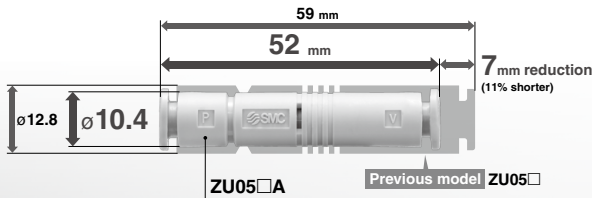


In-line Type Vacuum Ejector

ZU□A Series



Compact and Lightweight

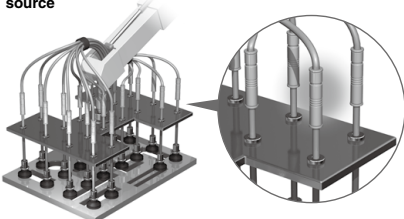


- O.D.** $\varnothing 10.4$ (Previous model $\varnothing 12.8$)
- Weight** **3.9 g** (Previous model 6.5 g)
- Overall length** **52 mm** (Previous model 59 mm)



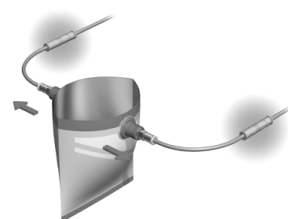
Application Examples

For preventing pad adsorption failures from the vacuum source

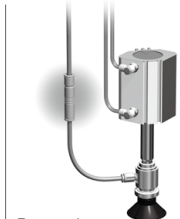


Numerous pads can be used to adsorb workpieces with holes.

For improving responsiveness by installing on flexible parts



Can be used to open and close plastic bags



For mounting on the end of a Z-axis air cylinder

Variations

Model	Nozzle size [mm]	Standard supply pressure [MPa]	Ultimate vacuum pressure [kPa]		Maximum suction flow rate [L/min (ANR)]		Air consumption [L/min (ANR)]	Port size
			Type S	Type L	Type S	Type L		
ZU03□A	0.3	0.35	-85	-40	1.8	3.4	4.2	ø4 One-touch fitting ø5/32"
ZU04□A	0.4		-87		3.2	5.8		
ZU05□A	0.5	0.45	-90	-48	7	13	14	ø6 One-touch fitting Rc1/8
ZU07□A	0.7				11	16		

In-line Type Vacuum Ejector

ZU□A Series

RoHS

How to Order

ZU05SA□

• Nozzle diameter

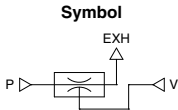
03	0.3 mm
04	0.4 mm
05	0.5 mm
07	0.7 mm

• Port size

Symbol	Port size	ZU03/04	ZU05/07
NII	ø4 One-touch fitting	●	—
	ø6 One-touch fitting	—	●
O1	Rc1/8 female thread	—	●
N	ø5/32"	●	—

• Ultimate vacuum pressure

Symbol	Ultimate vacuum pressure	ZU03/04	ZU05/07
S	-85 kPa (ZU03)/-87 kPa (ZU04)	●	—
	-90 kPa	—	●
L	-40 kPa	●	—
	-48 kPa	—	●



Specifications

Operating temperature range	-5 to 50°C (No freezing)	
Fluid	Air	
Applicable tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane	
Operating pressure range	0.1 to 0.6 MPa	
Standard supply pressure	ZU03/04	0.35 MPa
	ZU05/07	0.45 MPa

Ejector Specifications^{*1}

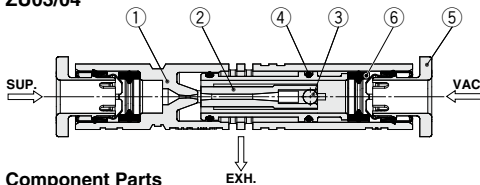
Model	Nozzle diameter [mm]	Ultimate vacuum pressure ^{*2} [kPa]		Maximum suction flow rate ^{*2} [L/min (ANR)]		Air consumption ^{*2} [L/min (ANR)]	Weight [g]	
		Type S	Type L	Type S	Type L		One-touch connection	Screw-in connection
ZU03□A	0.3	-85	-40	1.8	3.4	4.2	2.4	—
ZU04□A	0.4	-87	-40	3.2	5.8	7.7		
ZU05□A	0.5	-90	-48	7	13	14	3.9	18.6
ZU07□A	0.7			11	16	28	4.3	19.1

*1 The values indicating characteristics are representative values, and may vary depending on the atmospheric pressure (weather, altitude, etc.) and measurement method.

