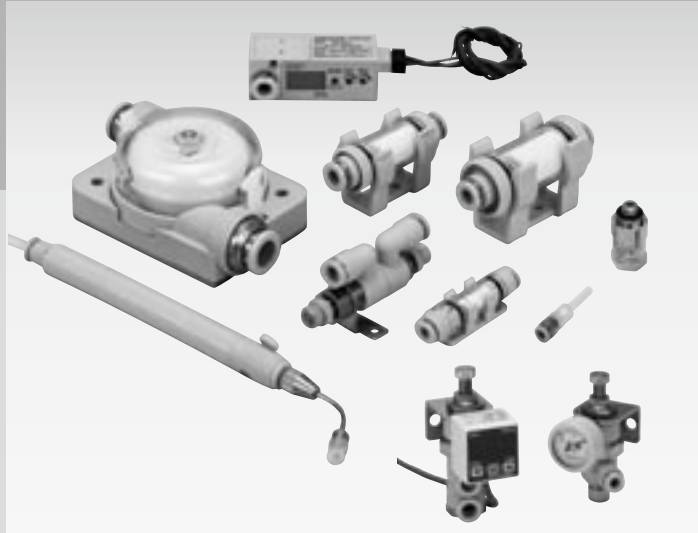


# Related vacuum products


## ■ Vacuum component



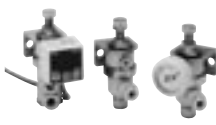
### C O N T E N T S

Series variation	420
● Position locking valve (VSECV)	422
● Compact vacuum regulator (VSRVV)	426
● Vacuum break unit (VSLF)	436
● Vacuum filter large volume union type (VSFB)	440
● Compact vacuum filter union type (VSFU)	440
● Compact vacuum filter socket type (VSFJ)	440
● Vacuum switch (VSUS)	448
● Air tweezers (VST)	454


## (Position locking valve)

Series	Model no.	Port size		Remarks	Page
		Vacuum generator side	Workpiece side		
<b>VSECV Series</b> • Separate circuit workpiece maintains vacuum even if workpiece deviates. • This is applicable for vacuum pads.		VSECV-M3	M3		422
		VSECV-M4	M4		
		VSECV-M5	M5		
		VSECV-M6	M6		
		VSECV-6A	R (c) 1/8		

## (Compact vacuum regulator)

Series	Model no.	Port size		Remarks	Page
		ø6	ø8		
<b>VSRVV Series</b> • Terminal pressure can be controlled in addition to main pressure. • Select either a vacuum pressure switch with a digital indicator or a vacuum pressure gauge.		VSRVV-*A*	○	○	426
		VSRVV-*B*	○	○	
		VSRVV-*U*	○	○	

## (Vacuum break unit)




Series	Model no.	Port size		Remarks	Page
		Vacuum generator side	Workpiece side		
<b>VSLF Series</b> • Control vacuum break air while maintaining vacuum characteristics of vacuum ejector. • Reduction of vacuum break time realized by vacuum break circuit relief function.		VSLF-44	ø4	ø4	436
		VSLF-66	ø6	ø6	
		VSLF-46A	ø4	R1/8	
		VSLF-66A	ø6	R1/8	

