



# Vacuum pad / Oval type

## Specification and Order expression

CHELIC

### How to order

<b>PAW</b>	<b>F</b>	<b>5 X 20</b>	<b>x</b>	<b>N</b>	<b>R</b>																																																																																								
Vacuum pad	Bracket	The vacuum pad specification	Stroke	Vacuum pad material	With free holder																																																																																								
PAW series Vacuum pad	Vertical connection  F	Short size area(A) x Long size area(B) mm <table border="1"> <tr><td>2 x 4</td><td></td></tr> <tr><td>3.5 x 7</td><td>5 x 30</td></tr> <tr><td>4 x 10</td><td>6 x 10</td></tr> <tr><td>4 x 20</td><td>6 x 20</td></tr> <tr><td>4 x 30</td><td>6 x 30</td></tr> <tr><td>5 x 10</td><td>8 x 20</td></tr> <tr><td>5 x 20</td><td>8 x 30</td></tr> </table>	2 x 4		3.5 x 7	5 x 30	4 x 10	6 x 10	4 x 20	6 x 20	4 x 30	6 x 30	5 x 10	8 x 20	5 x 20	8 x 30	<table border="1"> <tr><th>Type</th><th>Mark</th><th>Diameter (mm)</th></tr> <tr><td rowspan="2">2 x 4</td><td>2.5</td><td>2.5 mm</td></tr> <tr><td>5</td><td>5 mm</td></tr> <tr><td rowspan="2">3.5 x 7</td><td>2.5</td><td>2.5 mm</td></tr> <tr><td>5</td><td>5 mm</td></tr> <tr><td rowspan="2">4 x 10</td><td>3</td><td>3 mm</td></tr> <tr><td>10</td><td>10 mm</td></tr> <tr><td rowspan="2">4 x 20</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">4 x 30</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">5 x 10</td><td>3</td><td>3 mm</td></tr> <tr><td>10</td><td>10 mm</td></tr> <tr><td rowspan="2">5 x 20</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">5 x 30</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">6 x 10</td><td>3</td><td>3 mm</td></tr> <tr><td>10</td><td>10 mm</td></tr> <tr><td rowspan="2">6 x 20</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">6 x 30</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">8 x 20</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> <tr><td rowspan="2">8 x 30</td><td>6</td><td>6 mm</td></tr> <tr><td>15</td><td>15 mm</td></tr> </table>	Type	Mark	Diameter (mm)	2 x 4	2.5	2.5 mm	5	5 mm	3.5 x 7	2.5	2.5 mm	5	5 mm	4 x 10	3	3 mm	10	10 mm	4 x 20	6	6 mm	15	15 mm	4 x 30	6	6 mm	15	15 mm	5 x 10	3	3 mm	10	10 mm	5 x 20	6	6 mm	15	15 mm	5 x 30	6	6 mm	15	15 mm	6 x 10	3	3 mm	10	10 mm	6 x 20	6	6 mm	15	15 mm	6 x 30	6	6 mm	15	15 mm	8 x 20	6	6 mm	15	15 mm	8 x 30	6	6 mm	15	15 mm	<p>N: NBR (Black) (Standard)</p> <p>S: (Silicon) Silicon rubber</p> <p>SE: Anti-static rubber (Surface resistance 10<sup>4</sup> ~10<sup>6</sup>Ω)</p> <p>Note: SECustomized</p>	<table border="1"> <tr><th>Rotary bracket</th><th>Outer dia. (mm)</th></tr> <tr><td>PAR 05</td><td>□ x 10</td></tr> <tr><td>PAR 20</td><td>□ x 10, 20</td></tr> </table> <p>Note: According to vacuum pad specification to apply proper free holder. Please refer to P.3-2.81 for dimensions.</p>	Rotary bracket	Outer dia. (mm)	PAR 05	□ x 10	PAR 20	□ x 10, 20
2 x 4																																																																																													
3.5 x 7	5 x 30																																																																																												
4 x 10	6 x 10																																																																																												
4 x 20	6 x 20																																																																																												
4 x 30	6 x 30																																																																																												
5 x 10	8 x 20																																																																																												
5 x 20	8 x 30																																																																																												
Type	Mark	Diameter (mm)																																																																																											
2 x 4	2.5	2.5 mm																																																																																											
	5	5 mm																																																																																											
3.5 x 7	2.5	2.5 mm																																																																																											
	5	5 mm																																																																																											
4 x 10	3	3 mm																																																																																											
	10	10 mm																																																																																											
4 x 20	6	6 mm																																																																																											
	15	15 mm																																																																																											
4 x 30	6	6 mm																																																																																											
	15	15 mm																																																																																											
5 x 10	3	3 mm																																																																																											
	10	10 mm																																																																																											
5 x 20	6	6 mm																																																																																											
	15	15 mm																																																																																											
5 x 30	6	6 mm																																																																																											
	15	15 mm																																																																																											
6 x 10	3	3 mm																																																																																											
	10	10 mm																																																																																											
6 x 20	6	6 mm																																																																																											
	15	15 mm																																																																																											
6 x 30	6	6 mm																																																																																											
	15	15 mm																																																																																											
8 x 20	6	6 mm																																																																																											
	15	15 mm																																																																																											
8 x 30	6	6 mm																																																																																											
	15	15 mm																																																																																											
Rotary bracket	Outer dia. (mm)																																																																																												
PAR 05	□ x 10																																																																																												
PAR 20	□ x 10, 20																																																																																												
	Vertical connection (With fitting)  K																																																																																												
	Horizontal connection  T																																																																																												
	Vertical spring type  FS																																																																																												
	Horizontal spring type  TS																																																																																												

