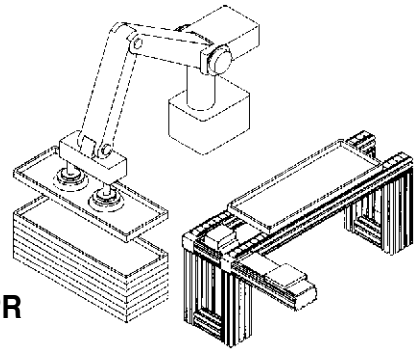
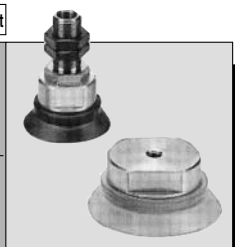
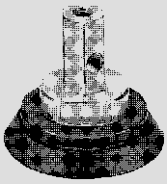
Vacuum Pad: Large/Heavy Duty Type
Series ZPT/ZPX

Ideal for heavy weight material or objects with a large surface area. Example: CRT, Car body



Pad diameter: ø40, ø50, ø63, ø80, ø100, ø125

Pad material: NBR, Silicon rubber, Urethane rubber, Fluoro rubber, EPR

Type	Without buffer			With buffer			Page
	Mounting	Vacuum entry port		Mounting	Vacuum entry port		
Series ZPT Vertical vacuum entry	Male thread	Female thread		Buffer body (Male thread)	Female thread		13-11-72 to 13-11-76
	Female thread	Common					
Series ZPX Lateral vacuum entry	Female thread	Female thread		Buffer body (Male thread)	Female thread		13-11-77 to 13-11-80

Series ZPT ZPX ▶

Buffer stroke \ Pad dia.	ø40	ø50	ø63	ø80	ø100	ø125
25	○	○	○	○	○	○
50	○	○	○	○	○	○
75	○	○	○	○	○	○
100	—	—	—	—	○	○

Pad Material and Characteristics

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

Material \ Characteristics	Durometer HS (±5°C)	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	50°	– 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	◎	◎	◎	○	◎	◎
EPR	50°	– 20 to 150	X	X	◎	○	◎	◎	○	◎	X

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

Series ZPT/ZPX
Model Selection

A vacuum pad diameter (øD) can be determined by calculation if the lifting force needed to perform the work function is known. The weight of the workpiece and any potential dynamic forces involved during movement (lifting, stopping, rotating, etc.) need to be considered. The area of one pad can be divided to an equivalent area of multiple pads (n) as necessary, based on these forces and the shape of the load.

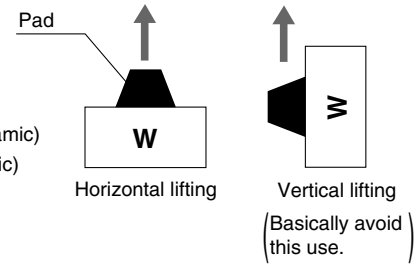
Calculation Method: Pad Diameter

A vacuum pad diameter with applied safety factor based on lifting orientation of workpiece (vertical or horizontal) can be derived from calculations or by using the Selection Graph shown below.

Calculation

$$\text{øD} = \sqrt{\frac{4}{3.14} \times \frac{1}{P} \times \frac{W}{n} \times t \times 1000}$$

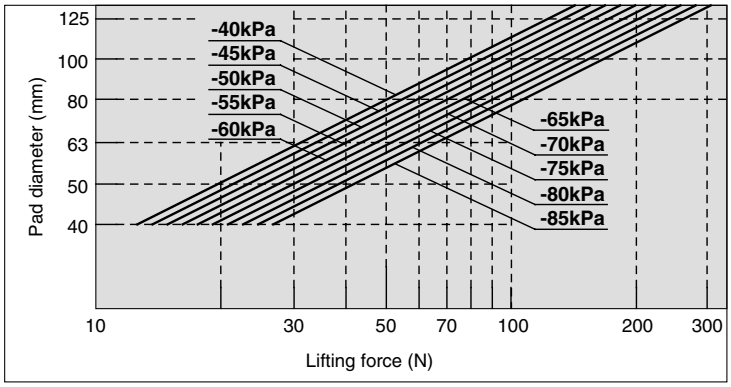
øD : Pad diameter (mm)
n : Number of pads used
W : Lifting force (N)
P : Stable vacuum pressure (kPa)
t : Safety factor: Horizontal pad contact: 4 (dynamic)
Vertical pad contact: 8 (dynamic)



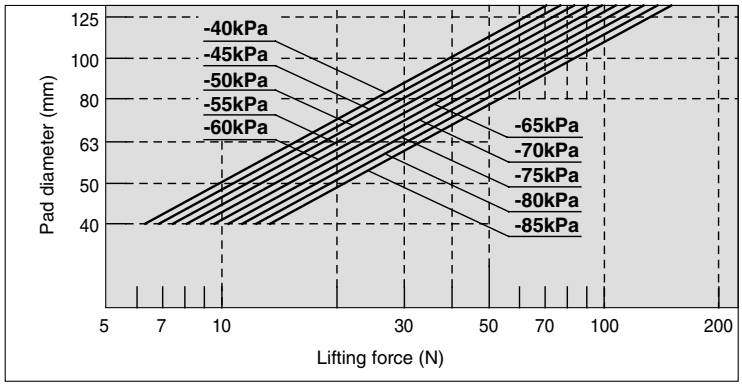
Selection Graph

The pad diameter required for horizontal (selection graphs (1) and (2)) or vertical contact can be found by setting the weight of the work the number ob pads to contact the workpiece and the stable adsorption vacuumu pressure.

Selection Graph (1) Selection Graph of Pad Diameter by Lift Force Horizontal (Reference value)



Selection Graph (2) Selection Graph of Pad Diameter by Lift Force Vertical (Reference value)



How to read
Example: Work load 20 kg (Lifting force: 196 N)
Conditions: Desired number of pads 5 pcs.
Working vacuum pressure –60 kPa
Horizontal lifting

<Selection procedure>
From left condition Lifting force per pad: 196 N ÷ 5 pcs. = 39.2 N
From Selection Graph (1) as horizontal lifting Lifting force 39.2 N
Extend to the y-axis from the corresponding point of vacuum pressure –60 kPa; result is to select a pad diameter bigger than 63 mm.

