



FS0004A flow stabilizer

# User Guide

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**Hilintec**

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## About This Document

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### Purpose

This document is a description of the FS0004A series flow stabilizer, which is used to guide the relevant technical personnel to understand the product characteristics.

### Intended Audience

This document is intended for technician responsible for product development. You should know your product very well and have a clear concept of the relevant parameters, specifications and sizes of the required flow stabilizer.

### Keyword

Stable flow,lifetime advantage,modular connector

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## Change History

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The change history accumulates each update of this document. The latest version of the document contains all the previous updates.

Issue	Date	Product Version	Issuer	Modification
01	2020-07	01	ZHD	First official release

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# Contents

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<b>About This Document</b> .....	<b>I</b>
<b>Change History</b> .....	<b>II</b>
<b>Contents</b> .....	<b>III</b>
<b>1 Product Characteristics</b> .....	<b>5</b>
1.1 Usage.....	5
1.2 characteristic.....	5
1.3 Small flow attenuation.....	5
1.4 Good stability.....	6
1.5 Small size and easy to install.....	6
<b>2 Specification</b> .....	<b>7</b>
2.1 Technical parameters.....	7
2.2 Steady flow effect.....	8
2.3 Working condition.....	12
2.4 Material.....	12
<b>3 Product Model Description</b> .....	<b>13</b>
3.1 Brief Description of Model naming.....	13
<b>4 Schematic diagram</b> .....	<b>14</b>
4.1 Vacuum pump connection.....	14
4.2 Compressor connection.....	15
4.3 Flow stabilizer installation.....	15
<b>5 Cautions</b> .....	<b>16</b>
<b>6 Product size</b> .....	<b>17</b>
6.1 Installation dimension drawing.....	17
<b>7 Appearance</b> .....	<b>18</b>

# 1 Product Characteristics



## 1.1 Flow stabilization effect

The FS0004A flow stabilizer adopts a buffer and steady flow structure to stabilize the airflow pulsation and achieve a good steady flow effect.

## 1.2 Lifespan advantage

The product has a compact structure, no moving parts, no wear, and has a significant lifespan advantage.

## 1.3 Chemical stability

The main body of the FS0004A flow stabilizer is made of reinforced nylon, and the internal components are made of stainless steel. In order to ensure a good seal, a nitrile material sealing ring is used to ensure the sealing performance. The main material is resistant to alkali, most salt solutions, weak acids and some organic compounds, with good flame retardancy and anti-aging performance; the internal material is anti-oxidative and

corrosion-resistant; the seal material has good oil resistance, wear resistance and good anti-aging performance

## 1.4 Modular Connector

The flow stabilizer has Rc1/8 internal thread interface, which can be matched with three different specifications of connectors to adapt to different occasions. the standard small straight hose connector is recommended to be matched with 6\*8 silicone hose, the large straight hose connector is recommended to be matched with 8\*10 silicone hose connector, and the elbow connector is recommended to be matched with 6\*8 silicone hose connector. Please refer to chapter 2.3 for connector options.

## 1.5 Quick Installation

The product is equipped with two movable mounting brackets, which are fixed by two M3 screws, and the mounting distance between the mounting screws is 13-62 mm, see chapter 6.1 for details. During installation, the screw spacing can be adjusted according to the installation position, and the installation range is large, which is convenient and quick.

