



Pneumatic muffler with indicator

Most machines with pneumatic valves are supplied with some type of pneumatic muffler to reduce the noise generated when compressed air leaves the venting ports. Unfortunately, it is common for production to be disrupted by conventional mufflers, which leads to a certain reluctance toward their use in industry. The problem can be solved by installing Silvent's patented pneumatic muffler with indicator.



The clogging problem

The noise from pneumatic valves is very harmful and should be dampened by pneumatic mufflers. Unfortunately, they are often removed in conjunction with operational disruptions and go missing. Conventional mufflers are often the cause of disrupted production. When a pneumatic muffler is blocked by contaminants, it can no longer let enough compressed air through, which may cause a production stoppage or affect the efficiency of the application. When troubleshooting, it is often difficult for maintenance technicians to identify which pneumatic muffler is blocked, resulting in the removal of all mufflers. In many cases, technicians forget to refit the pneumatic mufflers after the inspection, or choose not to refit them to reduce the risk of new stoppages. This is a well-known problem in industry, which unfortunately is rarely given priority, as a functioning, fault-free production process is usually more important than low sound levels.



THE PATENTED SOLUTION

1. Warning mark

Provides a clear indication before problems occur in the pneumatic system.

2. Two chamber system

Reduces back pressure as the expansion volume increases and the new filter is exposed.

3. Internal diffuser

Pushed out of the outer muffler chamber if back pressure is too high.

4. External diffuser

Effectively reduces noise thanks to the optimal use of the material volume.



1. The image shows the muffler in its normal position.



2. The muffler after a certain amount of clogging.



3. The warning mark indicates that the muffler needs replacing.

Problems with conventional pneumatic mufflers

- Difficult-to-localize malfunctions
- Costly downtime
- Noise problems are given low priority as a result of the above items

Warning indicators are the solution

Through R&D and close collaboration with industry, Silvent has developed a unique, patented series of pneumatic mufflers with warning indicators. The technology allows the pneumatic muffler itself to set the optimal combination of flow capacity and noise reduction thanks to a dynamic internal diffuser. To make maintenance work easier, the pneumatic mufflers have an integrated warning system that gives an indication before clogging takes place, i.e. it alerts before the muffler can disrupt production.

Thanks to the two-chamber system, the pneumatic muffler is provided with a new filter surface as the old surface becomes clogged, thereby increasing volume capacity to eliminate machine stoppage that could result from back pressure, which also extends service life considerably.

Advantages of the Silvent pneumatic muffler with indicator

- Alerts before problems occur
- Minimizes the risk of costly machine downtime
- Allows prioritization of noise suppression without affecting production reliability

Pneumatic mufflers

SILVENT SIS-02



- **Pneumatic muffler with indicator**

SILVENT SIS-02: Silvent's new series of pneumatic mufflers offers extremely effective noise reduction, compact size and a unique and patented warning system. The muffler's warning indicator gives early warning that backpressure in the system is too high. Maintenance personnel can both see and hear (by an elevated sound level) that it is time to replace the muffler before costly and unnecessary operation disturbance occurs. Since the warning indicator extends when it is pressed out, it is also possible to use electronic monitoring to stop the machine for muffler replacement. These pneumatic mufflers provide noise reduction of 30-35 dB(A). Silvent offers four different dimensions.

TECHNICAL DATA	SIS-02	SIS-03	SIS-04	SIS-05
Flow capacity (Nm ³ /h)	99	185	272	613
Sound level (dB(A))	65.5	66.5	73.2	76.5
Connection	G 1/8 "	G 1/4 "	G 3/8 "	G 1/2 "
Max temp (°C)	70	70	70	70
Max op. pressure (MPa)	0.5	0.5	0.5	0.5
Noise reduction (dB(A))	32	33	30	33

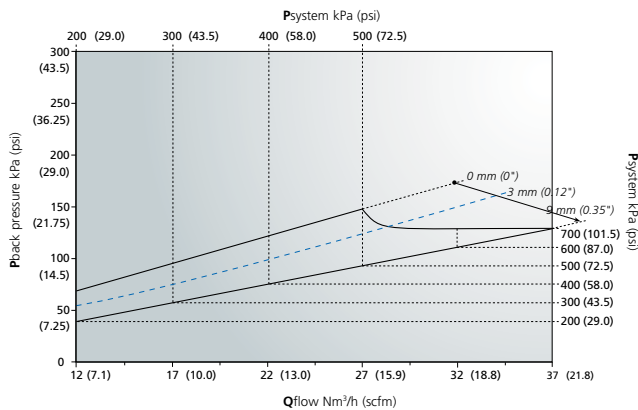
Material specification: HDPE, PP

*The value for flow applies with continuous operation over a valve.
For further information, see page 166 or visit silvent.com.*

