

Model	A	B	Y
ZP10UT□□	10	11	1
ZP13UT□□	13	14	1.5
ZP16UT□□	16	17	

Dimensions (mm)

Model	A	B	Y
ZP10CT□□	10	11	0.8
ZP13CT□□	13	14	1
ZP16CT□□	16	17	

Elliptic

ZP 2004 U N

Pad diameter (Breadth x Length)

2004	2 x 4
3507	3.5 x 7
4010	4 x 10

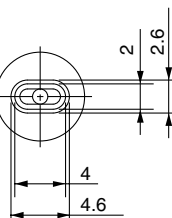
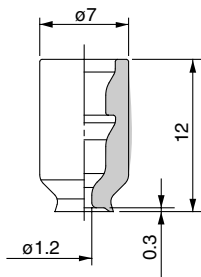
Pad type

U	Flat
---	------

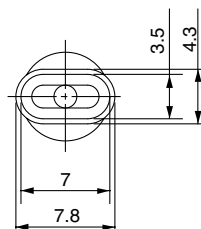
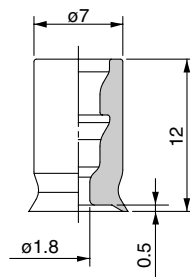
Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluororubber
GN	Conductive NBR
GS	Conductive silicon rubber

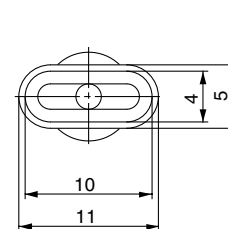
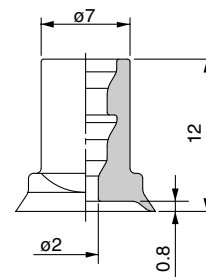
Dimensions



ZP2004U□□



ZP3507U□□



ZP4010U□□

ZA

ZX

ZR

ZM

ZMA

ZQ

ZH

ZU

ZL

ZY□

ZF□

ZP□

SP

ZCUK

AMJ

AMV

AEP

HEP

Related Equipment

Series ZP

Replacement Parts: Adapter/Buffer (Series ZPT)

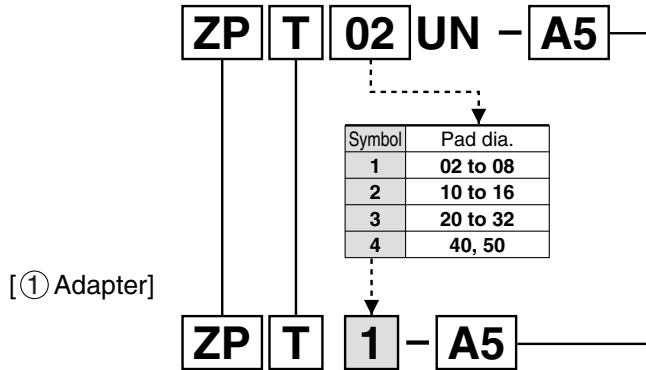
Appropriate adaptor or buffer can be selected for the currently used pad model.

● Without buffer

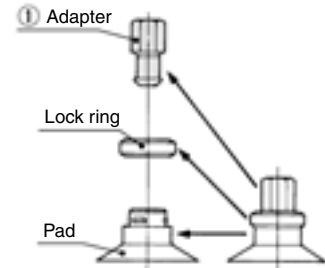
— The same symbol

←···· Replacement of the symbol

[Pad model no.]



Construction



Applicable pad diameter: $\varnothing 2$ to $\varnothing 8$

2 x 4, 3.5 x 7, 4 x 10

$\varnothing 10$ to $\varnothing 16$ (Thin section series)

Model	① Adapter
ZPT□□□□-A5	ZPT1-A5
ZPT□□□□-A6	ZPT1-A6
ZPT□□□□-B4	ZPT1-B4
ZPT□□□□-B5	ZPT1-B5