# 2 Technical Parameters

## 2.1 Model Selection

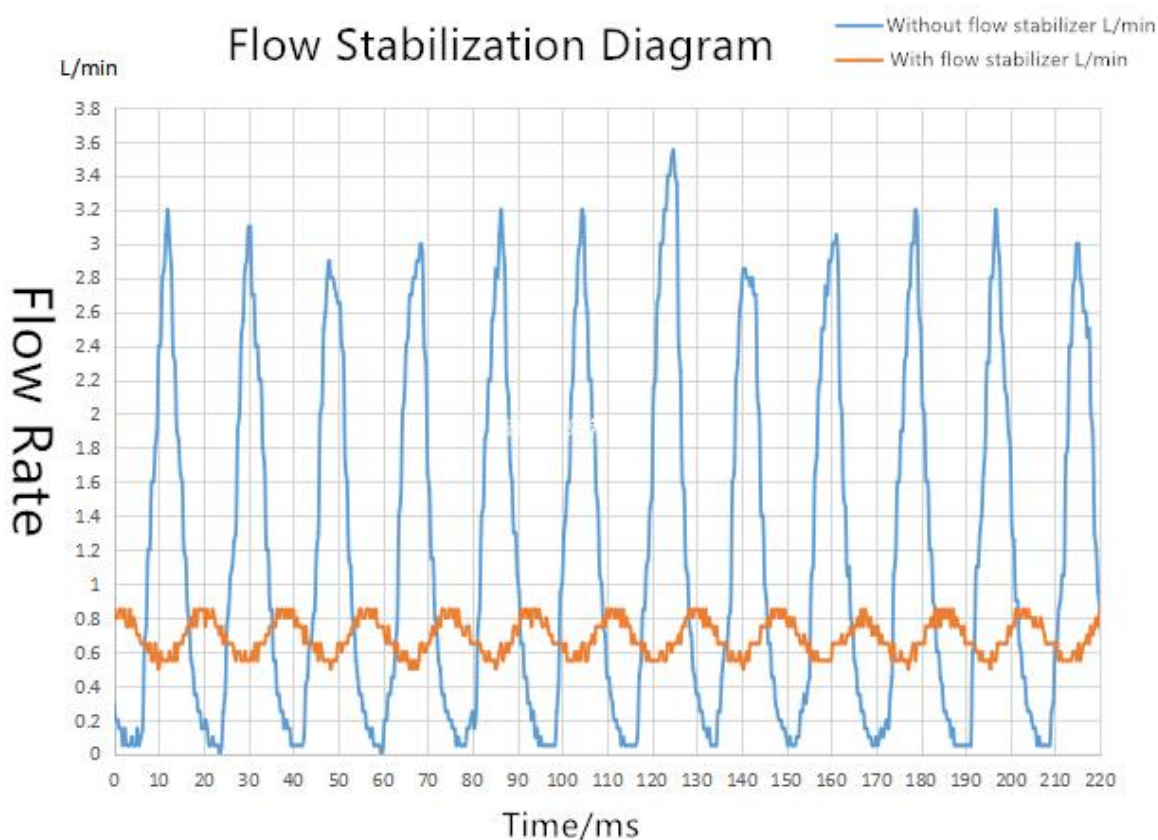
Model	Steady flow output Flow range (L/min)	Durable pressure (kPa)	Product weight (g)
FS0004A	0~4	200	50
...	...	...	

Note: 1. The output flow range of steady flow refers to the lower limit and upper limit of flow that can achieve a good steady flow effect after passing through the steady flow end.

2. The "durable pressure" refers to the maximum air pressure that the product can withstand. Use beyond this pressure may cause the flow stabilizer to burst and endanger.



## 2.2 Technical parameters



Note: The above data curve is measured by using FS0004A flow stabilizer with our C26S-24V micro pump .this is just for reference only.The effect of the stabilizer is different with different types of pumps.

## 2.3 Connector Options

No.	Air nozzle	Material	Matching tube
0	Small straight hose connector (Default)	Fiber reinforced PA6	Silicone hose with inner diameter 6mm
1	Big straight hose connector	Fiber reinforced PA6	Silicone hose with inner diameter 8mm
2	Quarter bend hose connector	Fiber reinforced PA6	Silicone hose with inner diameter 6mm

## 2.4 Working Condition

1. Environment: The recommended ambient temperature is 0°C~50°C, and the relative humidity  $\leq 90\%$ .
2. Medium: Permissible media temperature range is 0°C~50°C. The medium is allowed to contain water vapor, but the solid size must be less than 0.5mm, Otherwise, the flow stabilizer will be damaged; Do not suck oil mist gas.
3. Pressure resistance: The stabilizer housing is designed to withstand pressure of 200kPa, and The pressure shall not exceed the designed pressure tolerance value, otherwise it may lead to the loss of air tightness and the risk of damage.

