Pfenniger SA

Maquinaria, Insumos y Servicios Industriales desde 1928
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Ciencias de la vida

Plastic Piping systems for Life Science Applications

- Pharmaceuticals
- Cosmetics
- Biotechnology
- Medical technology
- Foodstuffs
- Dialysis
- Hospitals
- Universities

Innovative Piping Solutions for

Water for Injection (WFI)

Purified Water(PW)

Deionized Water(DI)

Soldadura invisible BCF

The Perfect Fusion Technology for the Life Science Industry
The revolutionary BCF (Bead and Crevice Free) fusion technology developed by George Fischer uses an internal inflated bladder to create an exceptionally smooth welded surface. This technology has been improved and expanded to include the market requirements and the needs of the Life Science Industry.

The Microbiological Quality of Water is Related to the Piping System
In the Life Sciences Industry, water is required in diverse qualities for a variety of processes. The water quality is defined according to the process requirements. In the pharmaceutical industry, for example, the chemical, physical, and microbiological quality for purified water and WFI are specified in detail within USP XXIV.
The microbiological quality is particularly important in the selection of the proper material and the joining technique for piping systems.

Features of BCF Fusion Technology

- No bead or "dead legs" on which microorganisms could grow
- Outstanding surface finish in the weld area
- Low-stress fusion welds
- High mechanical stability
- Reproducible fusion quality
- Automatic, welding process with label and print-out documentation

Polipropileno puro, sin aditivos ni cargas minerales

Natural Polypropylene (PP-n) at a Glance

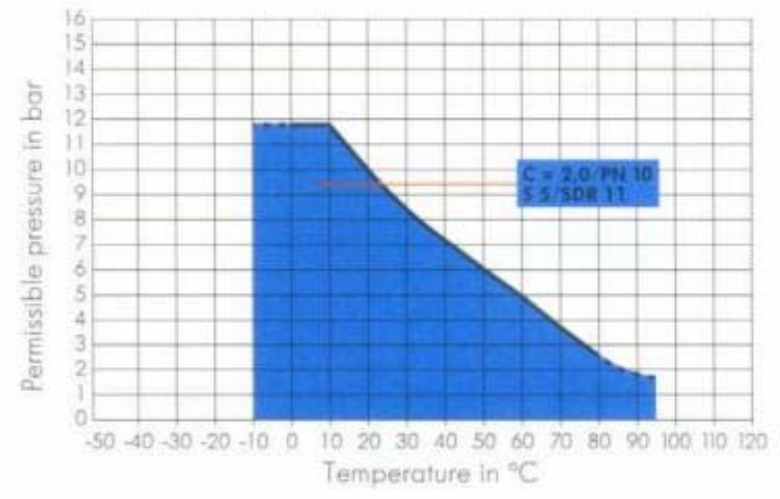
- **Unpigmented material**
- **FDA approved**
- **Does not rouge or corrode**
- **Light weight**
- **High temperature resistance**
- **Good long-term behavior**
- **Excellent resistance to specific disinfectants such as hydrogen peroxide**
- **Outstanding surface quality**
- **Easy to weld (BCF and IR Plus fusion methods)**
- **Excellent price/ performance ratio**
- **Quality management system certified according to ISO 9001**

The Innovative Polypropylene (PP-n) BCF Piping System
enable the installation of high-grade systems which meet industrial requirements and governmental regulations.

New Innovative Solution for Purified Water and DI Water
The new Natural Polypropylene (PP-n) BCF piping system provides the life science industry with an alternative and economical solution for DI water and purified water. The market now has access to a Natural Polypropylene (PP-n) piping system combined with BCF welding technology.
can be operated at 150 psi at ambient temperature.

Specific Application Areas for the Natural Polypropylene (PP-n) BCF Piping System

- **DI water and purified water systems in hospitals and universities**
- **Dialysis systems**
- **Process lines in the Life Science Industry**



Product	d mm	Product	d mm	Product	d mm
Pipe	20 25 32 40 50 63	Sanitary Adapter	20 25 32 40 50 63	 Flat Gasket EDPM	20 25 32 40 50 63
Elbow 90°	20 25 32 40 50 63	 Sanitary Clamp	20 25 32 40 50 63	 Pipe Clips	20 25 32 40 50 63
Elbow 45°	20 25 32 40 50 63	 Concentric Reducer	25-20 32-20 40-20	 Diaphragm Valve Type 315	20 25 32 40 50 63
Tee	20 25 32 40 50 63	 Concentric Reducer	32-25 40-25 50-25	 DIASTAR Diaphragm Valve Pneumatic	20 25 32 40 50 63
 Flange Ring	20 25 32 40 50 63	 Concentric Reducer	40-32 50-32 63-32	 Flat Gasket FPM	20 25 32 40 50 63
Flange Adapter	20 25 32 40 50 63	 Concentric Reducer	50-40 63-40		
 Union	20 25 32 40 50 63	 Concentric Reducer	63-50	Note: Only pipe, fittings and valves of the same material can be joined together with the PP-n BCF system.	

