

ZPR

Lateral Vacuum Entry without Buffer With One-touch Fitting



Specifications

Vacuum entry	Direction		Lateral	
	Tube dia.	Connection		One-touch fitting
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.	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 Style

Pad style	Flat	Flat with ribs	Deep	Bellows
Pad dia. ø(mm)	2, 4, 6, 8, 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), Fluorine rubber (Black with green mark) Conductive NBR (Black with one white mark), Conductive silicon rubber (Black with two white marks)			
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluorine rubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)			

Weight Table/Male Thread (Female Thread)

(g)

Model	Pad style		Flat				Flat with ribs			Deep			Bellows			
	Connection	Connection	M4	M5	M6	M8	M5	M6	M8	M5	M6	M8	M4	M5	M6	M8
ZPR02 to ZPR08	—	—	(19)	26 (20)	27 (—)	—	—	—	—	—	—	—	19 (Except for ø2, ø4)	26(20) (Except for ø2, ø4)	27(—) (Except for ø2, ø4)	—
ZPR10	—	—	—	—	—	—	—	—	29 (23)	30 (22)	—	—	—	—	—	—
ZPR13	—	—	—	29 (23)	31 (21)	—	29 (23)	31 (22)	—	—	—	—	—	29 (23)	31 (22)	—
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.



P.3.8-64 to 3.8-69

Lateral Vacuum Entry without Buffer *Series ZPR*

Model

Model	Pad dia. ϕ (mm)	Pad style				Vacuum entry (One-touch fitting)	Mounting thread	
		Flat (U)	Flat with ribs (C)	Deep (D)	Bellows (B)		Male thread	Female thread
ZPR02	2	●	—	—	—	● $\phi 4/\phi 6$ tube	● M5 X 0.8 M6 X 1	● M4 X 0.7 M5 X 0.8
ZPR04	4	●	—	—	—			
ZPR06	6	●	—	—	—			
ZPR08	8	●	—	—	●			
ZPR10	10	●	●	●	●	● $\phi 4/\phi 6$ tube	● M5 X 0.8 M6 X 1	● M5 X 0.8 M6 X 1
ZPR13	13	●	●	—	●			
ZPR16	16	●	●	●	●			
ZPR20	20	●	●	—	●			
ZPR25	25	●	●	●	●	● $\phi 4/\phi 6/\phi 8$ tube	● M6 X 1 M8 X 1	● M5 X 0.8 M6 X 0.1 M8 X 1.25
ZPR32	32	●	●	—	●			
ZPR40	40	●	●	●	●			
ZPR50	50	●	●	—	●			

ZX

ZR

ZM

ZH

ZU

ZL

ZF

ZP

ZCU

Vacuum related

How to Order

Series ZPR
without buffer

ZPR 02 U N 04 A5

Pad dia. (mm)

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

Pad style



(Refer to Table ① for applications.)

U	Flat
C	Flat with ribs
D	Deep
B	Bellows

Mounting thread



(Refer to Table ② for applications.)

Vacuum entry



(Refer to Table ② for applications.)

Table ② Vacuum Entry/Mounting Thread Dia.

Connection	Symbol	Thread dia. /Port size	$\phi 2$ to $\phi 8$	$\phi 10$ to $\phi 16$	$\phi 20$ to $\phi 32$	$\phi 40$ to $\phi 50$	
Vacuum entry	One-touch fitting	04	$\phi 4$ tube	●	●	—	
		06	$\phi 6$ tube	●	●	●	
		08	$\phi 8$ tube	—	—	●	●
Mounting	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	—	—	●	●		

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluorine rubber
GN*	Conductive NBR ($\phi 2$ to $\phi 16$)
GS*	Conductive silicon rubber ($\phi 2$ to $\phi 16$)

* $\phi 20$ and larger are manufactured upon receipt of order.

Table ① Pad Dia. /Pad Style

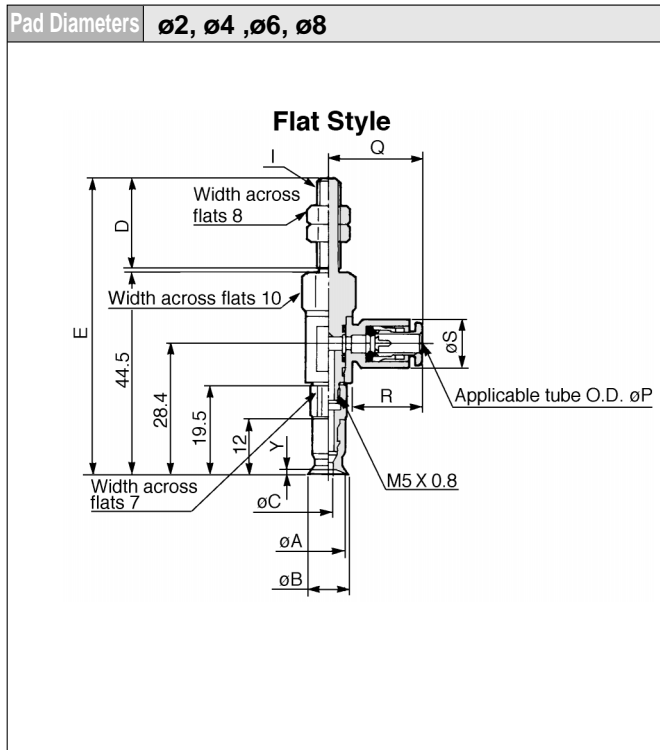
Style \ Dia. (mm)	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	●	—	●	—	●	—	●	—
Bellows	—	—	●	●	●	●	●	●	●	●	●	●

Series ZPR



Connection One-touch Fitting
Vacuum Entry Lateral

Pad Style Flat/Flat with Ribs/Deep
Mounting Male Thread



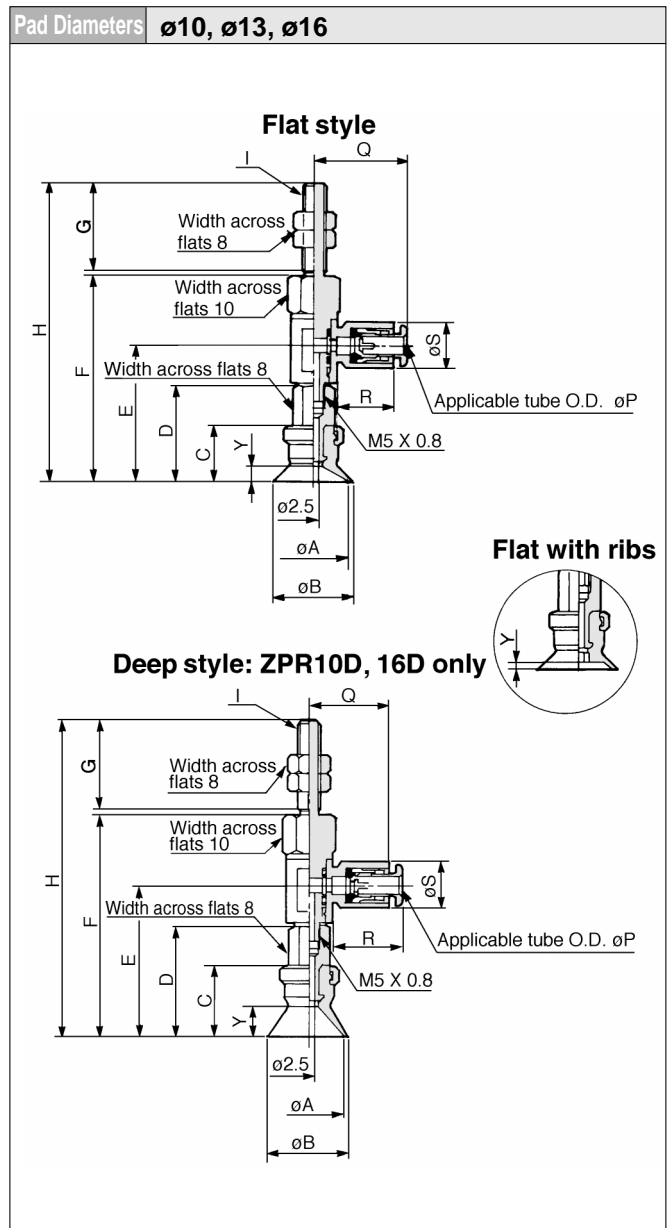
Flat style

Model	øA	øB	øC	I: M5 X 0.8		I: M6 X 1		Y
				D	E	D	E	
ZPR02U	2	2.6	1.2	20	65.5	25	70.5	0.8
ZPR04U	4	4.8	1.6					
ZPR06U	6	7	2.5					
ZPR08U	8	9	2.5					

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

- ZPR02U ————— SZPRU1, #14 (#1 + #8) to #17 (#1 + #11)
- ZPR04U ————— SZPRU1, #20 (#2 + #8) to #23 (#2 + #11)
- ZPR06U ————— SZPRU1, #26 (#3 + #8) to #29 (#3 + #11)
- ZPR08U ————— SZPRU1, #32 (#4 + #8) to #35 (#4 + #11)
- ZPR10U/C ————— SZPRU1, #38 (#5 + #8) to #41 (#5 + #11)
- ZPR13U/C ————— SZPRU1, #44 (#6 + #8) to #47 (#6 + #11)
- ZPR16U/C ————— SZPRU1, #50 (#7 + #8) to #53 (#7 + #11)
- ZPR10D ————— SZPRD, #20 (#1 + #5) to #23 (#1 + #8)
- ZPR16D ————— SZPRD, #26 (#2 + #5) to #29 (#2 + #8)



Flat style/Flat with ribs

Model	øA	øB	C	D	E	F	I: M5 X 0.8		I: M6 X 1		Y	
							G	H	G	H	Flat	Flat w/ ribs
ZPR10 ^U _C	10	12	12	21	29.9	46	20	67	25	72	3	1.7
ZPR13 ^U _C	13	15	12.5	21.5	30.4	46.5						1.8
ZPR16 ^U _C	16	18										1.2

Deep style

Model	øA	øB	C	D	E	F	I: M5 X 0.8		I: M6 X 1		Y
							G	H	G	H	
ZPR10D	10	12	15	24	32.9	49	20	70	25	75	6
ZPR16D	16	18	16	25	33.9	50					