Applicable pad diameter: $\varnothing 10$ to $\varnothing 16$

Model	① Adapter
ZPT□□□□-A5	ZPT2-A5
ZPT□□□□-A6	ZPT2-A6
ZPT□□□□-B5	ZPT2-B5
ZPT□□□□-B6	ZPT2-B6
ZPT□□□□-B01	ZPT2-B01
ZPT□□□□-N01	ZPT2-N01
ZPT□□□□-T01	ZPT2-T01

Applicable pad diameter: $\varnothing 20$ to $\varnothing 32$

Model	① Adapter
ZPT□□□□-A6	ZPT3-A6
ZPT□□□□-A8	ZPT3-A8
ZPT□□□□-B5	ZPT3-B5
ZPT□□□□-B6	ZPT3-B6
ZPT□□□□-B8	ZPT3-B8
ZPT□□□□-B01	ZPT3-B01
ZPT□□□□-N01	ZPT3-N01
ZPT□□□□-T01	ZPT3-T01

Applicable pad diameter: $\varnothing 40$, $\varnothing 50$

Model	① Adapter
ZPT□□□□-A6	ZPT4-A6
ZPT□□□□-A8	ZPT4-A8
ZPT□□□□-B6	ZPT4-B6
ZPT□□□□-B8	ZPT4-B8
ZPT□□□□-B01	ZPT4-B01
ZPT□□□□-N01	ZPT4-N01
ZPT□□□□-T01	ZPT4-T01

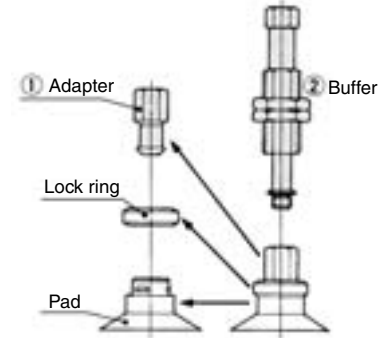
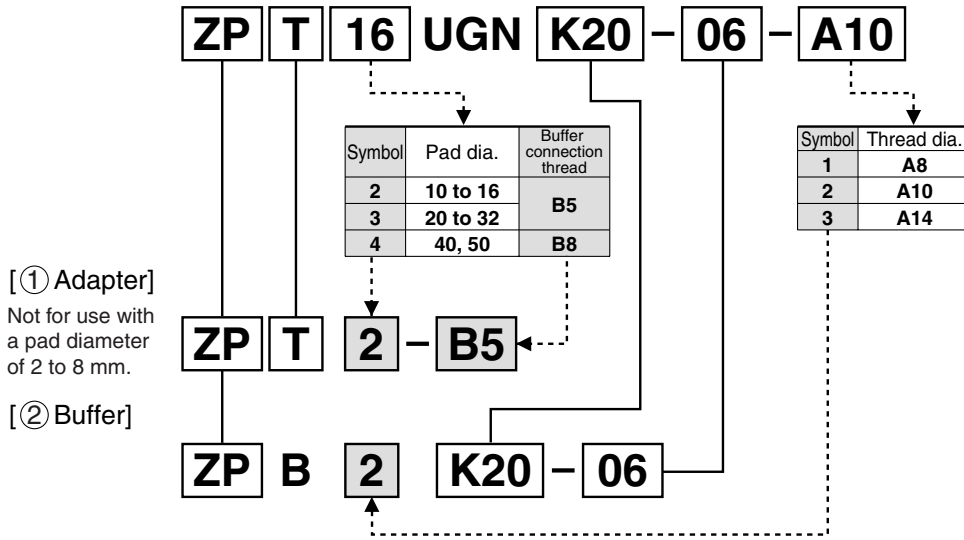
Replacement Parts: Adapter/Buffer (Series ZPT)

● With buffer

— The same symbol
 ◀ Replacement of the symbol

Construction

[Pad model no.]



[① Adapter]
 Not for use with a pad diameter of 2 to 8 mm.

[② Buffer]

* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs, and Elliptic.