# Related vacuum products


Series variation

## (Vacuum filter)


●: Standard, ○: Option

Series	Model no.	Port size						Remarks	Page
		M5	ø4	ø6	ø8	ø10	ø12		
<b>VSFB Series</b> Large volume union type • Dust and water drops are eliminated with the cyclone effect and element. • The entire dust case is removed with a single touch, preventing dust from scattering. 	VSFB-66			●				Filtration area: 20cm <sup>2</sup>	440
	VSFB-88				●			Filtration area: 20cm <sup>2</sup>	
	VSFB-1010					●		Filtration area: 20cm <sup>2</sup>	
	VSFB-1212						●	Filtration area: 20cm <sup>2</sup>	
<b>VSFU Series</b> Compact union type • Tools are not required to replace or clean the element. • In-line types are easily installed in piping. 	VSFU-1S	○	○	○				Filtration area: 2.8cm <sup>2</sup>	
	VSFU-1L	○	○	○				Filtration area: 4.7cm <sup>2</sup>	
	VSFU-2	○	○	○				Filtration area: 7.5cm <sup>2</sup>	
	VSFU-3			○	○	○		Filtration area: 12.5cm <sup>2</sup>	
<b>VSFJ Series</b> Compact socket type • This is appropriate for discrete ejector, not integrating vacuum filter. 	VSFJ-44		●					Filtration area: 0.8cm <sup>2</sup>	
	VSFJ-66			●				Filtration area: 1.1cm <sup>2</sup>	

## (Vacuum switch)

Series	Model no.	Port size					Remarks	Page
		M5	ø4	ø6	ø8	direct		
<b>VSUS Series</b> • 2 point output and analog output are available. • Push-in joint, M5 female thread, or direct installation piping connection is available. 	VSUS-NW	○	○	○	○	○	NPN: 2 point output	448
	VSUS-NA	○	○	○	○	○	NPN: Analog output	
	VSUS-PW	○	○	○	○	○	PNP: 2 point output	
	VSUS-PA	○	○	○	○	○	PNP: Analog output	

## (Air tweezers)

Series	Model no.	Pad diameter				Rubber Material	Holder shape	Page
		ø2	ø4	ø6	ø8			
<b>VST Series</b> • Vacuum pad and ejector are integrated into a pen shape component. • Appropriate for assembly, etc., of small part • A package type is also available. 	VAT-A*N	○	○	○	○	Nitrile rubber	Type without valve	454
	VAT-A*S	○	○	○	○	Silicon rubber	Type without valve	
	VAT-B*N	○	○	○	○	Nitrile rubber	Valve integrated type	
	VAT-B*S	○	○	○	○	Silicon rubber	Valve integrated type	

Related vacuum products

VSECV

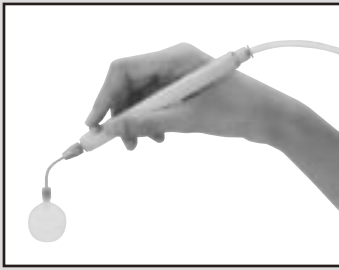
VSRVV

VSLF

VSFB-VSFU  
VSFJ

VSUS

VST



Vacuum ejector with integrated vacuum pad  
Air tweezers

# VST Series



## Features

- Air tweezers have a vacuum pad and vacuum ejector integrated in a pen-shaped body. This product is ideal for assembling small parts, etc.
- The VST-B type with integrated valve generates little noise, and conserves energy by flowing air only during use.

## Specifications

Descriptions	VST
Working fluid	Air
Working pressure range MPa	0.15 to 0.7
Rated supply pressure MPa	0.5
Ultimate vacuum kPa	-90 (VTB: -86)
Ambient temperature range °C	0 to 60

## How to order

- Air tweezers package set model no.

**VST - A - SET**

- Model no. of only air tweezers

**VST - A - 6RS**

Ⓐ Holder shape

Ⓑ Pad size, shape, material

Symbol	Descriptions
<b>Ⓐ Holder shape</b>	
<b>A</b>	Without valve
<b>B</b>	Valve integrated
<b>Ⓑ Pad size, shape, material</b>	
Refer to appendix table 1 for pad size, shape and material.	

Appendix table 1

Pad size, shape, material					
Symbol	Nitrile rubber	2RN	4RN	6RN	8RN
	Silicon rubber	2RS	4RS	6RS	8RS
Pad size (mm)		ø2mm	ø4mm	ø6mm	ø8mm

- \* Air tweezers package set descriptions

[Air tweezers: 1 pc., pad rubber: 4 pcs. (material: silicone), pad outer diameter: ø2mm, ø4mm, ø6mm, ø8mm]  
[Pad adaptor: 2 pcs. (for ø2.4mm, ø6.8mm), coiling tube: 1 tube]

- Model no.

