



Vacuum Break Control Valve with Break Air Flow Rate & Relief Pressure Adjustment Needle Vacuum Break Unit

# VSLF Series

● Port size:  $\phi 4$ ,  $\phi 6$ , R1/8

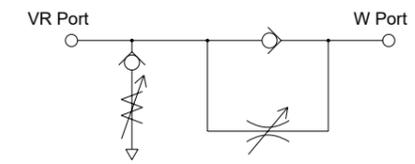


## VSLF Series Specifications / Characteristics

### Specifications

Item	VSLF
Operating Fluid	Air
Operating Pressure	0 to 0.7
Relief Valve Operating Pressure Setting Range	-0.015 to 0.015
Vacuum pressure	0 to -101
Operating Temperature	0 to 60 (However, no freezing)

### Circuit Diagram



■ Vacuum burst unit for vacuum ejector with vacuum burst mechanism.

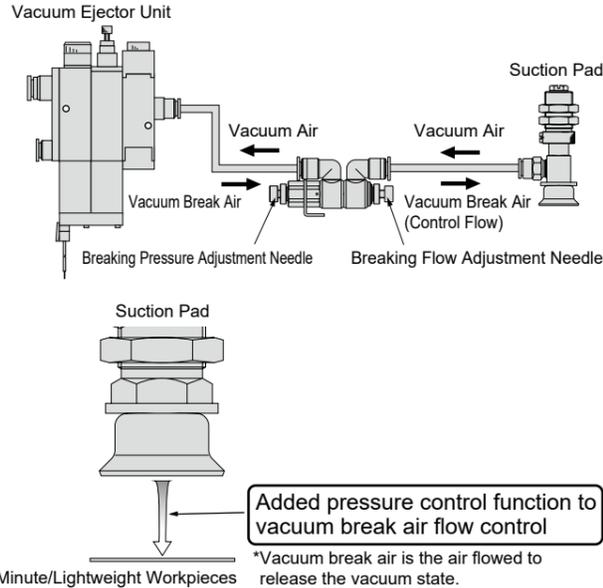
■ Control vacuum burst air while maintaining the vacuum characteristics of the vacuum ejector.

■ Pressure control is added to vacuum burst air flow rate control to prevent workpieces from being blown away.

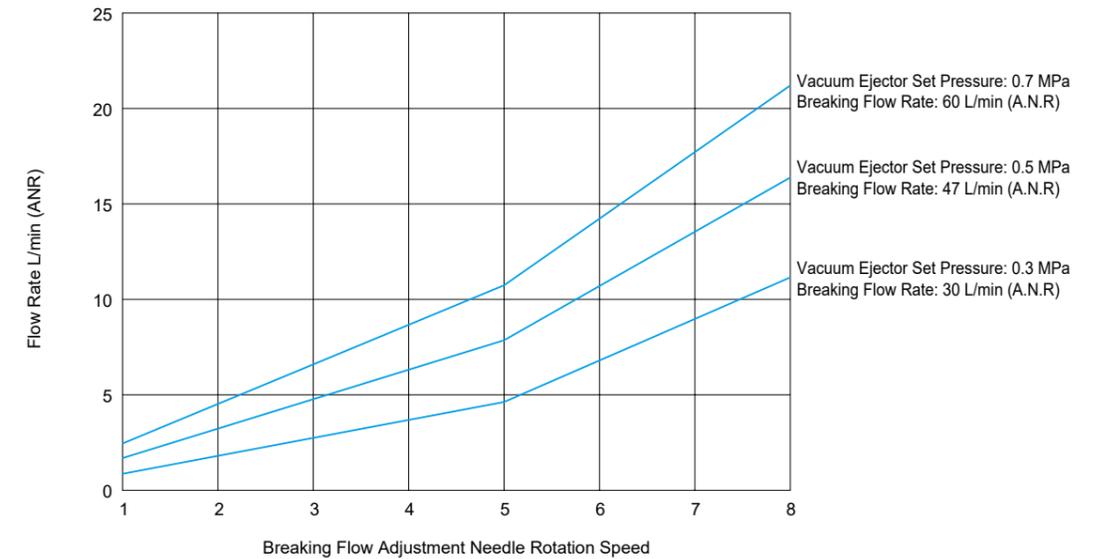
■ Shortening of vacuum burst time is realized by providing a relief function in the vacuum burst circuit (function to relieve extra pressure).

■ Burst time can be shortened by mounting to the end of the vacuum burst circuit.