Applicable pad diameter: ø2 to ø8
 2 x 4, 3.5 x 7, 4 x 10
 ø10 to ø16 (Thin section series)

Model	② Buffer only
ZPT□□□□(J-K)★★-B3-A8	ZPB1(J-K)★★-B3
ZPT□□□□(J-K)★★-B5-A8	ZPB1(J-K)★★-B5
ZPT□□□□(J-K)★★-N4-A8	ZPB1(J-K)★★-N4
ZPT□□□□(J-K)★★-U4-A8	ZPB1(J-K)★★-U4
ZPT□□□□(J-K)★★-04-A8	ZPB1(J-K)★★-04
ZPT□□□□(J-K)★★-06-A8	ZPB1(J-K)★★-06

Note) Applicable buffer stroke (★★): 6, 10, 15, 25 mm

Applicable pad diameter: ø10 to ø16

Model	① Adapter	② Buffer
ZPT□□□□(J-K)★★-B5-A10	ZPT2-B5	ZPB2(J-K)★★-B5
ZPT□□□□(J-K)★★-N6-A10	ZPT2-B5	ZPB2(J-K)★★-N6
ZPT□□□□(J-K)★★-U6-A10	ZPT2-B5	ZPB2(J-K)★★-U6
ZPT□□□□(J-K)★★-04-A10	ZPT2-B5	ZPB2(J-K)★★-04
ZPT□□□□(J-K)★★-06-A10	ZPT2-B5	ZPB2(J-K)★★-06

Note) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm

Applicable pad diameter: ø20 to ø32

Model	① Adapter	② Buffer
ZPT□□□□(J-K)★★-B5-A10	ZPT3-B5	ZPB2(J-K)★★-B5
ZPT□□□□(J-K)★★-N6-A10	ZPT3-B5	ZPB2(J-K)★★-N6
ZPT□□□□(J-K)★★-U6-A10	ZPT3-B5	ZPB2(J-K)★★-U6
ZPT□□□□(J-K)★★-04-A10	ZPT3-B5	ZPB2(J-K)★★-04
ZPT□□□□(J-K)★★-06-A10	ZPT3-B5	ZPB2(J-K)★★-06

Note) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm

Applicable pad diameter: ø40, ø50

Model	① Adapter	② Buffer
ZPT□□□□(J-K)★★-B5-A14	ZPT4-B8	ZPB3(J-K)★★-B5
ZPT□□□□(J-K)★★-□01-A14	ZPT4-B8	ZPB3(J-K)★★-□01
ZPT□□□□(J-K)★★-N6-A14	ZPT4-B8	ZPB3(J-K)★★-N6
ZPT□□□□(J-K)★★-U6-A14	ZPT4-B8	ZPB3(J-K)★★-U6
ZPT□□□□(J-K)★★-06-A14	ZPT4-B8	ZPB3(J-K)★★-06
ZPT□□□□(J-K)★★-08-A14	ZPT4-B8	ZPB3(J-K)★★-08

Note) Applicable buffer stroke (★★): 10, 20, 30, 50 mm

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP

Related Equipment

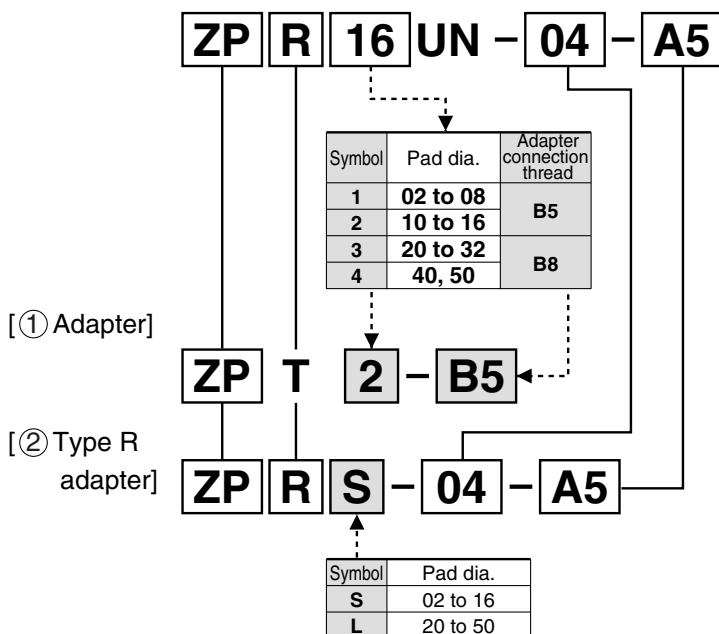
Replacement Parts: Adapter/Buffer (Series ZPR)