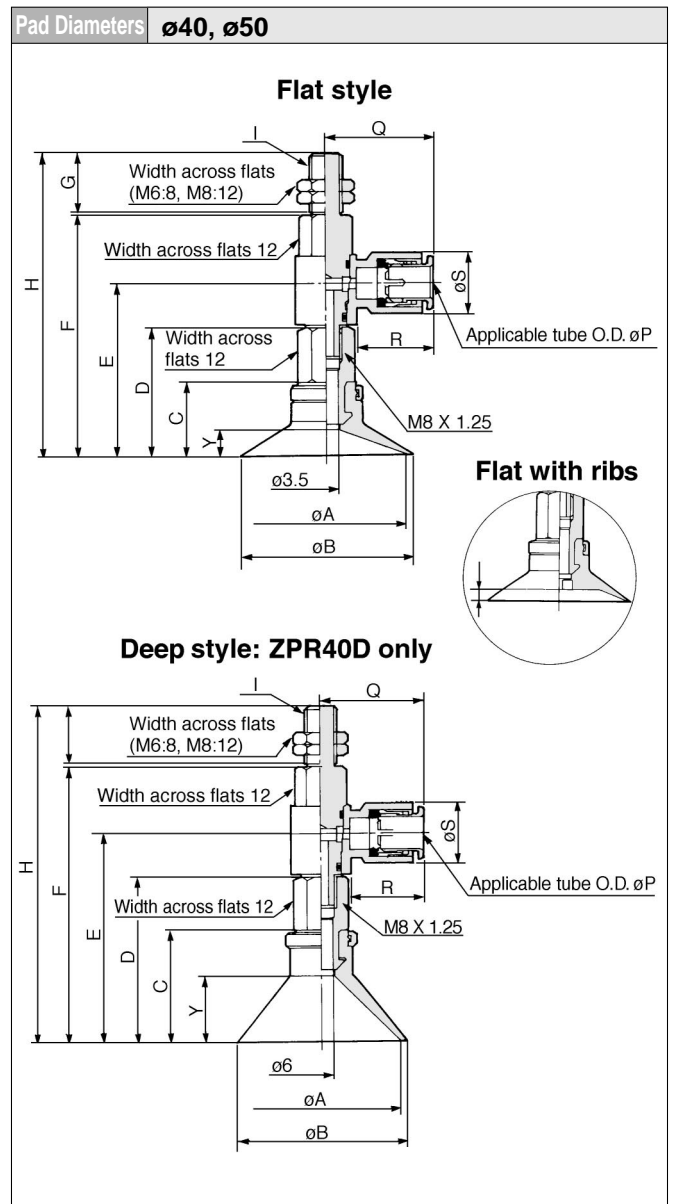
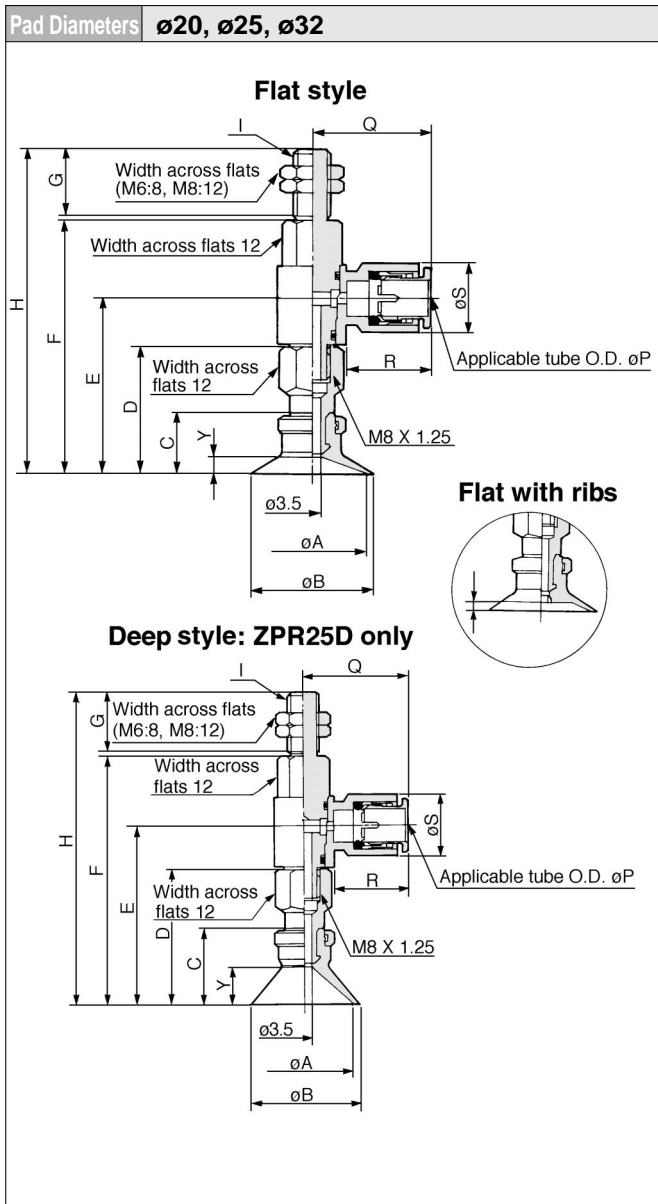
Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Lateral Vacuum Entry without Buffer *Series ZPR*



Connection	One-touch Fitting	Pad Style	Flat/Flat with Ribs/Deep
Vacuum Entry	Lateral	Mounting	Male Thread



- ZX
- ZR
- ZM
- ZH
- ZU
- ZL
- ZF
- ZP**
- ZCU
- Vacuum related

Flat style/Flat with ribs

Model	øA	øB	C	D	E	F	I: M6 X 1		I: M8 X 1		Y	
							G	H	G	H		
ZPR20 ^U _C	20	23	14	29	39.8	57.6	25	83.5	15	73.5	4	1.7
ZPR25 ^U _C	25	28	14	29	39.8	57.6	25	83.5	15	73.5	4	1.8
ZPR32 ^U _C	32	35	14.5	29.5	40.3	58.1	25	84	15	74	4.5	2.3

Deep style

Model	øA	øB	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 tube

Applicable tube O.D.	øP	Q	R	øS
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 style/Flat with ribs

Model	øA	øB	C	D	E	F	I: M6 X 1		I: M8 X 1		Y	
							G	H	G	H		
ZPR40 ^U _C	40	43	18.5	32	42.8	60.6	25	86.5	15	76.5	6.5	3.3
ZPR50 ^U _C	50	53	19.5	33	43.8	61.6	25	87.5	15	77.5	7.5	3.8

Deep style

Model	øA	øB	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 tube

Applicable tube O.D.	øP	Q	R	øS
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2



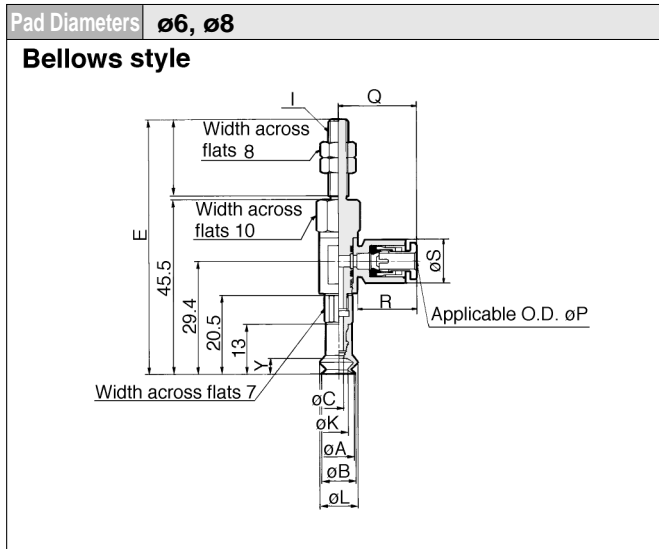
ZPR20U/C ——— SZPRU2, #15 (#1 + #6) to #20 (#1 + #11)
 ZPR25U/C ——— SZPRU2, #24 (#2 + #6) to #29 (#2 + #11)
 ZPR32U/C ——— SZPRU2, #33 (#3 + #6) to #38 (#3 + #11)
 ZPR40U/C ——— SZPRU2, #42 (#4 + #6) to #45 (#4 + #11)

ZPR50U/C ——— SZPRU2, #48 (#5 + #8) to #51 (#5 + #11)
 ZPR25D ——— SZPRD, #32 (#3 + #11) to #37 (#3 + #16)
 ZPR40D ——— SZPRD, #41 (#4 + #13) to #44 (#4 + #16)

Series ZPR



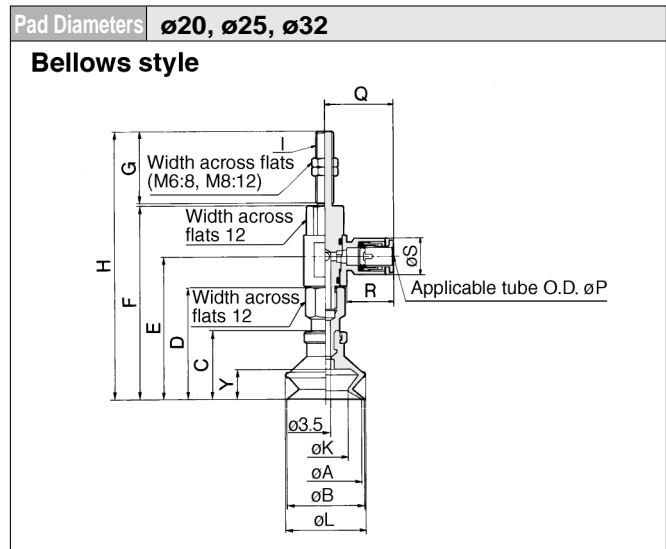
Connection	One-touch Fitting	Pad Style	Bellows
Vacuum Entry	Lateral	Mounting	Male Thread



Model	øA	øB	øC	I: M5 X 0.8		I: M6 X 1		øK	øL	Y
				D	E	D	D			
ZPR06B	6	7	2.5	20	66.5	25	71.5	3.3	9.1	4
ZPR08B	8	9		4.7	10.1					

Applicable tube

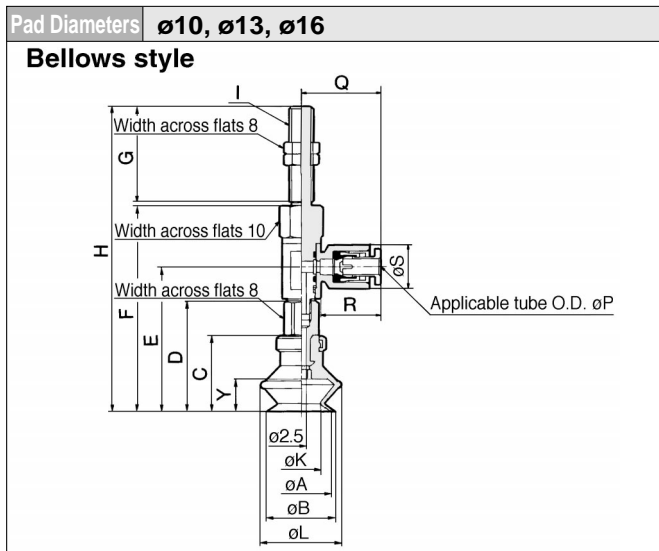
Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8



Model	øA	øB	C	D	E	F	I: M6 X 1		I: M8 X 1		øK	øL	Y
							G	H	G	H			
ZPR20B	20	22	23.5	38.5	49.3	67.1		93		83	12.4	25	10.5
ZPR25B	25	27	24	39	49.8	67.6	25	93.5	15	83.5	15.6	28	10.5
ZPR32B	32	34	29	44	54.8	72.6		98.5		88.5	18.9	37	14

Applicable tube

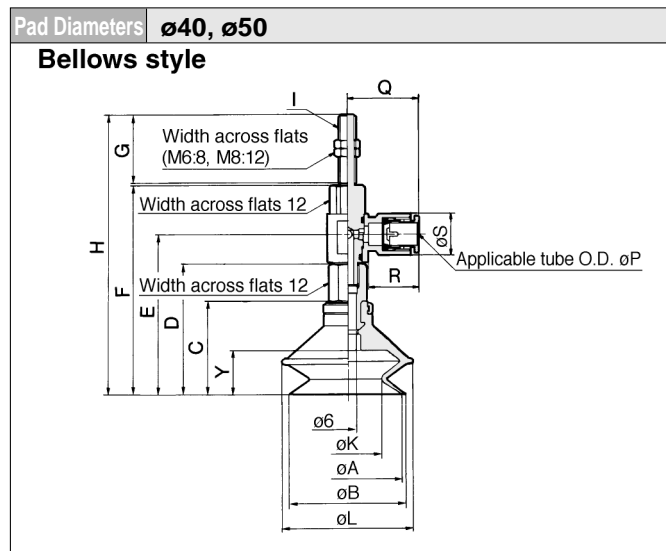
Applicable tube O.D.	øP	Q	R	øS
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2



Model	øA	øB	C	D	E	F	I: M5 X 0.8		I: M6 X 1		øK	øL	Y
							G	H	G	H			
ZPR10B	10	12	16	25	33.9	50		71		76	5.5	13.8	5.5
ZPR13B	13	15	18.5	27.5	36.4	52.5	20	73.5	25	78.5	8.7	19	7.5
ZPR16B	16	18	20	29	37.9	54		75		80	9.9	21	8.5

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8



Model	øA	øB	C	D	E	F	I: M6 X 1		I: M8 X 1		øK	øL	Y
							G	H	G	H			
ZPR40B	40	43	34	47.5	58.3	76.1		102		92	24.4	48	16
ZPR50B	50	53	38	51.5	62.3	80.1	25	106	15	96	32.4	57	19

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

- ZPR06B ——— SZPRB1, #12 (#1 + #6) to #15 (#1 + #9)
- ZPR08B ——— SZPRB1, #18 (#2 + #6) to #21 (#2 + #9)
- ZPR10B ——— SZPRB1, #24 (#3 + #6) to #27 (#3 + #9)
- ZPR13B ——— SZPRB1, #30 (#4 + #6) to #33 (#4 + #9)
- ZPR16B ——— SZPRB1, #36 (#5 + #6) to #39 (#5 + #9)