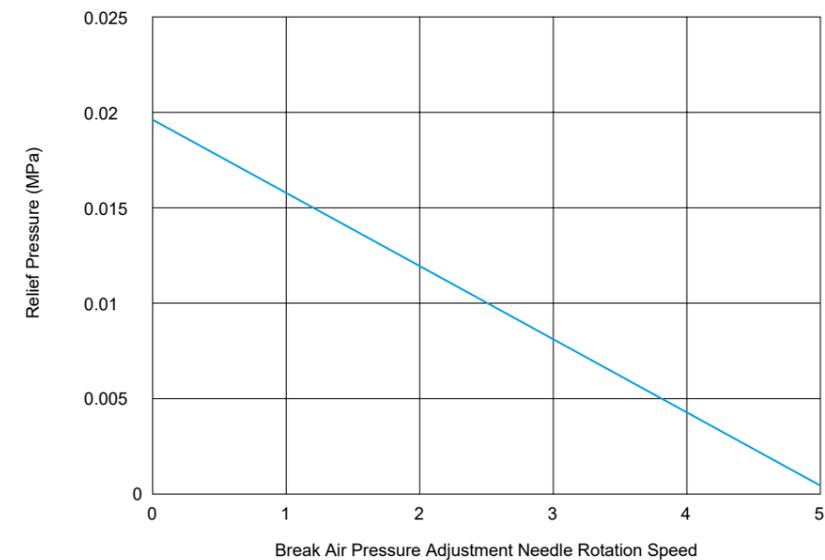
■ Fittings Tube removal direction is free, due to the rotation of resin body and tube part.



### Vacuum Break Air Discharge Flow Characteristic

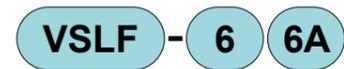


### Vacuum Break Air Pressure Characteristic



### Model No. Notation

● Vacuum Break Unit



Model No.      ② Pad Side Connection Port Size

① Vacuum Side Connection Port Size

#### ① Vacuum Side Connection Port Size

Code	Content
4	$\phi 4$ Push-in fitting
6	$\phi 6$ Push-in fitting

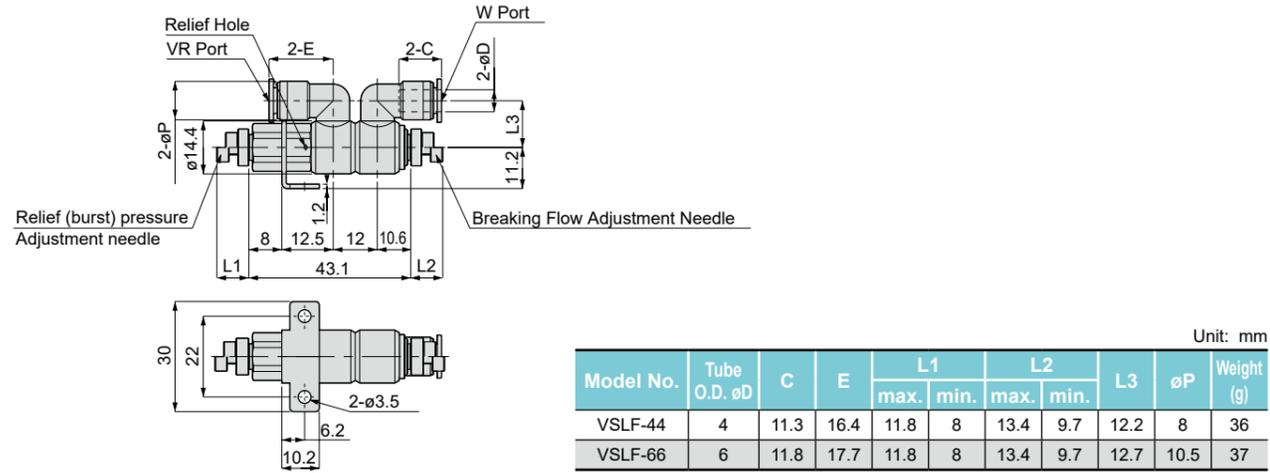
#### ② Pad Side Connection Port Size

Code	Content	Vacuum generator side port size	
		4	6
4	$\phi 4$ Push-in fitting	●	
6	$\phi 6$ Push-in fitting		●
6A	R1/8	●	●

