

# UF/DF TFF

*Ultrafiltration/Diafiltration TFF System*

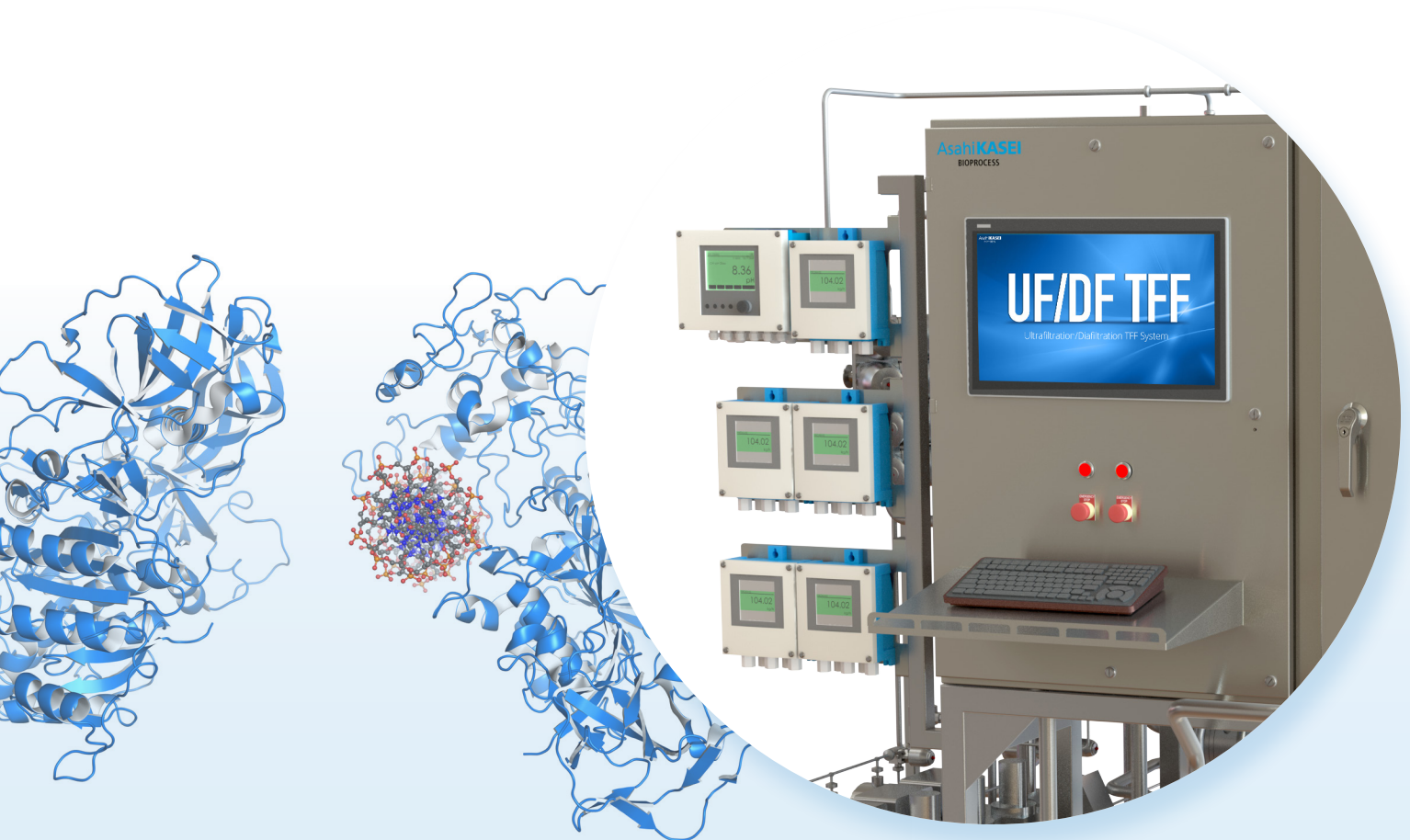
For Enhanced Oligo Purification  
and Product Concentration

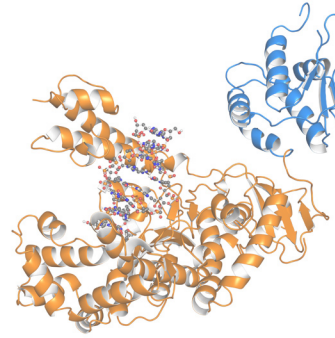


# Built For You.

At Asahi Kasei Bioprocess, we have dedicated well over a decade to cultivating our expertise in oligonucleotide manufacturing to deliver innovative equipment designed to improve productivity and safety.