· Filter element

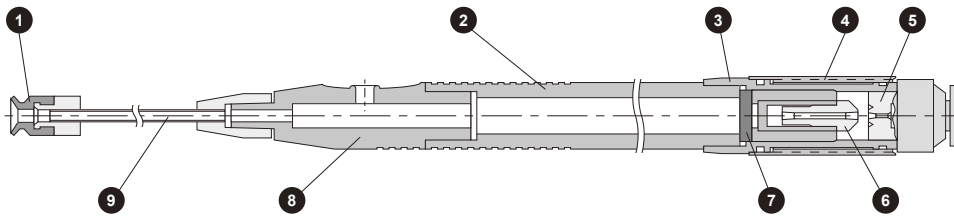
**VST - A - E**

Ⓐ Holder shape

Symbol	Descriptions
<b>Ⓐ Holder shape</b>	
<b>A</b>	Without valve
<b>B</b>	Valve integrated

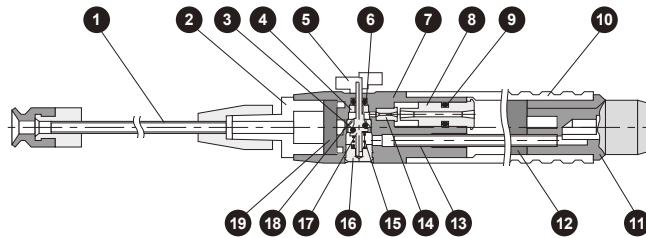
### Internal structure and parts list

#### ● Type without valve VST-A



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Standard type pad			6	Diffuser	Brass, nickeling	
2	Resin B	Nylon		7	Filter element		
3	Resin C	Polyacetal		8	Resin A	ABS resin	
4	Guard	ABS resin		9	Pad holder	Brass, nickeling	
5	Nozzle assembly						

#### ● Type with integrated valve VST-B



No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Pad holder B	Brass, nickeling		11	Joint	PBT	
2	Pad holder A	ABS resin		12	Silencer element		
3	O ring	Nitrile rubber		13	Pipe	Brass, nickeling	
4	O ring holder	Brass, nickeling		14	Nozzle	Brass, nickeling	
5	Push button	ABS resin		15	Spring	Stainless steel	
6	O ring	Nitrile rubber		16	Valving element guide	Brass, nickeling	
7	Resin A	PBT		17	Valving element	Brass, nickeling	
8	Diffuser	Brass, nickeling		18	Valving element ring	Brass, nickeling	
9	O ring	Nitrile rubber		19	Filter element		
10	Resin B	Nylon					

Related vacuum products

VSECV

VSRVV

VSLF

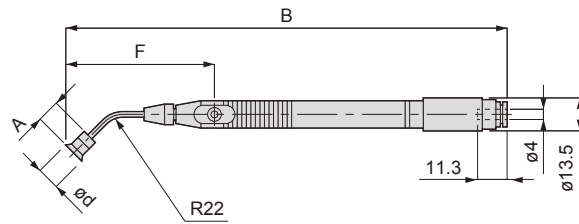
VSFB·VSFU  
VSFJ

VSUS

VST

## Dimensions

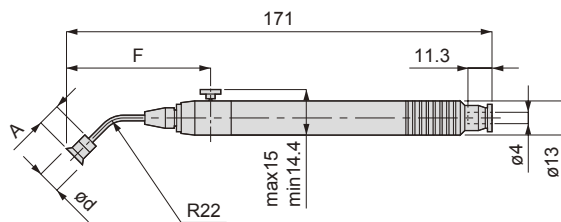
### ● Type without valve VST-A



Unit: mm

Model no.	Pad diameter ød	A	B	F	Weight (g)
VST-A-2R*	2	8	181.5	64	21.5
VST-A-4R*	4	8	181.5	64	21.5
VST-A-6R*	6	11	184.5	67	22.5
VST-A-8R*	8	9.5	183	65.5	22.5

