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# KDS

## Vacuum Pad



### How to order



#### ① Pad diameter

Pad diameter	2	4	5	6	8	10	15	20	25	30	32
Standard	●	●		●	●	○*	○*	●	●	●	
Bellows			●		●	●	●	●	●	●	
3 Stage bellows								●		●	
Flat						●	●	●	●		●
Soft flat										●	
Compact					●	●	●				
Ellipse											

Pad diameter	40	50	60	80	100	125	160	220	20×50	30×60
Standard	●	●	●	●	●	●	●	●		
Bellows	●	●	●	●	●					
3 Stage bellows	●									
Flat	●									
Soft flat										
Compact										
Ellipse									●	●

\* Standard type Ø10 and Ø15 are scheduled to be discontinued, please order the flat type(A).

### Features

- Vacuum pads are easy to install by simply pressing workpiece onto a surface, which **saves time and costs** without requiring tools or fixtures.
- It can be used on a **wide range of materials**, and different **sizes and shapes** can be selected to match the surface.
- **Strong holding force**, which makes them useful for a variety of applications.
- **Various materials** can be used in challenging conditions, including high temperatures and chemically harsh environments.
- Able to produce **special pads** of various features such as electrostatic discharge (ESD) protection or **mark-free** properties.

#### ② Pad shape

-	Standard
B	Bellows
3B	3 Stage bellows
F	Flat
P	Soft flat
A	Compact
E	Ellipse

#### ③ Pad material

R	NBR	
S	Silicon	
SO	Soft silicon (H30, H40)	
U	Urethane (Wear resistant)	
V	Viton (Chemical resistant, heat resistant)	

#### ④ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

### Symbol



Detail catalog

# KFSP

Non-Contact Vacuum Pad



## How to order

KFSP - 30 B  
 ① ② ③

① Series

KFSP	Non-contact vacuum pad
------	------------------------

② Pad diameter

30	Ø30
40	Ø40
60	Ø60
80	Ø80

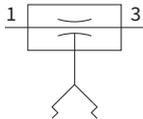
③ Bumper

-	None
B	Bumper attached

## Features

- Non-contact design prevents damage to delicate surfaces.
- Can be used in a variety of industries such as automotive, electronics, clean room and medical device manufacturing.

## Symbol



## Specifications

Pad diameter	Ø30	Ø40	Ø60	Ø80
Fluid	Compressed air			
Port size	M5xP0.8	G1/8		
Operating pressure	1.5 ~ 7kgf/cm <sup>2</sup> (0.15 ~ 0.7MPa)			
Proof pressure	7.5kgf/cm <sup>2</sup> (0.75MPa)			
Ambient temperature	0 ~ 60°C			
Force absorption (at 5kgf/cm <sup>2</sup> )	2.16N (220gf)	6.86N (700gf)	11.1N (1.13kgf)	26.5N (2.7kgf)
Consumption flow rate (at 5kgf/cm <sup>2</sup> )	29NL/min	50NL/min	100NL/min	400NL/min



Detail catalog

# DSA1

Vacuum Unit, Upward Suction, Without Spring, Jam Nut



## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## How to order

DSA1 - 10 B R - [ ]

①      ②      ③      ④      ⑤

### ① Series

DSA1	Upward suction, without spring, jam nut
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
3B	3 Stage bellows
F	Flat
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Specifications

Pad shape	Pad diameter(mm)														
	10	15	20	25	30	40	50	60	80	100	125	160	220	20x50	30x60
Standard	●	●	●	●	●	●	●	●	●	●	●	●	●		
Bellows			●	●	●	●	●	●	●	●	●	●	●		
3 Stage bellows			●		●	●									
Flat			●	●	●	●									
Ellipse														●	●



Detail catalog

# DSA2

Vacuum Unit, Upward Suction, Without Spring, Male Thread



## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



Detail catalog

## How to order



### ① Series

DSA2	Upward suction, without spring, male thread
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
3B	3 Stage bellows
F	Flat
P	Soft flat
A	Compact
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Mounting

Ø2 ~ Ø15	
-	M5

Ø20 ~ Ø50	
-	G1/8
M10x1.25	M10x1.25
G1/4	G1/4

Ø60 ~ Ø100	
-	G1/4

Ø125 ~ Ø220	
-	M16x2.0

30PS	
-	G1/8
M6	M6

3 Stage bellows	
-	G1/8
G1/4	G1/4

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Specifications

Pad shape	Pad diameter(mm)														
	2	4	5	6	8	10	15	20	25	30	40	50	60	80	100
Standard	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Compact					●	●	●								
Bellows			●		●	●	●	●	●	●	●	●	●	●	●
3 Stage bellows							●		●	●					
Flat							●	●	●	●	●				
Soft flat										●					
Ellipse															

Pad shape	Pad diameter(mm)				
	125	160	220	20x50	30x60
Standard	●	●	●		
Compact					
Bellows	●	●	●		
3 Stage bellows					
Flat					
Soft flat					
Ellipse				●	●

# DSA3

Vacuum Unit, Upward Suction, Without Spring, Female Thread



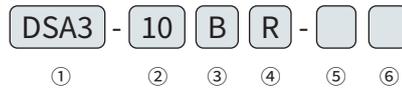
## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## How to order



### ① Series

DSA3	Upward suction, without spring, female thread
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
3B	3 Stage bellows
F	Flat
A	Compact
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Mounting

Ø2 ~ Ø15	
-	M5

### Ø20 ~ Ø50

-	G1/8
M10x1.25	M10x1.25

### Ø60 ~ Ø100

-	G1/4
---	------

### Ø125 ~ Ø220

-	M16x2.0
---	---------

### 3 Stage bellows

-	G1/8
---	------

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Specifications

Pad shape	Pad diameter(mm)														
	2	4	5	6	8	10	15	20	25	30	40	50	60	80	100
Standard	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Compact					●	●	●								
Bellows			●		●	●	●	●	●	●	●	●	●	●	●
3 Stage bellows								●		●	●				
Flat							●	●	●	●	●				
Ellipse															

Pad shape	Pad diameter(mm)				
	125	160	220	20x50	30x60
Standard	●	●	●		
Compact					
Bellows	●	●	●		
3 Stage bellows					
Flat					
Ellipse				●	●



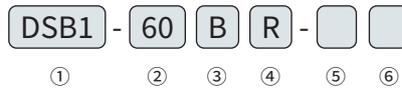
Detail catalog

# DSB1

Vacuum Unit, Horizontal Suction, Without Spring, Jam Nut



## How to order



### ① Series

DSB1	Horizontal suction, without spring, jam nut
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Mounting

Pad dia.	Ø60 ~ Ø100	Ø125 ~ Ø220
-	Rc(PT)1/8	Rc(PT)1/4

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Pad diameter(mm)					
	60	80	100	125	160	220
Standard	●	●	●	●	●	●
Bellows	●	●	●	●	●	●



Detail catalog

# DSB2

Vacuum Unit, Horizontal Suction, Without Spring, Male Thread



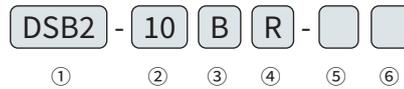
## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## How to order