This commitment fueled the design and development of the first TFF system built specifically for oligo manufacturing. Our UF/DF TFF skids are built with the understanding that oligonucleotides are unique therapeutics, demanding specialized and robust equipment to maximize the potential of every batch.





# Reliable and Scaleable

*Engineered and designed specifically for oligos*

## From Synthesis to Concentration

The demand for oligonucleotides manufacturing capacity continues to grow as dozens of high-potential therapeutics advance through clinical trials. To meet this demand, Asahi Kasei Bioprocess provides a comprehensive suite of equipment solutions – enabling efficient synthesis, cleavage and deprotection, purification and product concentration. Our technology has produced multiple compounds at various scales across the globe. When integrated with the complete oligosynthesis product family, our TFF contributes to reliable and scalable oligo manufacturing.



## Oligo Manufacturers – Built For You.

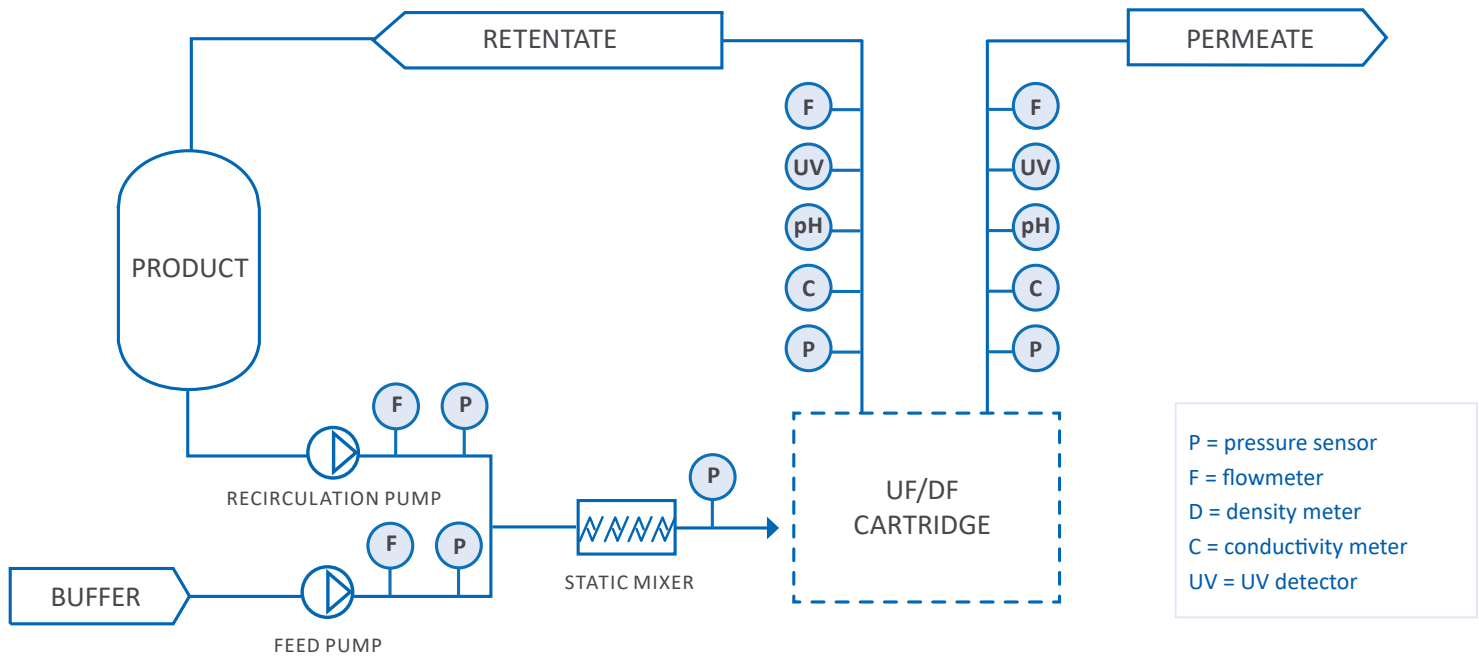
While a TFF system is not new to biopharmaceutical development, a system built exclusively to operate in hazardous area environments is. Our UF/DF TFF is designed and manufactured from the ground up to work seamlessly in an oligo manufacturing environment. With explosion-proof components and regional certifications, this TFF comes with the confidence that it can operate reliably even in harsh conditions.