Series ZPT/ZPX
Application Data

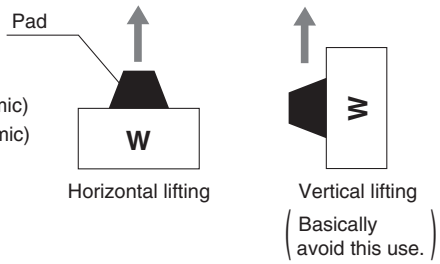
Theoretical Lifting Force

Theoretical lifting force for pad can be derived from calculations or taken directly from theoretical lifting force table.

Calculation

$$W = P \times S \times 0.1 \times \frac{1}{t}$$

W : Lifting force (N)
P : Stable vacuum pressure (kPa)
S : Pad area (cm²)
t : Factor of safety: Horizontal pad contact : 4 (dynamic)
Vertical pad contact : 8 (dynamic)



Theoretical Lifting Force

The theoretical lifting force (not including the safety factor) is found from the pad diameter and vacuum pressure.
The required lifting force is then found by dividing the theoretical lifting force by the safety factor.

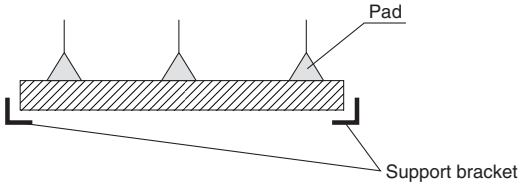
Lifting force = Theoretical lifting force ÷ t

Theoretical Lifting Force (Theoretical lifting force = P x S x 0.1) (N)

Pad diameter (mm)		ø40	ø50	ø63	ø80	ø100	ø125
Adsorption area (cm²)		12.6	19.6	31.2	50.3	78.5	122.7
Vacuum pressure (kPa)	–85	107	167	264.9	427	667.3	1042.6
	–80	101	157	249.3	401.9	628	981.3
	–75	94.5	147	233.7	376.8	588.8	920
	–70	88.2	137	218.1	351.7	549.5	858.6
	–65	81.9	127	202.5	326.6	510.3	797.3
	–60	75.6	118	187	301.4	471	736
	–55	69.3	108	171.4	276.3	431.8	674.6
	–50	63.0	98.0	155.8	251.2	392.5	613.3
	–45	56.7	88.2	140.2	226.1	353.3	552
	–40	50.4	78.4	124.6	201	314	490.7

⚠ Precautions

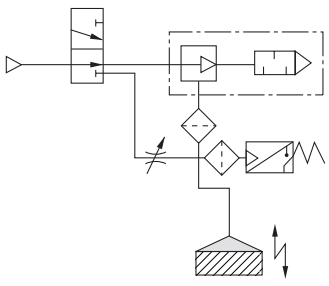
1. The quantity and placement of pads should be considered when transferred work has a large surface area.



Install support brackets to prevent a workpiece from dropping according to your requirements.

2. Vacuum response time and vacuum breaking time are influenced by internal volume of large bellows size pad, which has more volume than the large flat ribbed type pad.
When response time is important, consider the following measures:

- Use a larger capacity ejector.
- Set a vacuum breaking valve.



Vacuum Pad: Large/Heavy Duty Type
Vertical Vacuum Entry
Without Buffer
Series ZPT

Specifications

Mounting	Vacuum entry direction		Vertical	
	Connection		Male thread	Female thread
	Thread dia.	ø40, ø50	M14 x 1	M8 x 1.25, M10 x 1.5
		ø63, ø80	M16 x 1.5	M8 x 1.25, M10 x 1.5, M12 x 1.75, M16 x 1.5
		ø100, ø125	M16 x 1.5	M12 x 1.75, M16 x 1.5
Vacuum entry port			Rc 1/8	Use the mounting port

Pad Type

Pad diameter (mm)	ø40, ø50, ø63, ø80, ø100, ø125
Material (color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with mark Ⓕ), EPR (Black with mark Ⓔ)
Durometer	NBR/Silicone rubber/EPR (50°), Urethane/Fluoro rubber (60°)

Weight (g)

Pad dia.	Silicon rubber	Urethane rubber	Fluoro rubber	EPR
ø40	–1	0	5	–1
ø50	–1	0	8	0
ø63	–2	0	16	0
ø80	–3	1	27	–1
ø100	–5	1	53	–1
ø125	–8	3	84	0

Weight (NBR)

Model	Weight (g)	Model	Weight (g)
ZPT40HN-A14	71	**ZPT80HN-A16**	178
ZPT40HN-B8	38	**ZPT80HN-B8**	144
ZPT40HN-B10	37	**ZPT80HN-B10**	143
ZPT50HN-A14	83	**ZPT80HN-B12**	141
ZPT50HN-B8	50	**ZPT80HN-B16**	139
ZPT50HN-B10	49	**ZPT100HN-A16**	350
ZPT63HN-A16	149	**ZPT100HN-B12**	301
ZPT63HN-B8	115	**ZPT100HN-B16**	299
ZPT63HN-B10	114	**ZPT125HN-A16**	414
ZPT63HN-B12	112	**ZPT125HN-B12**	365
ZPT63HN-B16	110	**ZPT125HN-B16**	363

Add or deduct the weight shown in the table on the left for other materials.