### ① Series

DSB2	Horizontal suction, without spring, male thread
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
F	Flat
A	Compact

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Mounting

Ø2 ~ Ø15	
-	Ø6
Ø4	Ø4

### Ø20 ~ Ø50

-	Ø6 barb fitting
M10x1.25	M10x1.25

### Ø60 ~ Ø100

-	Rc(PT)1/8
---	-----------

### Ø125 ~ Ø220

-	Rc(PT)1/4
---	-----------

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Specifications

Pad shape	Pad diameter(mm)														
	2	4	5	6	8	10	15	20	25	30	40	50	125	160	220
Standard	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Compact					●	●	●								
Bellows			●		●	●	●	●	●	●	●	●	●	●	●
Flat							●								



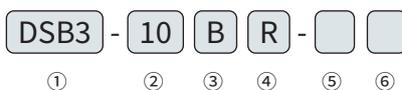
Detail catalog

# DSB3

Vacuum Unit, Horizontal Suction, Without Spring, Female Thread



## How to order



### ① Series

DSB3	Horizontal suction, without spring, female thread
------	---

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
F	Flat
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Mounting

Ø10 ~ Ø15	
-	Ø6
Ø4	Ø4

Ø20 ~ Ø50	
-	Ø6 barb fitting

Ø60 ~ Ø100	
-	Rc(PT)1/8

Ø125 ~ Ø220	
-	Rc(PT)1/4

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Pad diameter(mm)														
	10	15	20	25	30	40	50	60	80	100	125	160	220	20x50	30x60
Standard	●	●	●	●	●	●	●	●	●	●	●	●	●		
Bellows			●	●	●	●	●	●	●	●	●	●	●		
Flat			●	●	●	●									
Ellipse														●	●



Detail catalog

# DSC

Vacuum Unit, Upward Suction, External Spring



## How to order



### ① Series

DSC	Upward suction, external spring
-----	---------------------------------

### ② Pad diameter

Refer to specifications below	
-------------------------------	--

### ③ Pad shape

-	Standard
B	Bellows
F	Flat
A	Compact
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Stroke

Refer to specifications below	
-------------------------------	--

### ⑥ Special option

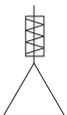
-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Stroke	Pad diameter(mm)																				
		2	4	5	6	8	10	15	20	25	30	40	50	60	80	100	125	160	220	20x50	30x60	
Standard	10	●	●		●	●	●	●														
	15								●	●	●	●	●	●	●	●						
	20	●	●		●	●	●	●														
	30								●	●	●	●	●	●	●	●	●	●	●			
	50								●	●	●	●	●	●	●	●	●	●	●			
	70													●	●	●						
Compact	10					●	●	●														
	20					●	●	●														
Bellows	10			●		●	●	●														
	15								●	●	●	●	●	●	●	●						
	20			●		●	●	●														
	30								●	●	●	●	●	●	●	●	●	●	●			
	50								●	●	●	●	●	●	●	●	●	●	●			
	70													●	●	●						
Flat	10								●													
	15								●	●	●	●										
	20								●													
	30								●	●	●	●										
	50								●	●	●	●										
Ellipse	15																			●	●	
	30																			●	●	
	50																			●	●	



Detail catalog

# DSU

Vacuum Unit, Upward Suction, Internal Spring



## How to order



### ① Series

DSU	Horizontal suction, external spring
-----	-------------------------------------

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
F	Flat
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Stroke

Refer to specifications below
-------------------------------

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Stroke	Pad diameter(mm)																
		2	4	6	8	10	15	20	25	30	40	50	60	80	100	20x50	30x60	
Standard	6							●	●	●	●	●						
	7	●	●	●	●		●											
	10	●	●	●	●		●						●	●	●			
Bellows	6							●	●	●	●	●						
	7				●	●	●											
	10				●	●	●						●	●	●			
Flat	6							●	●	●	●							
	7					●	●											
	10					●	●											
Ellipse	6															●	●	



Detail catalog

# DSD

Vacuum Unit, Horizontal Suction, External Spring



## How to order



### ① Series

DSD	Horizontal suction, external spring
-----	-------------------------------------

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
3B	3 Stage bellows
F	Flat
A	Compact
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Stroke

Refer to specifications below
-------------------------------

### ⑥ Special option

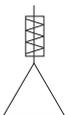
-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Stroke	Pad diameter(mm)																				
		2	4	5	6	8	10	15	20	25	30	40	50	60	80	100	125	160	220	20x50	30x60	
Standard	10	●	●		●	●	●	●														
	15								●	●	●	●	●	●	●	●						
	20	●	●		●	●	●	●														
	30								●	●	●	●	●	●	●	●	●	●	●			
	50								●	●	●	●	●	●	●	●	●	●	●			
	70													●	●	●						
Compact	10					●	●	●														
	20					●	●	●														
	10			●		●	●	●														
	15								●	●	●	●	●	●	●	●						
	20			●		●	●	●														
	30								●	●	●	●	●	●	●	●	●	●	●			
Bellows	50								●	●	●	●	●	●	●	●	●	●				
	70												●	●	●							
	6								●		●	●										
	10								●													
	15								●	●	●	●										
	20								●													
Flat	30								●	●	●	●										
	50								●	●	●	●										
	15																			●	●	
	30																			●	●	
	50																			●	●	
	Ellipse	15																			●	●
30																				●	●	
50																				●	●	



Detail catalog

# DSG

Vacuum Unit, Upward Suction, External Spring



## How to order



### ① Series

DSG	Upward suction, external spring
-----	---------------------------------

### ② Pad diameter

Refer to specifications below
-------------------------------

### ③ Pad shape

-	Standard
B	Bellows
F	Flat
E	Ellipse

### ④ Pad material

R	NBR
S	Silicon
SO	Soft silicon (H30, H40)
U	Urethane (wear resistant)
V	Viton (chemical resistant, heat resistant)

### ⑤ Stroke

Refer to specifications below
-------------------------------

### ⑥ Special option

-	None
CS, CST*	Mark free type
ASE	Static electricity free type
HTS	High temperature resistant type

\* CS, CST : With special pad coating, it prevents pad from leaving suction mark on clean glass or LCD surface.

## Features

- By using a holder, vacuum pads can be accurately positioned, increasing work efficiency.
- Various types, sizes, materials, and special options for pads can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## Specifications

Pad shape	Stroke	Pad diameter(mm)										
		20	25	30	40	50	60	80	100	20x50	30x60	
Standard	15	●	●	●	●	●	●	●	●	●		
	30	●	●	●	●	●	●	●	●	●		
	50	●	●	●	●	●	●	●	●	●		
Bellows	15	●	●	●	●	●	●	●	●	●		
	30	●	●	●	●	●	●	●	●	●		
	50	●	●	●	●	●	●	●	●	●		
Flat	15	●	●	●	●							
	30	●	●	●	●							
	50	●	●	●	●							
Ellipse	15										●	●
	30										●	●
	50										●	●



Detail catalog

# DVU

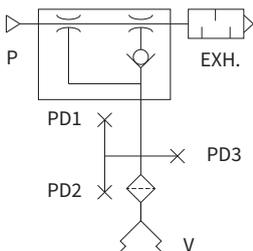
Vacuum Unit, Vacuum Ejector Integrated



## Features

- Vacuum ejector and pad are integrated to save installation space and piping man-hours.
- Various types, sizes, materials can be configured to suit different applications.
- Pads can be easily replaced, making maintenance simple and cost-effective.