## 2.5 Wetted materials

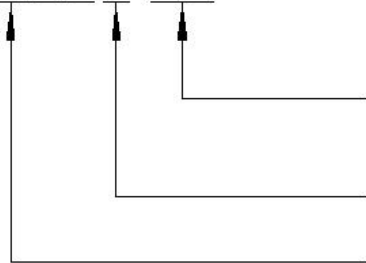
The flow stabilizer housing and connector are made of reinforced nylon, and the internal components of the stabilizer also include 304 stainless steel and nitrile sealing ring. The above materials have certain corrosion resistance to common acidic and alkaline gases. Please contact us for further details on chemical compatibility.

# 3

## Product Model Description

### 3.1 Brief Description of Model Naming

FS □ □ □ □ □ - □ □



Connector and material code: the first code is the connector type, 0, 1, 2... ,0 is the small straight connector, 1 is the large straight connector, 2 is the quarter bend connector; The second code is the main material of the product, 0 is reinforced nylon (standard)

Product update: A indicates the first update. B represents the second time

The output of Flow stabilization:FS is product code. The last four code are used to represent the lower limit and upper limit that can achieve good flow stabilization.They are represented by the numbers 0 to 9. Unit:L

Example: FS0004A-00

FS0004 indicates the steady flow output range of 0~4L, 00 indicates the left interval endpoint 0L,

04 indicates the interval right endpoint 4L; A indicates the first iterative improvement, 0 indicates

that the connector is a small straight connector (standard); 0 indicates that the main material is

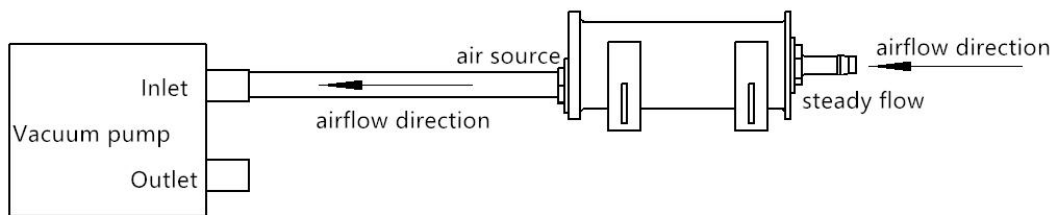
reinforced nylon (standard).

# 4 Schematic Diagram

## 4.1 Vacuum pump connection

When connect with the vacuum pump, the flow stabilizer is located on the side of the inlet pipe of the air pump, and it is located in the negative pressure range when working. In this case, the connection mode should be as shown in the following figure, and the air source side of the flow stabilizer is connected to the air inlet of the vacuum pump.

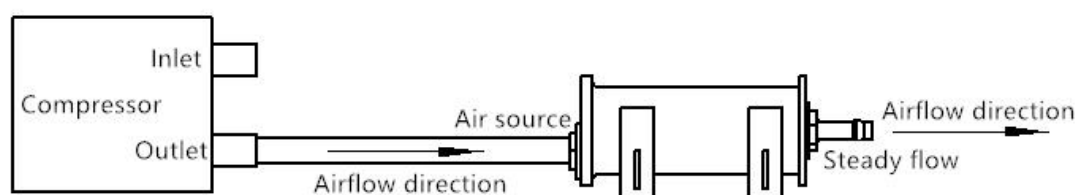
Note: The connection must follow the direction of the diagram!!



## 4.2 Compressor connection

When connect with the compressor, the flow stabilizer is located on the side of the outlet pipe of the pump, and it is located in the positive pressure range when working. In this case, the connection mode should be as shown in the following figure, and the air source side of the flow stabilizer is connected to the air outlet of the pump.

Note: The connection must follow the direction of the diagram!!



