

CUT Customized Membrane Filtration Solutions



bürkert
FLUID CONTROL SYSTEMS



Contents

- 3 _____ Introduction
- 4 _____ **T-CUT** Tubular modules – UF/MF
- 5 _____ **C-CUT** Capillary modules – UF/MF
- 6 _____ **T-CUT PP/02-55** Series
Tubular modules – MF
- 7 _____ **S-CUT** 4S/4I Design
Spiral wound modules – MF/UF/NF

CUT Customized Membrane Technology

Customized Membrane Technology Division of Burkert was founded in April, 2004 as an innovative manufacturer of membranes and modules for exceptionally critical applications including: chemistry, environmental studies, food industry, metal processing and many other highly specialized processes. Burkert produces a wide variety of tubular, hollow fiber and spiral wound modules at our site in Erkrath near Düsseldorf, Germany. We offer our customers a comprehensive range of custom designed micro, ultra and nanofiltration membranes and modules.

As an application authority in specialized niche markets, the Customized Membrane Technology Division of Burkert is an industry leader in the manufacture and the application of membrane modules. For this, we have a vast number of material combinations as well as laboratory and pilot installations for experimental applications. Our strong focus on the customers' requirements in particular is demonstrated in areas where it is important to offer customized special designs and process solutions.

The Burkert Membrane Technology team looks forward to creating a customized process solution perfectly suited for your specific application.

T-CUT – Tubular modules for microfiltration and ultrafiltration

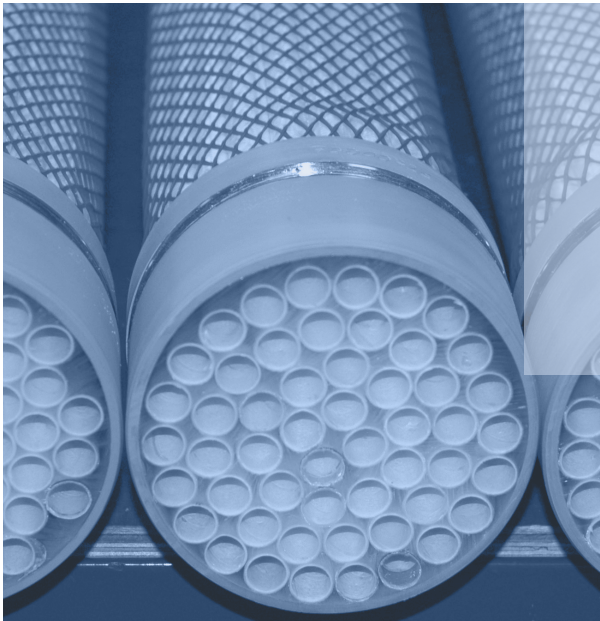
With its T-CUT series of micro- and ultrafiltration tubular modules, Burkert Membrane Technology offers a comprehensive product family of robust modules made from PVDF and PES, with very different membrane materials and cut offs.

The membranes are applied on high-quality backing material and offer extended durability and long service life.

Due to the high stability of the membrane and the pos-

sibility to clean this membrane with chemicals, T-CUT tubular modules are used very successfully in extreme applications, for instance such as the treatment of pickling baths. Further, T-CUT tubular modules have proven themselves in the metal-processing industry, for oil/water separation and the separation of biomass from water.

We offer you customized modules, tailored to your specific separation task.



Advantages

- Robust and long lasting
- Optimized membrane area
- Suitable for high solid contents
- Easy to clean (chemically and mechanically)

Technical data

Membrane material:	PVDF, PES
Pore size (kD) PVDF:	10; 50; 70; 100; 120; 150; 200
PES:	20; 30; 100
Temperature range (°C):	5 – 60
Pressure range (bar):	1 – 10
pH range:	2 – 12

Customer specific options

Module length (mm):	1,000; 1,500; 2,800; 3,000; 3,100; 5,000
Membrane tube diameter (mm):	5.2; 8; 10; 12.5; 25.4
OD housing (mm):	25; 40; 75; 110; 150; 170; 200; 220; 300
Housing material:	Stainless-steel; PP; PVC; GFK
Connecting feed:	ANSI/JIS Flange; Victaulic; DIN; Clamp; Thread
Connecting permeate:	ANSI/JIS Flange; Victaulic; DIN; Clamp; Thread

C-CUT – Capillary modules for microfiltration and ultrafiltration

With our C-CUT capillary modules with membranes made from PVDF, PES and PP, we provide a high quality product line to our customers, which has been especially developed for applications where a combination of filtration performance and high packing density is required.