## Symbol



## How to order

DVU - 15H - 160 - - R

①      ②      ③      ④      ⑤

### ① Series

DSV	Vacuum ejector integrated
-----	---------------------------

### ② Nozzle size

15H	Rc(PT)1/4
20H	Rc(PT)3/8

• Default nozzle installed.

- Standard type: 15H

- Bellows type: 20H

For faster absorption, use a 20H nozzle.

### ③ Pad diameter

125	Ø125
160	Ø160
220	Ø220

### ④ Pad shape

-	Standard
B	Bellows

### ⑤ Pad material

R	NBR
S	Silicon

## Specifications

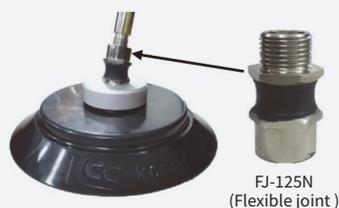
Fluid	Compressed air
Operating pressure	1.0 ~ 6kgf/cm <sup>2</sup> (0.1 ~ 0.6MPa)
Ambient temperature	0 ~ 60 °C
Lubrication	Not required



Detail catalog

# FJ

## Free Joint for Vacuum Unit



⚠ Vacuum pad and holder are not included.

### How to order

FJ - 20-M6

① ②

① Series

FJ	Free joint for vacuum unit
----	----------------------------

② Port size

Code	Port size	Applicable pad	Remarks
20-M6	M6	KCC Ø20~Ø50	
60-M10	M10x1.5	KCC Ø60~Ø100	
60-G1/8	G1/8	Third party Ø60~Ø100	
125-M16	M16x1.5	KCC Ø125	
125-M16F	M16x1.5(female thread)	KCC Ø125	
20N	M6	KCC Ø20~Ø50	Flexible joint (angle: 25°)
60N	M10x1.5	KCC Ø60~Ø100	
125N-G1/2	G1/2	Third party Ø125~Ø220	
125N-M16	M16x2.0	KCC Ø125~Ø220	

### Specifications

Fluid	Compressed air
Ambient temperature	0 ~ 60 °C
Rotating angle	0 ~ 15°

### Features

- **Increased flexibility** and maneuverability in handling workpiece, as the joint allows for more **freedom of movement**.
- **Reduced wear and tear** on the vacuum pad itself, as the joint can absorb some of the stress and movement.



Detail catalog

# KVSC

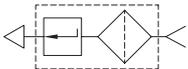
Vacuum Safety Valve



## Features

- It prevents sudden drops in vacuum pressure in the event that workpiece is not fully suctioned or if there is a malfunction in the vacuum piping system.
- It can be easily installed on the pad and can be operated easily.
- Maintenance and repair are very simple, and easily replaced as needed.
- Preventing malfunctions or accidents, maintaining productivity and reducing costs.

## Symbol



## How to order

KVSC - M5 03 - H  
 ① ② ③ ④

### ① Series

KVSC	Vacuum safety valve
------	---------------------

### ② Port size

### ③ Orifice

M5	M5xP0.8	03	Ø0.3
M6	M6xP1.0	05	Ø0.5
G1/8	G1/8	06	Ø0.6
M10	M10xP1.25		

### ④ Body type

H	Hex body
C	Circular body
HS*	Hex body with fine thread (Only available for M10 port size)
CS*	Circular body with fine thread (Only available for M10 port size)

\* HS, CS available for port size M10 only.

## Specifications

Fluid	Compressed air			
Ambient temperature	-10 ~ 60 °C			
Operating pressure	-95 ~ 0kPa (-713 ~ 0mmHg)			
Mounting method	Screw type			
Pressure drop before adsorption (-kPa)	M3-05	M6-05	G1/8-06	M10-06
	2	7	11	11
Applicable vacuum pad (mm)	≤ Ø15	Ø20~Ø50	Ø20~Ø100	Ø60~Ø100

• "C" type model can be installed in our DSC or DSG model holders for use



Detail catalog

# CF

## Vacuum Filter



CF-600



CF-06

### How to order

CF - 03

①      ②

① Series

CF	Vacuum filter
----	---------------

② Port size

03	Rc(PT)1/8
05	Rc(PT)1/3
06	Rc(PT)3/8
600	Rc(PT)3/4
800	Rc(PT)1

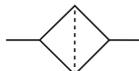
### Specifications

Fluid	Compressed air
Filtration grade	40 μm

### Features

- Vacuum filter maintains clean air, preventing contamination.
- It is widely used in various industries such as machinery, electronics, and food, playing a significant role in maintaining product quality and improving productivity.
- Various sizes, and efficient air purification can be achieved by selecting an appropriate filter.
- Designed with transparent casing, making it easy to check the condition of the filter and perform simple maintenance.

### Symbol



Detail catalog

# KVFL

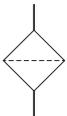
Vacuum/Pneumatic In-line Filter



## Features

- Compact and space-saving in-line filter.
- Easy tube connection and removal with built-in  $\varnothing 4$ ,  $\varnothing 6$ ,  $\varnothing 8$  one-touch fittings.
- **Transparent case** allows for easy monitoring of element status for maintenance purposes.
- Aluminum material used in connecting parts of the BODY and CASE for **excellent resistance** to external impact and internal pressure.

## Symbol



## How to order

KVFL - 88

①

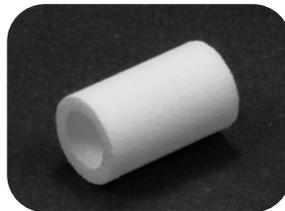
① Tube outer diameter

44	$\varnothing 4$
66	$\varnothing 6$
88	$\varnothing 8$

## Specifications

Model	KVFL-44	KVFL-66	KVFL-88
Fluid	Non-lubricated air / non-corrosive gas		
Ambient temperature	0 ~ 60°C		
Operating pressure range	-95.9 ~ 0KPa		
Proof pressure	0.5MPa		
Port size	$\varnothing 4$	$\varnothing 6$	$\varnothing 8$
Filtration grade	15 $\mu\text{m}$		
Suitable ejector nozzle diameter	$\leq \varnothing 1.0$	$\leq \varnothing 1.5$	$\leq \varnothing 2.0$
Weight	19g	20g	37g

## Maintenance parts



Element	Applicable
KVFL-44E	KVFL-44/66
KVFL-88E	KVFL-88



Filter kit	Applicable
KVFL-44K	KVFL-44
KVFL-66K	KVFL-66
KVFL-88K	KVFL-88



Holder	Applicable
KVFL-46H	KVFL-44/66
KVFL-81H	KVFL-88



Detail catalog

# KSV

## Vacuum Ejector



KSV-15HS



KSV-15HS-CK

### Features

- Easy to install and move due to its **small size** and **lightweight** design.
- Maintaining **high-performance** and **stable vacuum pressure**.
- Durable and operates with **low noise**.
- Additional equipment **vacuum sensors** can be connected to implement automatic control functions.

