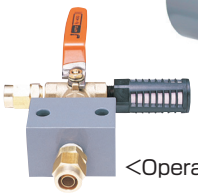
Model VPU VACUUM SYSTEM

Dry/wet operations

VPU-E10

Dry operation
(Wet operation not allowed)

VPU-D20



<Operating valve>

[Application]

A vacuum system dedicated to the vacuum chucks. The shuck side is evacuated continuously in order to effectively maintain atmospheric pressure on the workpiece on the chuck work face. Note that this system must not be modified to a pressure container.

[Features]

- A vacuum evacuation system, filter, vacuum tank and vacuum gage are incorporated neatly.
- Suction and evacuation operations to mount and demount workpieces can be done quickly and easily with the attached special operating handle.
- A difference in pressure over 80 kPa (600 mmHg) can be obtained continuously.

Ejector type VPU-E

A vacuum system to reduce pressure by jetting air at high pressure (principle of the spray gun). This is recommended where an air line by use of a compressor is installed. This type can be used for both wet and dry machining operations. However, the use of a lubricator in the air line must be avoided.

Dry pump type VPU-D

A vacuum system to reduce pressure by evacuation by a pump driven by a motor. A power source only is required to obtain an independent vacuum source. Note, however, this is recommended only for dry machining operations.

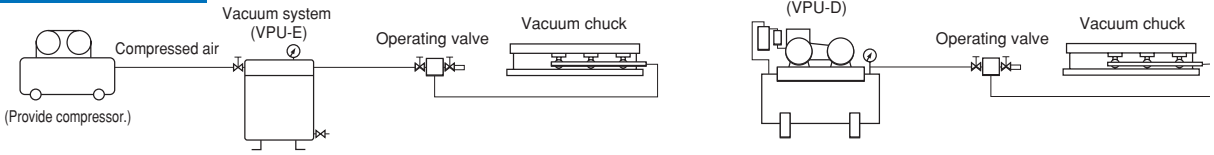
Other types

If the physical contact with the bottom face of workpieces is poor, a large amount of air leaks, requiring a large evacuation amount. In such a case, a blower type is required for dry operations and a water-sealed vacuum pump is required for wet operations depending on work conditions. Please contact us.

Examples of application of vacuum chucks and vacuum systems

Pump \ Chuck	1018	1325	1515	1530	1545	2035	2050	3060
VPU-E10	○	○	○	○	–	–	–	–
VPU-E20	○	○	○	○	○	○	○	○
VPU-D20								

Piping of vacuum system



Ejector type VPU-E

[mm(in)]

Model	Evacuation Volume	Continuous Pressure Difference	Suction Port	Compressed Air			Dimensions		Tank Capacity	Mass
				Pressure	Consumption	Supply port	Out. dia.	Height		
VPU-E10	110N ℓ /min	80 kPa (600 mmHG) or over.	3/8	500–600kPa (5–6kgf/cm²)	180N ℓ /min	1/4	φ280(11.0)	425(16.7)	15 ℓ	25kg/55 lb
VPU-E20	220N ℓ /min				360N ℓ /min	3/8	φ330(12.9)	600(23.6)	30 ℓ	45kg/99 lb

※The capacity of a compressor to use must be 2.5 kW or over for VPU-E10 and 4.5 kW or over for VPU-E20. ※(1) Operating valve and (2) φ12 hose 10 m and coupler for vacuum included.

Dry pump type VPU-D (for dry operations)

[mm(in)]

Model	Evacuation Volume	Continuous Pressure Difference	Suction Port	Power Source	Dimensions			Tank Capacity	Mass
					Width	Length	Height		
VPU-D20	220/260N ℓ /min(50/60Hz)	80 kPa (600 mmHG) or over	3/8	3-phase 200 VAC, 0.4 kW	320(12.6)	700(27.5)	710(27.9)	35 ℓ	68kg/149 lb

※(1) Operating valve, (2) φ12 hose 10 m and coupler for vacuum included. (3) power cable 5 m are included as accessories.

Model VPU-EG VACUUM SYSTEM

Dry operation
(Wet operation not allowed)

VPU-EG

Light weight and compact. Satisfactory functions!

[Application]

A vacuum system dedicated to the grid seal type vacuum chucks.

[Features]

- The vacuum tank has been eliminated to make a very compact size compared with the conventional model (VPU-E10). This system can be handled easily.
- A function to check the vacuum status is incorporated.
- This is for dry operation.
- Auxiliary functions in consideration of operating status and safety are incorporated. (Vacuum adjustment, interlock with the machine via vacuum check output signals, etc.)

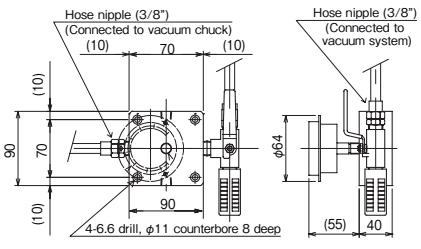
[mm(in)]

Model	Evacuation Volume	Continuous Pressure Difference	Suction Port	Compressed Air			Dimensions			Mass
				Pressure	Consumption	Supply port	Out.dia.	Length	Height	
VPU-EG	27N ℓ /min	80 kPa (600 mmHG) or over.	φ8 tube joint (Hose and vacuum coupler included)	500−600kPa (5−6kgf/cm²)	44N ℓ /min	Vacuum coupler 20PM (Nitto Kohki)	200(7.87)	250(9.84)	190(7.48)	6kg/13.2 lb

※The capacity of a compressor to use must be around 0.75 kW. ※φ8 hose 5m and coupler for vacuum included.

Model VPU-OV OPERATION BLOCK WITH VACUUM GAGE

VPU-OV



[Application]

An option to facilitate the use of vacuum chucks.

[Features]

- The operating valve and the vacuum gage have been integrated to enable it to check the state of workpiece holding near the chuck.
- By changing the location of the blank cap, a position to mount the vacuum gage can be selected from three places.