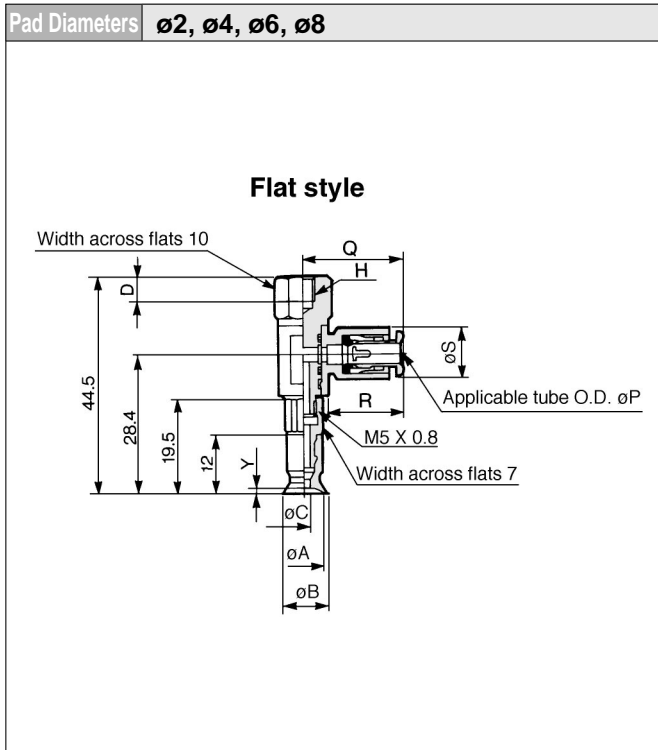
- ZPR20B ——— SZPRB2, #15 (#1 + #6) to #20 (#1 + #11)
- ZPR25B ——— SZPRB2, #24 (#2 + #6) to #29 (#2 + #11)
- ZPR32B ——— SZPRB2, #33 (#3 + #6) to #38 (#3 + #11)
- ZPR40B ——— SZPRB2, #42 (#4 + #8) to #45 (#4 + #11)
- ZPR50B ——— SZPRB2, #48 (#5 + #8) to #51 (#5 + #11)

Lateral Vacuum Entry without Buffer *Series ZPR*



Connection One-touch Fitting
Vacuum Entry Lateral

Pad Style Flat/Flat with Ribs/Deep
Mounting Female Thread



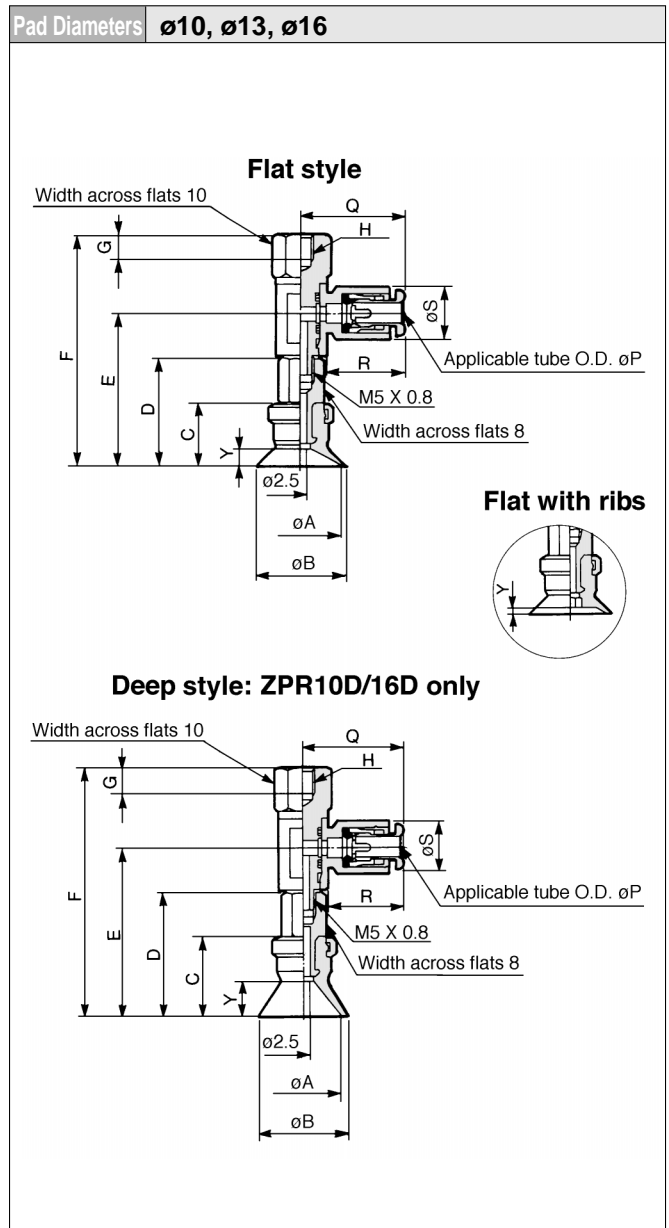
Flat style

Model	øA	øB	øC	H: M4 X 0.7		Y
				D	D	
ZPR02U	2	2.6	1.2	4	5	0.8
ZPR04U	4	4.8	1.6			
ZPR06U	6	7	2.5			
ZPR08U	8	9	2.5			

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

ZPR02U	—————	SZPRU1, #18 (#1 + #12), #19 (#1 + #13)
ZPR04U	—————	SZPRU1, #24 (#2 + #12), #25 (#2 + #13)
ZPR06U	—————	SZPRU1, #30 (#3 + #12), #31 (#3 + #13)
ZPR08U	—————	SZPRU1, #36 (#4 + #12), #37 (#4 + #13)
ZPR10U/C	—————	SZPRU1, #42 (#5 + #12), #43 (#5 + #13)
ZPR13U/C	—————	SZPRU1, #48 (#6 + #12), #49 (#6 + #13)
ZPR16U/C	—————	SZPRU1, #54 (#7 + #12), #55 (#7 + #13)
ZPR10D	—————	SZPRD, #24 (#1 + #9) to #25 (#1 + #10)
ZPR16D	—————	SZPRD, #30 (#2 + #9) to #31 (#2 + #10)



Flat style/Flat with ribs

Model	øA	øB	C	D	E	F	H: M5 X 0.8		H: M6 X 1		Y	
							G	G	Flat	Flat with ribs		
ZPR10 _C	10	12	12	21	29.9	46	5	6	3	1.7	1.8	
ZPR13 _C	13	15	12	21	29.9	46						
ZPR16 _C	16	18	12.5	21.5	30.4	46.5						

Deep style

Model	øA	øB	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	7	
ZPR16D	16	18	16	25	33.9	50					

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

ZX

ZR

ZM

ZH

ZU

ZL

ZF

ZP

ZCU

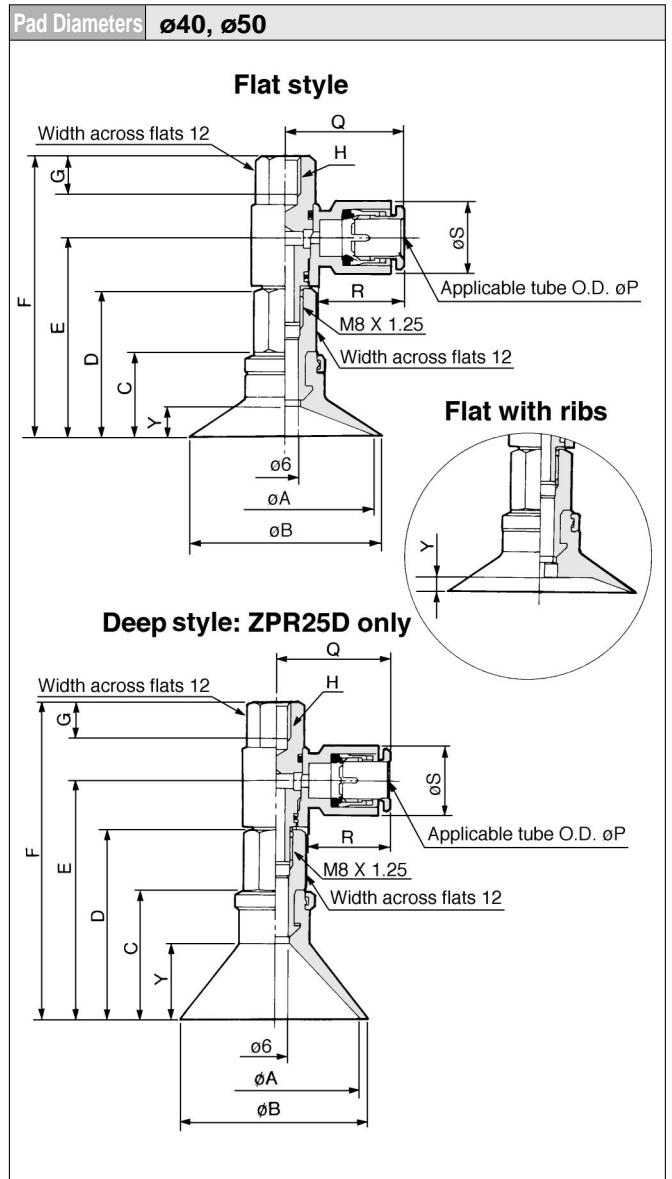
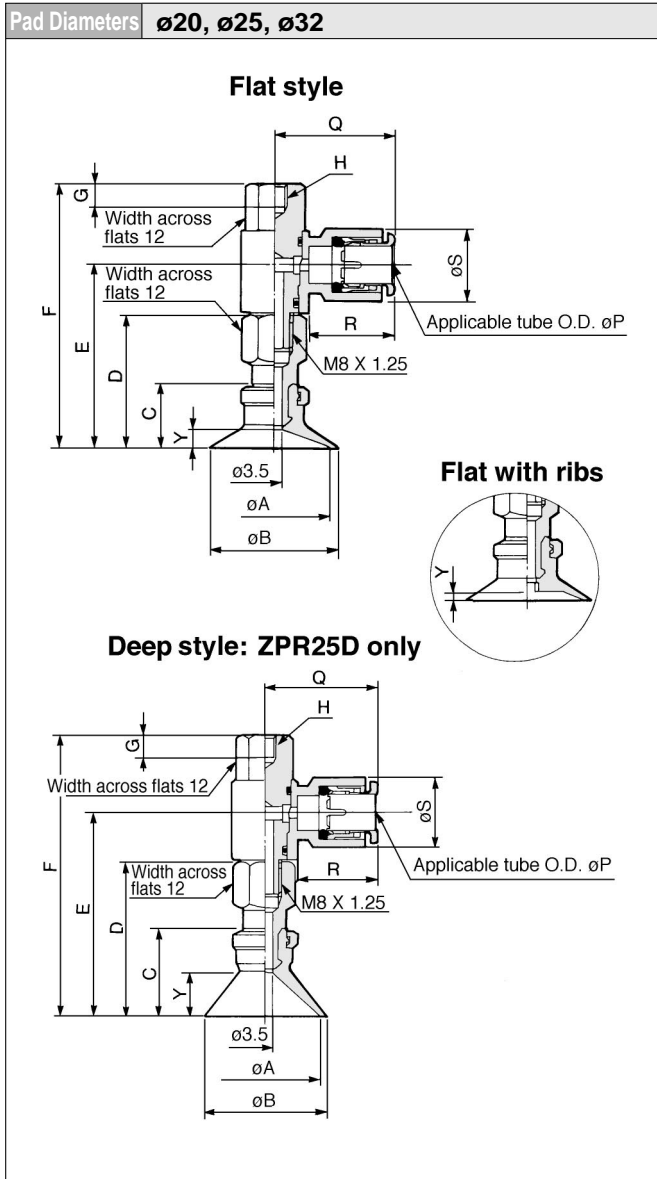
Vacuum related

Series ZPR



Connection One-touch Fitting
Vacuum Entry Lateral

Pad Style Flat/Flat with Ribs/Deep
Mounting Female Thread



Flat style/Flat with ribs

Model	ϕA	ϕB	C	D	E	F	H: M5 X 0.8			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	29	39.8	57.6	5	6	8	4	1.8
ZPR32 _U C	32	35	14.5	29.5	40.3	58.1				4.5	2.3

Deep style

Model	ϕA	ϕB	C	D	E	F	H: M5 X 0.8			Y
							G	G	G	
ZPR25D	25	28	20	35	45.8	63.6	5	6	8	10

Applicable tube

Applicable tube O.D.	ϕP	Q	R	ϕS
$\phi 4$	4	23.3	15.8	10.4
$\phi 6$	6	24.3	16.8	12.8
$\phi 8$	8	26.2	18.7	15.2

Flat style/Flat with ribs

Model	ϕA	ϕB	C	D	E	F	H: M6 X 1		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	6	8	7.5	3.8

Deep style

Model	ϕA	ϕB	C	D	E	F	H: M6 X 1		Y
							G	G	
ZPR40D	40	43	29	42.5	53.3	71.1	6	8	17

Applicable tube

Applicable tube O.D.	ϕP	Q	R	ϕS
$\phi 6$	6	24.3	16.8	12.8
$\phi 8$	8	26.2	18.7	15.2

ZPR20U/C	SZPRU2, #21 (#1 + #12) to #23 (#1 + #14)
ZPR25U/C	SZPRU2, #30 (#2 + #12) to #32 (#2 + #14)
ZPR32U/C	SZPRU2, #39 (#3 + #12) to #41 (#3 + #14)
ZPR40U/C	SZPRU2, #46 (#4 + #13), #47 (#4 + #14)