# 5

## Cautions

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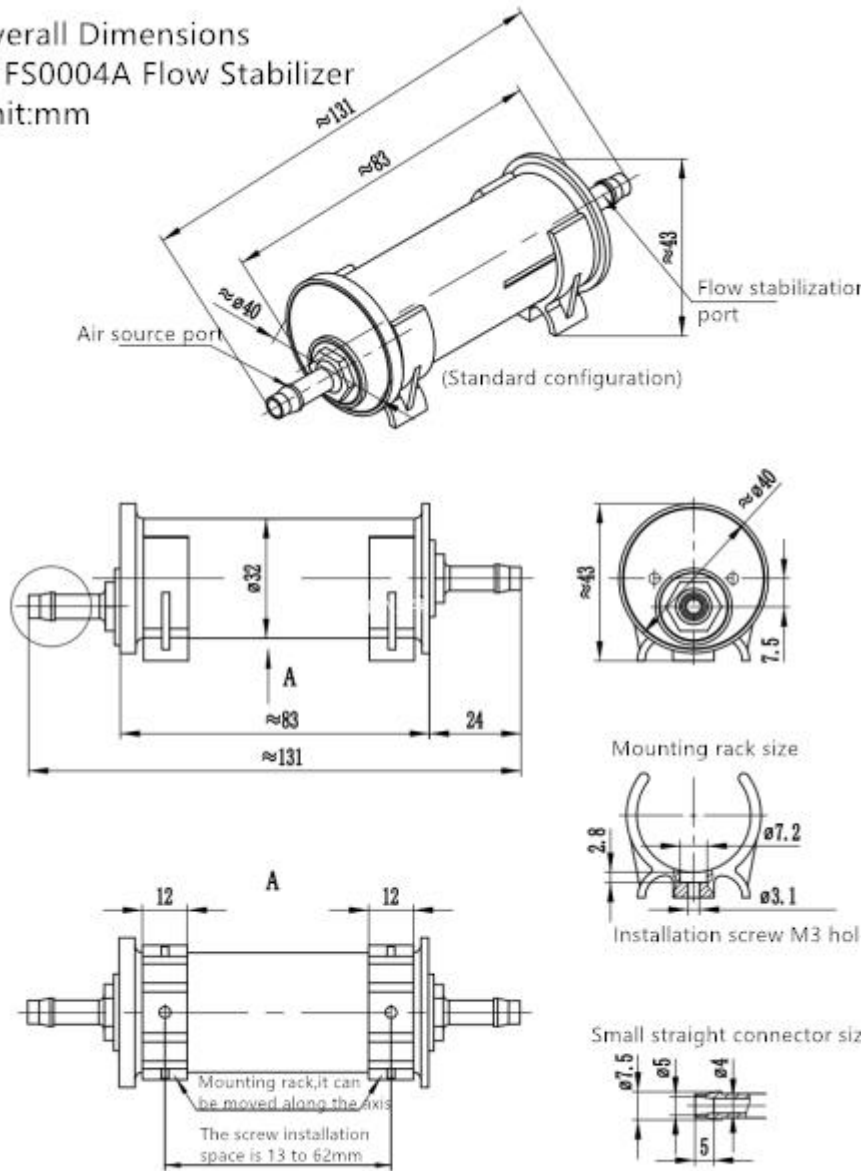
Please read the instructions in this chapter carefully and follow the instructions strictly before use.

- 1. Exceeding the withstand voltage of the flow stabilizer may cause the flow stabilizer to burst and endanger personal safety!**
- 2. Exceeding the nominal use parameters will cause damage to internal components, thereby reducing or losing the steady flow effect.**
- 3. The flow stabilizer is directional, please install and connect the tube in strict accordance with this manual. If the connection direction is wrong, the steady flow effect will be poor or the steady flow effect will be lost! .**
- 4. The flow stabilizer is a precision device, and non-professionals are not allowed to disassemble it! If unauthorized disassembly results in poor flow stabilization or loss, No free warranty.**
- 5. If there is particulate matter in the flow gas of the flow stabilizer, the diameter of the particle must be less than 0.5mm, otherwise the flow stabilizer will be damaged.**

