



SWISS QUALITY.
SINCE 1938.



CLAROX® filter cartridges
SECUROX™ filter housing

DEPTH FILTRATION FOR VALUABLE LIQUIDS.

SECUROX™ filter housing



Filter housing

Features

The SECUROX™ ST is a high quality stainless steel filter housing developed for use with standard filter cartridges and manufactured for heavy duty use – 24/7.

Advantages

- The enclosed system allows filtration completely without any product loss
- Vertical design
- Small equipment volume
- Readily adaptable to the desired task with expansion options
- Quick and easy to clean
- Surface roughness < 0.8 µm [Ra]
- Membrane filter cartridges can be checked for integrity

Certificates and documents

The following certificates and documents are available:

- FDA Certificate
- EU Directive 97/23/EC
- ATEX certified

Filter housing type	Possible numbers of cartridges
10-1	1 x 10"
30-1	1 x 30"
30-3	3 x 30"
30-5	5 x 30"
30-8	8 x 30"
30-12	12 x 30"
30-18	18 x 30"
30-24	24 x 30"
30-30	30 x 30"

others on request



CLAROX® CONTROL mini



CLAROX® CONTROL

CLAROX® CONTROL integrity testers

CLAROX® CONTROL and CLAROX® CONTROL mini are both portable integrity testers. Both of them test the integrity of membrane cartridges using the pressure drop test method. CLAROX® CONTROL is a reliable and user-friendly device which can be used to test up to 50 installed cartridges (0,1–1,0 µm). Both systems are battery-powered and can be used directly on the cartridge housing.

Up to 19 programmes and up to 100 results can be stored on the device. The software is Windows®-based, so it can be displayed directly on a PC. Unlike the CLAROX® CONTROL mini device, the CLAROX® CONTROL device can also print results locally.

More information can be found in the sections on the relevant product.

CLAROX® filter cartridges



Mounted filter cartridges



Pleating

Features

CLAROX® filter cartridges represent an approved and established filtration technology in solid/liquid separation.

On usage approved filter cartridges

Our range of cartridges offers safe and economical solutions for many different filtration applications.

We distinguish between

- Prefiltration with depth filter cartridges
- Prefiltration with pleated depth filter cartridges
- Prefiltration with stainless steel cartridges
- Prefiltration with surface filter cartridges
- Final filtration with membrane filter cartridges

Depth filter cartridges

FILTROX depth filter cartridges are normally made of melt-blown polypropylene fibers. Depending on the fineness of the filter, up to 8 different layers may be used, from coarse outer layers to very fine inner layers.

The above mentioned filter fibers are attached to an inner core in wound or pleated form.

Surface filter cartridges

FILTROX surface filter cartridges can be made of various materials such as polypropylene, polyester, glass fibers and steel fibers.

Particles which are bigger than the filter pores cannot penetrate into the filter medium. This effect is known as the 'sieve effect' and occurs primarily in surface filters.

The filter medium is installed in the filter cartridges in pleated form and removes residue particles individually on the surface of the filter medium. Use of glass fiber materials brings natural adsorption forces into effect.

Membrane filter cartridges

The filter medium of FILTROX membrane filter cartridges is made of hydrophilic polyethersulfone (PES) and is also installed in the cartridge in pleated form. This type of filter cartridge is used exclusively in the final filtration of product which has already been pre-clarified to ensure removal of harmful micro-organisms. It guarantees sterile filtration immediately prior to bottling.

Filter cartridge overview



CLAROX® PL/G filter cartridge
in comparison to the CLAROX® PL

CLAROX® PL

The specially pleated polypropylene filter cartridge for prefiltration of beverages makes the consistent retention of certain particles, such as diatomaceous earth and individual yeast cells, possible through its combination of surface and depth filters. Generally usable, made of 100% polypropylene. The effective filter surface area is made larger by the pleated design. This results in a better particle holding capacity. Thanks to its special design, it allows excellent regeneration capacity through backwash. These cartridges have an absolute retention capacity with a β -ratio of 5000 and an efficiency of 99.98%.

