



sartorius stedim
biotech

Standard Filter Housings Filter Cartridge Housings for the Biopharmaceutical Industry



turning science into solutions

Sartorius Stedim Biotech at a glance

The Sartorius Stedim Biotech Group is an internationally leading laboratory and process technology provider covering the segments of biotechnology and mechatronics. In 2008, the technology group earned sales revenue of 609,8 million euros. The Goettingen-based company founded in 1870 currently employs approximately 3,600 persons. Its biotechnology segment focuses on filtration and purification products as well as fermenters and bioreactors. The mechatronics segment manufactures, in particular, equipment and systems, which feature weighing, measurement and automation technology for laboratory and industrial applications, as well as hydrodynamic bearings. Key Sartorius Stedim Biotech customers are from the pharmaceutical, chemical and food and beverage industries and from numerous research and educational institutes of the public sector. Sartorius Stedim Biotech has its own production facilities in Europe, Asia and America as well as sales subsidiaries and local commercial agencies in more than 110 countries.



Introduction

There has been, and is, an increasing demand for quality filter cartridge systems for sterilizing and polishing filtration processes. An emphasis has been placed on the integrity of construction of the filter cartridges. However, the filter cartridge housing is just as an important part of any filtration system. Without a proper housing the cartridge is useless. Even the best filter cartridge cannot do the job if enclosed in a housing that allows fluid to bypass the filter, has external leaks, are not chemically or mechanically compatible with the application. Quality gas or liquid filtration systems require both quality housings and quality filter cartridges. To meet this need, Sartorius Stedim Biotech has been producing a sanitary line of housings with focusing on quality.



Standard filter housings that meet your needs

Features

- Hygienic, dead space-free design
- All product-contact surfaces are electropolished with a surface finish of $Ra < 0.5 \mu m$ (< 19.6 microinch)
- Clamps, flanges and threaded couplings are TÜV-tested (German Association for Technical Inspection and Safety)
- Minimal pressure losses thanks to optimized flow patterns
- High-grade stainless steel 316 L construction
- Options for connecting test and analytical devices
- Condensate run-off valves on compressed gas housings
- Approved according to Atex EX II 2 G D c
- Optimized low hold-up volume design





Ease in Cleaning

Sartorius Stedim Biotech utilizes a unique filter cup design that is conducive to allow a thorough and easy cleaning. The raised filter cup design eliminates small grooves and tight spaces that might be difficult to clean while still permitting free complete drainage of the filter housing.

Flexibility

Sartorius Stedim Biotech offers the widest range of housing sizes and design options to exactly match your flow rate, pressure differential and hold-up volume requirements. Connections are available in many styles and sizes. Custom designs and unique configurations are available upon request.

Ease of Installation

Sartorius Stedim Biotech housings are sold ready to install with all gaskets, o-rings and clamps. The flexible connectivity allows the end-user to install the housings to new or existing hard-piped installations.

Reliable quality that fulfills your requirements

Focused Quality –

Filter Cartridge Housings

Sartorius Stedim Biotech standard filter housings meet the highest requirements of the biopharmaceutical industry. Controlled production engineering is a guarantee for outstanding quality in processing and operational safety. All filter cartridge housings comply with Pressure Equipment Directive PED 97|23|EC. Our housings additionally feature GMP-compliant designs and FDA|USP Class VI approved gasket materials. Meticulously processed surfaces ensure operational safety wherever sterility and cleanability are concerned. Customer-specific documents are available for every filter cartridge housing. If requested, we can supply housing designs customized to meet your specific application.



Quality of Materials

Only 316L Stainless steel is used for all wetted surfaces to provide maximum durability. Supplied O-rings and gaskets are compounded only from FDA approved materials that meet the requirements for direct contact with food and biopharmaceutical products.