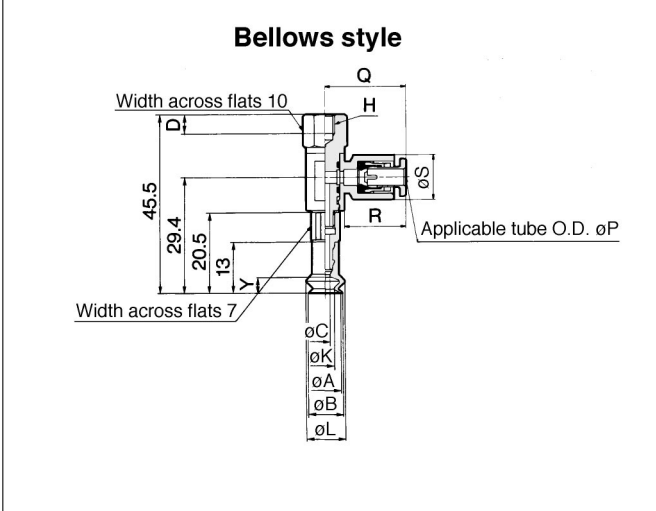
ZPR50U/C	SZPRU2, #52 (#5 + #13), #53 (#5 + #14)
ZPR25D	SZPRD, #38 (#3 + #17) to #40 (#3 + #19)
ZPR40D	SZPRD, #45 (#4 + #18), #46 (#4 + #19)

Lateral Vacuum Entry without Buffer *Series ZPR*



Connection	One-touch Fitting	Pad Style	Bellows
Vacuum Entry	Lateral	Mounting	Female Thread

Pad Diameters **ø6, ø8**

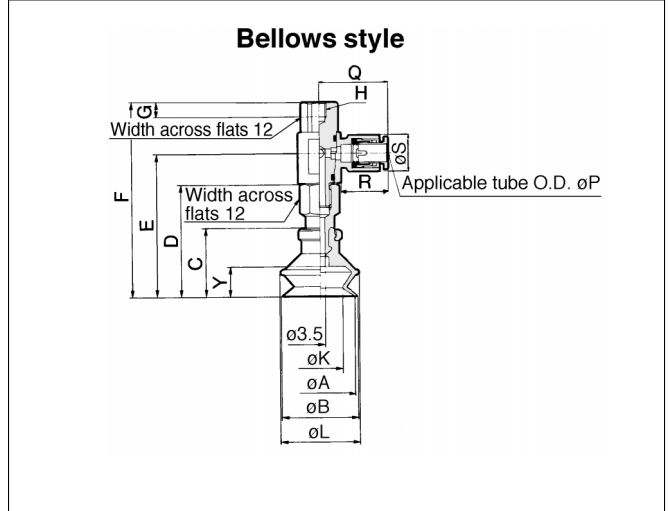


Model	øA	øB	øC	H: M4 X 0.7		H: M5 X 0.8		øK	øL	Y
				D	D	D	D			
ZPR06B	6	7	2.5	4	5	3.3	9.1	4		
ZPR08B	8	9				4.7	10.1			

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Pad Diameters **ø20, ø25, ø32**

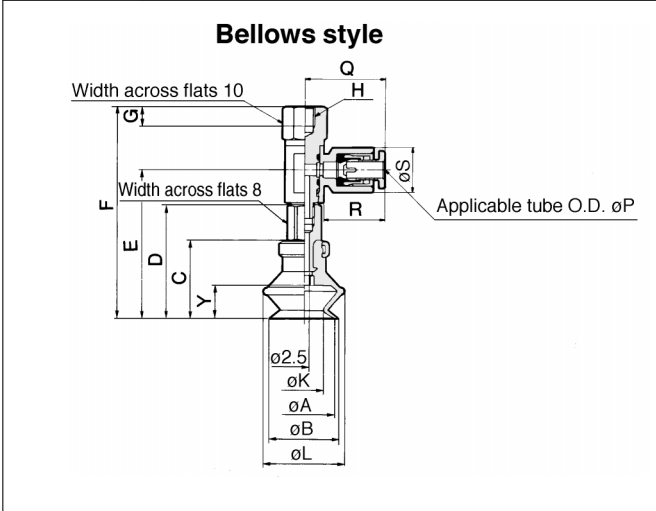


Model	øA	øB	C	D	E	F	H: M5 X 0.8			øK	øL	Y
							G	G	G			
ZPR20B	20	22	23.5	38.5	49.3	67.1	5	6	8	12.4	25	10.5
ZPR25B	25	27	24	39	49.8	67.6				15.6	28	10.5
ZPR32B	32	34	29	44	54.8	72.6				18.9	37	14

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	23.3	15.8	10.4
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

Pad Diameters **ø10, ø13, ø16**

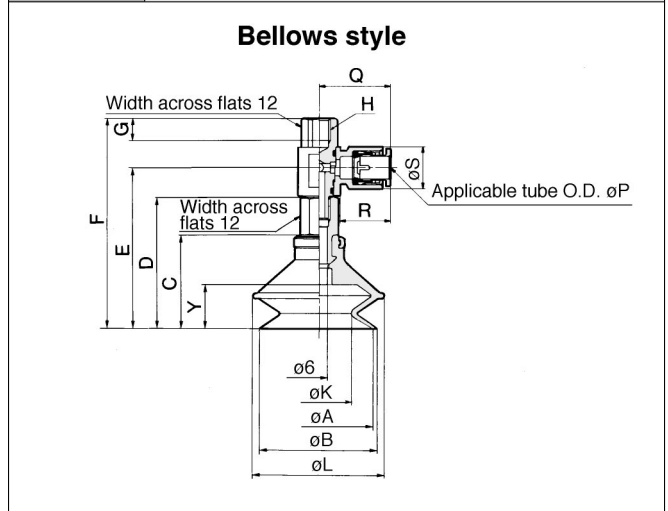


Model	øA	øB	C	D	E	F	H: M5 X 0.8		H: M6 X 1		øK	øL	Y
							G	G	G	G			
ZPR10B	10	12	16	25	33.9	50	5	6	5.5	13.8	5.5		
ZPR13B	13	15	18.5	27.5	36.4	52.5			8.7	19	7.5		
ZPR16B	16	18	20	29	37.9	54			9.9	21	8.5		

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø4	4	20.6	15.6	10.4
ø6	6	21.6	16.6	12.8

Pad Diameters **ø40, ø50**



Model	øA	øB	C	D	E	F	H: M6 X 1		H: M8 X 1.25		øK	øL	Y
							G	G	G	G			
ZPR40B	40	43	34	47.5	58.3	76.1	6	8	24.4	48	16		
ZPR50B	50	53	38	51.5	62.3	80.1			32.4	57	19		

Applicable tube

Applicable tube O.D.	øP	Q	R	øS
ø6	6	24.3	16.8	12.8
ø8	8	26.2	18.7	15.2

ZPR06B	SZPRB1, #16 (#1 + #10) to #17 (#1 + #11)
ZPR08B	SZPRB1, #22 (#2 + #10) to #23 (#2 + #11)
ZPR10B	SZPRB1, #28 (#3 + #10) to #29 (#3 + #11)
ZPR13B	SZPRB1, #34 (#4 + #10) to #35 (#4 + #11)
ZPR16B	SZPRB1, #40 (#5 + #10) to #41 (#5 + #11)

ZPR20B	SZPRB2, #21 (#1 + #12) to #23 (#1 + #14)
ZPR25B	SZPRB2, #30 (#2 + #12) to #32 (#2 + #14)
ZPR32B	SZPRB2, #39 (#3 + #12) to #41 (#3 + #14)
ZPR40B	SZPRB2, #46 (#4 + #13), #47 (#4 + #14)
ZPR50B	SZPRB2, #52 (#5 + #13), #53 (#5 + #14)

- ZX
- ZR
- ZM
- ZH
- ZU
- ZL
- ZF
- ZP
- ZCU
- Vacuum related





ZPR

Lateral Vacuum Entry with Buffer With One-touch Fitting



Specifications

Vacuum entry	Direction		
	Connection	Lateral	
Applicable tube dia.	ø2 to ø8	With One-touch fitting ø4, ø6 tube	
	ø10 to ø16	ø4, ø6 tube	
	ø20 to ø32	ø4, ø6, ø8 tube	
	ø40 to ø50	ø4, ø8 tube	
Mounting	Thread dia.	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 style	Rotating (J)/Non-rotating (K)
Buffer stroke	For ø2 to ø8 ——— 6, 10, 15, 25mm
	For ø10 to ø32 ——— 10, 20, 30, 40, 50mm
	For ø40, ø50 ——— 10, 20, 30, 50mm

Pad Style

Pad style	Flat	Flat with ribs	Deep	Bellows
Pad dia. ø(mm)	2, 4, 6, 8 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), Fluorine rubber (Black with green mark) Conductive NBR (Black with one white mark), Conductive silicon rubber (Black with two white marks)			
Durometer	NBR (50°), Silicon rubber (40°), Urethane rubber/Fluorine rubber (60°) Conductive NBR (50°), Conductive silicon rubber (50°)			

Spring Reactive Force

Pad dia. (mm)	0 stroke	Stroke end
ø2 to ø8	0.8N	1.2N
ø10 to ø32	1.0N	3.0N
ø40, ø50	2.0N	5.0N

Weight Table

Stroke (mm)	Pad style Vacuum entry Model	Flat/Flat with ribs			Deep			Bellows		
		04	06	08	04	06	08	04	06	08
6	ZPR 02 to 08	38	39	—	—	—	—	38	39	—
	ZPR 10 to 16	39	40	—	39	40	—	40	41	—
10	ZPR 20 to 25	54	55	56	55	56	57	57	58	59
	ZPR 32	56	57	58	—	—	—	61	62	63
10	ZPR 40	—	126	127	—	128	129	—	138	139
	ZPR 50	—	132	133	—	—	—	—	145	146

Weight by Stroke

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



P.3.8-64 to 3.8-69

Lateral Vacuum Entry with Buffer *Series ZPR*

How to Order

Series ZPR
with buffer

ZPR 16 U GS K 20 06 A10

Pad dia. (mm)

02	ø2
04	ø4
06	ø6
08	ø8
10	ø10
13	ø13
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50



(Refer to Table ① for applications.)

Pad style

U	Flat
C	Flat with ribs
D	Deep
B	Bellows

Buffer

J	Rotating
K	Non-rotating

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluorine rubber
GN*	Conductive NBR (ø2 to ø16)
GS*	Conductive silicon rubber (ø2 to ø16)

*ø20 or larger are manufactured upon receipt of order.

Mounting thread

(Refer to Table ③ for applications.)

Vacuum entry

(Refer to Table ③ for applications.)

Buffer stroke

(Refer to Table ③ for applications.)

ZX

ZR

ZM

ZH

ZU

ZL

ZF

ZP

ZCU

Vacuum related

Table ① Pad Dia. /Pad Style

Style \ Dia.(mm)	2	4	6	8	10	13	16	20	25	32	40	50
Flat	●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs	—	—	—	—	●	●	●	●	●	●	●	●
Deep	—	—	—	—	●	—	●	—	●	—	●	—
Bellows	—	—	●	●	●	●	●	●	●	●	●	●

Table ② Pad Dia. /Stroke

Stroke \ Dia.(mm)	2	4	6	8	10	13	16	20	25	32	40	50
6mm	●	●	●	●	—	—	—	—	—	—	—	—
10mm	●	●	●	●	●	●	●	●	●	●	●	●
15mm	●	●	●	●	—	—	—	—	—	—	—	—
20mm	—	—	—	—	●	●	●	●	●	●	●	●
25mm	●	●	●	●	—	—	—	—	—	—	—	—
30mm	—	—	—	—	●	●	●	●	●	●	●	●
40mm	—	—	—	—	●	●	●	●	●	●	—	—
50mm	—	—	—	—	●	●	●	●	●	●	●	●