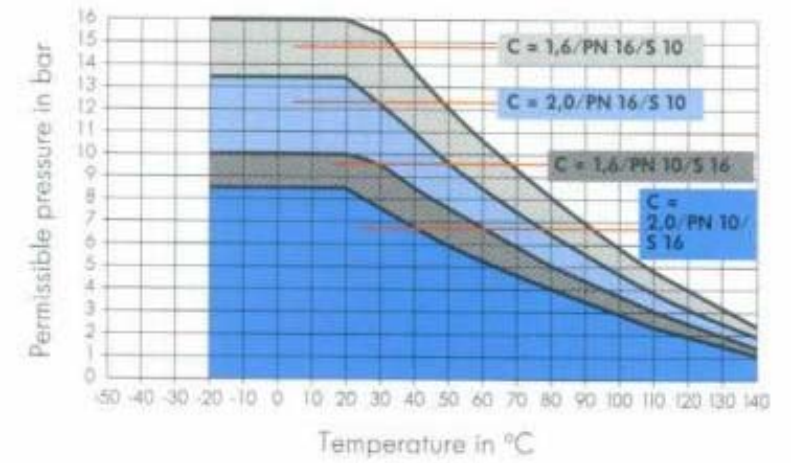
PVDF de alta exigencia

SYGEF HP BCF- A Real Alternative for Highest Demands
Compared to traditional materials, SYGEF HP BCF piping systems is made of high-performance PVDF

- Free of additives, stabilizing agents, pigments or other fillers
- Physiologically inert
- FDA approved material
- Exceptionally low leach out values for organic and inorganic substances
- No tendency for microorganisms to collect on the surface
- Does not rouge or corrode
- Con be steam- sterilized
- Excellent resistance to chemicals, disinfectants, e.g. ozone
- Low thermal conductivity
- Excellent pipe surface quality of Ra <= 0.2um

Time-tested, High-end Solution for WFI and Purified Water
The SYGEP HP BCF piping system made of high-performance PVDF has proven to be on ideal high-end solution for conveying purified water and WFI and has been successfully installed in life science applications for more than 10 years.

The Special Application Areas of the SYGEF HP BCF Piping System
SYGEF HP BCF meets the highest demands, as specified by USP XXIV and WFI systems or product pipelines in the Life Science Industry.



For your purified water and WFI system, you need a piping material with high purity, possibility for validation, and temperature resistance up to 135°C (276 °F).

Product	d mm	Product	d mm	Product	d mm
 Pipe	20 25 32 40 50 63	 Flange Ring	20 25 32 40 50 63	 Flat Gasket FPM	20 25 32 40 50 63
 Elbow 90°	20 25 32 40 50 63	Flange Adapter	20 25 32 40 50 63	 Flat Gasket EDPM	20 25 32 40 50 63
Elbow 45°	20 25 32 40 50 63	 Union	20 25 32 40 50 63	 Diaphragm Valve Type 314	20 25 32 40 50 63
Tee	20 25 32 40 50 63	Sanitary Adapter AAA	20 25 32 40 50 63	 Diaphragm Valve Type 315	20 25 32 40 50 63
 Concentric Reducer	25-20; 32-20; 32-25; 40-20; 40-25; 40-32; 50-32; 50-40 63-32; 63-40; 63-50	 Sanitary Clamp	20 25 32 40 50 63	 Zero Valve Type 319	20-20, 25-20, 25 32-20, 25, 32 40-20, 25, 32, 40 50-20, 25, 32, 40, 50v 63-20, 25, 32, 40, 50, 63 75-40, 50, 63 90-20, 25, 32, 50, 63 110-20, 25, 32, 50, 63

Range from
d 20 mm (~1/2") to d 63 mm (~2 1/2")

Note: Only pipe, fittings and valves of the same material can be joined together with the PP-n BCF system.

Product	d mm	Product	d mm	Product	d mm
Eccentric Reducer 25-20 32-20;	32-25 40-20; 40-25; 40-32 50-32; 50-40 63-32; 63-40; 63-50	 Transition Fitting	20-1/4"; 20-3/8"; 20-1/2" 25-1/4"; 25-3/8"; 25-1/2" 25-1/4"; 25-3/8"; 25-1/2"	 DIASTAR Diaphragm Valve Pneumatic	20 25 32 40 50 63
				 Vortex Flow Meter	20 25 32 40 50 63

Range from
d 20 mm (~1/2") to d 63 mm (~2 1/2")

Note: Only pipe, fittings and valves of the same material can be joined together with the PP-n BCF system.

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Casa Matriz Santiago: mailbox@psa.cl
San Ignacio 500 - 7490469 Quilicura
Tel +56-2-733 5320 / Fax +56-2-733 5098
Buzón de voz +56-2-733 5097,
Casilla 2827, Correo 21, 6509200 Santiago
Sucursal Antofagasta: antofagasta@psa.cl
Tel +56-55-284 063 / Fax +56-55-259 863
Sucursal Concepción: concepción@psa.cl
Tel +56-41-250 248 / Fax +56-41-250 249