### Symbol



Detail catalog

### How to order

KSV - 
 10
HS

①
②
③
④

#### ① Series

KSV	Vacuum ejector
-----	----------------

#### ② Nozzle diameter

05	Ø0.5
10	Ø1.0
15	Ø1.5
20	Ø2.0
25	Ø2.5
30	Ø3.0

#### ③ Degree of vacuum

LS	≥ -53.3kPa
HS	≥ -86.8kPa

#### ④ Vacuum switch

-	None
C	Fixed
CK	Adjustable

• KSV05, 25, 35 size are not available for vacuum switch option.

### Specifications

Fluid	Compressed air
Ambient temperature	0 ~ 60 °C
Lubrication	Not required
Operating pressure	1.0 ~ 6kgf/cm <sup>2</sup> (0.1 ~ 0.6MPa)
Vacuum switch	None(standard), fixed vacuum level, adjustable vacuum level

Model		Nozzle	Suction capacity	Max. Vacuum pressure	Air consumption	Pressure supply
		mm	ℓ/min(ANR)	-kPa	ℓ/min(ANR)	MPa
KSV-05	HS	0.5	6	86.6	13	0.5
	LS	1.0	36	57.2	44	0.5
KSV-10	HS	1.0	27	91.8	44	0.5
	LS	1.5	95	57.2	100	0.5
KSV-15	HS	1.5	63	91.8	100	0.5
	LS	2.0	165	57.2	180	0.5
KSV-20	HS	2.0	110	91.8	180	0.5
	LS	2.5	250	57.2	265	0.5
KSV-25	HS	2.5	160	91.8	265	0.5
	LS	3.0	350	57.2	385	0.5
KSV-30	HS	3.0	225	91.8	385	0.5

	Setting range	Factory setting	Operation accuracy	Hysteresis	Rated current
C fixed setting value	-53kPa (-400mmHg)	-53kPa (-400mmHg)	±5.3kPa (±40mmHg)	4.0~13.3kPa (30~100mmHg)	AC125V : 5A
CK fixed setting value	-20 ~ -53kPa (-400mmHg)	-46.6kPa (-400mmHg)			AC250V : 3A

# KSV-S, KSV-T

Vacuum Ejector for Chemical

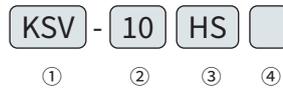


KSV-15HS-T  
(PTFE)



KSV-15HS-S3  
(STS303)

## How to order



### ① Series

KSV	Vacuum ejector for chemical
-----	-----------------------------

### ② Nozzle diameter

10	Ø1.0
15	Ø1.5
20	Ø2.0

### ③ Degree of vacuum

HS	≥ -86.8kPa
----	------------

### ④ Body material

S3	STS303
S6	STS316
T	PTFE

## Features

- It is available for use in environments that require **abrasion resistance** and **chemical resistance**.
- Easy to install and move due to its **small size** and **lightweight** design.
- Maintaining **high-performance** and stable vacuum pressure.
- Durable and operates with **low noise**.

## Symbol



## Specifications

Fluid	Chemical, gas, corrosive fluid
Ambient temperature	0 ~ 60 °C
Lubrication	Not required
Operating pressure	1.0 ~ 9.9kgf/cm <sup>2</sup> (0.1 ~ 0.99MPa)
Vacuum switch	None



Detail catalog

# KMC22

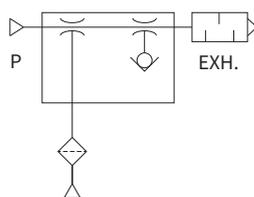
Vacuum Ejector Unit



## Features

- **Light and compact** - 20mm width, compact solenoid valve.
- Vacuum pressure and nozzle sizes choice available.  
**Energy saving** with MVS-201  
 Sensor nozzle choice: Ø0.5, Ø0.7 and Ø1.0
- Manifold option - Up to 8 units

## Symbol



Detail catalog

## How to order

KMC22	S	05	H	S	ABS	LC	4	B	L	R				
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭

### ① Type

S	Single type
M	Manifold type

### ② Nozzle diameter

05	Ø0.5
07	Ø0.7
10	Ø1.0

### ③ Max. Vacuum pressure

H	-87kPa
L	-53kPa

### ④ Supply pressure

S	0.5MPa
R	0.35MPa

### ②③④ Applicable models

②	③	④	
		S	R
05	H	●	●
	L	●	
07	H	●	●
	L	●	
10	H	●	●
	L		

### ⑤ Pressure sensor

Code	Sensor	Pressure	Display	Switch output	Analog output	Input
ABS	MVS-030AB	Vacuum	LED	NPN1 point	None	None
ABP	MVS-030AB	Vacuum	LED	PNP1 point	None	None
VG	MPS-V23	Vacuum	Digital	NPN2 point	DC1~5V	None
VGP	MPS-V23	Vacuum	Digital	PNP2 point	DC1~5V	None
21	MVS-201	Compound	Digital	NPN1 point	None	Sink
21P	MVS-201	Compound	Digital	PNP1 point	None	Sink
Z	None	-	-	-	-	-

### ⑥ Check valve

L	Without check valve
LC	With check valve

### ⑦ Solenoid valve voltage

4	DC24V
---	-------

### ⑧ Solenoid valve function

A	NO
B	NC
W*	Self-holding solenoid

\* The energy-saving function of a sensor cannot work if the self-holding valve is selected.

### ⑨ Valve connection

L	Lead wire
---	-----------

### ⑩ Port thread

R	Rc(PT)1/8 (standard)
G	G1/8
N	NPT1/8

### ⑪ Number of manifold units

-		① : Single type	
1	1 unit	5	5 units
2	2 units	6	6 units
3	3 units	7	7 units
4	4 units	8	8 units

### ⑫ Number of block plates

-		① : Single type	
0	None	4	4 units
1	1 unit	5	5 units
2	2 units	6	6 units
3	3 units	7	7 units

### ⑬ Number of bodies

-		① : Single type	
1	1 unit	5	5 units
2	2 units	6	6 units
3	3 units	7	7 units
4	4 units	8	8 units

### ⑭ Position of body

R	Placed to the right
L	Placed to the left
-	When ①: Single type or ⑪ and ⑬ are the same number.

• Please turn the vacuum port towards your side, the unit body you faced could be either left or right upon chose.

