cobetter®
filtration

Consieve UET & UFC & MET
TFF Cassettes and Systems

Tangential Flow Filtration Technology

Tangential flow filtration is a membrane technology used for concentration, dialysis, separation by tangential flow, usually retaining the molecular weight of the Range: 1-1000KD.

Unlike conventional vertical filtration, in tangential flow filtration, the fluid flows tangentially across the membrane surface and the transmembrane pressure difference created by the fluid presses a portion of the solution against the filter membrane, while the retained portion circulates back through the system. During the whole process, the liquid flows continuously through the membrane surface at a certain speed, while ultrafiltration also flushes the membrane surface, so that the membrane surface is not easy to form a gel layer, so that the particles in the liquid will not quickly block the membrane, maintaining a stable filtration speed.

Applications

Blood products

Vaccines

Recombinant protein

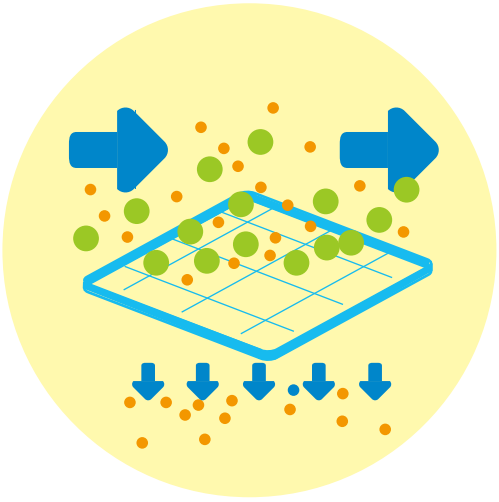
Monoclonal

Plasmids

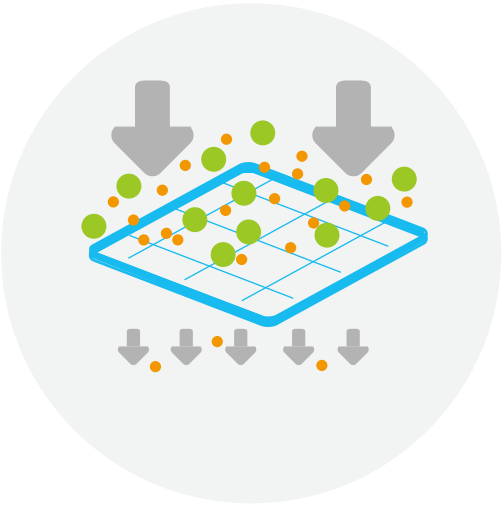
Chemical

Traditional Chinese medicine injection

Tangential flow filtration

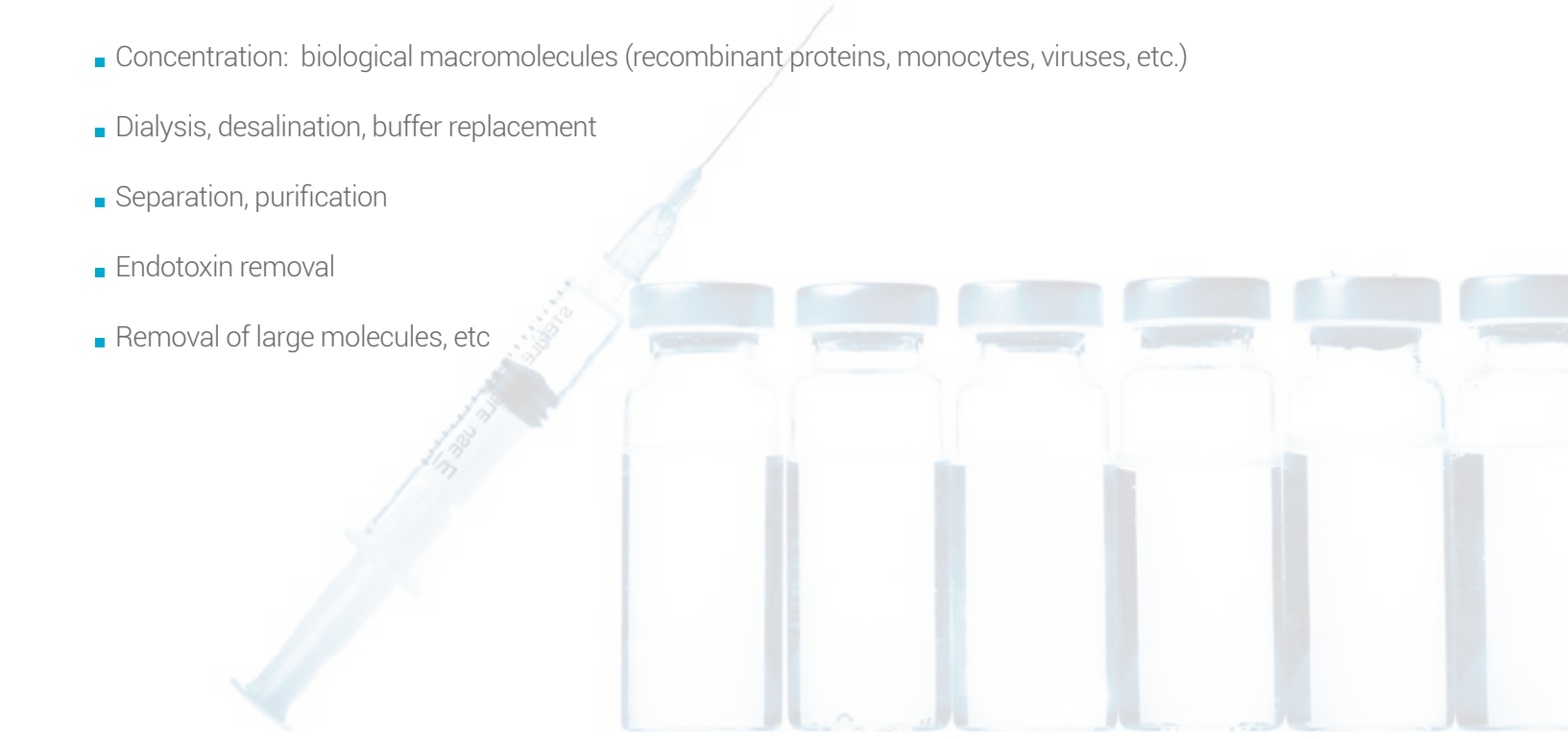


Dead-End Filtration



Typical Applications

- Concentration: biological macromolecules (recombinant proteins, monocytes, viruses, etc.)
- Dialysis, desalination, buffer replacement
- Separation, purification
- Endotoxin removal
- Removal of large molecules, etc

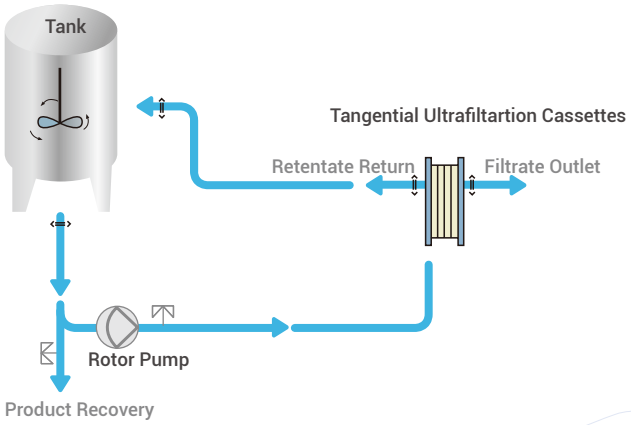


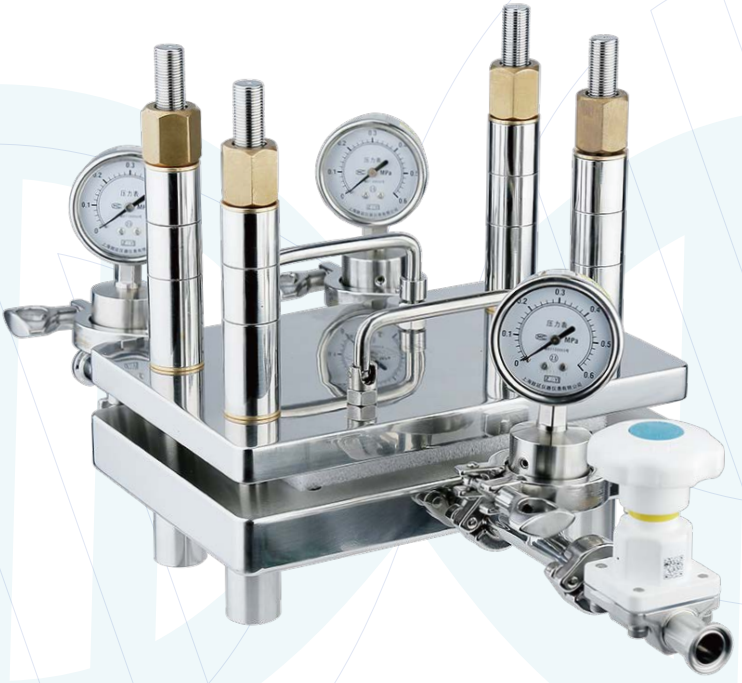
Tangential Flow Simple Device

The tangential flow simple device is easy to operate, flexible configuration, small footprint, sanitary design.