How to Order

ZPT | **40** | **H** | **N** – **A14**

Pad diameter (mm)

40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125

Vacuum entry/Mounting thread diameter

(Vacuum entry port)		ø40, ø50	ø63, ø80	ø100, ø125
A14	M14 x 1	●	—	—
A16	M16 x 1.5	—	●	●
B8	M8 x 1.25	●	●	—
B10	M10 x 1.5	●	●	—
B12	M12 x 1.75	—	●	●
B16	M16 x 1.5	—	●	●

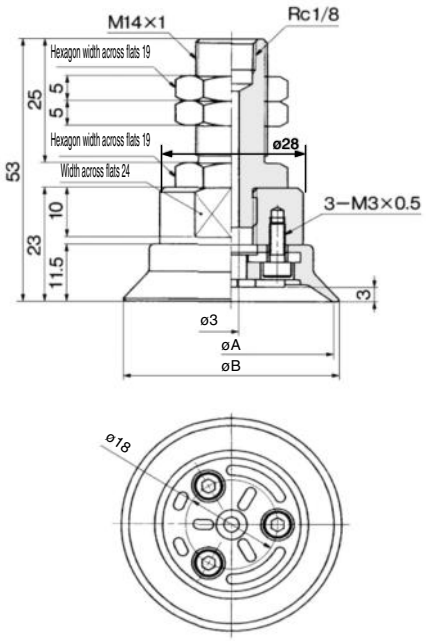
Pad type

H	Heavy duty

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluoro rubber
E	EPR

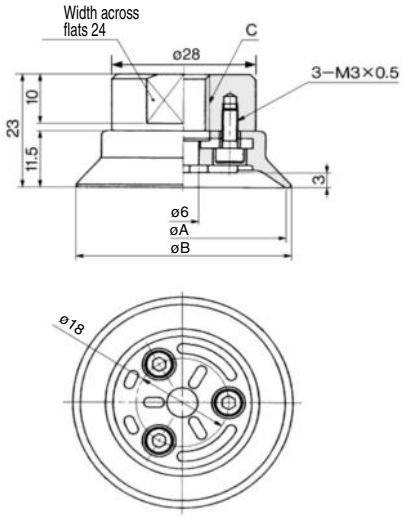
ZPT $^{40}_{50}$ H□-A14 (Male thread)



(mm)

Model	øA	øB
ZPT40H□-A14	40	42
ZPT50H□-A14	50	52

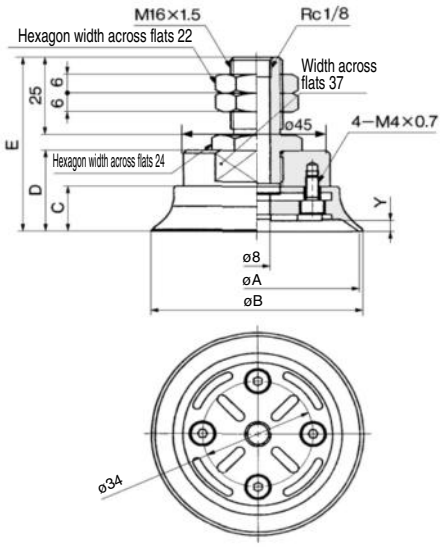
ZPT $^{40}_{50}$ H□-B□ (Female thread)



(mm)

Model	øA	øB	C
ZPT40H□-B8	40	42	M8 x 1.25
ZPT40H□-B10	40	42	M10 x 1.5
ZPT50H□-B8	50	52	M8 x 1.25
ZPT50H□-B10	50	52	M10 x 1.5

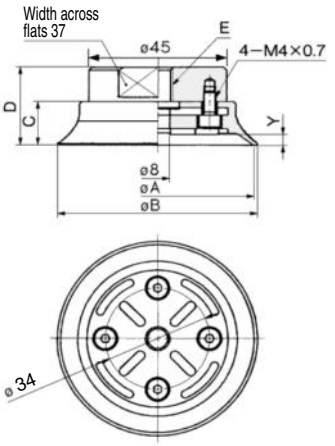
ZPT $^{63}_{80}$ 6380H□-A16 (Male thread)



(mm)

Model	øA	øB	C	D	E	Y
ZPT63H□-A16	63	65	14.5	26	56	3.5
ZPT80H□-A16	80	82	16.5	28	58	4.5

ZPT $^{63}_{80}$ H□-B□ (Female thread)

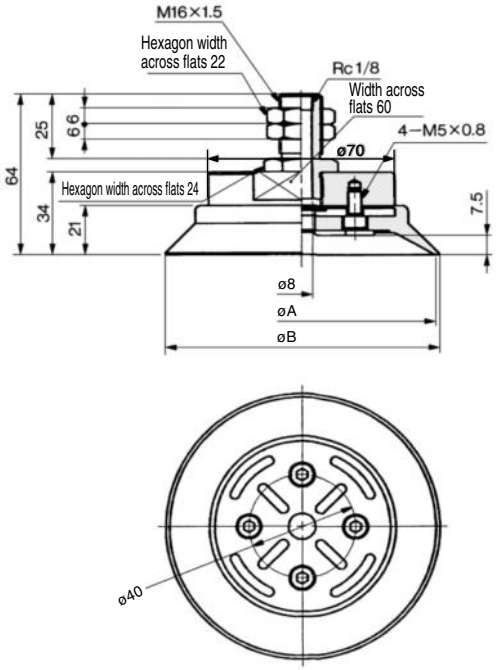


(mm)

Model	øA	øB	C	D	E	Y
ZPT63H□-B8	63	65	14.5	26	M8 x 1.25	3.5
ZPT63H□-B10	63	65	14.5	26	M10 x 1.5	3.5
ZPT63H□-B12	63	65	14.5	26	M12 x 1.75	3.5
ZPT63H□-B16	63	65	14.5	26	M16 x 1.5	3.5
ZPT80H□-B8	80	82	16.5	28	M8 x 1.25	4.5
ZPT80H□-B10	80	82	16.5	28	M10 x 1.5	4.5
ZPT80H□-B12	80	82	16.5	28	M12 x 1.75	4.5
ZPT80H□-B16	80	82	16.5	28	M16 x 1.5	4.5

Series ZPT

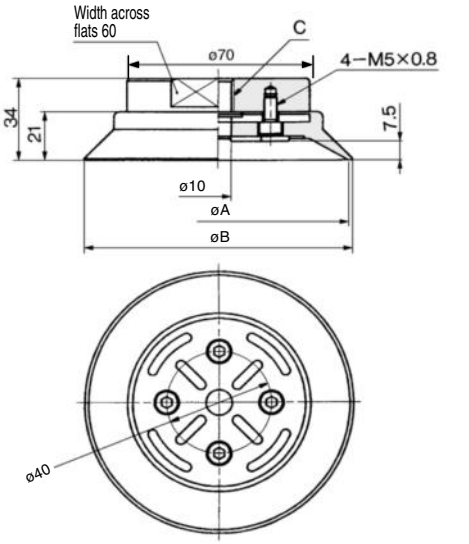
ZPT $^{100}_{125}$H□-A16 (Male thread)