## Specifications

Model	KMC22□-05			KMC22□-07			KMC22□-10	
	HS	LS	HR	HS	LS	HR	HS	HR
Fluid	Non-lubricated compressed air							
Ambient temp.	0 ~ 50°C(no freezing)							
Operating pressure	0.2 ~ 0.5MPa							
Blow-off flow	50ℓ/min(ANR)							
Solenoid valve function	Normally closed, normally open, self-holding							
Filtration grade	37µm							
Nozzle size	Ø0.5			Ø0.7			Ø1.0	
Nominal pressure	0.5MPa		0.35MPa	0.5MPa		0.35MPa	0.5MPa	0.35MPa
Vacuum (air) flow ℓ/min(ANR)	6	11	4	11	21	9	20	15
Max. Vacuum pressure	-87kPa	-53kPa	-87kPa	-87kPa	-53kPa	-87kPa	-87kPa	-87kPa
Air consumption	10ℓ/min(ANR)			22.5ℓ/min(ANR)			48ℓ/min(ANR)	
Weight	L/LC single	117g						

# KMC42

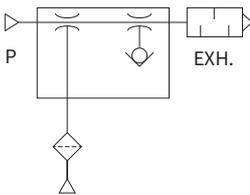
Vacuum Ejector Unit



## Features

- Compact type and light weight 10 mm width body, resin body.
- Digital vacuum sensor mountable.
- Can be mounted on manifold - Up to 5 units.
- Easy replacement of vacuum pump system.

## Symbol



## How to order



### ① Type

S	Single type
M	Manifold type

### ② Nozzle diameter

05	∅0.5
07	∅0.7
10	∅1.0

### ③ Max. Vacuum pressure

H	-87kPa
---	--------

### ④ Supply pressure

S	0.5MPa
R	0.35MPa

### ②③④ Applicable models

②	③	④	
		S	R
05	H	●	●
07	H	●	●

### ⑤ Pressure sensor

Code	Sensor	Pressure	Display	Switch output	Analog output	Input
V9	MPS-9	Vacuum	Digital	NPN1 point	DC1~5V	None
V9P	MPS-9	Vacuum	Digital	PNP1 point	DC1~5V	None
10	MPS-10	Compound	Digital	NPN1 point	DC1~5V	Sink
10P	MPS-10	Compound	Digital	PNP1 point	DC1~5V	Sink
10PS	MPS-10	Compound	Digital	NPN1 point	DC1~5V	Sink
ZZ	None	-	-	-	-	-

### ⑥ Solenoid valve voltage

4	DC24V
---	-------

### ⑦ Solenoid valve function

A	NO
B	NC
W*	Self-holding solenoid

\* The energy-saving function of a sensor cannot work if the self-holding valve is selected.

### ⑧ Number of manifold units

-	①: Single type
1	1 unit
2	2 units
3	3 units
4	4 units
5	5 units

### ⑨ Number of block plates

-	①: Single type		
0	None	3	3 units
1	1 unit	4	4 units
2	2 units	5	5 units

### ⑩ Number of bodies

-	①: Single type		
0	None	3	3 units
1	1 unit	4	4 units
2	2 units	5	5 units

### ⑪ Position of body

R	Placed to the right
L	Placed to the left
-	When ①: Single type or ⑩ and ⑪ are the same number.

• Please turn the vacuum port towards your side, the unit body you faced could be either left or right upon chose.

## Specifications

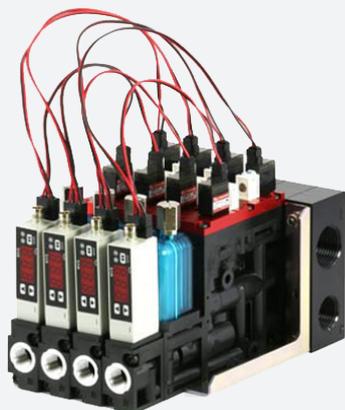
Model	KMC42□05		KMC42□07	
	HS	HR	HS	HR
Fluid	Non-lubricated compressed air			
Ambient temp.	0 ~ 60°C(no freezing)			
Operating pressure	0.2 ~ 0.5MPa			
Blow-off flow	10 (at: 0.5) ℓ/min(ANR)			
Solenoid valve function	Normally closed, normally open, self-holding			
Nozzle size	∅0.5		∅0.7	
Nominal pressure	0.5MPa	0.38MPa	0.5MPa	0.38MPa
Vacuum (air) flow	7 ℓ/min(ANR)	6 ℓ/min(ANR)	11 ℓ/min(ANR)	11 ℓ/min(ANR)
Max. Vacuum pressure	-85kPa	-85kPa	-85kPa	-85kPa
Air consumption	10 ℓ/min(ANR)	11 ℓ/min(ANR)	21.5 ℓ/min(ANR)	22 ℓ/min(ANR)
Weight	L/LC single	57g		



Detail catalog

# KMC72

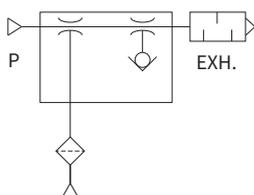
Vacuum Ejector Unit



## Features

- High vacuum flow type.
- Best choice for suction the workpieces with porous surface and heavy workpieces.
- Holding workpiece at an emergency stop.
- Can be mounted on manifold, up to 5 units.

## Symbol



Detail catalog

## How to order

KMC72 S 15 H S VG C 4 B L R

①   ②   ③   ④   ⑤   ⑥   ⑦   ⑧   ⑨   ⑩   ⑪

### ① Type

S	Single type
M	Manifold type

### ② Nozzle diameter

15	Ø1.5
20	Ø2.0
25	Ø2.5

### ③ Max. Vacuum pressure

H	-87kPa
L	-53kPa

### ④ Supply pressure

S	0.5MPa
R	0.35MPa

### ②③④ Applicable models

②	③	④	
		S	R
15	H	●	●
	L	●	
20	H	●	●
	L	●	
25	H	●	
	L		

### ⑤ Pressure sensor

Code	Sensor	Pressure	Display	Switch output	Analog output	Input
AB	MVS-030AB	Vacuum	LED	NPN1 point	-	None
ABP	MVS-030AB	Vacuum	LED	PNP1 point	-	None
VG	MPS-V23	Vacuum	Digital	NPN2 point	DC1~5V	None
VGP	MPS-V23	Vacuum	Digital	PNP2 point	DC1~5V	None
21	MVS-201	Compound	Digital	NPN1 point	-	Sink
21P	MVS-201	Compound	Digital	PNP1 point	-	Sink
ZZ	Without sensor (without base)					
ZS	Without sensor (with base)					

### ⑥ Body type

Code	Blow-off	Check	Filter
C	Solenoid valve	With	
D	With	None	With
E	With	None	
F	None	With	
G	With	None	None
Z	With	None	

### ⑨ Valve connection

L	Connector type
---	----------------

### ⑩ Port size

R	Rc(PT)1/4
G	G1/4
N	NPT1/4-27

### ⑪ Number of manifold units

-	① : Single type
1	1 unit
2	2 units
3	3 units
4	4 units
5	5 units

### ⑦ Solenoid valve voltage

4	DC24V
---	-------

### ⑧ Solenoid valve function

A	NO
B	NC
W*	Self-holding solenoid

\* The energy-saving function of a sensor cannot work if the self-holding valve is selected.

