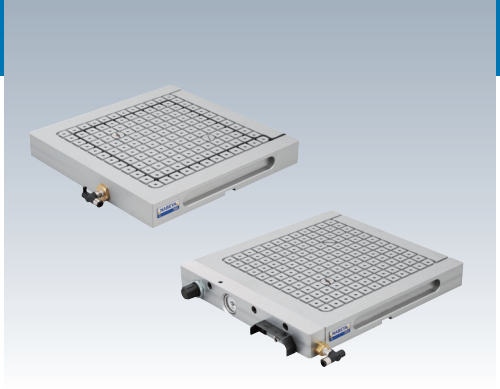


RoHS Compliant

ERON

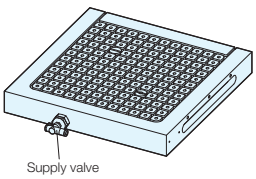
No.E-1101

Vacuum Chucks

Material A5052 Surface Treatment Alumite

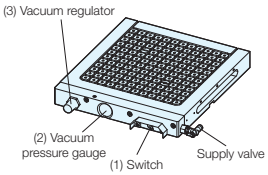
- Makes it possible to adsorb workpieces purely by supplying compressor air.
- Suitable for clamping non-magnetic workpieces such as aluminum, stainless steel, and copper which cannot be used with magnetic chucks.

Specifications



VCM0303E

The specifications of the supply valve only allow the adsorption to be on or off.



VCM0303S

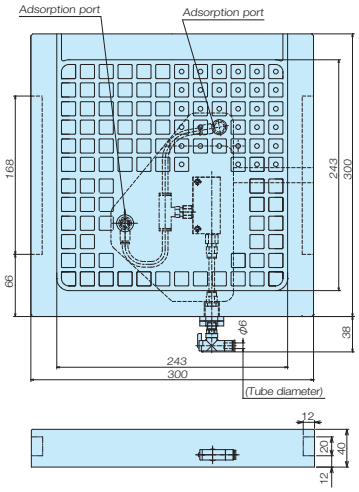
(1)You can switch between adsorption and air blow using the switch.
(2)You can check the current adsorption force using the vacuum pressure gauge. (Refer to P.217 for the adsorption force calculation)
(3)The adsorption force can be adjusted using the vacuum regulator.

Order No.	No.	Size	Weight (kg)	
109778	VCM0303E	300 × 300 × 40	8.5	

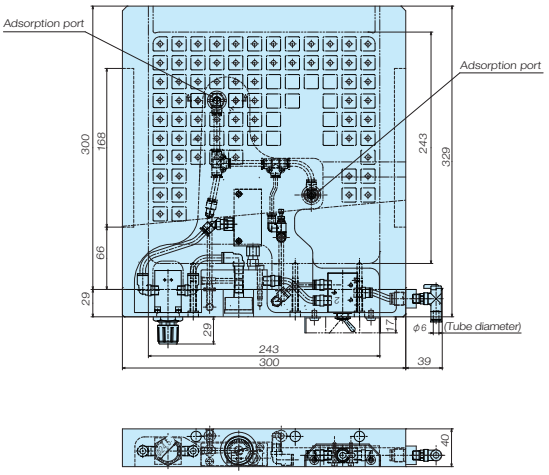
Order No.	No.	Size	Weight (kg)	
109779	VCM0303S	300 × 329 × 40	9	

External Dimensions

VCM0303E



VCM0303S



Accessories

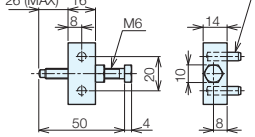
VCM0303E・VCM0303S

Accessory Names	
Adsorption Plug	2
Plug	1
Locating Pin	5
Round rubber for sealing	1

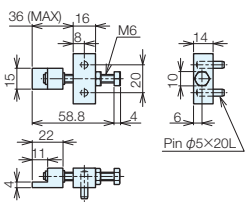
Stopper Block A and B

Order No.	No.	Compatible Models	
114333	VCM-SB1	All sizes	
114334	VCM-SB2	All sizes	

Stopper Block A

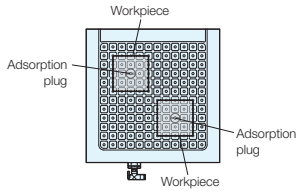


Stopper Block B



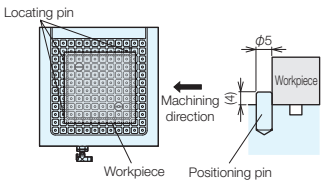
Usage Methods

(1) The adsorption surface is created by attaching an adsorption plug, plug, round for sealing, and locating pin according to the shape of workpiece.



The area enclosed by the round rubber for sealing forms the adsorption area.
The adsorption area has a large effect on the adsorption force.
However, if the round rubber for sealing is on the outside of the workpiece, there is virtually no adsorption.
The area should be enclosed by as large a round rubber for sealing as possible that will fit inside the workpiece.

(2) Place the locating pin in the hole in the used surface of the vacuum chuck.



The locating pin is not only for locating the workpiece, but can also be used as a stopper against cutting resistance in the horizontal direction during cutting.
Stopper block A and stopper block B, which are sold separately, can also be mounted on holes in the used surface.

(3) Mount the workpiece, connect the air, and turn the supply valve on to activate the adsorption.

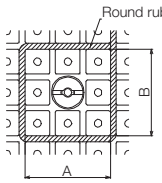
The workpiece can be removed by turning the supply valve off.

Adsorption Force

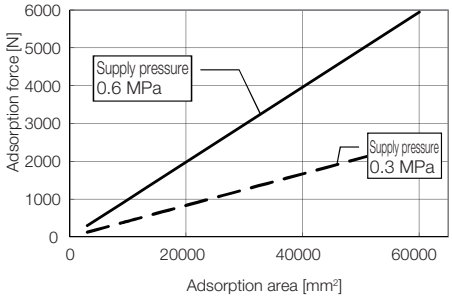
Note that these should be used as reference values since the adsorption force varies depending on the condition of the workpiece and how the round rubber for sealing is arranged.

If a vacuum pressure gauge is fitted to the VCM0303S, the adsorption force can also be calculated accurately using the following formula.

Adsorption force (N) = Vacuum pressure (kPa) × adsorption area (mm^2) × 0.001



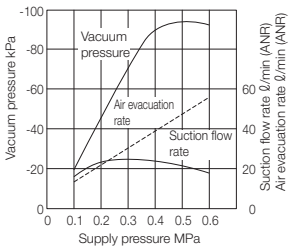
Vacuum pressure (kPa): Value on vacuum pressure gauge
Adsorption area (mm^2): A (mm) × B (mm)



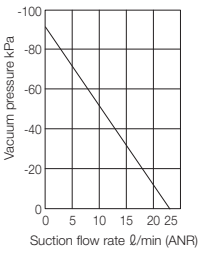
Exhaust Characteristics and Flow Rate Characteristics

The flow rate characteristics show the characteristics when the supply pressure is 0.45 MPa.

Exhaust characteristics



Flow rate characteristics



⚠ Cautions

The speed controller is shipped already adjusted. You should not adjust it yourself. Doing so could cause the vacuum pressure gauge to break.
In order to generate stable adsorption force, a pressure of 0.3 to 0.6 MPa needs to be supplied continuously. The seal rubber should be arranged so that it is inside the workpiece. If the seal rubber is outside the workpiece, it can cause the adsorption force to decrease.

Usage Examples