Can be used for small trial, pilot, small scale production, fully linear scaling.

Pump	Peristaltic Pump
Holder	Sanitary Cassette Holder
Membrane	Lab 100cm² 200cm² 0.11m² Flow 0.46m² 0.5m² 2.33m² 2.5m²
Pipe	Hygienic silicone tubes, autoclavable
Pressure Gauge	Sanitary diaphragm pressure gauge
Connections	Sanitary clamp connection





A Stainless Steel Holder

Process development and small-volume manufacturing with an EFA of 100cm²/200cm²/0.11m²

B Stainless Steel Holder

Accomodate an EFA of 0.46 - 2.5 m² up to 5 m²

(Need to replace longer fixing screw)

Customized Ultrafiltration System for Lab Pilot & Process Scale Application

- Mass flowmeter, electromagnetic flowmeter, pH meter, conductivity meter and other testing equipment can be selected according to needs
- Automatic CIP/SIP, automatic detection of water flux, automatic concentration, constant-volume dialysis, automatic recycling, etc. can be achieved by editing methods
- Automatic adjustment/control of inlet or circulating flow rate and recording of flow rate change curve.
- Automatically monitor the inlet, retentate, and permeate pressure, calculate TMP automatically, realize TMP control, and record TMP curve.
- The retentate can be equipped with a precision TMP control valve for automatic and precise TMP control. Multi-level permission management with audit trail.

- System Requirements
- Technical Visit
- URS Completed
- Drawings, Quotations, Solutions
- No
- Customer Confirmation
- Contracting and Producting Systems
- FAT — No → Rectification
- SAT IQ&OQ — No → Rectification
- Training services for the optimization of the use and maintenance of ultrafiltration processes
  Follow-up system services

Consieve UET

TFF Cassette with PES Membrane

Consieve UET PES Cassette have high retention efficiency with low working volume and are easy to clean/install. Available in Lab and Flow format, both have same height and length screen type, easy to amplify based on specific process requirements. The inner gaskets make installation/cleaning/storage/replacement quick and easy. Low working volume and high efficiency ensure product yields.

Material

Membrane	PES
Screen	PP
Gasket	Silicone
Sealant	Silicone
Material Features	Low protein binding and high product yield High flux Broad chemical compatibility

Information

PH Range	1-14
NMWL	1/3/5/8/10/30/50/100/300/500/1000KD
Max. Operating Temperature	50°C
Max. Operating Pressure	4bar
Integrity	100% Integrity testing
Tangential Flow Rate	100% Tangential flow rate testing
Biocompatibility	Component materials meet the requirements of the current USP<88> for plastic class VI.

Filters Type

Format	Abbr.	Available Size	R&D	Notes
Lab	LA	100 cm^2 200 cm^2 0.11 m^2	R&D R&D, Pilot	Cassette, Stainless steel holder required
Flow	FL	0.46 m^2 0.5 m^2 2.33 m^2 2.5 m^2	Pilot, Process Pilot, Process	

Consieve UFC

TFF Cassette with RC Membrane

Consieve UFC RC Cassette has the characteristics of high flux, strong anti-pollution ability, and easy cleaning. The cassette uses regenerated cellulose(RC) membrane material, which has very good hydrophilic properties and ultra-low protein binding and adsorption, lower leachables, and good solvent resistance make it suitable for ultrafiltration process of antibodies, recombinant proteins, blood and other biological applications. Low working volume and high efficiency ensure product ensure product yields.

Material

Membrane	Regenerated Cellulose(RC)
Screen	PP
Gasket	Silicone
Sealant	Silicone
Material Features	Low protein binding and high product yield High flux Special solvent resistance

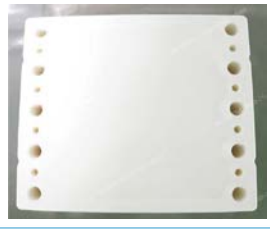
Information

PH Range	2-13
NMWL	1/3/5/8/10/30/50/100/300/500/1000KD
Max. Operating Temperature	50°C
Max. Operating Pressure	4bar
Integrity	100% Integrity testing
Tangential Flow Rate	100% Tangential flow rate testing
Biocompatibility	Component materials meet the requirements of the current USP<88> for plastic class VI.