*2 Standard supply pressure

Construction

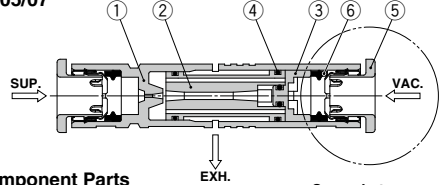
ZU03/04



Component Parts

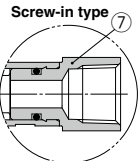
No.	Description	Material	Note
1	Body	Resin	
2	Diffuser	Resin	
3	Steel ball	Stainless steel	
4	O-ring	NBR	Grease applied
5	Cassette	—	
6	Seal	NBR	Grease applied

ZU05/07



Component Parts

No.	Description	Material	Note
1	Body	Resin	
2	Diffuser	Resin	
3	Cap	Resin	
4	O-ring	NBR	Grease applied
5	Cassette	—	
6	Seal	NBR	Grease applied
7	Screw-in stud	Brass	Electroless nickel plating

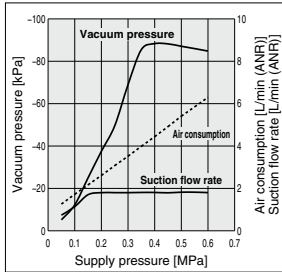


Exhaust Characteristics/Flow Rate Characteristics (Representative Value)

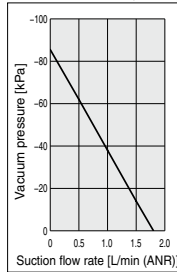
(Flow rate characteristics: Standard supply pressure)

ZU03SA

Exhaust Characteristics

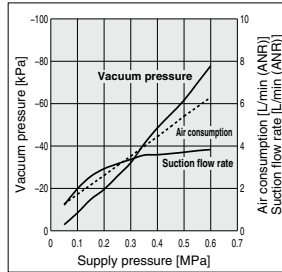


Flow Rate Characteristics (0.35 MPa)

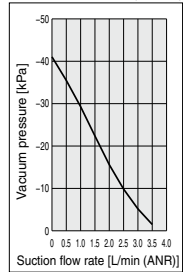


ZU03LA

Exhaust Characteristics

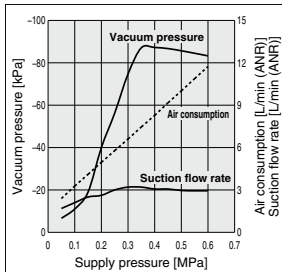


Flow Rate Characteristics (0.35 MPa)

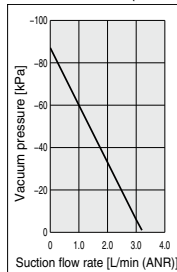


ZU04SA

Exhaust Characteristics

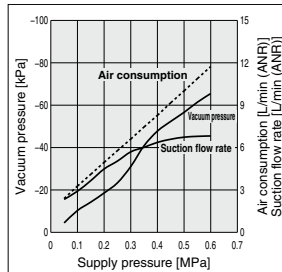


Flow Rate Characteristics (0.35 MPa)

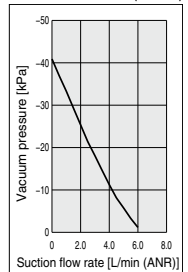


ZU04LA

Exhaust Characteristics

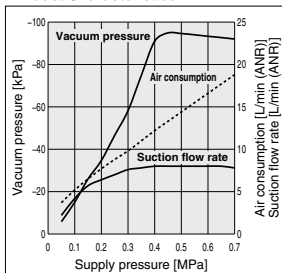


Flow Rate Characteristics (0.35 MPa)

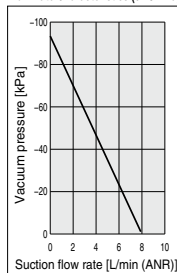


ZU05SA

Exhaust Characteristics

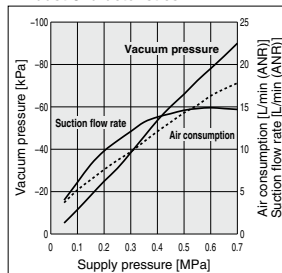


Flow Rate Characteristics (0.45 MPa)