## Specifications

Model	KMC72□-15			KMC72□-20			KMC72□-25
	HS	LS	HR	HS	LS	HR	HS
Fluid	Non-lubricated compressed air						
Ambient temp.	0 ~ 60°C(no freezing)						
Operating pressure	0.2 ~ 0.6MPa						
Blow-off flow	100ℓ/min(ANR)						
Solenoid valve function	Normally closed, normally open, self-holding						
Filtration grade	130µm						
Nozzle size	Ø1.5			Ø2.0			Ø2.5
Nominal pressure	0.5MPa	0.35MPa		0.5MPa	0.35MPa		0.5MPa
Vacuum (air) flow ℓ/min(ANR)	55	90	46	95	130(110*)	80	140(120*)
Max. Vacuum pressure	-87kPa	-53kPa	-87kPa	-87kPa	-53kPa	-87kPa	-87kPa
Air consumption	100ℓ/min(ANR)			180ℓ/min(ANR)			265ℓ/min(ANR)
Weight	Single(w/o sensor): 460g , manifold single(w/o sensor): 400g						

\* Value when attaching a check valve.

# KCVZ

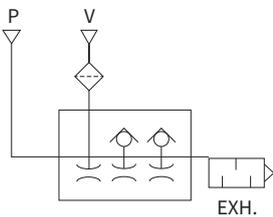
## High Flow Vacuum Ejector



### Features

- Maximum vacuum flow is **877ℓ/min** at 4 nozzles, supply pressure 0.55MPa.
- Best choice for suction the works with **porous surface** and **heavy works**.
- Can select 1 ~ 4 nozzles to meet customer's needs.
- With the Port (Rp1/8) for mount the pressure sensor.
- Low noise(60dB) at 1 nozzle, block the vacuum port, supply pressure 0.55MPa.

### Symbol



### How to order



#### ① Series

1	Ø1.5x1
2	Ø1.5x2
3	Ø1.5x3
4	Ø1.5x4

#### ② Pressure sensor

Z	None
S	MPS-V60DL-R1

#### ③ Silencer

Z	None
S	With silencer

#### ④ Port thread type

R	Rc(PT)
G	G
N	NPT

### Specifications

Model	KCVZ-1	KCVZ-2	KCVZ-3	KCVZ-4
Fluid	Non-lubricated compressed air			
Ambient temperature	0~50°C (no freezing)			
Operating pressure	0.15~0.6MPa			
Recommended solenoid valve effective area	≥ 7mm <sup>2</sup>	≥ 12mm <sup>2</sup>	≥ 18mm <sup>2</sup>	≥ 25mm <sup>2</sup>
Weight(with silencer)	730g	737g	901g	908g
Weight of silencer	102g			



Detail catalog

# MVO

## Rotary Vane Vacuum Pump, Oil Circulated Type



MVO 006



MVO 010/020



MVO 063/100

### How to order

MVO - 010 - B C  
 ①            ②            ③            ④

#### ① Series

MVO	Rotary vane vacuum pump, oil circulated type
-----	--

#### ② Displacement

006	6m <sup>3</sup> /hr	063	63m <sup>3</sup> /hr
010	10m <sup>3</sup> /hr	100	100m <sup>3</sup> /hr
020	20m <sup>3</sup> /hr	160	160m <sup>3</sup> /hr
030	30m <sup>3</sup> /hr	250	250m <sup>3</sup> /hr
040	40m <sup>3</sup> /hr		

#### ③ Motor voltage

Single-phase		3 phase	
A	110/220V	D	220/380V
B	220V		
C	110V		
L	240V		

#### ④ Motor hertz (Hz)

A	60
B	50
C	50/60

### Specifications

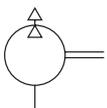
Model		MVO-006	MVO-010	MVO-020	MVO-030	MVO-040
Displacement(m <sup>3</sup> /h)	50Hz	6.0	10	20	30	40
	60Hz	7.2	12	24	36	48
Max. Pressure(mbar)		2	0.5	2	0.5	
Weight(kg)	50Hz	12	20		34	38
	60Hz					

Model		MVO-063	MVO-100	MVO-160	MVO-250
Displacement(m <sup>3</sup> /h)	50Hz	63	100	160	250
	60Hz	76	120	190	300
Max. Pressure(mbar)		0.5			
Weight(kg)	50Hz	64	75	174	202
	60Hz				

### Features

- Easy to install and simple handling due to its **compact** and **lightweight** design.
- Durable and operates stably.
- It operates with **high efficiency**, **low noise**, and **low vibration**.
- It maintains a **consistent vacuum** pressure.

### Symbol



Detail catalog

# SVO

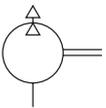
Rotary Vane Vacuum Pump, Oil Circulated Type



## Features

- Easy to install and simple handling due to its compact and lightweight design.
- Durable and operates stably.
- It operates with high efficiency, low noise, and low vibration.
- It maintains a consistent vacuum pressure.

## Symbol



## How to order

SVO - 060 - B C  
 ①            ②            ③            ④

### ① Series

SVO	Rotary vane vacuum pump, oil circulated type
-----	--

### ② Displacement

060	60ℓ/m
100	100ℓ/m

### ③ Motor voltage

Single-phase	
A	110/220V
B	220V
C	110V
L	240V

### ④ Motor hertz (Hz)

A	60
B	50
C	50/60

## Specifications

Model		SVO-006	SVO-100
Displacement(ℓ/m)	50Hz	50	85
	60Hz	60	100
Max. Pressure(mbar)		2	
Weight(kg)	50Hz	12	13
	60Hz		



Detail catalog

# SML

## Rotary Vane Vacuum Pump, Dry Running Type



SML 060



SML 140

### How to order

SML - 060 - B C  
①      ②      ③      ④

#### ① Series

SML	Rotary vane vacuum pump, dry running type
-----	---

#### ② Displacement

060	60ℓ/m
140	140ℓ/m
280	280ℓ/m

#### ③ Motor voltage

Single-phase		3 phase	
A	110/220V	D	220/380V
B	220V	E	380V
C	110V	F	220V
L	240V	G	440V
		H	460V
		J	415V
		K	200V

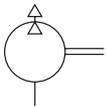
#### ④ Motor hertz (Hz)

A	60
B	50
C	50/60

### Features

- Easy to install and simple handling due to its **compact** and **lightweight** design.
- Durable and operates stably.
- It operates with **high efficiency**, **low noise**, and **low vibration**.
- It maintains a **consistent vacuum pressure**.

### Symbol



### Specifications

Model		SML-006	SML-040	SML-280
Displacement(ℓ/m)	50Hz	50	120	235
	60Hz	60	140	280
Max. Pressure(mmHg)	50Hz	550~600	660	
	60Hz			
Max. Pressure(bar)		1.0		
Weight(kg)	50Hz	7.0	25.5	
	60Hz			



Detail catalog

# DWV

## Water Ring Vacuum Pump



DWV 400



DWV 10H

### How to order

DWV 400 - B C  
 ① ② ③ ④

① Series

DWV	Water ring vacuum pump
-----	------------------------

② Displacement

400	400ℓ/m
10H	1000ℓ/m

③ Motor voltage

Single-phase		3 phase	
A	110/220V	D	220/380V
B	220V	E	380V
C	110V	F	220V
L	240V	G	440V
		H	460V
		J	415V
		K	200V

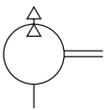
④ Motor hertz (Hz)

A	60
B	50
C	50/60

### Features

- Easy to install and simple handling due to its compact and lightweight design.
- Durable and operates stably.
- It operates with high efficiency, low noise, and low vibration.
- It maintains a consistent vacuum pressure.