Due to the high stability of the membrane and the ability to clean this membrane chemically as well as mechanically and to backwash it, C-CUT capillary modules are preferentially used for cleaning of process water and in wine and vinegar filtration. They are also successfully applied in diafiltration and in degreasing baths.

We are glad to offer you customized modules, tailored to your specific separation task.

Advantages

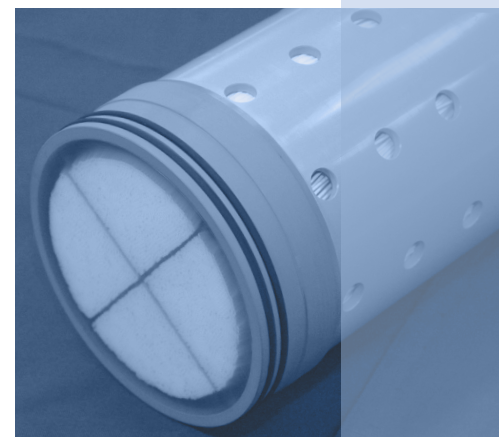
- Robust and long lasting
- Optimized membrane area
- Suitable for backwashing
- Easy to clean (chemically and mechanically)

Technical data

Membrane material:	PVDF, PES, PP
Pore size MF (µm):	0.1; 0.2; 0.4;
UF (kD):	5; 10; 20; 30; 50; 100; 150; 200
Operating modus:	inside/outside
Temperature range (°C):	5 – 60
Pressure range (bar):	1 – 10
pH - range:	2 – 12

Customer specific options

Module length (mm):	500 – 1,500
OD housing (mm):	up to 300
Hollow fibre diameter (mm):	0.8; 1.2; 1.5; 1.8
Housing material:	Stainless steel, PS, PP, PVC
Feed connector:	DIN; ANSI/JSI Flange; Victaulic; Clamp
Permeate connector:	DIN; ANSI/JSI Flange; Screw; Victaulic, Clamp



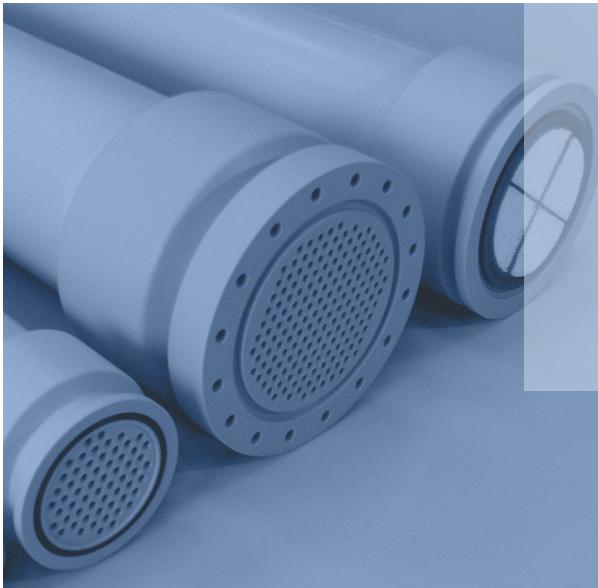
T-CUT PP – Tubular modules for microfiltration (O2-55 series)

Designed for the filtration of abrasive media and applications under extreme conditions, the product range of Burkert Membrane Technology is supplemented by another high-quality and robust tubular module – the T-CUT PP (O2-55 series).

Polypropylene membranes can be used throughout the entire pH range from 0 – 14. Thus, the abrasion resistant PP tubular modules are perfect for use in the fields of acid and caustic recycling. They have also been used successfully for a long time in many other processes, in-

cluding pigment separation and suspension concentration. T-CUT PP tubular modules are made exclusively out of polypropylene, allowing for a very high service life with extremely robust mechanical stability and long operating life. The symmetrically structured PP membrane is suitable everywhere that above average performance defines the standard.

Upon request, we will be pleased to supply custom-made module with polypropylene membranes.