(mm)

Model	øA	øB
ZPT100H□-A16	100	103
ZPT125H□-A16	125	128

ZPT $^{100}_{125}$H□-B□ (Female thread)



(mm)

Model	øA	øB	C
ZPT100H□-B12	100	103	M12 x 1.75
ZPT100H□-B16	100	103	M16 x 1.5
ZPT125H□-B12	125	128	M12 x 1.75
ZPT125H□-B16	125	128	M16 x 1.5

Vacuum Pad: Large/Heavy Duty Type
Vertical Vacuum Entry
With Buffer
Series ZPT

Specifications

Mounting	Vacuum entry direction		Vertical
	Connection		Male thread
	Thread dia.	ø40, ø50	M18 x 1.5
		ø63, ø80	M18 x 1.5
		ø100, ø125	M22 x 1.5
Vacuum entry port			Rc 1/8

Buffer type		Rotating (J)
Buffer stroke	ø40 to ø80	25 mm, 50 mm, 75 mm
	ø100, ø125	25 mm, 50 mm, 75 mm, 100 mm

Pad Type

Pad diameter (mm)	ø40, ø50, ø63, ø80, ø100, ø125
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with mark Ⓕ), EPR (Black with mark Ⓔ)
Durometer	NBR/Silicone rubber/EPR (50°), Urethane/Fluoro rubber (60°)

Weight (g)

Pad dia.	Silicon rubber	Urethane rubber	Fluoro rubber	EPR
ø40	–1	0	5	–1
ø50	–1	0	8	0
ø63	–2	0	16	0
ø80	–3	1	27	–1
ø100	–5	1	53	–1
ø125	–8	3	84	0

Weight (NBR)

Model	Weight (g)
ZPT40HNJ25-B01-A18	125
ZPT40HNJ50-B01-A18	145
ZPT40HNJ75-B01-A18	166
ZPT50HNJ25-B01-A18	137
ZPT50HNJ50-B01-A18	157
ZPT50HNJ75-B01-A18	195
ZPT63HNJ25-B01-A18	202
ZPT63HNJ50-B01-A18	222
ZPT63HNJ75-B01-A18	243
ZPT80HNJ25-B01-A18	214

Model	Weight (g)
ZPT80HNJ50-B01-A18	251
ZPT80HNJ75-B01-A18	272
ZPT100HNJ25-B01-A22	489
ZPT100HNJ50-B01-A22	529
ZPT100HNJ75-B01-A22	574
ZPT100HNJ100-B01-A22	613
ZPT125HNJ25-B01-A22	553
ZPT125HNJ50-B01-A22	593
ZPT125HNJ75-B01-A22	638
ZPT125HNJ100-B01-A22	677

Add or deduct the weight shown in the table on the left for order materials.

How to Order

ZPT | **40** | **H** | **N** | **J** | **25** | **B01** | **A18**

Pad diameter (mm)

40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125

Pad type

H	Heavy duty

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluoro rubber
E	EPR

Buffer stroke (Rotating)

Stroke	ø40	ø50	ø63	ø80	ø100	ø125
25	●	●	●	●	●	●
50	●	●	●	●	●	●
75	●	●	●	●	●	●
100	—	—	—	—	●	●

Vacuum entry

B01	Rc 1/8

Mounting thread

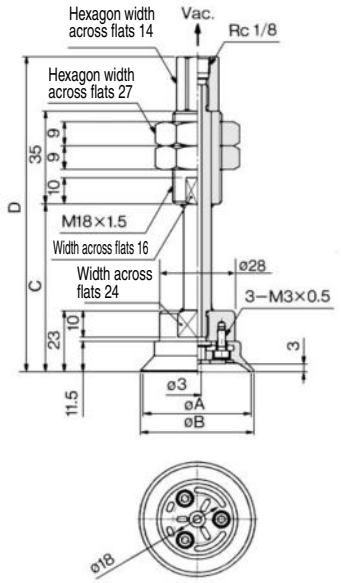
A18	M18 x 1.5 (ø40 to ø80)
A22	M22 x 1.5 (ø100, ø125)

Spring Force

Pad diameter	**ø40 to ø80**	**ø100, ø125**
First mounting load	6.9 N	10 N
Second mounting load	11.8 N	15 N

Series ZPT

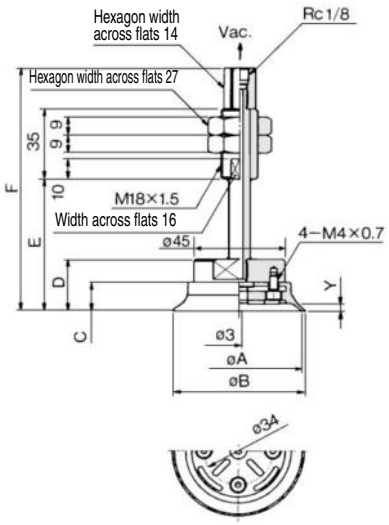
ZPT $^{40}_{50}$ H□J□-B01-A18 (With buffer)



(mm)

Model	øA	øB	C	D
ZPT40H□J25-B01-A18	40	42	63	118.5
ZPT40H□J50-B01-A18	40	42	98	153.5
ZPT40H□J75-B01-A18	40	42	134	189.5
ZPT50H□J25-B01-A18	50	52	63	118.5
ZPT50H□J50-B01-A18	50	52	98	153.5
ZPT50H□J75-B01-A18	50	52	134	189.5