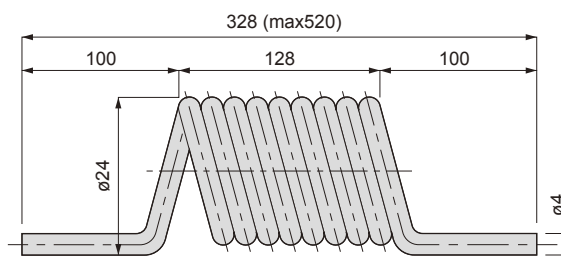
### ● Type with integrated valve VST-B



Unit: mm

Model no.	Pad diameter ød	A	F	Weight (g)
VST-B-2R*	2	8	59	16
VST-B-4R*	4	8	59	16
VST-B-6R*	6	11	62	17
VST-B-8R*	8	9.5	60.5	17

### ● Coiling tube for air tweezers



## Safety precautions

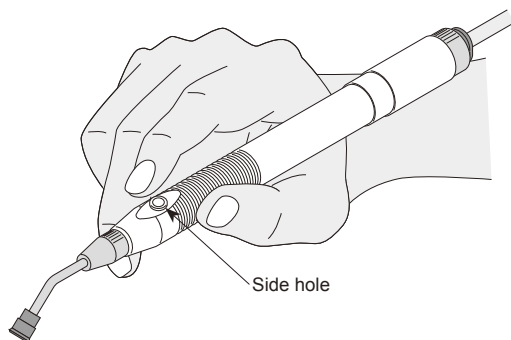
### CAUTION

- Do not mechanically push the pushbutton on the type with integrated valve. The button could break off.
- The filter element is replaced by removing the ejector (VST-A type without valve) or pad holder (VST-B type with integrated valve). Regularly service and inspect the element. Performance could drop if the element is clogged.
- The silencer for the type with integrated valve cannot be replaced.
- When piping to the air tweezers, use a coiling tube, and keep the load applied onto the joint as small as possible.

## How to use

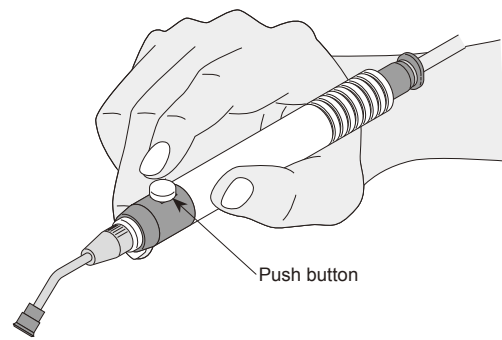
### ● VST-A type with no valve

Pick up a workpiece by pressing the side hole while compressed air (0.5 MPa) is flowing to the air tweezers. To release the workpiece, release the side hole.



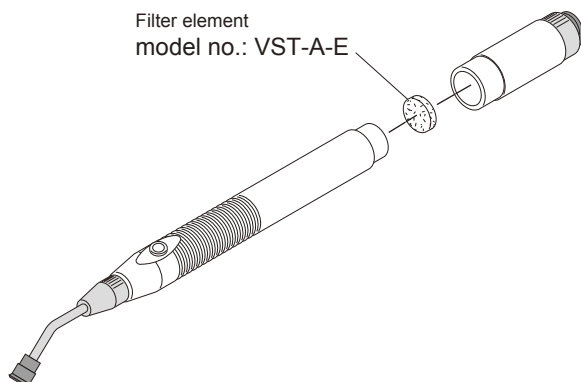
### ● VST-B type with integrated valve

Pick up a workpiece by pressing the pushbutton while compressed air (0.5 MPa) is flowing to the air tweezers. To release the workpiece, release the pushbutton.



## Replacement element for air tweezers

### ● VST-A type with no valve



### ● VST-B type with integrated valve