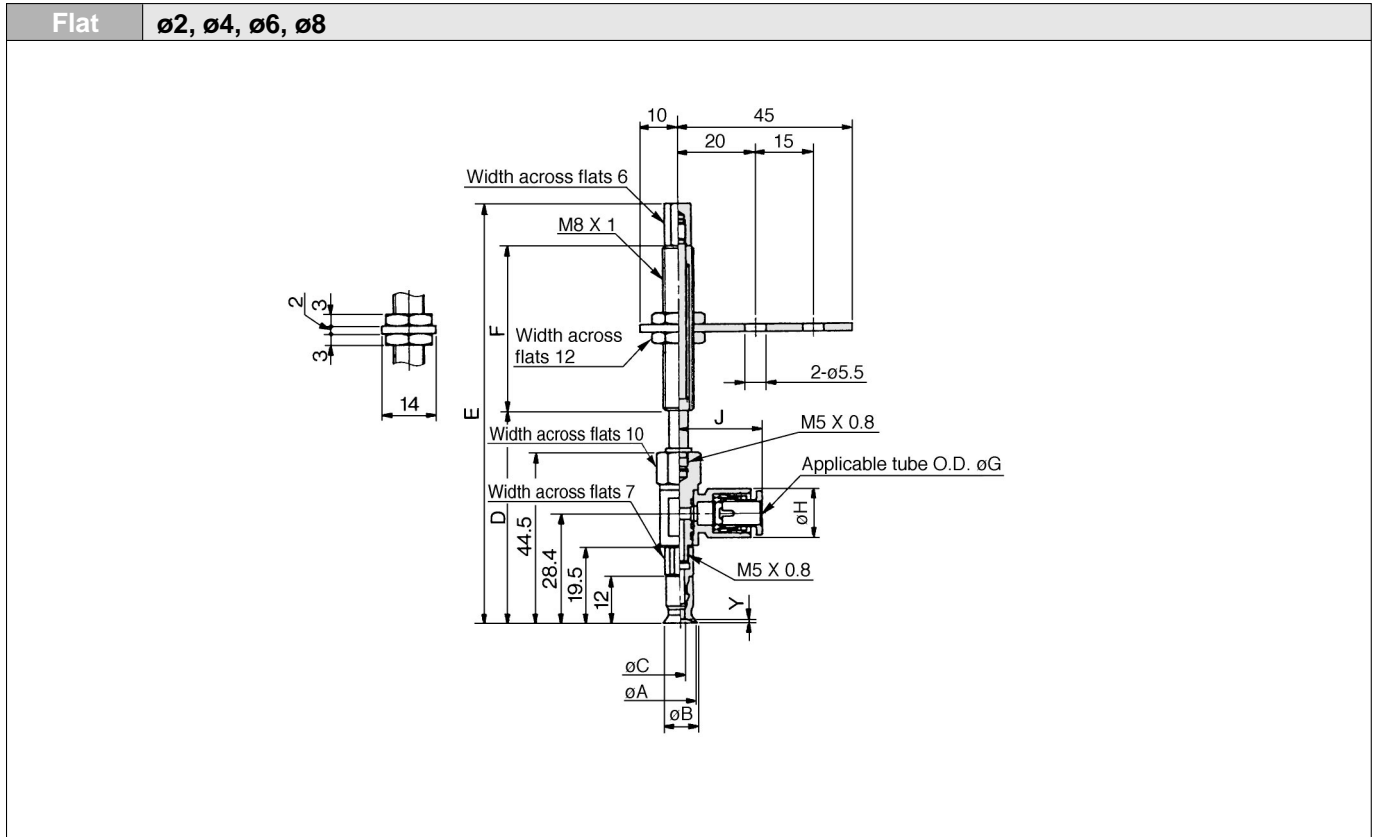
Table ③ Vacuum Entry/Mounting Thread Dia.

	Symbol	Thread dia. /Port size	ø2 to ø8	ø10 to ø16	ø20 to ø32	ø40/ø50
Vacuum entry	One-touch fitting	04	ø4 tube	●	●	—
		06	ø6 tube	●	●	●
		08	ø8 tube	—	—	●
Mounting thread	Male thread	A8	M8 X 1	●	—	—
		A10	M10 X 1	—	●	●
		A14	M14 X 1	—	—	—

Series ZPR



Connection	One-touch Fitting	Pad Style	Flat
Vacuum Entry	Lateral	Mounting	Male Thread



Flat style

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

Dimensions by stroke

Model	D	E	F	G: ø4		G: ø6	
				H	J	H	J
ZPR□□U□□□□ 6-0□-A8	52.5	78.5	15	10.4	20.6	12.8	21.6
ZPR□□U□□□□10-0□-A8	55.5	109.5	43				
ZPR□□U□□□□15-0□-A8	60.5	114.5					
ZPR□□U□□□□25-0□-A8	70.5	124.5					

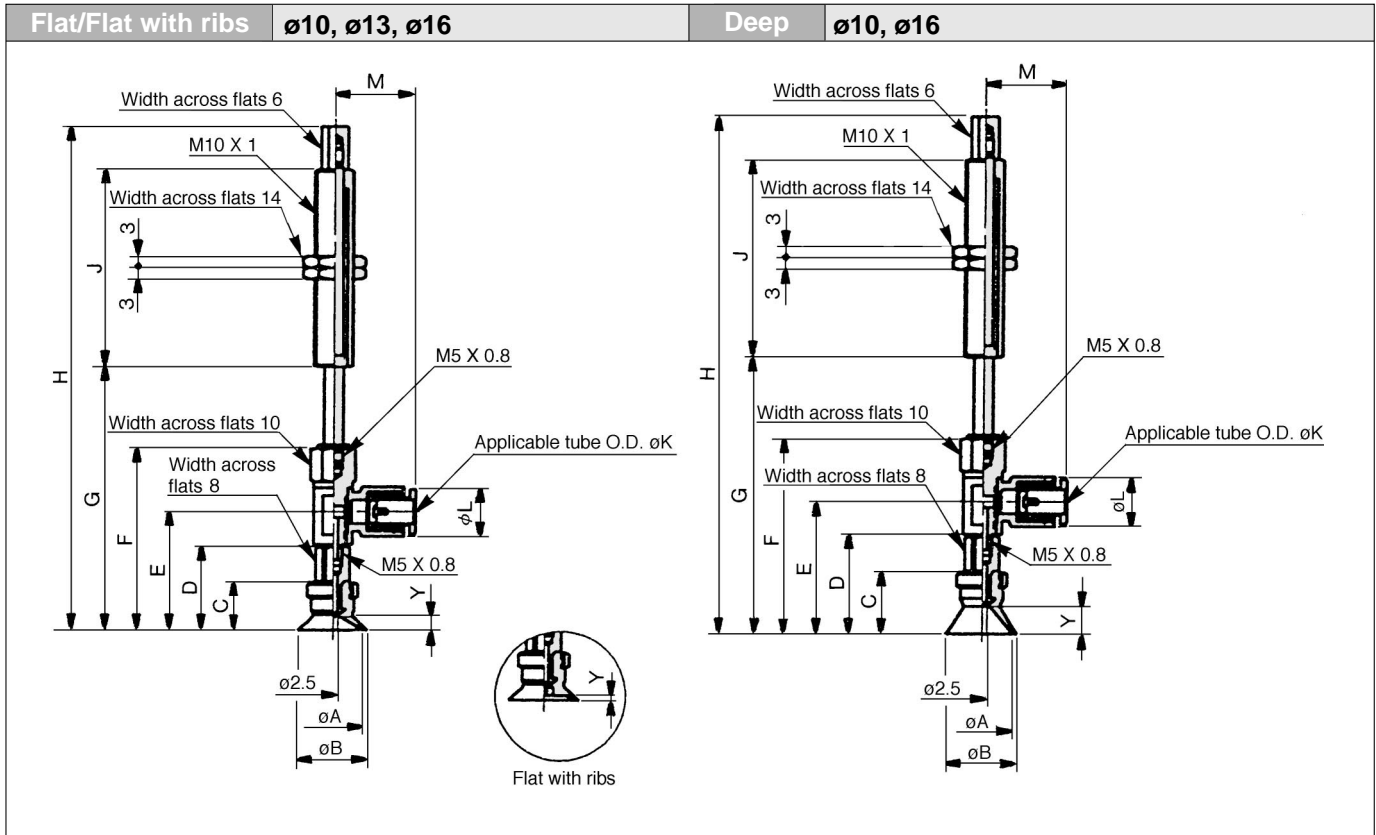


- ZPR02U ———— SZPRU11, #22 (#1 + #13), #23 (#1 + #14)
- ZPR04U ———— SZPRU11, #24 (#2 + #13), #25 (#2 + #14)
- ZPR06U ———— SZPRU11, #26 (#3 + #13), #27 (#3 + #14)
- ZPT08U ———— SZPRU11, #28 (#4 + #13), #29 (#4 + #14)

Lateral Vacuum Entry with Buffer Series ZPR



Connection	One-touch Fitting	Pad Style	Flat/Flat with Ribs/Deep
Vacuum Entry	Lateral	Mounting	Male Thread



- ZX
- ZR
- ZM
- ZH
- ZU
- ZL
- ZF
- ZP**
- ZCU
- Vacuum related

Flat style/Flat with ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat w/ ribs
ZPR10 ^U □□□□□-0□A10	10	12	12	21	29.9	46	3	1.7
ZPR13 ^U □□□□□-0□A10	13	15						1.8
ZPR16 ^U □□□□□-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 □□□□-10□A10	57	91	57.5	91.5	23
ZPR□□ ^U □□□□-10□A10	67	129	67.5	129.5	
ZPR□□ ^U □□□□-10□A10	77	139	77.5	139.5	51
ZPR□□ ^U □□□□-10□A10	87	175	87.5	175.5	
ZPR□□ ^U □□□□-10□A10	97	185	97.5	185.5	77

- ZPR10U/C ——— SZPRU11, #30 (#5 + #15), #31 (#5 + #16)
- ZPR13U/C ——— SZPRU11, #32 (#6 + #15), #33 (#6 + #16)
- ZPR16U/C ——— SZPRU11, #34 (#7 + #15), #35 (#7 + #16)
- ZPR10D ——— SZPRD11, #12 (#1 + #5), #13 (#1+ #6)
- ZPR16D ——— SZPRD11, #14 (#2 + #5), #15 (2+ #6)

Deep style

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	
ZPR□□D□□□□30-0□-A10	80	142	81	143	51
ZPR□□D□□□□40-0□-A10	90	178	91	179	
ZPR□□D□□□□50-0□-A10	100	188	101	189	77

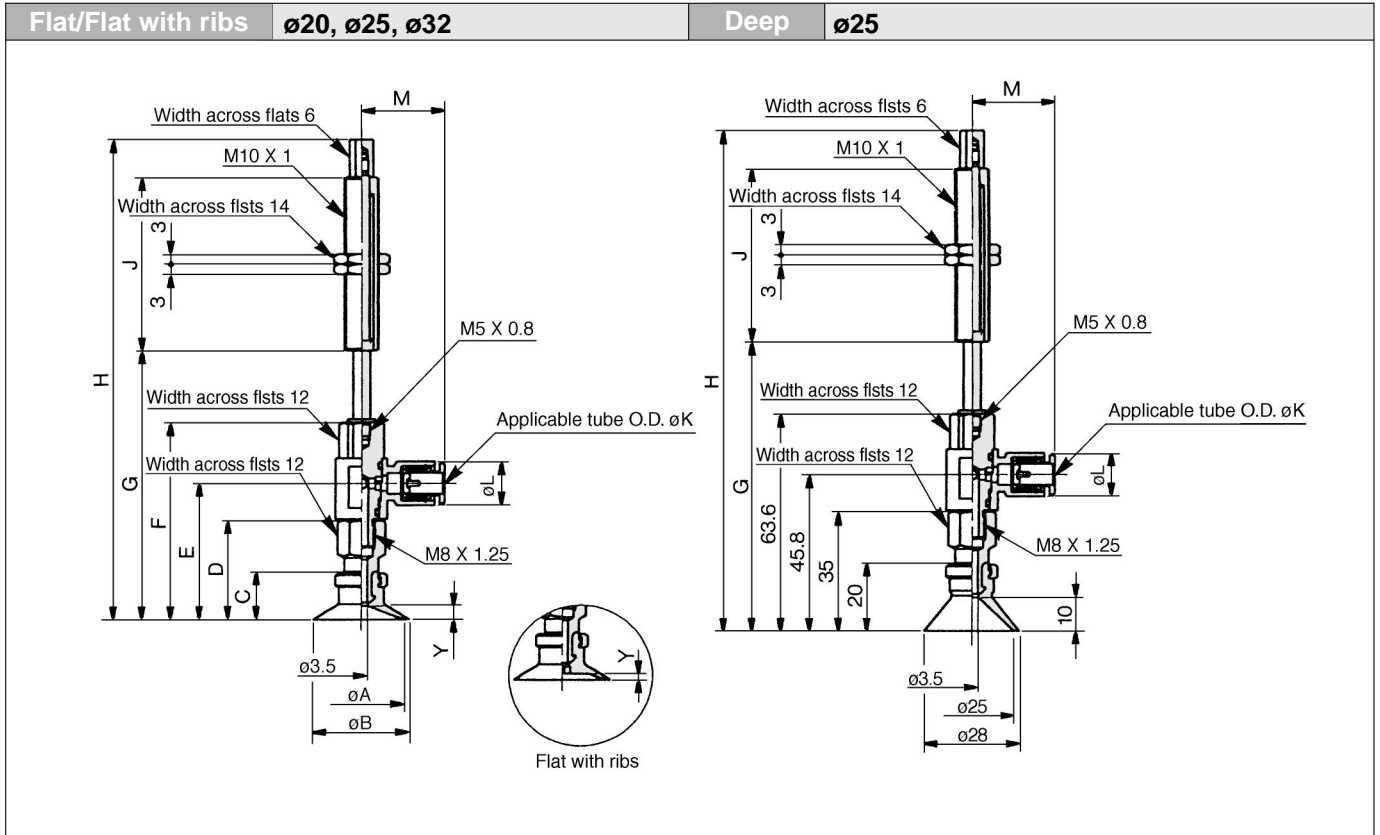
One-touch fitting

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

Series ZPR



Connection	One-touch Fitting	Pad Style	Flat/Flat with Ribs/Deep
Vacuum Entry	Lateral	Mounting	Male Thread