Note 1: Only available to PAGFS, PAGTS series.  
Note 2: Please refer to P.3-2.49 ~ P.3-2.50

### Vacuum pad material

Mark	Material	Hardness (HS)	Ambient and fluid temperature	Color	Surface resistance (Note)
N	NBR(Rubber)	A55/S	-26~120℃	Black	-
S	Silicon, Silicon rubber	A55/S	-60~250℃	White	-
SE	Anti-static rubber	A50/S	-60~250℃	Black	10 <sup>4</sup> ~10 <sup>6</sup> Ω·cm

Note: 1. Rubber conductive type means each cm<sup>3</sup> has resistance.  
2. It is the output value according to ours testing object.

### Vacuum control system

The theoretical suction force is calculated according to pad size and the vacuum value occurred.

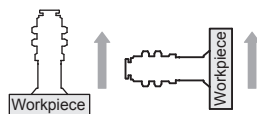
The formula is for reference only, please apply vacuum pad and test in actual practical usage.

The theoretical suction force is the value in static conditions, but the object weight and movement (ex. lifting, stopping, rotating..etc.) should be considered while processing in high speed, then please do make sure enough buffer to manage.

### Calculation formula

$$W = \frac{P \times A}{-10}$$

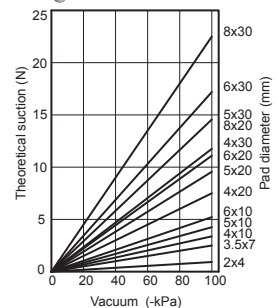
W: Force N  
P : Vacuum pressure kPa  
A : Pad area cm<sup>2</sup>

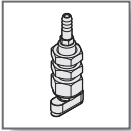


### Theoretical suction

#### ● Oval vacuum pad size: ● Pad diameter : Ø10mm

2x 4mm, 3.5x7mm, 4x10mm, 4x20mm, 4x30mm, 5x10mm, 5x20mm, 5x30mm, 6x10mm, 6x20mm, 6x30mm, 8x20mm, 8x30mm