● Without buffer

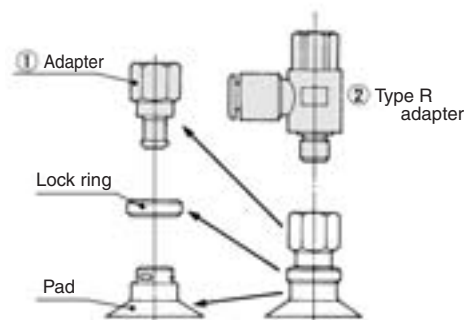
— The same symbol

← Replacement of the symbol

[Pad model no.]



Construction



Applicable pad diameter: $\varnothing 2$ to $\varnothing 8$

2 x 4, 3.5 x 7, 4 x 10

$\varnothing 10$ to $\varnothing 16$ (Thin section series)

Model	① Type T adapter	② Type R adapter
ZPR□□□□-☆☆-A5	ZPT1-B5	ZPRS-☆☆-A5
ZPR□□□□-☆☆-A6	ZPT1-B5	ZPRS-☆☆-A6
ZPR□□□□-☆☆-B4	ZPT1-B5	ZPRS-☆☆-B4
ZPR□□□□-☆☆-B5	ZPT1-B5	ZPRS-☆☆-B5

Note) Vacuum entry (☆☆): 04, 06

Applicable pad diameter: $\varnothing 10$ to $\varnothing 16$

Model	① Type T adapter	② Type R adapter
ZPR□□□□-☆☆-A5	ZPT2-B5	ZPRS-☆☆-A5
ZPR□□□□-☆☆-A6	ZPT2-B5	ZPRS-☆☆-A6
ZPR□□□□-☆☆-B5	ZPT2-B5	ZPRS-☆☆-B5
ZPR□□□□-☆☆-B6	ZPT2-B5	ZPRS-☆☆-B6

Note) Vacuum entry (☆☆): 04, 06

Applicable pad diameter: $\varnothing 20$ to $\varnothing 32$

Model	① Type T adapter	② Type R adapter
ZPR□□□□-☆☆-A6	ZPT3-B8	ZPRL-☆☆-A6
ZPR□□□□-☆☆-A8	ZPT3-B8	ZPRL-☆☆-A8
ZPR□□□□-☆☆-B5	ZPT3-B8	ZPRL-☆☆-B5
ZPR□□□□-☆☆-B6	ZPT3-B8	ZPRL-☆☆-B6
ZPR□□□□-☆☆-B8	ZPT3-B8	ZPRL-☆☆-B8

Note) Vacuum entry (☆☆): 04, 06, 08

Applicable pad diameter: $\varnothing 40$, $\varnothing 50$

Model	① Type T adapter	② Type R adapter
ZPR□□□□-☆☆-A6	ZPT4-B8	ZPRL-☆☆-A6
ZPR□□□□-☆☆-A8	ZPT4-B8	ZPRL-☆☆-A8
ZPR□□□□-☆☆-B6	ZPT4-B8	ZPRL-☆☆-B6
ZPR□□□□-☆☆-B8	ZPT4-B8	ZPRL-☆☆-B8

Note) Vacuum entry (☆☆): 06, 08

Replacement Parts: Adapter/Buffer (Series ZPR)