Flat style/Flat with ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat w/ ribs
ZPR20U/C □□□□□□-00-A10	20	23	14	29	39.8	57.6	4	1.7
ZPR25U/C □□□□□□-00-A10	25	28						1.8
ZPR22U/C □□□□□□-00-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 □□□□□□10-00-A10	68.6	102.6	69.1	103.1	23
ZPR□□U/C □□□□□□20-00-A10	78.6	140.6	79.1	141.1	51
ZPR□□U/C □□□□□□30-00-A10	88.6	150.6	89.1	151.1	
ZPR□□U/C □□□□□□40-00-A10	98.6	186.6	99.1	187.1	77
ZPR□□U/C □□□□□□50-00-A10	108.6	196.6	109.6	197.1	

Deep style

Model	G	H	J
ZPR25D□□□□10-00-A10	74.6	108.6	23
ZPR25D□□□□20-00-A10	84.6	146.6	51
ZPR25D□□□□30-00-A10	94.6	156.6	
ZPR25D□□□□40-00-A10	104.6	192.6	77
ZPR25D□□□□50-00-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



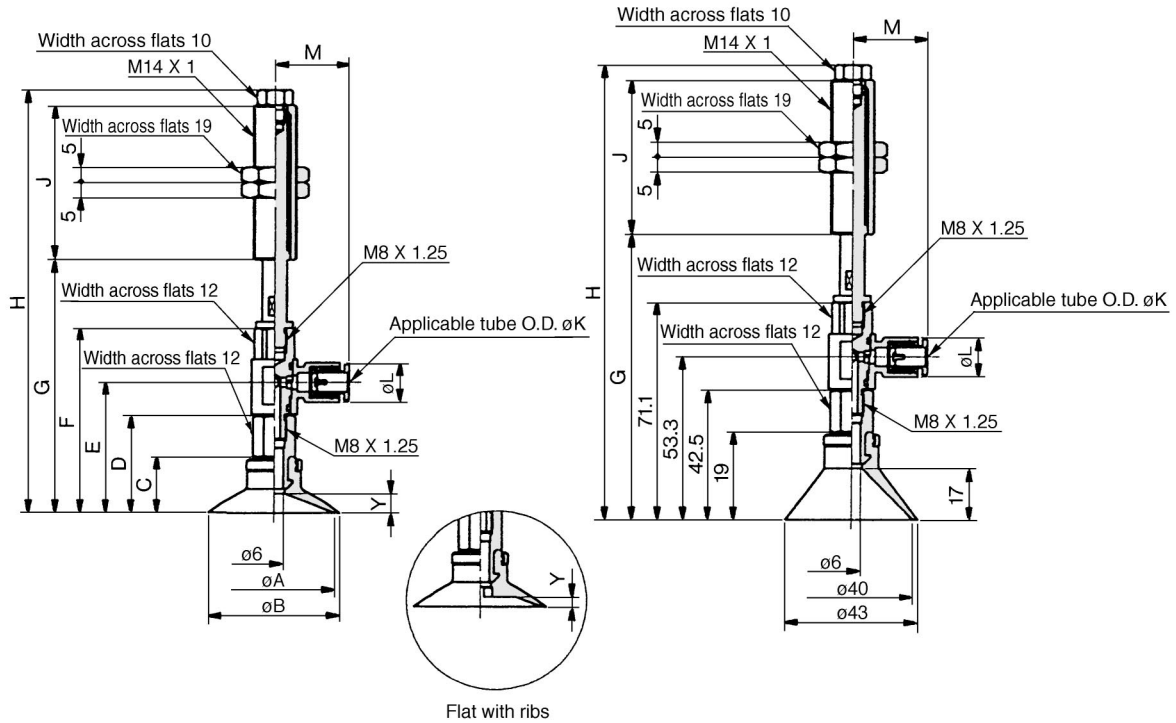
- ZPR20U/C ——— SZPRU11, #36 (#8 + #17) to #38 (#8 + #19)
- ZPR25U/C ——— SZPRU11, #39 (#9 + #17) to #41 (#9 + #19)
- ZPR32U/C ——— SZPRU11, #42 (#10 + #17) to #44 (#10 + #19)
- ZPR25D ——— SZPRD11, #16 (#3 + #7) to #18 (#3 + #9)

Lateral Vacuum Entry with Buffer Series ZPR



Connection	One-touch Fitting	Pad Style	Flat/Flat with Ribs/Deep
Vacuum Entry	Lateral	Mounting	Male Thread

Flat/Flat with ribs	ø40, ø50	Deep	ø40
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ZX

ZR

ZM

ZH

ZU

ZL

ZF

ZP

ZCU

Vacuum related

Flat style/Flat with ribs

Model	A	B	C	D	E	F	Y	
							Flat	Flat w/ ribs
ZPR40U/C □□□□□□-00-A14	40	43	18.5	32	42.8	60.6	6.5	3.3
ZPR50U/C □□□□□□-00-A14	50	53	19.5	33	43.8	61.6	7.5	3.8

Dimensions by stroke

Model	ø40		ø32		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	

Deep style

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

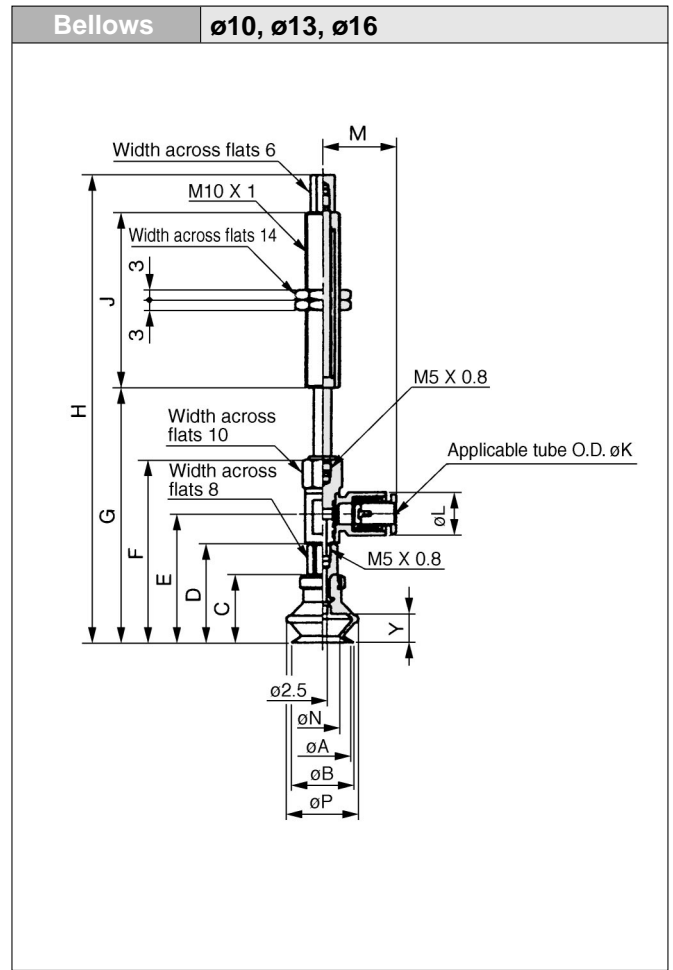
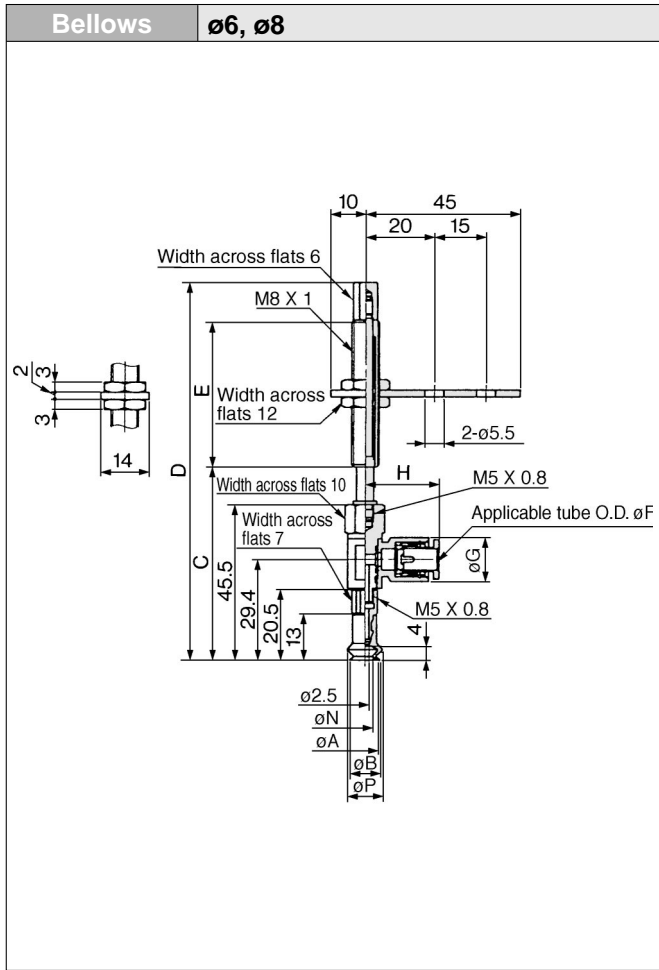
Model	K	L	M
ZPR□□□□□□□□-06-A14	6	12.8	24.3
ZPR□□□□□□□□-08-A14	8	15.2	26.2

- ZPR40U/C ————— SZPRU11, #45 (#11 + #20), #46 (#11 + #21)
- ZPR50U/C ————— SZPRU11, #47 (#12 + #20), #48 (#12 + #21)
- ZPR40D ————— SZPRD11, #19 (#4 + #10), #20 (#4 + #11)

Series ZPR



Connection	One-touch Fitting	Pad Style	Bellows
Vacuum Entry	Lateral	Mounting	Male Thread



Bellows style

Model	A	B	N	P
ZPR06B□□□□-0□-A8	6	7	3.3	9.1
ZPR08B□□□□-0□-A8	8	9	4.7	10.1

Dimensions by stroke

Model	C	D	E	F: ø4		F: ø6	
				G	H	G	H
ZPR□□B□□□ 6-0□-A8	53.5	79.5	15				
ZPR□□B□□□10-0□-A8	56.5	110.5	43	10.4	20.6	12.8	21.6
ZPR□□B□□□15-0□-A8	61.5	115.5					
ZPR□□B□□□25-0□-A8	71.5	125.5					

ZPT06B ———— SZPRB11, #20 (#1 + #11), #21 (#1 + #12)
 ZPT08B ———— SZPRB11, #22 (#2 + #11), #23 (#2 + #12)

Bellows style

Model	A	B	C	D	E	F	N	P	Y
ZPR10B□□□□-0□-A10	10	12	16	25	33.9	50	5.5	13.8	5.5
ZPR13B□□□□-0□-A10	13	15	18.5	27.5	36.4	52.5	8.7	19	7.5
ZPR16B□□□□-0□-A10	16	18	20	29	37.9	54	9.9	21	8.5