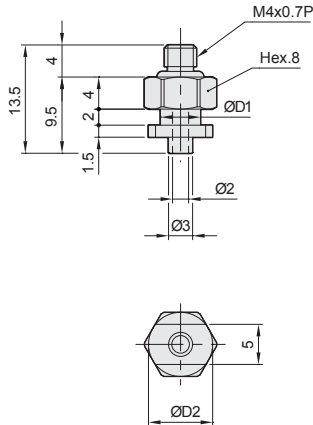
# Vacuum pad / Oval type

## The pad specification - Oval type PAW series

CHELIC

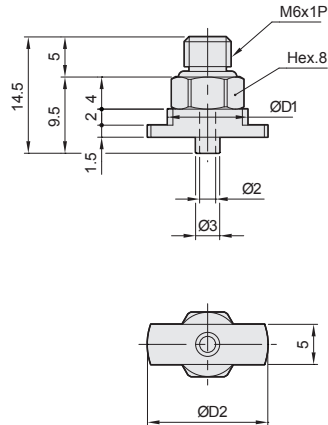
### ● The joint size to bracket

● PAW □ x 10



● PAW □ x 20

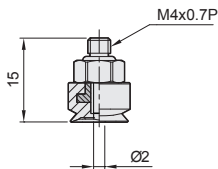
● PAW □ x 30



Type	ØD <sub>1</sub>	ØD <sub>2</sub>	Applicable pad size
PAW 10-M4	5	8	4x10、5x10、6x10
PAW 20-M6	10	15	4x20、4x30、5x20、5x30、6x20、6x30、8x20、8x30