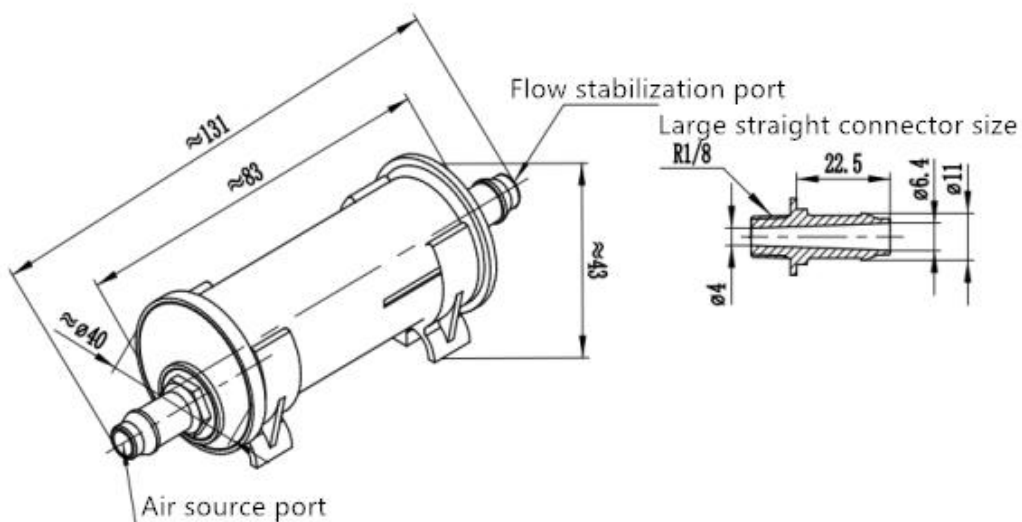
# 6 Dimensions

## 6.1 Dimension drawing

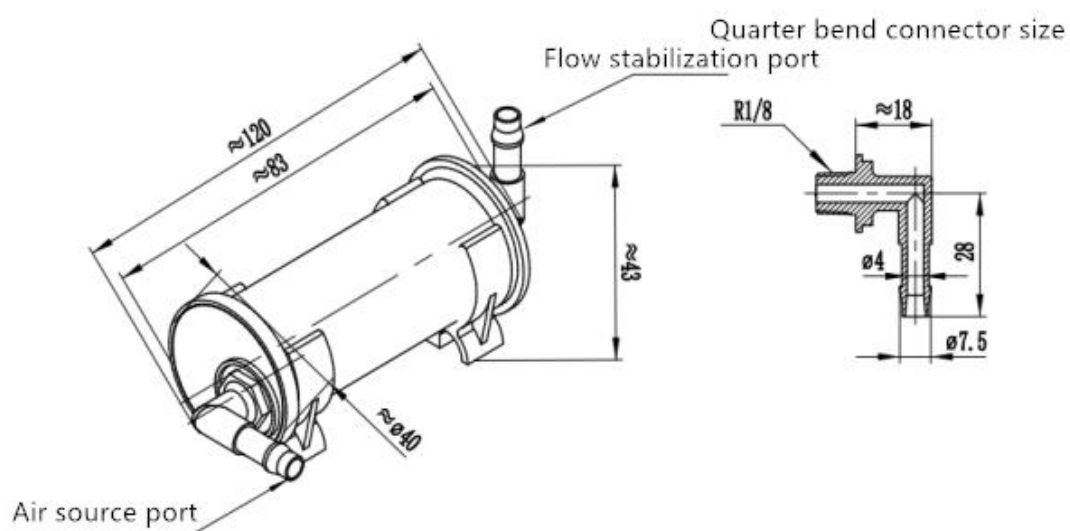
Overall Dimensions  
of FS0004A Flow Stabilizer  
Unit:mm



FS0004A Flow stabilizer  
with large straight connector



FS0004A Flow stabilizer  
with quarter bend connector





# 7 Appearance