Dimensions by stroke

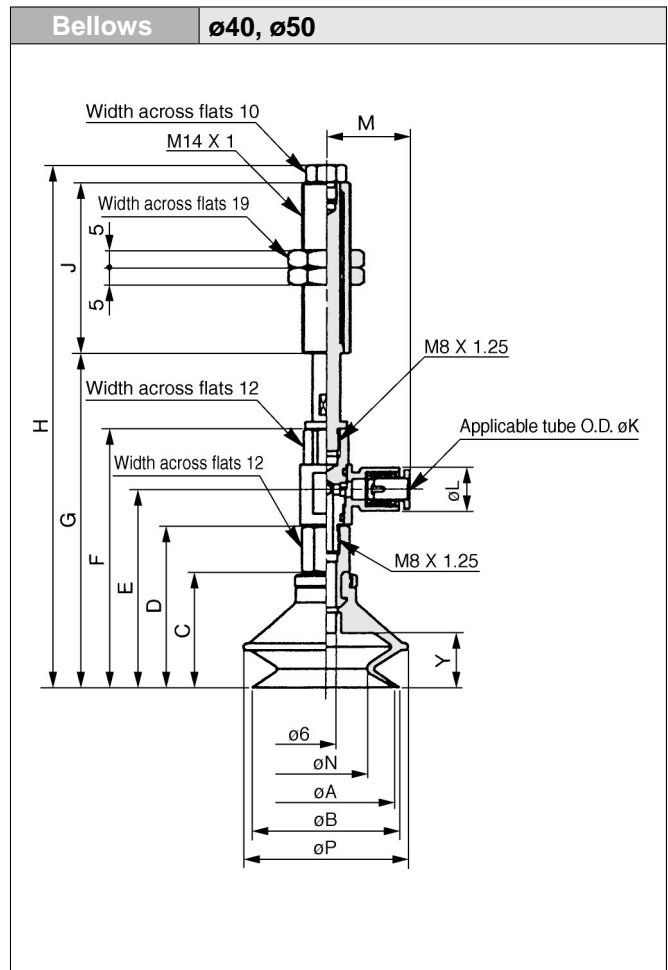
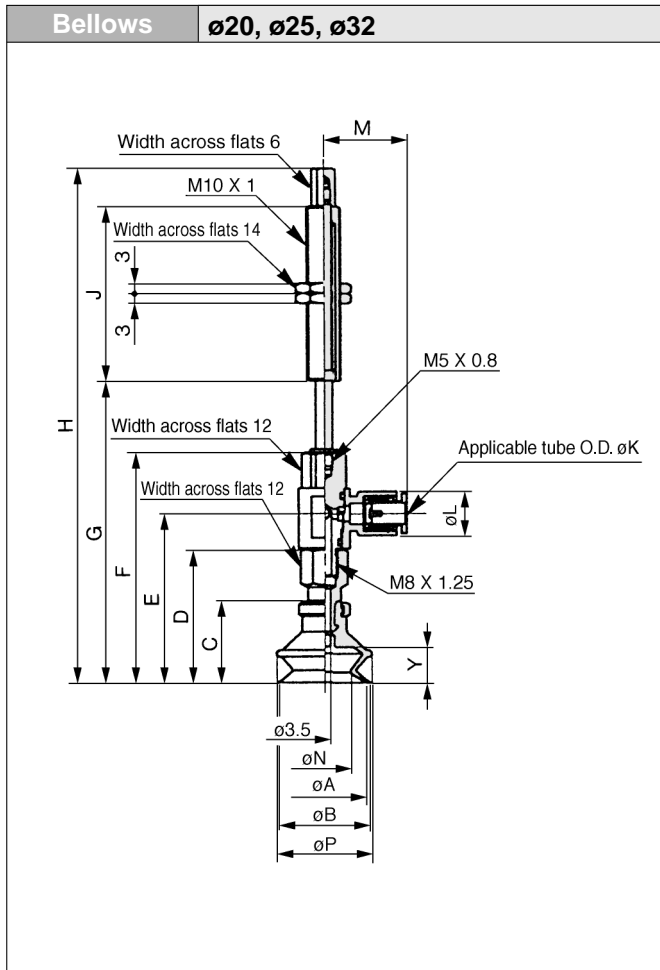
Model	ø10		ø13		ø16		J	K: ø4		K: ø6	
	G	H	G	H	G	H		L	M	L	M
ZPR□□B□□□10-0□-A10	61	95	63.5	97.5	65	99	23				
ZPR□□B□□□20-0□-A10	71	133	73.5	135.5	75	137	51	10.4	20.6	12.8	21.6
ZPR□□B□□□30-0□-A10	81	143	83.5	145.5	85	147					
ZPR□□B□□□40-0□-A10	91	179	93.5	181.5	95	183	77				
ZPR□□B□□□50-0□-A10	101	189	103.5	191.5	105	193					

ZPR10B ———— SZPRB11, #24 (#3 + #13), #25 (#3 + #14)
 ZPR13B ———— SZPRB11, #26 (#4 + #13), #27 (#4 + #14)
 ZPR16B ———— SZPRB11, #28 (#5 + #13), #29 (#5 + #14)

Lateral Vacuum Entry with Buffer Series ZPR



Connection	One-touch Fitting	Pad Style	Bellows
Vacuum Entry	Lateral	Mounting	Male Thread



- ZX
- ZR
- ZM
- ZH
- ZU
- ZL
- ZF
- ZP**
- ZCU
- Vacuum related

Bellows style

Model	A	B	C	D	E	F	N	P	Y
ZPR20B□□□□□-0□-A10	20	22	23.5	38.5	49.3	67.1	12.4	25	10.5
ZPR25B□□□□□-0□-A10	25	27	24	39	49.8	67.6	15.6	28	
ZPR32B□□□□□-0□-A10	32	34	29	44	54.8	72.6	18.9	37	

Bellows style

Model	A	B	C	D	E	F	N	P	Y
ZPR40B□□□□□-0□-A14	40	43	34	47.5	58.3	76.1	24.4	48	16
ZPR50B□□□□□-0□-A14	50	53	38	51.5	62.3	80.1	32.4	57	19

Dimensions by stroke

Model	ø20						ø25						ø32						J	K: ø4		K: ø6		K: ø8	
	G		H		G		H		G		H		G		H		L	M		L	M	L	M		
	G	H	G	H	G	H	G	H	G	H	G	H													
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																			

Dimensions by stroke

Model	ø40		ø50		J	K: ø6		K: ø8	
	G	H	G	H		L	M	L	M
	G	H	G	H					
ZPR□□B□□□□10-0□-A14	88.1	156.1	92.1	160.1	50	12.8	24.3	15.2	26.2
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					

- ZPR20B ———— SZPRB11, #30 (#6 + #15), #32 (#6 + #17)
- ZPR25B ———— SZPRB11, #33 (#7 + #15), #35 (#7 + #17)
- ZPR32B ———— SZPRB11, #36 (#8 + #15), #38 (#8 + #17)

- ZPR40B ———— SZPRB11, #39 (#9 + #18), #40 (#9 + #19)
- ZPR50B ———— SZPRB11, #41 (#10 + #18), #42 (#10 + #19)

Series ZPR With Buffer

How to Order

ZPR 10 F GN J 30 06 A10

Pad diameter (mm)

10	ø10
13	ø13
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

Pad type

F	Ball joint
---	------------

Pad material

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

* ø20 and larger are manufactured upon receipt of order.

Buffer type

J	Without detent
K	With detent

• Mounting thread diameter/male thread
(Refer to Table 1 for applications.)

• Vacuum entry
(Refer to Table 1 for applications.)

Table 1 Vacuum entry/Mounting thread diameter

			Mounting thread diameter (male thread)	
Pad diameter (mm)			ø10 to ø16	ø20 to ø50
Connection	Thread diameter, Piping diameter	Symbol	M10 x 1	M14 x 1
			A10	A14
Vacuum entry	One-Touch fitting	ø4 tube	•	–
		ø6 tube	•	•
		ø8 tube	–	•

• Buffer stroke

Symbol	Stroke	Pad diameter (mm)	
		ø10 to ø16	ø20 to ø50
10	10mm	•	•
20	20mm	•	•
30	30mm	•	•
40	40mm	•	–
50	50mm	•	•

Buffer spring reactive force

Pad diameter (mm)	0 stroke	Stroke end
ø10 to ø16	1.0N {0.10kgf}	3.0N {0.31kgf}
ø20 to ø50	2.0N {0.20kgf}	5.0N {0.51kgf}

Note) Pads are exclusively ball joint type and are not interchangeable with other pads.

Pad Types

Pad type	Ball joint					
Pad diameter (mm)	ø10, ø13, ø16, ø20, ø25, ø32, ø40, ø50					
Material	NBR	Silicon rubber	Urethane rubber	Fluoro rubber	Conductive NBR	Conductive silicon rubber
Color	Black	White	Brown	Black with green mark	Black with 1 white mark	Black with 2 white marks
Durometer	50°	40°	60°	60°	50°	50°

Standard Specifications



Vacuum entry direction		Lateral	
Connection		Mounting	Vacuum entry
		Male thread	One-Touch fitting
Pad diameter (mm)	ø10 to ø16	M10 x 1	ø4 tube
			ø6 tube
	ø20 to ø50	M14 x 1	ø6 tube
			ø8 tube
Ball joint rotation		±15°	

Buffer Specifications

Pad diameter (mm)	ø10 to ø16		ø20 to ø50	
Mounting	M10 x 1		M14 x 1	
Stroke (mm)	10, 20, 30, 40, 50		10, 20, 30, 50	
Spring reactive force	0 stroke	1.0N {0.10kgf}	0 stroke	2.0N {0.20kgf}
	Stroke end	3.0N {0.31kgf}	Stroke end	5.0N {0.51kgf}
Detent specifications	Without detent (J), With detent (K)			

Weight Table

(g)

Pad diameter (mm)	Vacuum entry		
	One-Touch fitting		
	ø4 tube	ø6 tube	ø8 tube
ø10 to ø16	34	35	–
ø20 to ø32	–	38	39
ø40, ø50	–	134	136

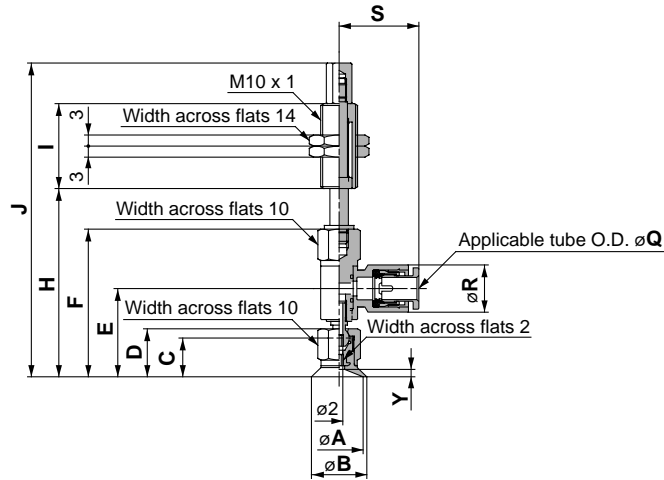
Addition Weight by Stroke

(g)

Pad diameter (mm)	Stroke (mm)			
	20	30	40	50
ø10 to ø16	+10.5	+12.5	+22.5	+24
ø20 to ø50	+37.5	+40	–	+66.5

Series ZPR With Buffer

ZPR 10/13/16 F□□ J/K10-0□-A10 (With Buffer)



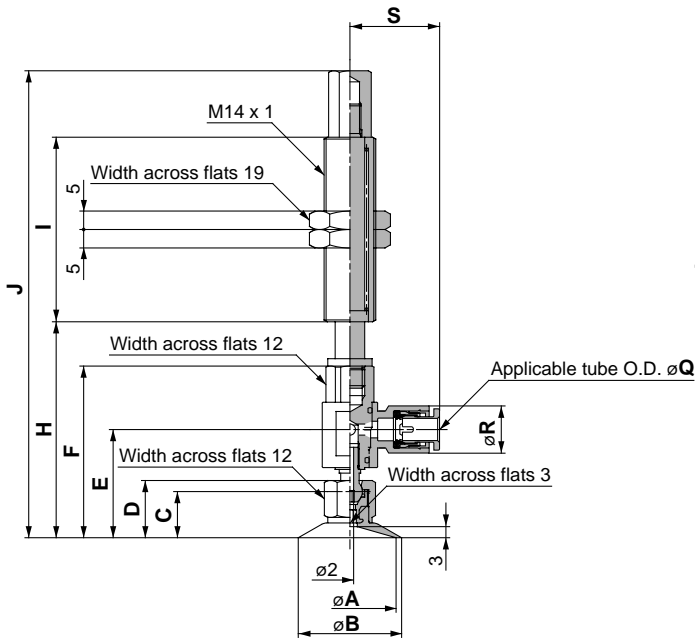
Dimensions/10mm stroke

Model	A	B	C	D	E	F	H	I	J	Q: 4		Q: 6		Y
										R	S	R	S	
ZPR10F□□□10-0□-A10	10	12	10	12.5	23.4	39.5	50.5	23	84.5					1.5
ZPR13F□□□10-0□-A10	13	15	10.5	13	23.9	40	51		85	10.4	20.6	12.8	21.6	2
ZPR16F□□□10-0□-A10	16	18												