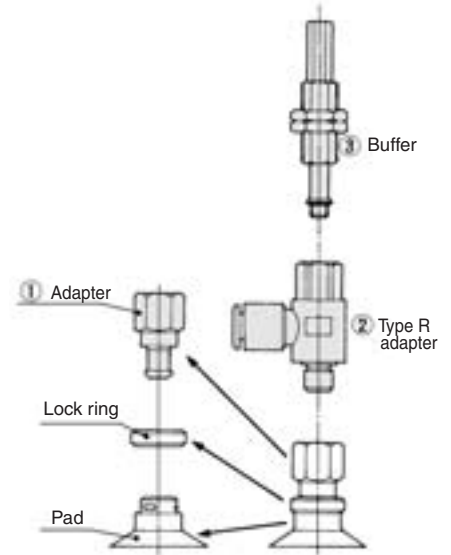
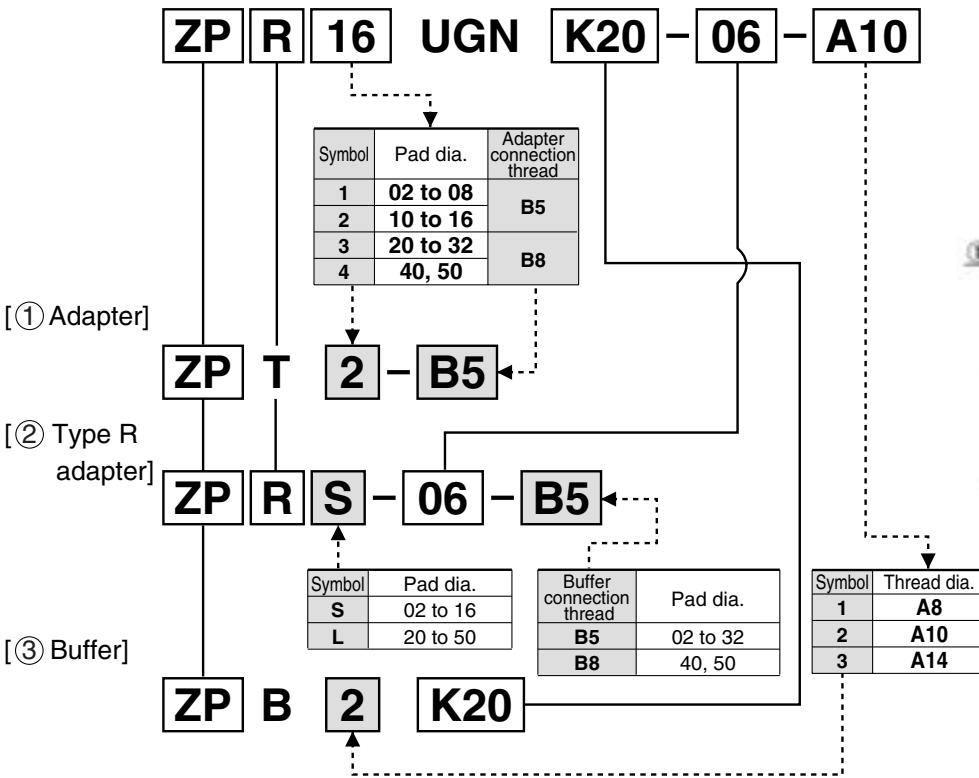
● With buffer

— The same symbol

←···· Replacement of the symbol

Construction

[Pad model no.]



* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs, and Elliptic.

Applicable pad diameter: ø2 to ø8
 2 x 4, 3.5 x 7, 4 x 10
 ø10 to ø16 (Thin section series)

Model	① Type T adapter	② Type R adapter	③ Buffer
ZPR□□□□(J-K)★★-☆☆-A8	ZPT1-B5	ZPRS-☆☆-B5	ZPB1(J-K)★★

Note 1) Applicable buffer stroke (★★): 6, 10, 15, 25 mm
 Note 2) Vacuum entry (☆☆): 04, 06

Applicable pad diameter: ø10 to ø16

Model	① Type T adapter	② Type R adapter	③ Buffer
ZPR□□□□(J-K)★★-☆☆-A10	ZPT2-B5	ZPRS-☆☆-B5	ZPB2(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm
 Note 2) Vacuum entry (☆☆): 04, 06

Applicable pad diameter: ø20 to ø32

Model	① Type T adapter	② Type R adapter	③ Buffer
ZPR□□□□(J-K)★★-☆☆-A10	ZPT3-B8	ZPRL-☆☆-B5	ZPB2(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm
 Note 2) Vacuum entry (☆☆): 04, 06, 08