Quality Surface Finishes

All Sartorius Stedim Biotech Sanitary housings come standard with internal finishes of at least 0.5 micron Ra (19.6 microinch) and are electropolished. Electropolishing removes surface impurities in stainless steel left over from the machining and the finishing processes. Such impurities are sites for future initiation of corrosion and possible sources of contaminants leaching into the product. Electropolishing also smooths the microscratches left by mechanical polishing, thus reducing the total surface area the product will contact, and making it harder for bacteria or contaminants to lodge on the housing surface. Finally, electropolishing leaves a highly corrosion resistant, passive film on the surface of the steel (passivation). Thus electropolishing is the recommended finish for all applications where cleanliness and corrosion resistance are critical.

Quality Control and Documentation

An important feature of pharmaceutical process validation is documentation. All our housings are given stringent inspections during and after manufacturing including dimensional checks, weld inspections, surface measurements and hydrostatic testing. Each housing is labeled by laser with a matching serial number on the bell and base. This serial number provides complete traceability for the Quality Control Certificate, Material Test Reports, and Weld Logs.

PED 97|23|EC Standard

Sartorius Stedim Biotech Stainless Steel Housings are designed and manufactured according to the Pressure Equipment Directive PED 97|23|EC. Our manufacturing process follows the highest quality standards and is monitored by an internal quality control system as well as by independent notified bodies on a regular basis.



Off-the-Shelf Products – Mini Housings

Product specifications

Housing material	316L stainless steel
Seals	EPDM (FDA USPcIV)
Surface finish	Electropolished <math><0.5 \mu\text{m}</math> (19.6 microinch)
Body closure	Sanitary Tri Clamp
Max. allowable working pressure	10 bar (145 psig)
Max. allowable working temperature	150° C (302°F)

Documentation type "N"

Content:

- Manual
- Declaration of conformity PED 97|23|EC
- Raw material certificates (BOM)

PED design code

Housings designed in accordance with the European Council Pressure Equipment Directive (PED 97|23|EC). Conformity assessments based on Fluid Group 1 (dangerous) including steam.

All Mini- and 1 Round single housings can also be used in ASME applications



Order code:
7M19LEN00001

T-style pressure liquid housing

Pharma vent valve

Adapter 15 (Plug-in)

Cartridge height 5"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 19.1×1.65 mm (3/4")

Installation dimension, face to face 172 mm (6.77")



Order code:
7M19LEN00162

T-style pressure air housing

Pharma vent valve

Pharma drain valve

Adapter 15 (Plug-in)

Cartridge height 5"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 19.1×1.65 mm (3/4")

Installation dimension, face to face 164 mm (6.46")



Order code:
7M19LEN00040

I-style liquid housing

Pharma vent valve

Pharma drain valve

Adapter 15 (Plug-in)

Cartridge height 5"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 25.4×1.65 mm (1")

Installation dimension, face to face 287 mm (11.30")



Off-the-Shelf Products – 1 Round Single Housing



Order code:
7S11LEN00147 10"
7S12LEN00147 20"

T-style pressure liquid housing

Pharma vent valve

Pharma drain valve (inlet)

Adapter 25 (Double bayonet)

Cartridge height 10" and 20"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ISO1127 33.7×2.0 mm (1")

Installation dimension, face to face 243 mm (9.57")



Order code:
7S11LEN00091

T-style pressure liquid housing

Pharma vent valve | gauge port TC 50.5 (1.5")

Adapter 25 (Double bayonet)

Cartridge height 10"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 25.4×1.65 mm (1")

Installation dimension, face to face 217 mm (8.54")



Order code:
7S11LEN00138 10"
7S12LEN00138 20"

T-style pressure gas housing

Pharma vent valve | gauge port TC 50.5 (1.5")

Adapter 25 (Double bayonet)

Cartridge height 10" and 20"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 38.1×1.65 mm (1½")

Installation dimension, face to face 252 mm (9.93")



Order code:
7S10LEN00414 5"
7S11LEN00414 10"

I-style non pressure gas housing

Adapter 25 (Double bayonet)

Cartridge height 5" and 10"

In- and outlet TC 50.5 mm (1.5")

Tube dimension ASME-BPE 38.1×1.65 mm (1½")

Installation dimension height 5" 253 mm (9.98")

Installation dimension height 10" 393 mm (15.49")



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