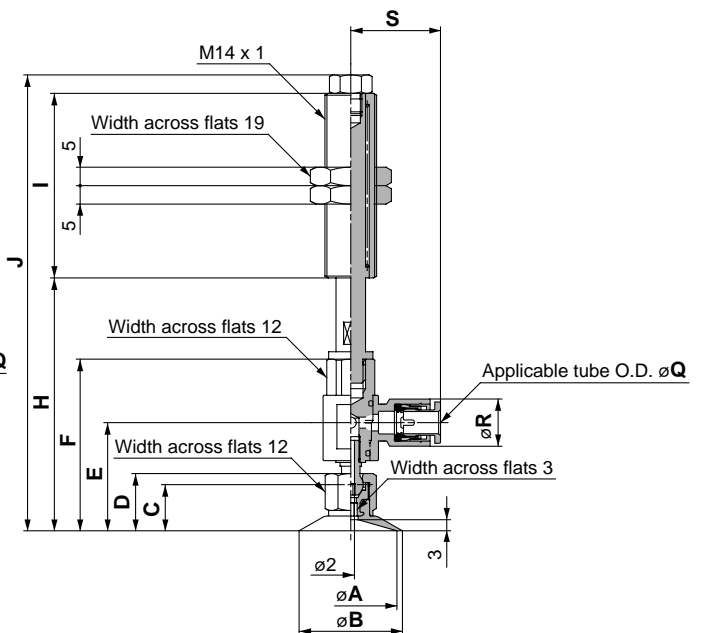
Additional dimensions by stroke (mm)

Stroke	H	I	J
20	+10	+28	+38
30	+20		+48
40	+30	+54	+84
50	+40		+94

ZPR 20/25/32 F□□ J/K10-0□-A14 (With Buffer)



With a stroke of 10mm



With a stroke of 20 to 50mm

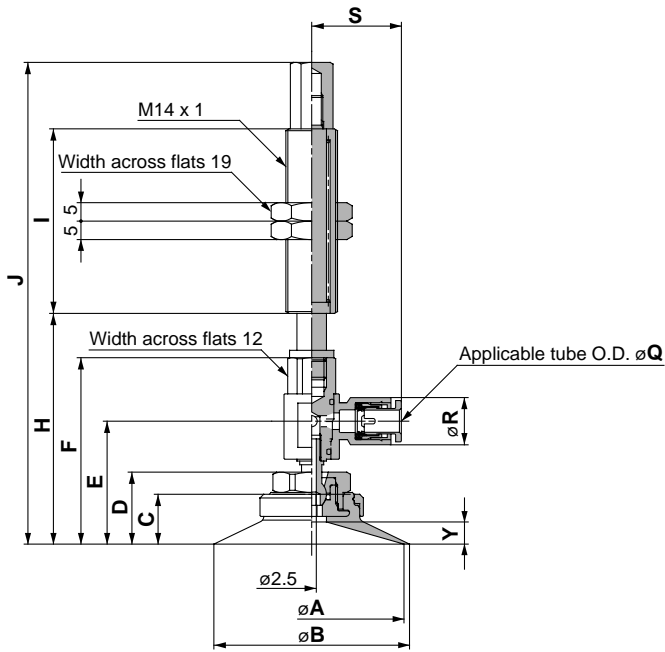
Dimensions/10mm stroke

Model	A	B	C	D	E	F	H	I	J	Q: 6		Q: 8		
										R	S	R	S	
ZPR20F□□□10-0□-A14	20	22	12.5	15.5	29.3	46.5	58.5	50	126.5					
ZPR25F□□□10-0□-A14	25	28	13	16	29.8	47	59		127	12.8	24.3	15.2	26.2	
ZPR32F□□□10-0□-A14	32	35												

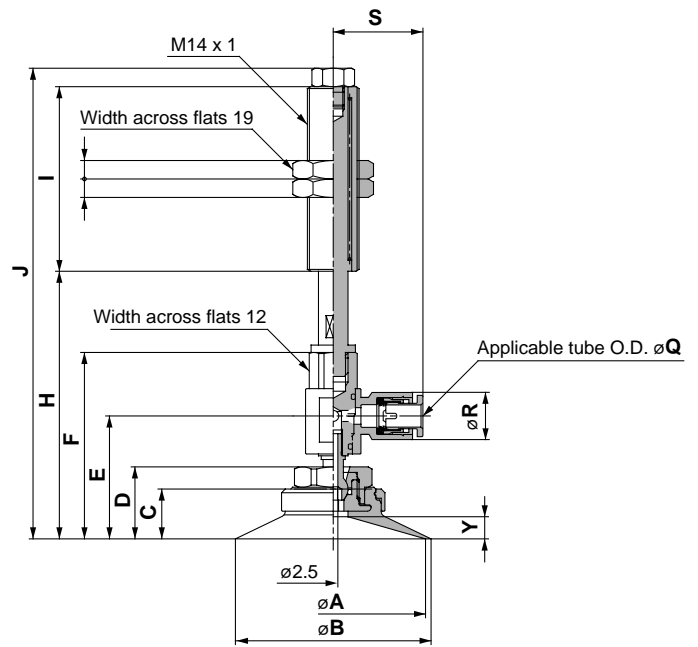
Additional dimensions by stroke (mm)

Stroke	H	I	J
20	+10	±0	-3
30	+20		+7
50	+40	+25	+52

ZPR 40/50 F□□ J/K 10-0□-A14 (With Buffer)



With a stroke of 10mm



With a stroke of 20 to 50mm

Dimensions/10mm stroke

Model	A	B	C	D	E	F	H	I	J	Q: 6		Q: 8		Y
										R	S	R	S	
ZPR40F□□□10-0□-A14	40	43	12.5	18.5	32.3	49.5	61.5	50	129.5	12.8	24.3	15.2	26.2	5
ZPR50F□□□10-0□-A14	50	53	13.5	19.5	33.3	50.5	62.5		130.5					6

(mm)

Additional dimensions by stroke (mm)


Stroke	H	I	J
20	+10	±0	-3
30	+20		+7
50	+40	+25	+52

Series ZPR

Without Buffer/Female Thread

How to Order

ZPR 10 F GS 06 B5



Pad diameter (mm)

10	ø10
13	ø13
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

Mounting thread diameter/female thread
(Refer to Table 1 for applications.)

Vacuum entry
(Refer to Table 1 for applications.)

Pad type

F	Ball joint
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Pad material

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

* ø20 and larger are manufactured upon receipt of order.

Table 1 Vacuum entry/Mounting thread diameter

Pad diameter (mm)		Mounting thread diameter			
		ø10 to ø16		ø20 to ø50	
Connection	Thread diameter, Piping diameter	Symbol	M5 x 0.8	M5 x 0.8	M8 x 1.25
	Vacuum entry	One-Touch fitting	ø4 tube	04	•
ø6 tube			06	•	•
ø8 tube			08	–	•

Note) Pads are exclusively ball joint type and are not interchangeable with other pads.

Standard Specifications

Vacuum entry direction		Lateral	
Connection		Connection	Vacuum entry
		Female thread	One-Touch fitting
Pad diameter (mm)	ø10 to ø16	M5 x 0.8	ø4 tube
			ø6 tube
		ø20 to ø50	M5 x 0.8
	ø8 tube		
	M8 x 1.25		ø6 tube
			ø8 tube
Ball joint rotation		±15°	

Weight Table

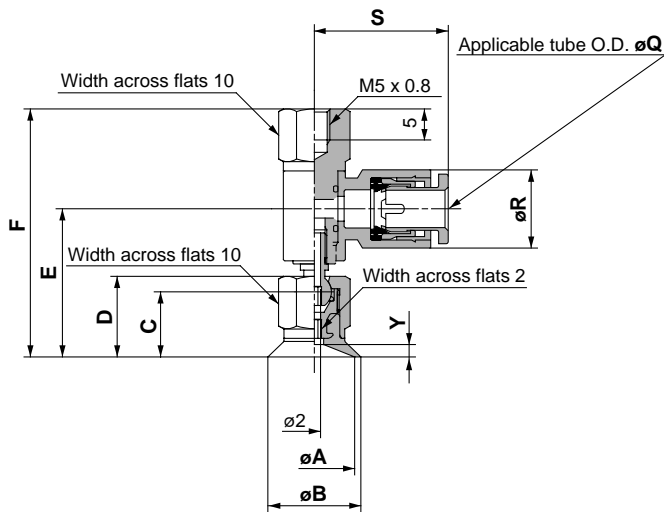
(g)

Pad diameter (mm)	Mounting female thread	Vacuum entry (One-Touch fitting)		
		ø4 tube	ø6 tube	ø8 tube
ø10 to ø16	M5 x 0.8	18	19	–
	M5 x 0.8	–	22	23
ø20 to ø32	M8 x 1.25	–	21	22
	M5 x 0.8	–	58	60
ø40, ø50	M8 x 1.25	–	57	59

Pad Types

Pad type	Ball joint					
Pad diameter (mm)	ø10, ø13, ø16, ø20, ø25, ø32, ø40, ø50					
Material	NBR	Silicon rubber	Urethane rubber	Fluoro rubber	Conductive NBR	Conductive silicon rubber
Color	Black	White	Brown	Black with green mark	Black with 1 white mark	Black with 2 white marks
Durometer	50°	40°	60°	60°	50°	50°

ZPR 10/13/16 F□□-0□-B5 (Without Buffer/Female Thread)



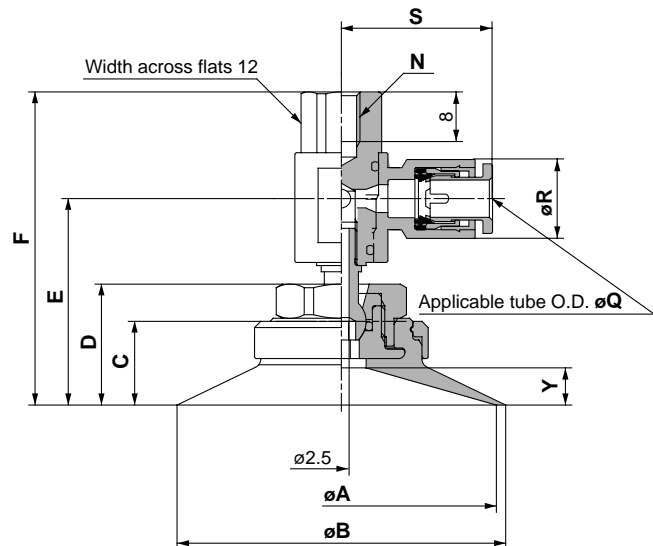
Dimensions (mm)

Model	A	B	C	D	E	F	Y
ZPR10F□□-0□-B5	10	12	10	12.5	23.4	39.5	1.5
ZPR13F□□-0□-B5	13	15	10.5	13	23.9	40	2
ZPR16F□□-0□-B5	16	18					

Dimensions by tube diameter (mm)

Pad diameter (mm)	Q: 4		Q: 6	
	R	S	R	S
ø10 to ø16	10.4	20.6	12.8	21.6

ZPR 40/50 F□□-0□-B8 (Without Buffer/Female Thread)



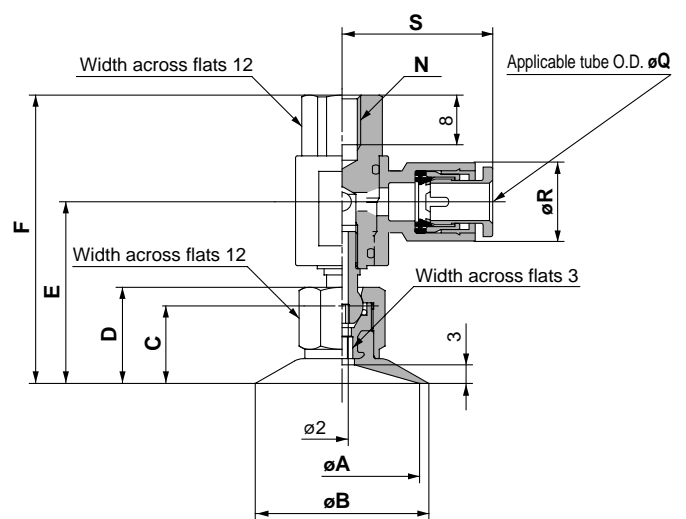
Dimensions (mm)

Model	A	B	C	D	E	F	N	Y
ZPR40F□□-0□-B8	40	43	12.5	18.5	32.3	49.5	M8 x 1.25	5
ZPR50F□□-0□-B8	50	53	13.5	19.5	33.3	50.5		6

Dimensions by tube diameter (mm)

Pad diameter (mm)	Q: 6		Q: 8	
	R	S	R	S
ø40, ø50	12.8	24.3	15.2	26.2

ZPR 20/25/32 F□□-0□-B 5/8 (Without Buffer/Female thread)



Dimensions (mm)

Model	A	B	C	D	E	F	N
ZPR20F□□-0□-B5	20	22	12.5	15.5	29.3	46.5	M5 x 0.8
M8 x 1.25							
ZPR25F□□-0□-B5	25	28	12.5	15.5	29.3	46.5	M5 x 0.8
M8 x 1.25							
ZPR32F□□-0□-B5	32	35	13	16	29.8	47	M5 x 0.8
M8 x 1.25							

Dimensions by tube diameter (mm)

Pad diameter (mm)	Q: 6		Q: 8	
	R	S	R	S
ø20 to ø32	12.8	24.3	15.2	26.2