Applicable pad diameter: ø40, ø50

Model	① Type T adapter	② Type R adapter	③ Buffer
ZPR□□□□(J-K)★★-☆☆-A14	ZPT4-B8	ZPRL-☆☆-B8	ZPB3(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 50 mm
 Note 2) Vacuum entry (☆☆): 06, 08

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment

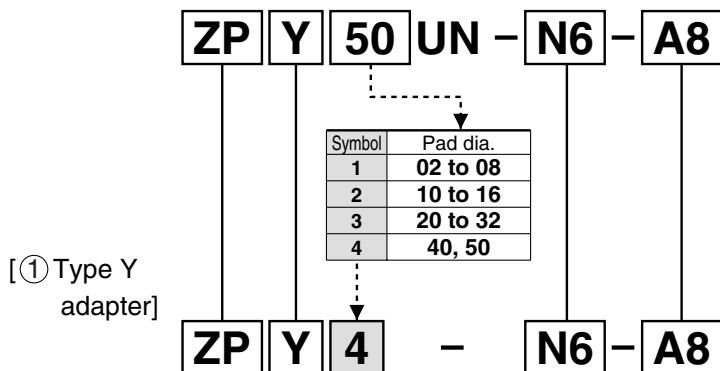
Series ZP

Replacement Parts: Adapter/Buffer (Series ZPY)

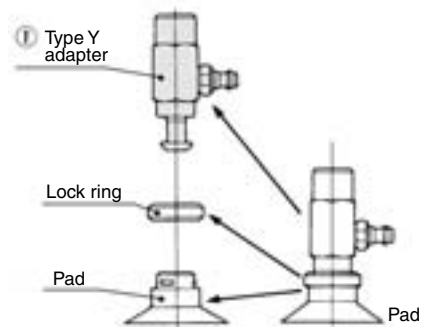
● Without buffer

— The same symbol
 ◀ Replacement of the symbol

[Pad model no.]



Construction



Applicable pad diameter: $\varnothing 2$ to $\varnothing 8$
 2 x 4, 3.5 x 7, 4 x 10
 $\varnothing 10$ to $\varnothing 16$ (Thin section series)

Model	① Adapter
ZPY□□□□-◆◆-A5	ZPY1-◆◆-A5
ZPY□□□□-◆◆-A6	ZPY1-◆◆-A6
ZPY□□□□-◆◆-B4	ZPY1-◆◆-B4
ZPY□□□□-◆◆-B5	ZPY1-◆◆-B5

Note) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: $\varnothing 10$ to $\varnothing 16$

Model	① Adapter
ZPY□□□□-◆◆-A5	ZPY2-◆◆-A5
ZPY□□□□-◆◆-A6	ZPY2-◆◆-A6
ZPY□□□□-◆◆-B5	ZPY2-◆◆-B5
ZPY□□□□-◆◆-B6	ZPY2-◆◆-B6

Note) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: $\varnothing 20$ to $\varnothing 32$

Model	① Adapter
ZPY□□□□-◆◆-A6	ZPY3-◆◆-A6
ZPY□□□□-◆◆-A8	ZPY3-◆◆-A8
ZPY□□□□-◆◆-B5	ZPY3-◆◆-B5
ZPY□□□□-◆◆-B6	ZPY3-◆◆-B6
ZPY□□□□-◆◆-B8	ZPY3-◆◆-B8

Note) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: $\varnothing 40$, $\varnothing 50$

Model	① Adapter
ZPY□□□□-◆◆-A6	ZPY4-◆◆-A6
ZPY□□□□-◆◆-A8	ZPY4-◆◆-A8
ZPY□□□□-◆◆-B6	ZPY4-◆◆-B6
ZPY□□□□-◆◆-B8	ZPY4-◆◆-B8