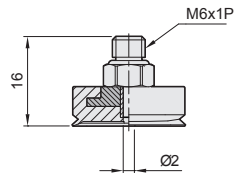
### ● The size of joint with vacuum pad

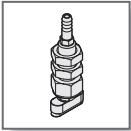
● PAW □ x 10



● PAW □ x 20

● PAW □ x 30





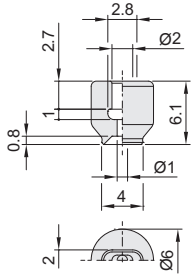
# Vacuum pad / Oval type

The pad specification - Oval type PAW series

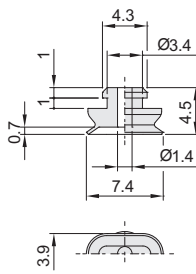
CHELIC

## ● The joint size to bracket

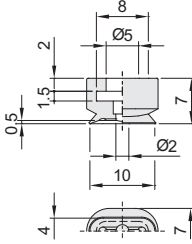
● PAW 2 x 4



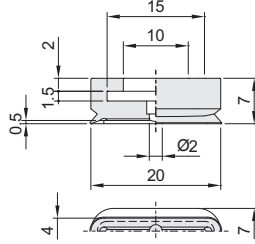
● PAW 3.5 x 7



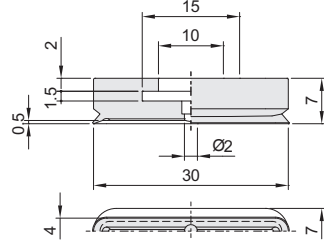
● PAW 4 x 10



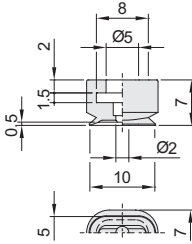
● PAW 4 x 20



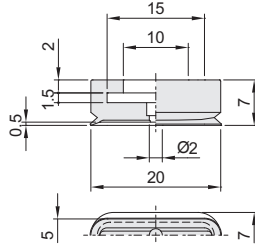
● PAW 4 x 30



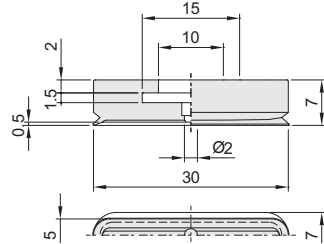
● PAW 5 x 10



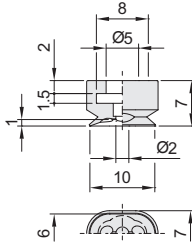
● PAW 5 x 20



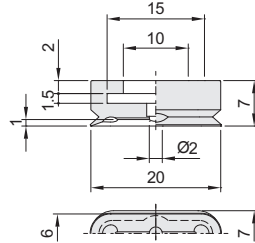
● PAW 5 x 30



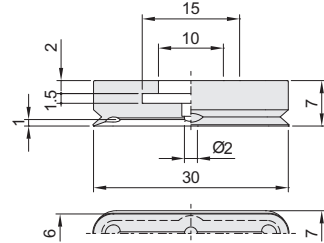
● PAW 6 x 10



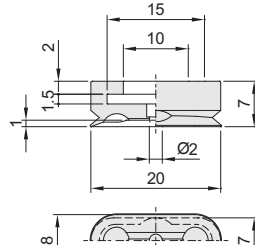
● PAW 6 x 20



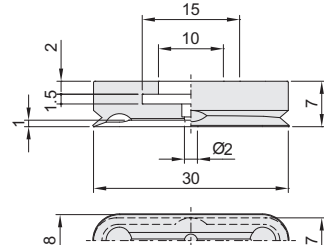
● PAW 6 x 30

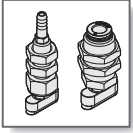


● PAW 8 x 20



● PAW 8 x 30



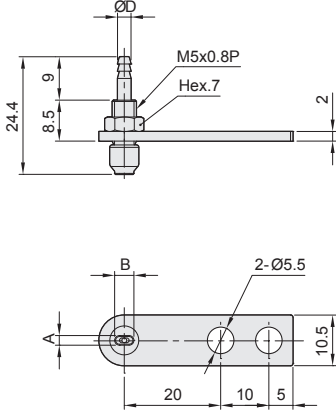


# Vacuum pad / Oval type

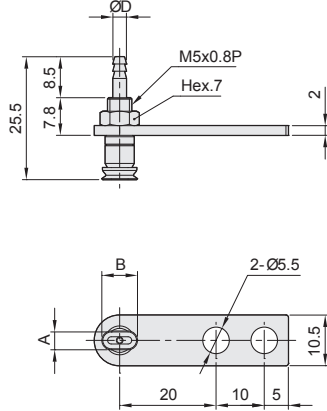
The vacuum pad specification and type -  
Oval PAWF, PAWK (with fitting) series / Vertical entry

CHELIC

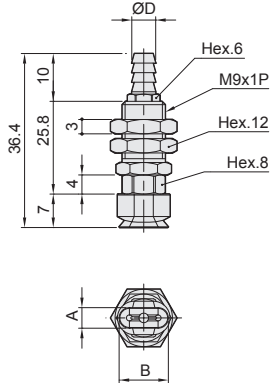
## PAWF - 2x4



## PAWF - 3.5x7

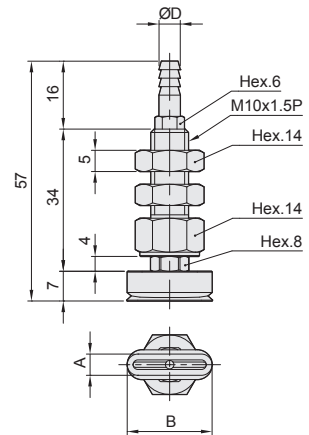


## PAWF - □ - x 10

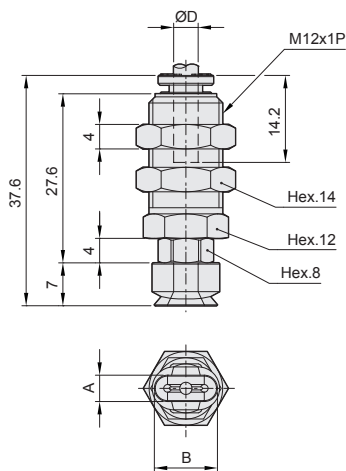


Type	Tube outer dia. x Inner dia. ØD	Short size area A	Long size area B
PAWF - 2 x 4	4x2.5	2	4
PAWF - 3.5 x 7	6x4	3.5	7
PAWF - 4 x 10	6x4	4	10
PAWF - 4 x 20			20
PAWF - 4 x 30			30
PAWF - 5 x 10	6x4	5	10
PAWF - 5 x 20			20
PAWF - 5 x 30			30
PAWF - 6 x 10	6x4	6	10
PAWF - 6 x 20			20
PAWF - 6 x 30			30
PAWF - 8 x 20	6x4	8	20
PAWF - 8 x 30			30