Flow chart for pneumatic muffler SIS 02 – SIS 05

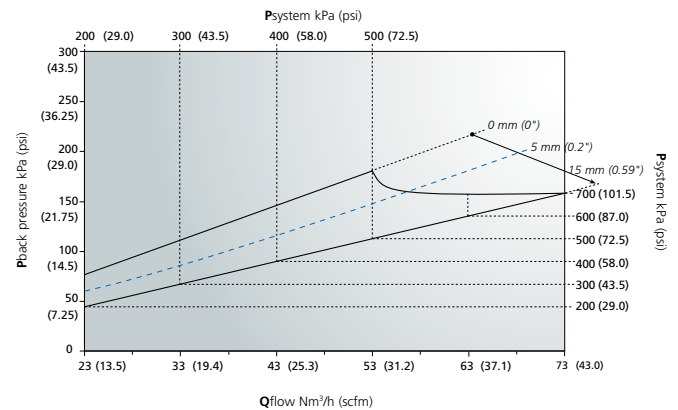
The diagrams show flows and back pressure for different system pressures for each SIS pneumatic muffler. The values in *italics* state in mm (inches) how much the silencer is triggered. Values range from zero to a maximum recommended triggered mode, where the warning indicator becomes visible.

SIS-02



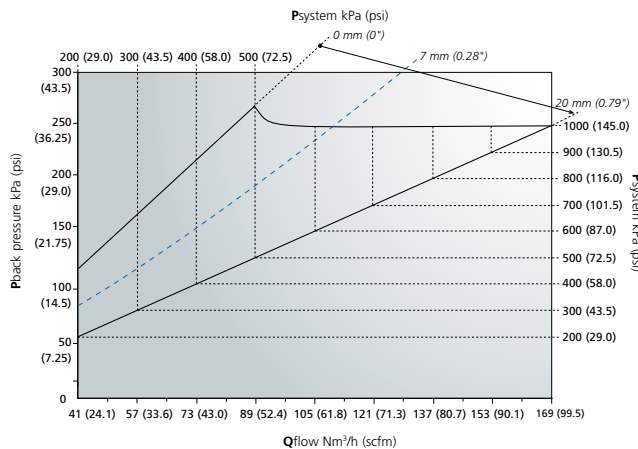
*Continuous operation over 1/8" valve with hose diameter Ø 6/4 mm (Ø 0.236").

SIS-03



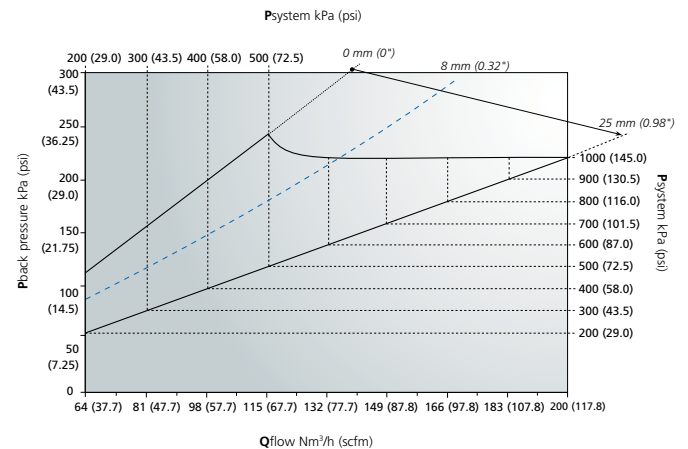
*Continuous operation over 1/4" valve with hose diameter Ø 8/6 mm (Ø 0.315").

SIS-04



*Continuous operation over 3/8" valve with hose diameter Ø 10/8 mm (Ø 0.394").

SIS-05



*Continuous operation over 1/2" valve with hose diameter Ø 12/10 mm (Ø 0.472").