Filters Type

Format	Abbr.	Available Size	R&D	Notes
Lab	LA	100 cm² 200 cm² 0.11 m²	R&D R&D, Pilot	Cassette, Stainless steel holder required
Flow	FL	0.46 m² 0.5 m² 2.33 m² 2.5 m²	Pilot, Process Pilot, Process	

Comparison between Flow B and normal, take RC3K as example:

Format	Normal Flow	Flow B
Part No.	UFCFL0003250P	UFCFL0003B250P
Batch No.	3510SDR23410	3510SDR23411
Appearance	 Length: 203mm Width: 172mm Height: 82mm	 Length: 212mm Width: 175mm Height: 82mm
Material	Membrane, Screen, Silicone Sealing are consistent	
Batch release testing	Appearance cleanliness, tangential flow rate, integrity test methods, and standards are consistent	
Package	Preservation solution and packaging method are consistent	
Conclusion	In summary, except for the differences in appearance and size, the two products are consistent in terms of materials, production processes, effective area, product performance control, etc., the length and width expansion parts of the Flow B cassette are filled with silicone glue, more compatible and higher installation matching with the holder.	

Consieve MET

Microfiltration TFF Cassette

Consieve MET microfiltration TFF cassettes are often used in the clarification process of the supernatant after centrifugation of fermentation broth or lysate. It has the characteristics of high process throughput, large filtration loading capacity, good clarification effect, and easy cleaning. The relatively open suspended flow channel is compatible with filter fluids with a certain solid content and higher viscosity.

Material (PES Microfiltration TFF Cassettes)

Membrane	Polyethersulfone (PES)
Screen	Polypropylene (PP)
Gasket	Silicone
Sealant	Silicone
Material Features	High throughput, high load capacity, acid and alkali resistant

Information

PH Range	1-14
Pore Size	0.1/0.2/0.45/0.65μm
Max. Operating Temperature	50°C
Max. Operating Pressure	4bar
Integrity	100% integrity testing
Tangential Flow Rate	100% tangential flow rate testing
Biocompatibility	Component materials meet the requirements of the current USP<88> for plastic class VI.

Material (PVDF Microfiltration TFF Cassettes)

Membrane	Polyvinylidene difluoride (PVDF)
Screen	Polypropylene (PP)
Gasket	Silicone
Sealant	Silicone
Material Features	Very hydrophilic, high throughput, high loading capacity, and good anti-pollution ability

Information

PH Range	2-11
Pore Size	0.1/0.2/0.45/0.65μm
Max. Operating Temperature	50°C
Max. Operating Pressure	4bar
Integrity	100% integrity testing
Tangential Flow Rate	100% tangential flow rate testing
Biocompatibility	Component materials meet the requirements of the current USP<88> for plastic class VI.

Material (RC Microfiltration TFF Cassettes)

Membrane	Regenerated cellulose (RC)
Screen	Polypropylene (PP)
Gasket	Silicone
Sealant	Silicone
Material Features	Naturally hydrophilic, good anti-pollution ability, resistant to various organic solvents

Information

PH Range	2-13
Pore Size	0.2 /0.45μm
Max. Operating Temperature	50°C
Max. Operating Pressure	4bar
Integrity	100% integrity testing
Tangential Flow Rate	100% tangential flow rate testing
Biocompatibility	Component materials meet the requirements of the current USP<88> for plastic class VI.

Filter Type

Format	Abbr.	Available Size	R&D	Notes
Lab	LA	200 cm² 0.1 m²	R&D	Cassette format, stainless steel holder required
Flow	FL	0.5 m² 2.5 m²	Pilot, Process	

Ordering Information

Cobetter Consieve UET Cassettes (Standard Coarse Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFE	LA	0	001		001	P
UFE Cobetter Consieve UET	LA Lab FL Flow	0 Standard Coarse Screen	001 1 KD 003 3 KD 005 5 KD 008 8 KD 010 10 KD 030 30 KD 050 50 KD 100 100 KD 300 300 KD 500 500 KD 01K 1000 KD	Blank	001 100 cm²(only Lab) 002 200 cm²(only Lab) 010 0.11 m²(only Lab) 050 0.46 m²(only Flow) 055 0.50 m²(only Flow) 250 2.33 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFE Cobetter Consieve UET	FL Flow	0 Standard Coarse Screen	01K 1000 KD	B	050 0.46 m²(only Flow) 055 0.50 m²(only Flow) 250 2.33 m²(only Flow) 270 2.50 m²(only Flow)	