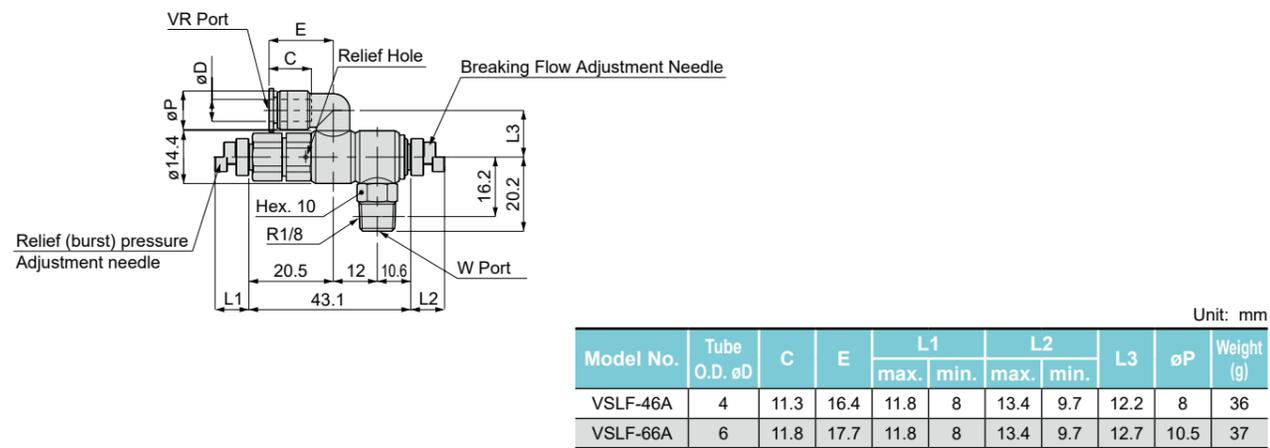
□ indicates not available.

External Dimension Drawings

● Vacuum side (VR) port: Push-in fitting, Pad Side (W) Port: Push-in fitting Type

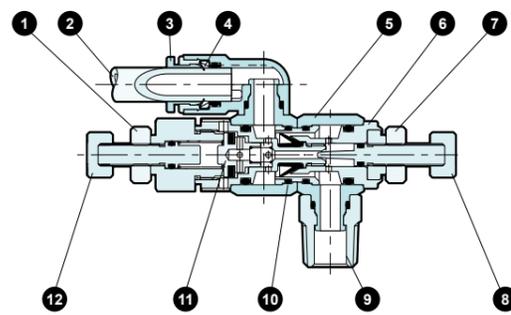


Vacuum side (VR) port: Push-in fitting, Pad Side (W) Port: Tapered Thread Type



Internal Structure Diagram/Materials

● VR Port: Push-in fitting, W Port: Tapered Thread Type



Part No.	Part Name	Material	Part No.	Part Name	Material
1	Lock Nut	Aluminum alloy	7	Lock Nut	Aluminum alloy
2	Vacuum Port (VR)		8	Vacuum Break Flow Adjustment Needle	Brass (Electroless nickel plating)
3	Release Ring	Acetal Resin	9	Pad Side Port (W)	
4	Locking Finger	Stainless Steel	10	Check Packing	Nitrile rubber
5	Resin Body	Polybutylene terephthalate resin	11	Valve Element	Aluminum alloy
6	Metal Body	Brass (Electroless nickel plating)	12	Vacuum Break Relief Pressure Adjustment Needle	Brass (Electroless nickel plating)



Pneumatic Components

To Use This Product Safely

Be sure to read this before use.

For general pneumatic components precautions, Intro 15 for details.

Individual Precautions: Vacuum Break Unit VSLF Series

Design / Selection

Warning

- Since the vacuum breaker unit has air control direction, read the catalog carefully before use. Incorrect control direction poses a risk of personal injury or equipment damage.
- Do not use with fluids other than air. Regarding the use of fluids other than air, please inquire.
- Do not apply tensile, torsion, or bending loads to the body. Do not drop or apply excessive impact. There is a risk of body damage.
- Without using tools, tighten the lock nut securely by hand. Tightening with tools may cause damage to the lock nut or body. Also, if not securely tightened, the lock nut may loosen, potentially disrupting the initial setting.
- Do not use in such a way that the internal pressure between the vacuum ejector and the vacuum burst unit is usually 0.2 MPa more. This can cause vacuum ejector damage.

Caution

- Read the catalog carefully regarding flow rate adjustment and vacuum burst relief pressure adjustment for vacuum burst air.
- Be careful when the piping resistance or required flow rate is large. Insufficient breaking flow rate may cause trouble. Check the specifications carefully before use.
- Be sure to install a Vacuum Filters on the pad side port (limited to filters usable with positive pressure for vacuum burst). Also, if not installed, avoid sucking in dust, salt, iron powder, etc., as much as possible, and perform internal cleaning periodically.

How to Use

Vacuum Break Unit Adjustment Method

1. First, install port VR(vacuum side port) to the vacuum ejector side and port W (pad side port) to the pad side, fully open the relief pressure adjustment needle ① in the figure and fully close the burst air flow rate adjustment needle ②
2. Generate vacuum of the vacuum ejector, gradually tighten the needle in Fig. ① so that the degree of vacuum rises, and check that there is no delay in the rising time of the vacuum. Then, repeatedly generate vacuum, and if there are no problems, proceed to setting 3.
3. Generate vacuum of the vacuum ejector, gradually tighten the needle in Fig.② so that the degree of vacuum rises, and check that there is no delay in the rising time of the vacuum.