Advantages

- Robust and long lasting
- Resistant to a wide range of chemicals
- Suitable for abrasive media
- Easy to clean (chemically and mechanically)

Technical data

Membrane material:	Polypropylene (PP)
Pore size (µm):	0.2
Membrane diameter (inch):	5.5
Temperature range (°C):	5 – 65
Pressure range (bar):	1 – 10
pH range:	1 – 14

Customer specific options

Module length (mm):	500; 750; 1,000; 1,360; 1,496; 1,500; 1,650; 3,000; 3,100; 5,000
OD housing (mm):	75; 110; 150; 170; 200; 220; 250; 300
Housing material:	Stainless-steel; PP; PVC; GFK
Connecting feed:	ANSI/JIS Flange; Victaulic; DIN; Clamp; Thread
Connecting permeate:	ANSI/JIS Flange; Victaulic; DIN; Clamp; Thread

S-CUT – (4S / 4I design) Spiral wound modules for micro-, ultra- and nanofiltration

In many pharmaceutical applications, spiral wound modules are used in addition to capillary modules. Particularly in the case of less sophisticated process flows, carrying a small particle load with them, S-CUT spiral wound modules are used. An overriding advantage of S-CUT modules exists in the high temperature resistance in addition to the comparatively simple module exchange.

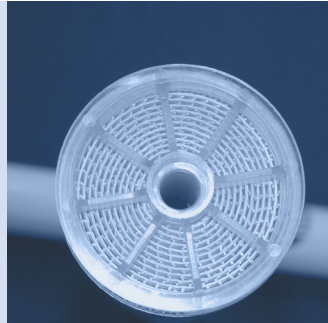
Typical application for the usage of sanitary spiral wound modules (4S design) are the cleaning of products with diafiltration, the depyrogenization of pharmaceutical water, and the separation of proteins (e.g. milk).

Applications for the use of industrial spiral wound modules (4I design) are industrial water treatment, (rinsing) water recycling, oil/water separation, wastewater treatment and the concentration of recyclable material solutions (e.g. cathodic electrophoretic paint (CEP)).

S-CUT spiral wound modules are available in a variety of different designs.

Advantages

- Variable spacer configurations
- Optimized membrane area due to compact design
- Resistant to high temperatures
- Wide range of materials



	S-CUT NF 4I-Design, Industrial	S-CUT UF/MF 4I-Design, Industrial	S-CUT UF/MF 4S-Design, Sanitary
Technical data			
Membrane material:	Polyamide	PVDF; PES	PVDF; PES
Pore size MF (µm): UF (kD):		0.1; 0.2 1; 3; 5; 10; 30; 50; 70; 100; 200; 300; 500; 800	0.1; 0.2 1; 3; 5; 10; 30; 50; 70; 100; 200; 300; 500; 800
Cut off (Dalton):	200 – 500		
Temperature range (°C):	5 – 85	5 – 85	5 – 85
Pressure range (bar):	up to 40	1 – 10	1 – 10
pH range:	2 – 12	2 – 12	2 – 12
Customer specific options			
Module length (inch):	12; 20; 40	12; 20; 40	12; 20; 38
Module diameter (inch):	2.4; 4.0; 8.0	2.4; 4.0; 8.0	1.8; 2.4; 3.8; 4.3; 5.8; 6.3
Spacer material feed/permeate:	PA; PET; PP	PA; PET; PP	PA; PET; PP
Outer wrap:	Epoxy; Net wrap; PE	Epoxy; Net wrap; PE	Net wrap
Permeate tube material:	Stainless steel; PP; PSU; PVC; ABS	Stainless steel; PP; PSU; PVC; ABS	Stainless steel; PSU
ATD material:	Stainless steel; PP; PSU; PVC; ABS	Stainless steel; PP; PSU PVC; ABS	Stainless steel; PSU



Burkert Fluid Control Systems

USA

Sales Office – West Coast
2572 White Road
Irvine, CA 92614

Sales Office – East Coast
2915 Whitehall Park Drive, Suite 650
Charlotte, NC 28273

Systemhaus
2915 Whitehall Park Drive, Suite 100
Charlotte, NC 28273

Phone: 1-800-325-1405
Fax: 949-223-3198

marketing-usa@burkert.com
www.burkert-usa.com

Canada

5002 South Service Road
Burlington, Ontario L7L 5Y7

Phone: 905-632-3033
Fax: 905-632-3833

sales.ca@burkert.com
www.burkert.ca