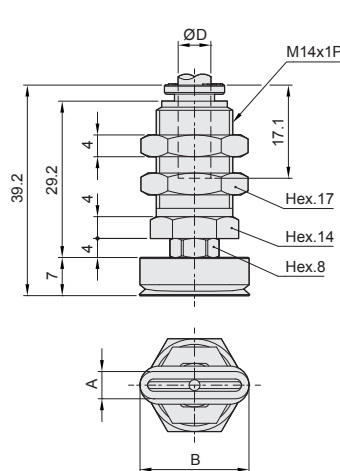
## PAWF - □ - x 20, 30



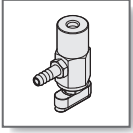
## PAWK - □ - x 10



## PAWK - □ - x 20, 30



Type	Tube outer dia. ØD	Short size area A	Long size area B
PAWK - 4 x 10	4	4	10
PAWK - 4 x 20	6		20
PAWK - 4 x 30			30
PAWK - 5 x 10	4	5	10
PAWK - 5 x 20	6		20
PAWK - 5 x 30			30
PAWK - 6 x 10	4	6	10
PAWK - 6 x 20	6		20
PAWK - 6 x 30			30
PAWK - 8 x 20	6	8	20
PAWK - 8 x 30			30

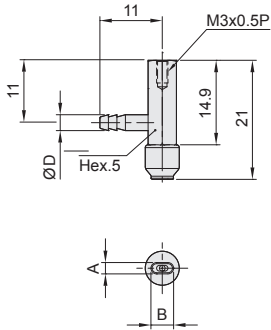


# Vacuum pad / Oval type

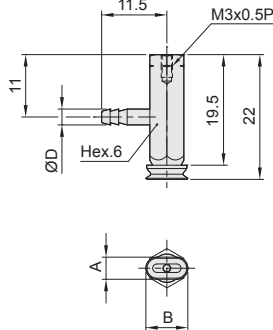
The vacuum pad specification and type -  
Oval PAWT series / Side entry

CHELIC

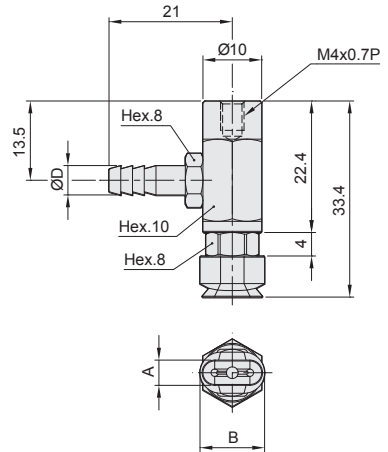
## PAW T - 2x4



## PAW T - 3.5x7

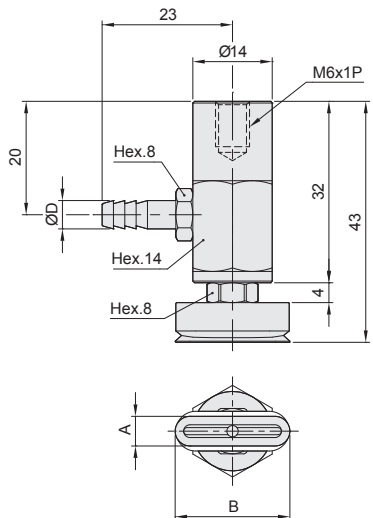


## PAW T - □ x 10



Type	Tube outer dia. x Inner dia. ØD	Short size area A	Long size area B
PAW T - 2 x 4	4x2.5	2	4
PAW T - 3.5 x 7	6x4	3.5	7
PAW T - 4 x 10	6x4	4	10
PAW T - 4 x 20			20
PAW T - 4 x 30			30
PAW T - 5 x 10	6x4	5	10
PAW T - 5 x 20			20
PAW T - 5 x 30			30
PAW T - 6 x 10	6x4	6	10
PAW T - 6 x 20			20
PAW T - 6 x 30			30
PAW T - 8 x 20	6x4	8	20
PAW T - 8 x 30			30