### Symbol



### Specifications

Model		DWV-400	DWV-10H
Displacement(ℓ/m)	50Hz	335	835
	60Hz	400	1000
Max. Pressure(mmHg)		680	730
Weight(kg)	50Hz	20	
	60Hz		



Detail catalog

# 35DN

Oil-less Diaphragm Vacuum Pump



35DNS-BL2

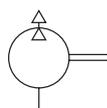


35DND-S-BL2

## Features

- Operates **without lubricating oil** and equipped with permanent lubricating bearings.
- Built-in **thermal protector**.
- Use of aluminum alloys in construction enhances durability and resistance to corrosion.
- Compact and lightweight** design for ease of use and integration into various applications.
- Low noise**, vibration and **leak-free** operation for improved reliability and performance.
- Standard specification of **PTFE coating** applied for improved wear resistance.

## Symbol



Detail catalog

## How to order

35DND-P

①

① Model

35DNS	AC motor, single head
35DND-P	AC motor, double head, parallel connection
35DND-S	AC motor, double head, serial connection
35DNS-BL1	BLDC motor, single head, 12VDC
35DNS-BL2	BLDC motor, single head, 24VDC
35DND-P-BL2	BLDC motor, double head, parallel connection, 24VDC
35DND-S-BL2	BLDC motor, double head, serial connection, 24VDC

## Specifications

### AC

Model		Single head	Double head(parallel)	Double head(serial)
		35DNS	35DND-P	35DND-S
Free flow rate (LPM)	50Hz	25	50	35
	60Hz	33	58	39
Max. Vacuum (mmHg)		580	590	690
Max. Pressure (bar)		-	-	-
Port size		PT 1/4"(R 1/4")		
Dimensions (mm) (W)x(H)x(L)		104 x 148 x 170	104 x 148 x 229	
Weight (kg)		2.6	3.7	
Motor type		4 poles, capacitor start type, thermal protector		
Power consumption	50Hz	50W	80W	
	60Hz	60W	87W	
Rated current	230V,50Hz	0.30A	0.39A	
	220V,60Hz	0.30A	0.40A	
Power source		110~120VAC(50/60Hz), 220~230VAC(50/60Hz)		

### BLDC

Model	Single head		Double head	
	35DNS-BL1	35DNS-BL2	35DND-BL1	35DND-BL2
Free flow rate (LPM)	42	42	51	42
Max. Vacuum (mmHg)	580	580	580	690
Max. Pressure (bar)	-	-	-	-
Port size	PT 1/4"(R 1/4")			
Dimensions (mm) (W)x(H)x(L)	104 x 148 x 148		104 x 148 x 215	
Weight (kg)	1.8Kg		2.6Kg	
Motor type	Brush-less motor(BLDC), built-in driver			
Power consumption	40W	40W	63W	68W
Rated current	3.3A	1.7A	2.6A	2.8A
Power source	12VDC		24VDC	

# RN(AC)

Oil-less Rocking Piston Pump



20RNS



50RND

## How to order



① Free flow rate (LPM: ℓ/min)

Code	Applicable type			
	Single head	Double head	Linear pump	Liquid pump
4				●
8				●
10	●			
12	●			
15	●		●	
20	●		●	
25	●			
30	●			
40	●	●	●	
50	●	●		
60	●	●		
70	●	●		
80		●	●	
100		●		
120		●		
140		●		

② Operation

R	Rocking piston pump
D	Diaphragm pump
L	Linear pump

③ Purpose

N	Standard
A	For air compressor
V	For vacuum pumps

④ Structure

S	Single head
D	Double head

⑤ PTFE coating

-	None
P	PTFE coating

## Features

- Operates **without lubricating oil** and equipped with permanent lubricating bearings.
- Built-in **thermal protector**.
- Use of aluminum alloys in construction enhances durability and resistance to corrosion.
- Compact and lightweight** design for ease of use and integration into various applications.
- Low noise, vibration and leak-free** operation for improved reliability and performance.
- PTFE coating** applied(option) for improved wear resistance.

## Specifications

### Mini single head

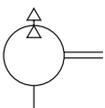
Model		10RNS	12RNS	15RNS	20RNS	25RNS	30RNS
Free flow rate (LPM)	50Hz	8.0	10.0	12.5	16.0	21.0	26.0
	60Hz	9.5	12.0	15.0	19.0	24.0	30.0
Max. Vacuum (mmHg)		490	540	600	650	600	650
Max. Pressure (bar)		2.0	2.5	4.4	6.0	4.5	6.5
Port type	Barb type (Possible to use of R1/8")						
Dimensions	140(L) x 94(H) x 117(W) mm						
Noise level	45 ~ 52 dB						
Weight	1.95Kg						
Motor type	4 Pole, capacitor start, thermal protector					2 Pole, capacitor start, overheat protection	
Power source	100~115 VAC(50/60Hz), 200~230V VAC(50/60Hz)						

• Mini double head type, please confirm with us when ordering.

### Single head

Model		40RNS	50RNS	60RNS	70RNS
Head		Vacuum / air			Vacuum
Free flow rate (LPM)	50Hz	33	42	50.5	59
	60Hz	39	50	60	70
Max. Vacuum (mmHg)		650	680	690	700
Max. Pressure (bar)		7.0	4.0	2.0	-
Port type	R1/4"(PT 1/4")				
Dimensions	155(L) x 178(H) x 118(W) mm				
Noise level	50 ~ 53 dB				
Weight	4.2Kg				
Motor type	4 Pole, capacitor start, thermal protector & cooling fan				
Motor output	100W				
Power source	100~110 VAC(50/60Hz), 200~220V VAC(50/60Hz), 230~240 VAC(50/60Hz)				

## Symbol



Detail catalog

## Double head

Model	40RND	50RND	60RND	70RND	80RND	100RND	120RND	140RND	
Head connect	Serial connect (2-Stage)				Parallel connect (1-Stage)				
Head	Vacuum				Vacuum / air				
Free flow rate (LPM)	50Hz	33	42	50	59	66	84	101	118
	60Hz	39	50	60	70	78	100	120	140
Max. Vacuum (mmHg)	720	740	745	750	650	680	690	700	
Port size	R1/4"(PT 1/4")								
Dimensions	240(L) x 178(H) x 118(W) mm								
Noise level	50 ~ 53 dB				55 ~ 58 dB				
Weight	7.1Kg								
Motor type	4 Pole , capacitor start, thermal protector & cooling fan								
Motor output	200W								
Power source	100~110 VAC(50/60Hz), 200~220V VAC(50/60Hz), 230~240 VAC(50/60Hz)								

## Oil-less linear pump

Model	15LND	20LND	40LND	80LND
Free flow rate (LPM)	50Hz	13	17	67
	60Hz	15	20	80
Max. Vacuum (mmHg)	-	-	250	-
Max. Pressure (bar)	0.2	0.2	0.25	0.30
Port type	Barb type			
Dimensions	73(L) x 45(H) x 130(W) mm		126 x 95 x 84	178 x 129 x 108
Weight	0.5Kg		1.0Kg	2.2Kg
Power consumption	6W	7W	40W	80W
Power source	110~120 VAC(50/60Hz), 220~230 VAC(50/60Hz)			

• 80RND, please confirm with us when ordering.