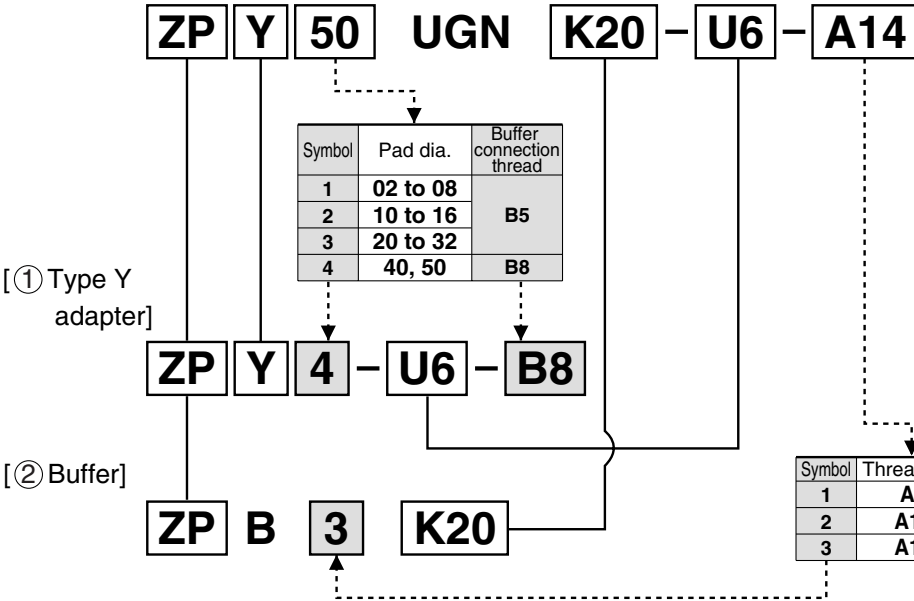
Note) Vacuum entry (◆◆): N6, U6

Replacement Parts: Adapter/Buffer (Series ZPY)

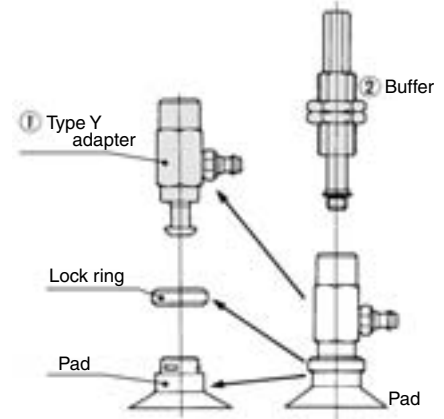
● With buffer

— The same symbol
 ← Replacement of the symbol

[Pad model no.]



Construction



* Refer to ø2 to ø8 for Thin flat, Thin flat with ribs, and Elliptic.

Applicable pad diameter: ø2 to ø8
 2 x 4, 3.5 x 7, 4 x 10
 ø10 to ø16 (Thin section series)

Model	① Adapter	② Buffer
ZPY□□□□(J-K)★★-◆◆-A8	ZPY1-◆◆-B5	ZPB1(J-K)★★

Note 1) Applicable buffer stroke (★★): 6, 10, 15, 25 mm
 Note 2) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: ø10 to ø16

Model	① Adapter	② Buffer
ZPY□□□□(J-K)★★-◆◆-A10	ZPY2-◆◆-B5	ZPB2(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm
 Note 2) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: ø20 to ø32

Model	① Adapter	② Buffer
ZPY□□□□(J-K)★★-◆◆-A10	ZPY3-◆◆-B5	ZPB2(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 40, 50 mm
 Note 2) Vacuum entry (◆◆): N4, N6, U4, U6

Applicable pad diameter: ø40, ø50

Model	① Adapter	② Buffer
ZPY□□□□(J-K)★★-◆◆-A14	ZPT4-B8	ZPB3(J-K)★★

Note 1) Applicable buffer stroke (★★): 10, 20, 30, 50 mm
 Note 2) Vacuum entry (◆◆): N6, U6

- ZA
- ZX
- ZR
- ZM
- ZMA
- ZQ
- ZH
- ZU
- ZL
- ZY□
- ZF□
- ZP□
- SP
- ZCUK
- AMJ
- AMV
- AEP
- HEP
- Related Equipment