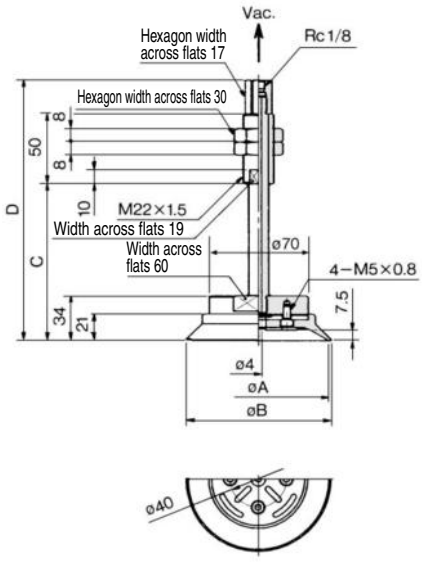
ZPT $^{63}_{80}$ H□J□-B01-A18 (With buffer)



(mm)

Model	øA	øB	C	D	E	F	Y
ZPT63H□J25-B01-A18	63	65	14.5	26	66	121.5	3.5
ZPT63H□J50-B01-A18	63	65	14.5	26	101	156.5	3.5
ZPT63H□J75-B01-A18	63	65	14.5	26	137	192.5	3.5
ZPT80H□J25-B01-A18	80	83	16.5	28	68	123.5	4.5
ZPT80H□J50-B01-A18	80	83	16.5	28	103	158.5	4.5
ZPT80H□J75-B01-A18	80	83	16.5	28	139	194.5	4.5

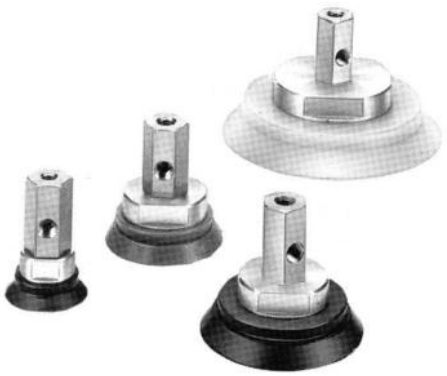
ZPT $^{100}_{125}$ H□J□-B01-A22 (With buffer)



(mm)

Model	øA	øB	C	D
ZPT100H□J25-B01-A22	100	103	78	152
ZPT100H□J50-B01-A22	100	103	114	188
ZPT100H□J75-B01-A22	100	103	154	228
ZPT100H□J100-B01-A22	100	103	189	263
ZPT125H□J25-B01-A22	125	128	78	152
ZPT125H□J50-B01-A22	125	128	114	188
ZPT125H□J75-B01-A22	125	128	154	228
ZPT125H□J100-B01-A22	125	128	189	263

Vacuum Pad: Large/Heavy Duty Type
Lateral Vacuum Entry
Without Buffer
Series ZPX



Specifications

Mounting	Vacuum entry direction		Lateral
	Connection		Female thread
	Thread dia.	ø40, ø50	M8 x 1.25, M10 x 1.5
		ø63, ø80	M10 x 1.5, M12 x 1.75
		ø100, ø125	M10 x 1.5, M12 x 1.75
Vacuum entry port			Rc 1/8

Pad Type

Pad diameter (mm)	ø40, ø50, ø63, ø80, ø100, ø125
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with mark Ⓕ), EPR (Black with mark Ⓔ)
Durometer	NBR/Silicone rubber/EPR (50°), Urethane/Fluoro rubber (60°)

Weight

(g)

Pad dia.	Silicon rubber	Urethane rubber	Fluoro rubber	EPR
ø40	–1	0	5	–1
ø50	–1	0	8	0
ø63	–2	0	16	0
ø80	–3	1	27	–1
ø100	–5	1	53	–1
ø125	–8	3	84	0

Weight (NBR)

Model	Weight (g)
ZPX40H□-B01-B8	148
ZPX40H□-B01-B10	150
ZPX50H□-B01-B8	160
ZPX50H□-B01-B10	158
ZPX63H□-B01-B10	229
ZPX63H□-B01-B12	219
ZPX80H□-B01-B10	258
ZPX80H□-B01-B12	254

Model	Weight (g)
ZPX100H□-B01-B10	418
ZPX100H□-B01-B12	414
ZPX125H□-B01-B10	482
ZPX125H□-B01-B12	478

Add or deduct the weight shown in the table on the left for other materials.

How to Order

ZPX [**40**] [**H**] [**N**] – [**B01**] – [**B8**]

Pad diameter (mm)

40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125

Pad type

H	Heavy duty

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluoro rubber
E	EPR

Vacuum entry

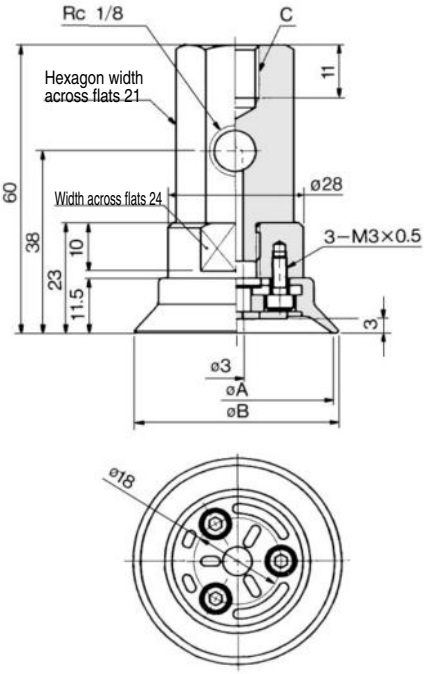
B01	Rc 1/8

Mounting thread

		ø40, ø50	ø63, ø80	ø100, ø125
B8	M8 x 1.25	●	—	—
B10	M10 x 1.5	●	●	●
B12	M12 x 1.75	—	●	●