## Liquid pump, magnet type

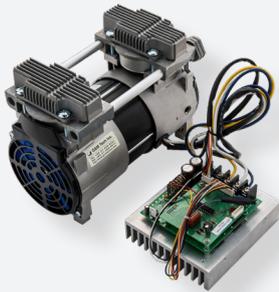
Model	4WNS	8WNS
Free flow rate (LPM @ open flow)	4	8.5
Max. Head (cm)	120	180
Ambient temperature	0 ~ 40°C	
Maximum Current at Rated Load(A)	0.1	0.25
Fluid temperature	0 ~ 90°C	
Weight	0.47Kg	0.97Kg
Insulation class	E	
Port size	Outer diameter Ø10	
Power source	AC220V 50/60Hz(AC100V 50/60Hz, AC120V 60Hz, AC230V 50Hz)	
Motor pole number	2 Pole	
Thermal protector	120°C	
Motor type	Shaded pole Motor	

# RN(DC)

Oil-less Rocking Piston Pump



20RNS



100RND-ED

## How to order



### ① Free flow rate (LPM: ℓ/min)

Code	Applicable type		
	Brushed type	Brush-less type(BLDC)	
	Single head	Single head	Double head
10	●	●	
12	●	●	
15	●	●	
20	●	●	
25	●	●	
30	●	●	
40		●	
50		●	
60		●	
70		●	
80			●
100			●
120			●
140			●

### ② Operation

R	Rocking piston pump
D	Diaphragm pump
L	Linear pump

### ③ Purpose

N	Standard
A	For air compressor
V	For vacuum pumps

### ④ Structure

S	Single head
D	Double head

### ⑤ PTFE coating

-	None
P	PTFE coating

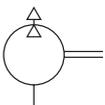
### ⑥ Driver

-	Driver inner
ED	Driver outer

## Features

- Operates **without lubricating oil** and equipped with permanent lubricating bearings.
- Built-in **thermal protector**.
- Use of aluminum alloys in construction enhances durability and resistance to corrosion.
- Compact and lightweight** design for ease of use and integration into various applications.
- Low noise**, vibration and **leak-free** operation for improved reliability and performance.
- PTFE coating** applied(option) for improved wear resistance.
- PWM-controllable** driver equipped.

## Symbol



Detail catalog

## Specifications

### Mini single head, brushed type

Model	10RNS		12RNS		15RNS		20RNS		25RNS		30RNS	
Voltage	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
Rated current	1.5A	0.8A	2.4A	1.2A	3.1A	1.5A	3.1A	2A	4.5A	2.4A	6.1A	2.9A
Free flow rate (LPM)	10		12		15		19		24		29	
Max. Vacuum(mmHg)	490		540		600		650		600		650	
Max. Pressure (bar)	2.0		2.5		4.5		6.5		5.0		6.5	
Port type	Barb type (option: R1/8")											
Dimensions	140(L) x 106(H) x 75(W) mm											
Noise level	45 ~ 52dB											
Weight	1.25Kg											
Motor type	Brushed DC motor(BDC), insulation class E											
Ambient temp.	0 ~ 40°C											

• Double head type, please confirm with us when ordering.

### Mini single head, brush-less type

Model	10RNS		12RNS		15RNS		20RNS		25RNS-ED		30RNS-ED	
Voltage	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
Rated current	1.7A	1.0A	2.4A	1.2A	3.1A	1.6A	3.1A	2.0A	4.6A	2.8A	6.5A	3.8A
Apply driver	Inner								Outer(GED-2405D)			
Free flow rate(LPM)	10		12		15		19		24		29	
Max. Vacuum(mmHg)	490		540		600		650		600		650	
Max. Pressure(bar)	2.0		2.5		1.0	4.5	-	6.0	5.0		6.5	
Connecting type	Barb type (option: R1/8")											
Dimensions	124(L) x 106(H) x 75(W) mm											
Noise	45 ~ 52dB											
Weight	0.8Kg											
Motor type	Brush-less type DC motor(BLDC), insulation class E											
Ambient temp.	0 ~ 40°C											

• Double head type, please confirm with us when ordering.

### Single head, brush-less type

Model	40RNS		50RNS-ED			60RNS-ED			70RNS-ED		
Voltage	12VDC	24VDC	12VDC	24VDC	220VAC	12VDC	24VDC	220VAC	12VDC	24VDC	220VAC
Rated current	6.5A	5.5A	19A	8A	2.5A	23A	9.5A	3A	25A	11A	3A
Apply driver	Inner		Outer								
			GED-2425D			GED-430A			GED-2425D		
Free flow rate(LPM)	~ 40		~ 50			~ 60			~ 70		
Max. Vacuum(mmHg)	650		680			690			700		
Max. Pressure(bar)	1.0bar	7.0bar	7.0bar			7.0bar			4.0bar		
Connecting type	R 1/4"										
Dimensions	160(L) x 178(H) x 117(W) mm										
Weight	3.8Kg										
Motor type	Brush-less type DC motor(BLDC), insulation class E										
Ambient temp.	0 ~ 40°C										

### Double head, brush-less type

Model	80RND-ED			100RND-ED			120RND-ED			140RND-ED				
Voltage	12VDC	24VDC	220VAC	12VDC	24VDC	220VAC	12VDC	24VDC	220VAC	12VDC	24VDC	220VAC		
Rated current	30A	15A	2A	30A	19A	2.5A	30A	22A	3A	30A	22A	3A		
Apply driver	Outer													
	GED-2425D			GED-430A			GED-2425D			GED-430A			GED-2425D	
Free flow rate(LPM)	~ 80			~ 100			~ 120			~ 140				
Max. Vacuum(mmHg)	650			680			690			700				
Max. Pressure(bar)	7.0			7.0			4.0			2.0				
Connecting type	R 1/4"													
Dimensions	240(L) x 178(H) x 118(W)													
Weight	6.3Kg													
Motor type	Brush-less type DC motor(BLDC), insulation class E													
Ambient temp.	0 ~ 40°C													

### Brush-less pump outer driver

	GED-2425D	GED-2405D	GED-430A
Model			
Control method	MOSFETs, PWM switching control		
Apply motor	3 phase, brush-less motor(BLDC)		
Input voltage	Max. 30A	Max. 7A	Max. 5A
Volume	500W	120W	450W
LED lamp	Power, reminder, error		
Features	Current limit, soft start, closed loop RPM control		
	PWM signal / speed control potentiometer		
	Hall sensor power supply / on-off signal indication		
RPM control	Max. 3,000 RPM	Max. 3,000 RPM	Max. 2,000 RPM
Dimensions	140(L) x 65(H) x 125(W) mm	97(L) x 47(H) x 74(W) mm	145(L) x 46(H) x 130(W) mm
Ambient temperature	-20 ~ 60°C	-20 ~ 60°C	0 ~ 50°C