## PAW T - □ x 20, 30





# Vacuum pad / Oval type

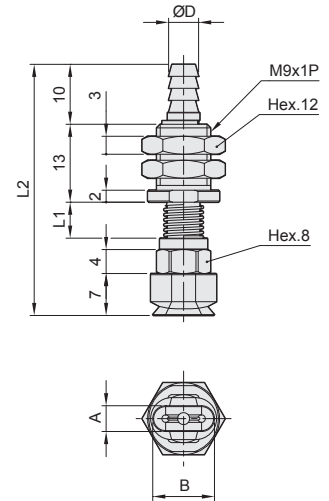
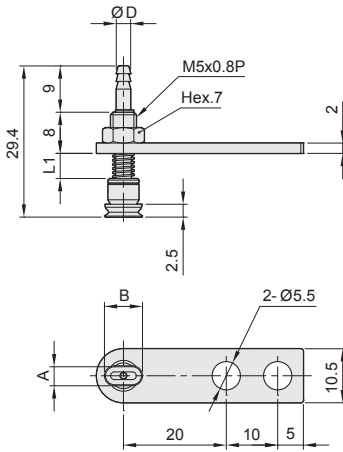
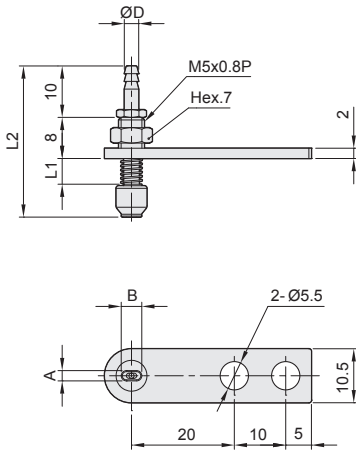
The vacuum pad specification and type -  
Oval PAWFS series / Vertical entry with spring

CHELIC

PAWFS - 2x4x 2.5  
PAWFS - 2x4x 5

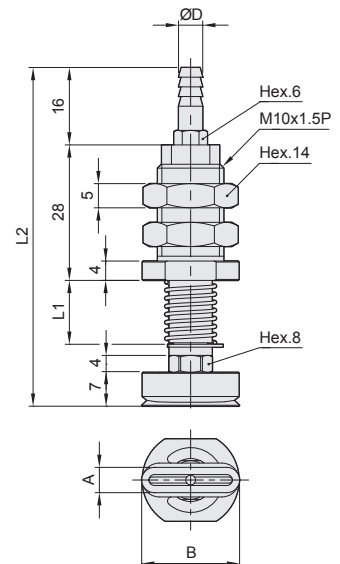
PAWFS - 3.5x7x 2.5  
PAWFS - 3.5x7x 5

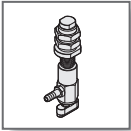
PAWFS - x 10 x 03  
PAWFS - x 10 x 10



Type	Tube outer dia. x inner dia. ØD	Short size area A	Long size area B	L1	L2
PAWFS - 2 x 4 x 2.5	4x2.5	2	4	5	29.4
PAWFS - 2 x 4 x 5				10	34.4
PAWFS - 3.5 x 7 x 2.5	4x2.5	3.5	7	5	29.4
PAWFS - 3.5 x 7 x 5				10	34.4
PAWFS - 4 x 10 x 3	6x4	4	10	6	42
PAWFS - 4 x 10 x 10				20	56
PAWFS - 4 x 20 x 6	6x4	4	20	12	70.5
PAWFS - 4 x 20 x 15				30	87.5
PAWFS - 4 x 30 x 6	6x4	4	30	12	70.5
PAWFS - 4 x 30 x 15				30	87.5
PAWFS - 5 x 10 x 3	6x4	5	10	6	42
PAWFS - 5 x 10 x 10				20	56
PAWFS - 5 x 20 x 6	6x4	5	20	12	70.5
PAWFS - 5 x 20 x 15				30	87.5
PAWFS - 5 x 30 x 6	6x4	5	30	12	70.5
PAWFS - 5 x 30 x 15				30	87.5
PAWFS - 6 x 10 x 3	6x4	6	10	6	42
PAWFS - 6 x 10 x 10				20	56
PAWFS - 6 x 20 x 6	6x4	6	20	12	70.5
PAWFS - 6 x 20 x 15				30	87.5
PAWFS - 6 x 30 x 6	6x4	6	30	12	70.5
PAWFS - 6 x 30 x 15				30	87.5
PAWFS - 8 x 20 x 6	6x4	8	20	12	70.5
PAWFS - 8 x 20 x 15				30	87.5
PAWFS - 8 x 30 x 6	6x4	8	30	12	70.5
PAWFS - 8 x 30 x 15				30	87.5