Series ZPX

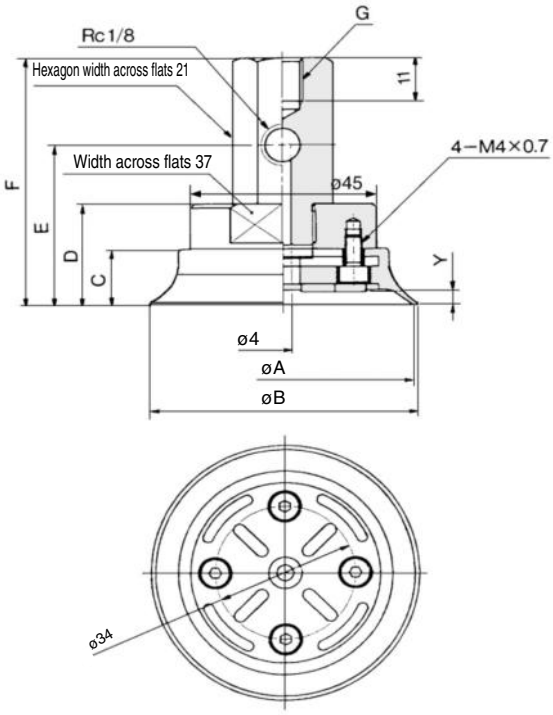
ZPX $^{40}_{50}$ H□-B01-B□ (Female thread)



(mm)

Model	øA	øB	C
ZPX40H□-B01-B8	40	42	M8 x 1.25
ZPX40H□-B01-B10	40	42	M10 x 1.5
ZPX50H□-B01-B8	50	52	M8 x 1.25
ZPX50H□-B01-B10	50	52	M10 x 1.5

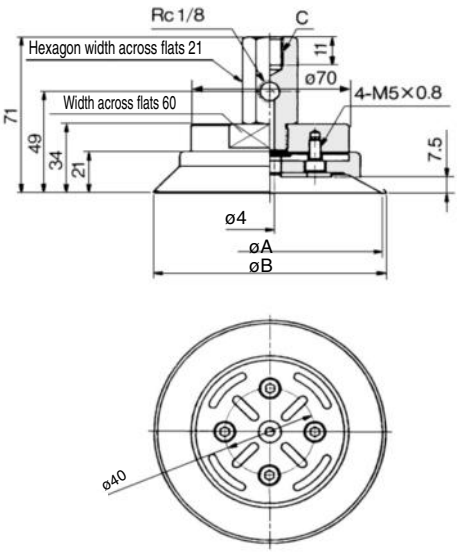
ZPX $^{63}_{80}$ H□-B01-B□ (Female thread)



(mm)

Model	øA	øB	C	D	E	F	Y	G
ZPX63H□-B01-B10	63	65	14.5	26	41	63	3.5	M10 x 1.5
ZPX63H□-B01-B12	63	65	14.5	26	41	63	3.5	M12 x 1.75
ZPX80H□-B01-B10	80	82	16.5	28	43	65	4.5	M10 x 1.5
ZPX80H□-B01-B12	80	82	16.5	28	43	65	4.5	M12 x 1.75

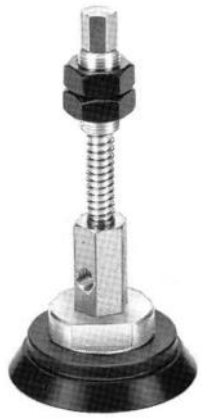
ZPX $^{100}_{125}$ H□-B01-B□ (Female thread)



(mm)

Model	øA	øB	C
ZPX100H□-B01-B10	100	103	M10 x 1.5
ZPX100H□-B01-B12	100	103	M12 x 1.75
ZPX125H□-B01-B10	125	128	M10 x 1.5
ZPX125H□-B01-B12	125	128	M12 x 1.75

Vacuum Pad: Large/Heavy Duty Type
Lateral Vacuum Entry
With Buffer
Series ZPX



Specifications

Mounting	Vacuum entry direction		Vertical
	Connection		Male thread
	Thread dia.	ø40, ø50	M18 x 1.5
		ø63, ø80	M18 x 1.5
		ø100, ø125	M22 x 1.5
Vacuum entry port			Rc 1/8

Buffer type		Rotating (J)
Buffer stroke	ø40 to ø80	25 mm, 50 mm, 75 mm
	ø100, ø125	25 mm, 50 mm, 75 mm, 100 mm

Pad Type

Pad diameter (mm)	ø40, ø50, ø63, ø80, ø100, ø125
Material (Color)	NBR (Black), Silicon rubber (White), Urethane rubber (Brown), Fluoro rubber (Black with mark Ⓕ), EPR (Black with mark Ⓔ)
Durometer	NBR/Silicone rubber/EPR (50°), Urethane/Fluoro rubber (60°)

Weight (g)

Pad dia.	Silicon rubber	Urethane rubber	Fluoro rubber	EPR
ø40	–1	0	5	–1
ø50	–1	0	8	0
ø63	–2	0	16	0
ø80	–3	1	27	–1
ø100	–5	1	53	–1
ø125	–8	3	84	0

Weight (NBR)

Model	Weight (g)
ZPX40HNJ25-B01-A18	266
ZPX40HNJ50-B01-A18	287
ZPX40HNJ75-B01-A18	310
ZPX50HNJ25-B01-A18	278
ZPX50HNJ50-B01-A18	299
ZPX50HNJ75-B01-A18	322
ZPX63HNJ25-B01-A18	351
ZPX63HNJ50-B01-A18	372
ZPX63HNJ75-B01-A18	395
ZPX80HNJ25-B01-A18	380

Model	Weight (g)
ZPX80HNJ50-B01-A18	401
ZPX80HNJ75-B01-A18	424
ZPX100HNJ25-B01-A22	638
ZPX100HNJ50-B01-A22	677
ZPX100HNJ75-B01-A22	721
ZPX100HNJ100-B01-A22	760
ZPX125HNJ25-B01-A22	702
ZPX125HNJ50-B01-A22	741
ZPX125HNJ75-B01-A22	785
ZPX125HNJ100-B01-A22	824

Add or deduct the weight shown in the table on the left for other materials.