CLAROX® PL/E

Pleated polypropylene filter cartridge for separation of particles in various application fields. Economical alternative to the CLAROX® PL cartridge. Nominal retention rate with an efficiency of around 99%.

CLAROX® PL/H

Pleated polypropylene filter cartridge with up to 5 layers of decreasing porosity to achieve a higher surface area for particle separation of solvent filtration and a high particle holding capacity. Semi-absolute retention rate with an efficiency of 99%. Also available in 5" junior type design.

CLAROX® PL/G

Specially designed polypropylene large surface filter cartridge for the filtration of large volume flows. Large volumes of residue are retained inside the cartridge. Flow from inside to outside. Its main area of use is in the prefiltration of tap and mineral water.

CLAROX® GF

These pleated filter cartridges with a nominal retention capability contain a filter medium made of glass fibers for beverage clarification. They can also be used in the filtration of rinse water for membrane final filters. This cartridge has a high particle holding capacity and allows the retention of fine particles and colloids.

CLAROX® PX/E

This filter cartridge contains up to 4 layers of pleated polyester filter media. All its integral parts are also made of polyester, guaranteeing high temperature resistance up to 120°C even in long-term use. Its high level of chemical resistance makes it ideal for solvent filtration.



CLAROX® filter cartridges



CLAROX® S/PL stainless steel filter cartridge

CLAROX® GP

This filter cartridge belongs to the latest generation of cartridges. The filter medium is made of specially developed polypropylene nanofibers. Nanofibers have a diameter of 0.5–0.8 µm, which is around 5–10 times finer than any material previously used in filter cartridges. Using this type of fiber results in a filter medium which allows a high flow capacity at low differential pressures. The superfine structure of nanofibers allows for highly effective removal of bacteria, yeast, mould and colloids.

CLAROX® GM

This filter cartridge contains a pre-filter medium composed of glass fibers, providing optimal protection for the installed downstream 1.2 µm PES membrane. The CLAROX® GM filter cartridge is used mainly in the removal of yeast cells and mould in the wine industry. The glass fiber layer's depth filter matrix also allows the removal of deformable particles such as colloids.

CLAROX® MP

Membrane filter cartridges with a pleated asymmetric PES membrane for reliable and economical final sterile filtration of tap and mineral water.

CLAROX® MP/W

The CLAROX® MP/W membrane filter cartridge for wine filtration (0.45, 0.65 and 0.8 µm) contains a pleated asymmetric PES membrane for reliable and economical final sterile filtration. These filter cartridges are used in final filtration after sufficient prefiltration using depth filter sheets (FIBRAFIX®), depth filter modules (FILTRODISC™) or prefiltration cartridges.

CLAROX® MP/B

The CLAROX® MP/B membrane filter cartridge for final filtration of beer (0.45 and 0.65 µm) contains a pleated asymmetric PES membrane specially developed for beer filtration, guaranteeing reliable and economical final filtration. These filter cartridges are used in final filtration after sufficient prefiltration using depth filter sheets (FIBRAFIX®), depth filter modules (FILTRODISC™) or prefiltration cartridges.

CLAROX® S/PL

The CLAROX® S/PL is a pleated stainless steel filter cartridge. This filter medium (a combination of surface and depth filters), lies between two stainless woven wire cloths (316L) and is made of sintered 316L stainless steel fibers. This highly stable structure makes filtration possible at high pressure and temperatures (>300°C), as well as in the presence of corrosive liquids. Manual mechanical cleaning of the cartridge is also possible.

CLAROX® S/PP

This filter cartridge, a nominal surface filter made from stainless woven wire cloth (316L), represents the ideal economical alternative to the CLAROX® S/PL, used primarily for filtration of corrosive liquids and steam. It is resistant to temperatures of >300°C.