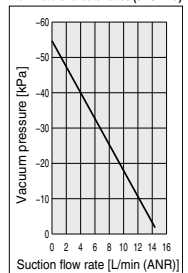


ZU05LA

Exhaust Characteristics

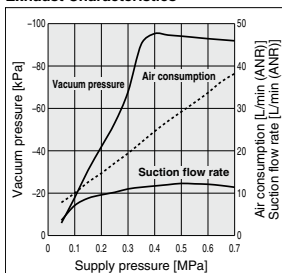


Flow Rate Characteristics (0.45 MPa)

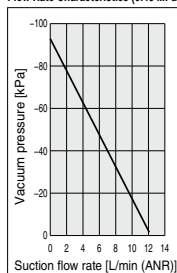


ZU07SA

Exhaust Characteristics

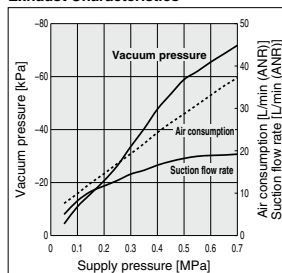


Flow Rate Characteristics (0.45 MPa)

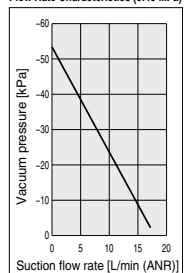


ZU07LA

Exhaust Characteristics

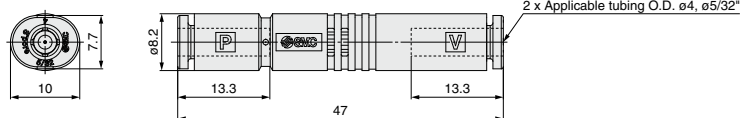


Flow Rate Characteristics (0.45 MPa)

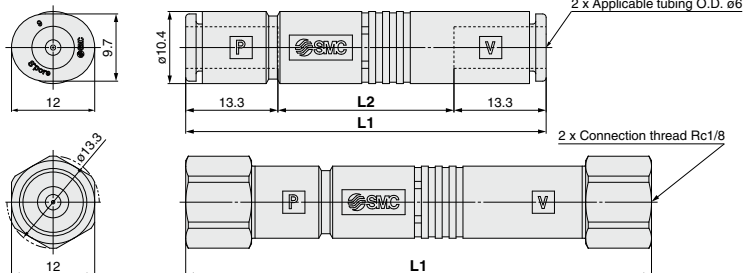


Dimensions

ZU03/04



ZU05/07



One-touch Connection

Model	L1	L2
ZU05□A	52	25.4
ZU07□A	59	32.4

Screw-in Connection

Model	L1
ZU05□A01	67.2
ZU07□A01	74.2

⚠ Specific Product Precautions

Be sure to read this before handling the products. For safety instructions, refer to the “Handling Precautions for SMC Products” and the “Operation Manual” on the SMC website: <https://www.smcworld.com>

Mounting

⚠ Caution

1. When the product is mounted in between piping, the piping on both the P port side and the V port side should be adequately supported in order to avoid any unnecessary load from the piping being applied to the product.

Failure to do so may lead to performance issues or damage to the body of the product.

When mounting the product, please do not block the exhaust port at the center of the body as this may cause performance issues.

Piping

⚠ Caution

1. Piping diameter

The piping diameter we recommend for each port is the same as that of the standard size One-touch fitting. If the piping diameter is reduced, it may lead to an insufficient flow of supply air, a reduction in suction flow, or a reduction in the ultimate vacuum pressure.

Model Selection

⚠ Caution

1. Supply valve

Select a supply valve which can provide a sufficient flow rate with ejector air consumption taken into account. If the flow rate of the supply valve is insufficient, it may lead to vacuum failure. The selected supply valve should have a C factor of at least that shown in the table below.

Minimum C Factor of a Supply Valve

Model	C [dm ³ /(s·bar)]
ZU03	0.04
ZU04	0.08
ZU05	0.12
ZU07	0.23

Air Supply

⚠ Caution

1. Quality of supply air

Use clean compressed air as the fluid. (Air quality class 2:4:3, 2:5:3, or 2:6:3 as specified in ISO 8573-1:2010 is recommended.) If any impurities enter the product, vacuum performance might be reduced due to the deterioration of the air passage or clogging of the exhaust system.