PAWFS - x 20, 30x 06  
PAWFS - x 20, 30x 15





# Vacuum pad / Oval type

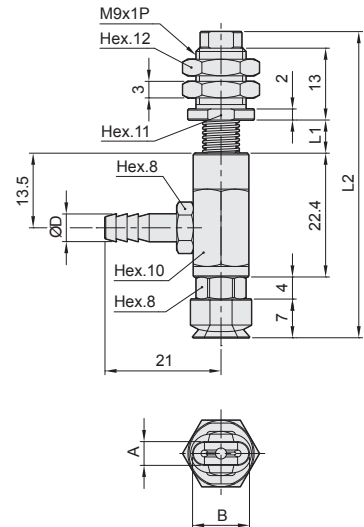
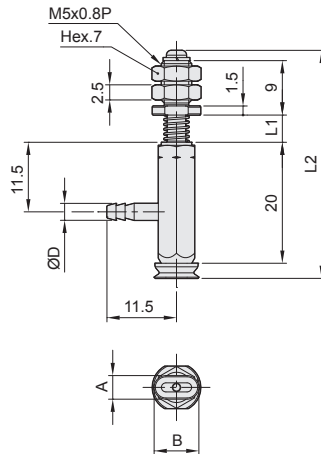
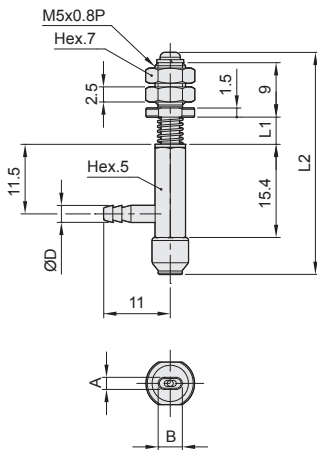
The vacuum pad specification and type -  
Oval PAWFS series / Side entry with spring

CHELIC

PAW TS - 2x4x 2.5  
PAW TS - 2x4x 5

PAW TS - 3.5x7x 2.5  
PAW TS - 3.5x7x 5

PAW TS -  x 10 x 03  
PAW TS -  x 10 x 10



Type	Tube outer dia. x Inner dia.	Short size area	Long size area	L1	L2
	ØD	A	B		
PAW TS - 2 x 4 x 2.5	4x2.5	2	4	5	36.7
PAW TS - 2 x 4 x 5				10	47.7
PAW TS - 3.5 x 7 x 2.5	4x2.5	3.5	7	5	37.7
PAW TS - 3.5 x 7 x 5				10	48.7
PAW TS - 4 x 10 x 3	6x4	4	10	6	55.5
PAW TS - 4 x 10 x 10				20	69.5
PAW TS - 4 x 20 x 6	6x4	4	20	12	84
PAW TS - 4 x 20 x 15				30	101
PAW TS - 4 x 30 x 6	6x4	4	30	12	84
PAW TS - 4 x 30 x 15				30	101
PAW TS - 5 x 10 x 3	6x4	5	10	6	55.5
PAW TS - 5 x 10 x 10				20	69.5
PAW TS - 5 x 20 x 6	6x4	5	20	12	84
PAW TS - 5 x 20 x 15				30	101
PAW TS - 5 x 30 x 6	6x4	5	30	12	84
PAW TS - 5 x 30 x 15				30	101
PAW TS - 6 x 10 x 3	6x4	6	10	6	55.5
PAW TS - 6 x 10 x 10				20	69.5
PAW TS - 6 x 20 x 6	6x4	6	20	12	84
PAW TS - 6 x 20 x 15				30	101
PAW TS - 6 x 30 x 6	6x4	6	30	12	84
PAW TS - 6 x 30 x 15				30	101
PAW TS - 8 x 20 x 6	6x4	8	20	12	84
PAW TS - 8 x 20 x 15				30	101
PAW TS - 8 x 30 x 6	6x4	8	30	12	84
PAW TS - 8 x 30 x 15				30	101

PAW TS -  x 20, 30x 06  
PAW TS -  x 20, 30x 15