Examples of use: recommended cartridges and parameters

Application	Recommended cartridge	Recommended flow rate /L/30" hr	Max. differential pressure kPa (bar)
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Beer



Fine filtration (trap filtration)	CLAROX® PL 3.0 / 10 / 20	2000–3000	500 (5.0)
Ultra-fine filtration	CLAROX® GF 0.5	1500	400 (4.0)
Prefiltration before membranes	CLAROX® PL 0.5	1000	500 (5.0)
Sterile filtration	CLAROX® MP/B 0.45 / 0.65	900	400 (4.0)

Wine



Ultra-fine filtration	CLAROX® GM 10	1000	400 (4.0)
Sterile filtration	CLAROX® MP/W 0.45 / 0.65	700–1000	400 (4.0)

Spirits



Fine/polishing filtration of distillates	CLAROX® GF 0.2	1000	500 (5.0)
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Water



Fine filtration of rinse water for membrane cartridges	CLAROX® GF 0.2 / 1.0	3000–5000	500 (5.0)
Fine filtration of mineral water	CLAROX® PL 1.0 / 0.5	2500–3500	500 (5.0)
Sterile filtration of mineral water	CLAROX® MP 0.2	2500	400 (4.0)

Sugar syrup



Clarification	CLAROX® PL 5.0 / 3.0	1500 at 75 °C	300 (3.0)
Fine filtration	CLAROX® PL 1.0 / 0.5	1000 at 75 °C	300 (3.0)

Miscellaneous



Particle filtration of steam	CLAROX® S/PP 10.0 / 5.0 CLAROX® S/PL 10.0 / 5.0		
Removal of particles from solvents	CLAROX® PL/H 5.0	150–200 / 5"	500 (5.0)
Particle filtration of aggressive media	CLAROX® PX/E 1.0	1000	500 (5.0)

CLAROX® order information

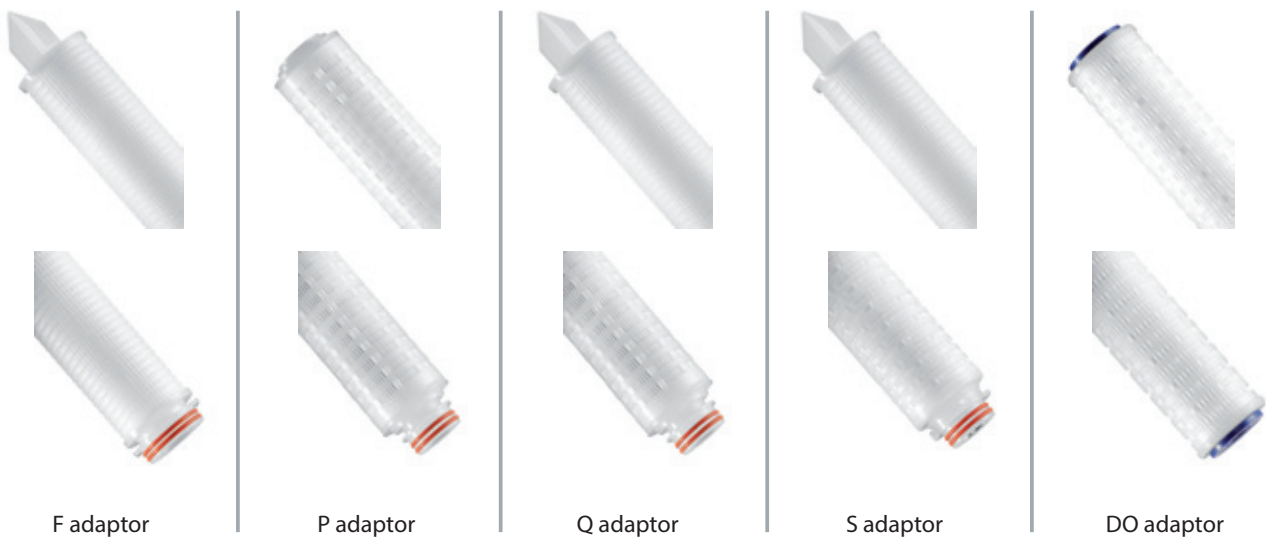
CLAROX® type	Capture rate microns	Code	Fitting	Code	Description	Code
PL	0.2	02	SOE: open end with 2 O-rings 2.226 and double bayonet connection. Sealed end with fin.	F	Prewashed with depyrogenised water; only available for CLAROX® PX/E	P
PL/E	0.45	04				
PL/H	0.5	05				
PL/G	0.65	06	SOE: open end with 2 O-rings 2.222. Sealed end with fin.	Q		
GF	1.0	10			General types	blank
PX/E	3.0	30	SOE: open end with 2 O-rings 2.222. Sealed end without fin.	P		
GP	5.0	50				
GM	10.0	11	SOE: open end with 2 O-rings 2.222 and three-fold bayonet coupling. Sealed end with fin.	S		
MP	20.0	21				
MP/W	Other porosities possible					
MP/B						
S/PL						
S/PP			DOE: open on both sides with 2 flat gaskets.	DO		