How to Order

ZPX [40] [H] [N] **J** [25] — [B01] — [A18]

Pad diameter (mm)

40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125

Pad type

H	Heavy duty

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluoro rubber
E	EPR

Buffer stroke (Rotating)

Stroke	ø40	ø50	ø63	ø80	ø100	ø125
25	●	●	●	●	●	●
50	●	●	●	●	●	●
75	●	●	●	●	●	●
100	—	—	—	—	●	●

Vacuum entry

B01	Rc 1/8

Mounting thread

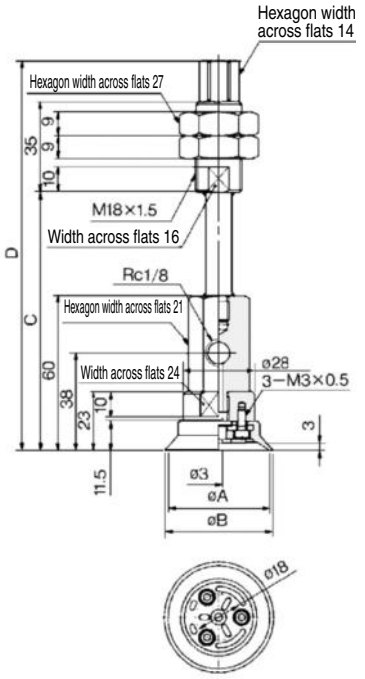
A18	M18 x 1.5 (ø40 to ø80)
A22	M22 x 1.5 (ø100, ø125)

Spring Force

Pad diameter	**ø40 to ø80**	**ø100, ø125**
First mounting load	6.9 N	10 N
Second mounting load	11.8 N	15 N

Series ZPX

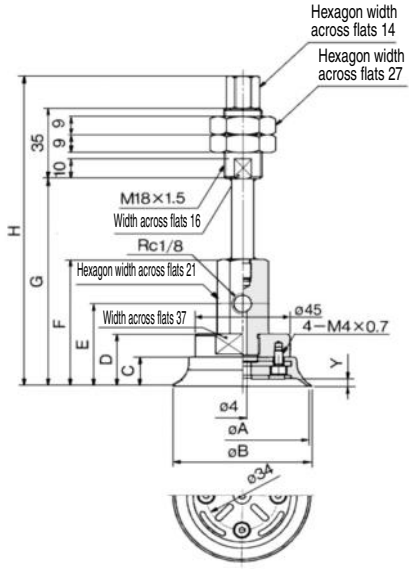
ZPX $^{40}_{50}$ H□J□-B01-A18 (With buffer)



(mm)

Model	øA	øB	C	D
ZPX40H□J25-B01-A18	40	42	100	151
ZPX40H□J50-B01-A18	40	42	135	186
ZPX40H□J75-B01-A18	40	42	171	222
ZPX50H□J25-B01-A18	50	52	100	151
ZPX50H□J50-B01-A18	50	52	135	186
ZPX50H□J75-B01-A18	50	52	171	222

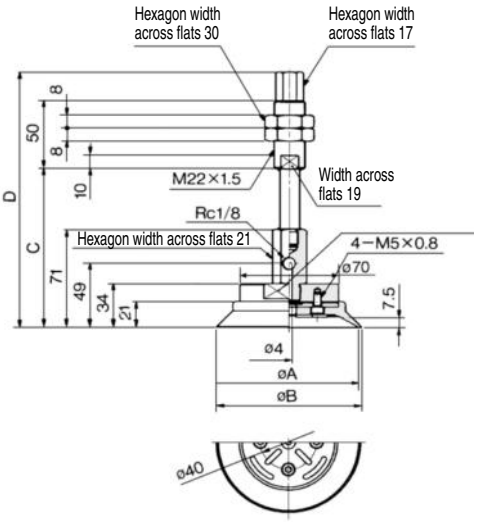
ZPX $^{63}_{80}$ H□J□-B01-A18 (With buffer)



(mm)

Model	øA	øB	C	D	E	F	G	H	Y
ZPX63H□J25-B01-A18	63	65	14.5	26	41	63	103	154	3.5
ZPX63H□J50-B01-A18	63	65	14.5	26	41	63	136	189	3.5
ZPX63H□J75-B01-A18	63	65	14.5	26	41	63	172	225	3.5
ZPX80H□J25-B01-A18	80	82	16.5	28	43	65	105	156	4.5
ZPX80H□J50-B01-A18	80	82	16.5	28	43	65	138	191	4.5
ZPX80H□J75-B01-A18	80	82	16.5	28	43	65	174	227	4.5

ZPX $^{100}_{125}$ H□J□-B01-A22 (With buffer)

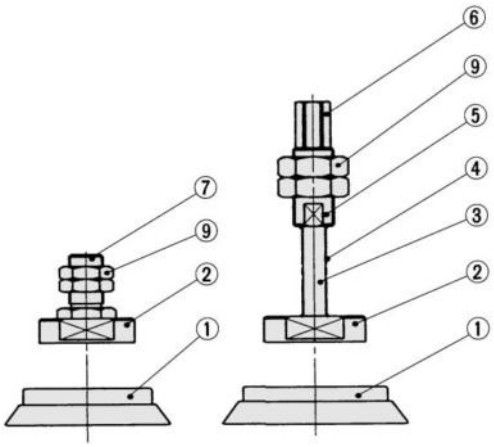


(mm)

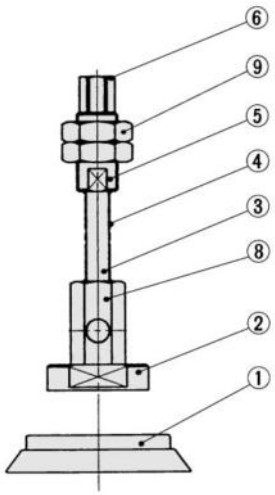
Model	øA	øB	C	D
ZPX100H□J25-B01-A22	100	103	115	186
ZPX100H□J50-B01-A22	100	103	151	222
ZPX100H□J75-B01-A22	100	103	191	262
ZPX100H□J100-B01-A22	100	103	226	297
ZPX125H□J25-B01-A22	125	128	115	186
ZPX125H□J50-B01-A22	125	128	151	222
ZPX125H□J75-B01-A22	125	128	191	262
ZPX125H□J100-B01-A22	125	128	226	297