Cobetter Consieve UETA Cassettes (Tight Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFE	LA	A	001		001	P
UFE Cobetter Consieve UET	LA Lab FL Flow	A Tight Screen	001 1 KD 003 3 KD 005 5 KD 008 8 KD 010 10 KD 030 30 KD 050 50 KD 100 100 KD 300 300 KD 500 500 KD 01K 1000 KD	Blank	001 100 cm²(only Lab) 002 200 cm²(only Lab) 010 0.11 m²(only Lab) 055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFE Cobetter Consieve UET	FL Flow	A Tight Screen	01K 1000 KD	B	055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	

Cobetter Consieve UETV Cassettes (Suspended Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFE	LA	V	001		002	P
UFE Cobetter Consieve UET	LA Lab FL Flow	V Suspended	001 1 KD 003 3 KD 005 5 KD 008 8 KD 010 10 KD 030 30 KD 050 50 KD 100 100 KD 300 300 KD 500 500 KD 01K 1000 KD	Blank	002 200 cm²(only Lab) 010 0.11 m²(only Lab) 055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFE Cobetter Consieve UET	FL Flow	V Suspended	01K 1000 KD	B	055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	

Ordering Information

Cobetter Consieve UFC Cassettes (Standard Coarse Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFC	LA	0	001		001	P
UFC Cobetter Consieve UFC	LA Lab FL Flow	0 Standard Coarse Screen	001 1 KD 002 2 KD 003L 3 KDL 003H 3 KDH 003 3 KD 005 5 KD 008 8 KD 010 10 KD 030 30 KD 100 100 KD	Blank	001 100 cm²(only Lab) 002 200 cm²(only Lab) 010 0.11 m²(only Lab) 050 0.46 m²(only Flow) 055 0.50 m²(only Flow) 250 2.33 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFC Cobetter Consieve UFC	FL Flow	O Standard Coarse Screen	300 300 KD	B	050 0.46 m²(only Flow) 055 0.50 m²(only Flow) 250 2.33 m²(only Flow) 270 2.50 m²(only Flow)	

Cobetter Consieve UFCA Cassettes (Tight Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFC	LA	A	030		001	P
UFC Cobetter Consieve UFC	LA Lab FL Flow	A Tight Screen	030 30 KD	Blank	001 100 cm²(only Lab) 002 200 cm²(only Lab) 010 0.11 m²(only Lab) 055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFC Cobetter Consieve UFC	FL Flow	A Tight Screen		B	055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	

Cobetter Consieve UFCV Cassettes (Suspended Screen)

Application	Format	Screen Type	NMWL	Type	Effective Filtration Area	Industry
UFC	LA	V	001		002	P
UFC Cobetter Consieve UFC	LA Lab FL Flow	V Suspended	001 1 KD 002 2 KD 003L 3 KDL 003H 3 KDH 003 3 KD 005 5 KD 008 8 KD 010 10 KD 030 30 KD 100 100 KD 300 300 KD	Blank	002 200 cm²(only Lab) 010 0.11 m²(only Lab) 055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	P Pharmaceutical
UFC Cobetter Consieve UFC	FL Flow	V Suspended		B	055 0.50 m²(only Flow) 270 2.50 m²(only Flow)	

Ordering Information

Cobetter Consieve MET PES Microfiltration Cassettes (Suspended Screen)

Application	Membrane	Format	Screen Type	NMWL	Effective Filtration Area	Industry
MF	E	LA	V	M10	002	P
MF Cobetter Consieve MET	E PES	LA Lab FL Flow	V Suspended	M10 0.1μm M20 0.2μm M45 0.45μm M65 0.65μm	002 200 cm²(only Lab) 010 0.1 m²(only Lab) 050 0.50 m²(only Flow) 250 2.50 m²(only Flow)	P Pharmaceutical

Cobetter Consieve MET PVDF Microfiltration Cassettes (Suspended Screen)

Application	Membrane	Format	Screen Type	NMWL	Effective Filtration Area	Industry
MF	D	LA	V	M10	002	P
MF Cobetter Consieve MET	D PVDF	LA Lab FL Flow	V Suspended	M10 0.1μm M20 0.2μm M45 0.45μm M65 0.65μm	002 200 cm²(only Lab) 010 0.1 m²(only Lab) 050 0.50 m²(only Flow) 250 2.50 m²(only Flow)	P Pharmaceutical

Cobetter Consieve MET RC Microfiltration Cassettes (Suspended Screen)

Application	Membrane	Format	Screen Type	NMWL	Effective Filtration Area	Industry
MF	C	LA	V	M20	002	P
MF Cobetter Consieve MET	C RC	LA Lab FL Flow	V Suspended	M20 0.2μm M45 0.45μm	002 200 cm²(only Lab) 010 0.1 m²(only Lab) 050 0.50 m²(only Flow) 250 2.50 m²(only Flow)	P Pharmaceutical

Filtration
Separation
Purification

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