Code	Seal type	
S	Standard	Silicone
E	On request	EPDM
V	On request	Viton

Code	Nominal length
05	5"
1	10"
2	20"
3	30"
4	40"

Not all combinations are possible.
For further details, refer to corresponding technical data sheet.

FILTROX adaptor variations





FILTROX. DEPTH FILTRATION FOR VALUABLE LIQUIDS.

As a global market leader in depth filtration, FILTROX offers complete solutions for filtration of high value liquids.

We are experts in development, manufacturing and supply of Swiss top quality products for a wide range of applications in pharmaceuticals, biotechnology, chemicals and cosmetics as well as in food and beverage. Since 1938, we have been developing and manufacturing both filter

media as well as filtration equipment in-house. Based on this experience, we can offer our customers a complete range of products.

FILTROX's worldwide distribution network and comprehensive technical support will help you optimize your filtration process.

Visit us online at www.filtrox.com for more information.

FILTROX AG

Moosmühlestr. 6
CH-9001 St. Gallen / Switzerland
Phone: ++41 071 272 91 11
Fax: ++41 071 272 91 00
E-mail: sales@filtrox.ch

FILTROX Southern Europe
Ramón Viñas, 4
08930 Sant Adrià de Besòs / Spain
Phone: ++34 934 626 700
Fax: ++34 933 810 258
E-mail: filtrox.Espana@filtrox.com

FILTROX UK & Northern Europe
Butts Mill
Barnoldswick
Lancashire
BB18 SHP / United Kingdom
Phone: ++44 1282 811000
Fax: ++44 1282 811001
E-mail: filtrox.UK@filtrox.com

FILTROX France s.a.r.l.
1 Rue du Claire Matin
F 21200 Beaune / France
Phone: ++33/380 222 915
Fax: ++33/380 241 856
E-mail: contact@filtroxfrance.com

FILTROX North America
9805 NE 116th Street
PMB A-200
Kirkland WA 98034 / USA
Phone: Toll free 800 473 4526
Phone: ++1 425 820 4850
Fax: ++1 425 820 2816
E-mail: info@filtercorp.com

FILTROX MICROFILTRACIONES SA DE CV
Circuito Circunvalación Poniente 4B
Cd. Satélite
53100 Naucalpan de Juárez
Estado de México / Mexico
Phone: ++52 55 2628 1691
E-mail: info@filtrox.com.mx

FILTROX (Shanghai) Filtration System Co., Ltd.
7 # Building no. 1855
TianChen Rd. QingPu
Shanghai 201712 / P.R. China
Phone: ++86 021 5922 7508
Fax: ++86 021 5922 7511
E-mail: info@filtroxchina.cn

FILTROX Asia-Pacific Pte Ltd
25 International Business Park
#02-14 German Center
Singapore 609916 / Singapore
Phone: ++65 933 88645
E-mail: sales_apac@filtrox.com