Construction

Series ZPT



Series ZPX



Component Parts

No.	Description	Material	Surface treatment
①	Pad	NBR, Silicone rubber, Urethane rubber, Fluoro rubber, EPR	—
②	Adapter plate	Aluminum	—
③	Piston rod	Carbon steel	Hard chrome plated
④	Spring	Stainless steel	—
⑤	Buffer body	Aluminum	—
⑥	Buffer adaptor	Brass	Electroless nickel plated
⑦	Adaptor A	Brass	Electroless nickel plated
⑧	X type adaptor	Brass	Electroless nickel plated
⑨	Mounting nut	Rolled steel	Black zinc chromated

Replacement Parts/Pad Unit

How to Order Pad Unit

ZP | **40** | **H** | **N**

Pad dia. (mm)

40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø125

Pad type

H	Heavy duty

Material

N	NBR
S	Silicon rubber
U	Urethane rubber
F	Fluoro rubber
E	EPR

Pad Unit Weight

(NBR) (g)

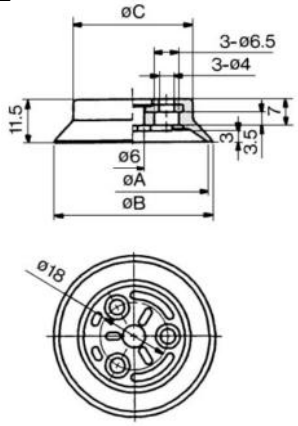
Model	Weight (g)
ZP40HN	15
ZP50HN	27
ZP63HN	57
ZP80HN	86
ZP100HN	160
ZP125HN	224

Add NBR weight to the table on the right for other materials.

Pad dia.	Silicon rubber	Urethane rubber	Fluoro rubber	EPR
ø40	–1	0	5	–1
ø50	–1	0	8	0
ø63	–2	0	16	0
ø80	–3	1	27	–1
ø100	–5	1	53	–1
ø125	–8	3	84	0

Dimensions

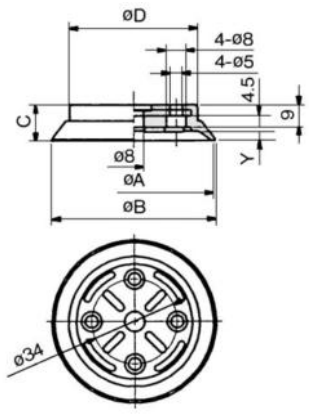
$ZP^{40}_{50}H\square$



(mm)

Model	øA	øB	øC
ZP40H□	40	42	32
ZP50H□	50	52	42

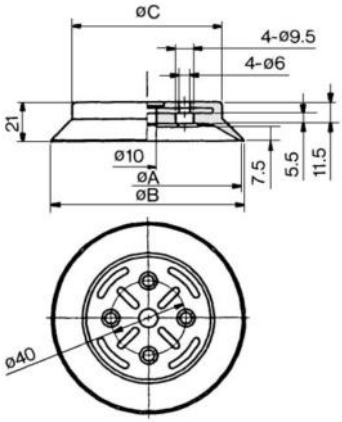
$ZP^{63}_{80}H\square$



(mm)

Model	øA	øB	C	D	Y
ZP63H□	63	65	14.5	50	3.5
ZP80H□	80	82	16.5	61	4.5

$ZP^{100}_{125}H\square$

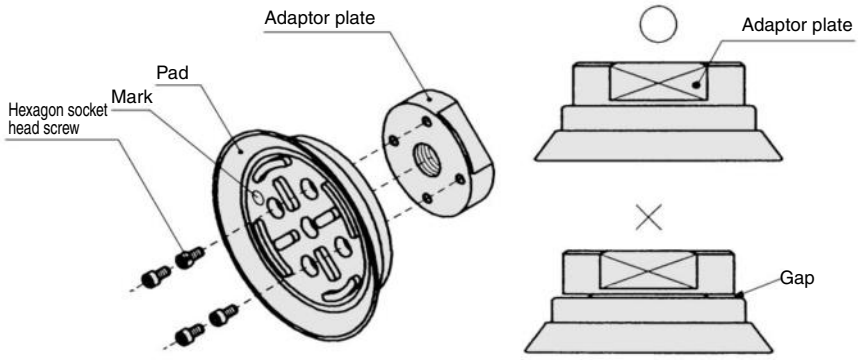


(mm)

Model	øA	øB	øC
ZP100H□	100	103	80
ZP125H□	125	128	104

Series ZPT/ZPX

How to Assemble/Disassemble



Remove bolts with a hex. key wrench from the pad underside. Tighten new pad with the bolts ensuring there is no gap between the adaptor plate and the pad.

How to Distinguish Different Pad Materials

Checking the mark on the pad's interior surface as shown in the figure on the left.

Material	Color	Mark
NBR	Black	—
Silicon rubber	White	—
Urethane rubber	Brown	—
Fluoro rubber	Black	Ⓕ
EPR	Black	Ⓔ

Replacement Parts/Mounting Nut

How to Order

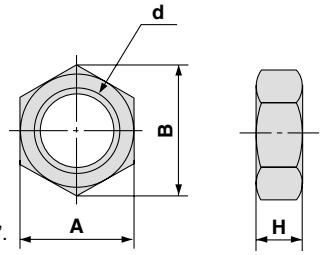
ZPNA – M16

Mounting thread

M16	M16 x 1.5
M18	M18 x 1.5
M22	M22 x 1.5

Mounting nut part number for "M14 x 1" is "SN-015A".

Dimensions

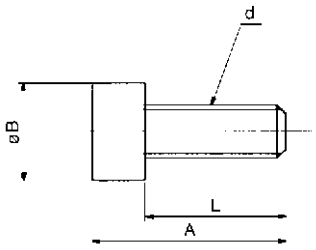


(mm)

Model	A	B	d	H
SN-015A	19	21.9	M14 x 1	5
ZPNA-M16	22	25.4	M16 x 1.5	6
ZPNA-M18	27	31.2	M18 x 1.5	9
ZPNA-M22	30	34.6	M22 x 1.5	8

Bolts

Dimensions



(mm)

A	øB	d	L
11	5.5	M3 x 0.5	8
12	7	M4 x 0.7	8
15	8.5	M5 x 0.8	10