## Upstream or Downstream? Both.

UF/DF TFF is designed to perform seamlessly with any widely available, industry-accepted cassette-style filters – up to a total area of 20 sqm. The same unit can be used upstream, prior to your chromatography step, to make purification that much more productive. Or, it can be used downstream prior to lyophilization during concentration. Same system, two different unit operations – in either position, optimized for high performance and efficiency.



# A Closer Look at the UF/DF TFF



## Setting the Standard

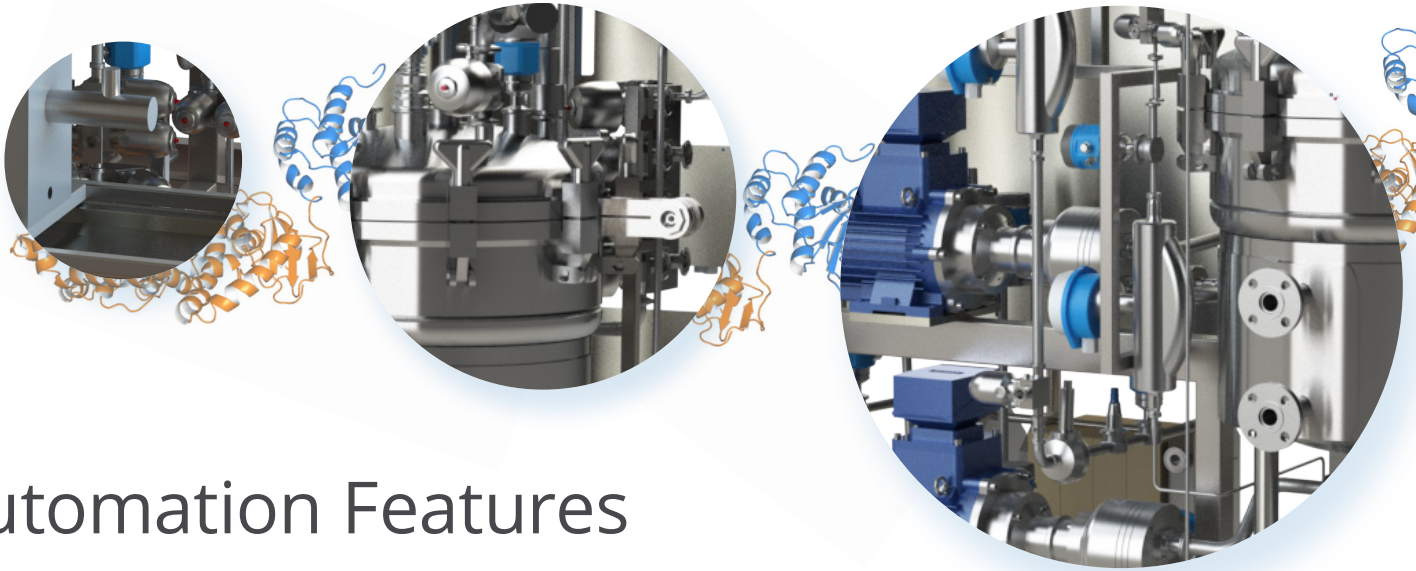
We wholeheartedly believe in our motto ‘Built For You’ – but we are about more than just custom systems. Knowing our customers also means knowing how to build the right standard offerings. To that end, the UF/DF TFF standard design already includes:

- » **One (1) ergonomically accessible cassette holder:** up to 20 m<sup>2</sup> surface area
- » **On-skid retentate tank:** max working volume of 60L
- » **Operating flow rate:** up to 30 LPM
- » **Operating pressure:** up to 4 barg
- » **Suite of sensors:** conductivity, pH, pressure, flow, UV
- » Recirculation and feed pumps
- » OCELOT™ System Control automation

*Minimize the  
filtration time  
for a given batch*

# Advanced Controls

All our automated equipment provides advanced process controls to ensure precise and accurate results, and our TFF system is no exception. Each pump is monitored and controlled by an independent Coriolis mass flowmeter, ensuring consistent flow rates and total volume delivery. Pump speeds can also be controlled by transmembrane pressure, which allows the system to minimize the filtration time for a given batch.



# Automation Features

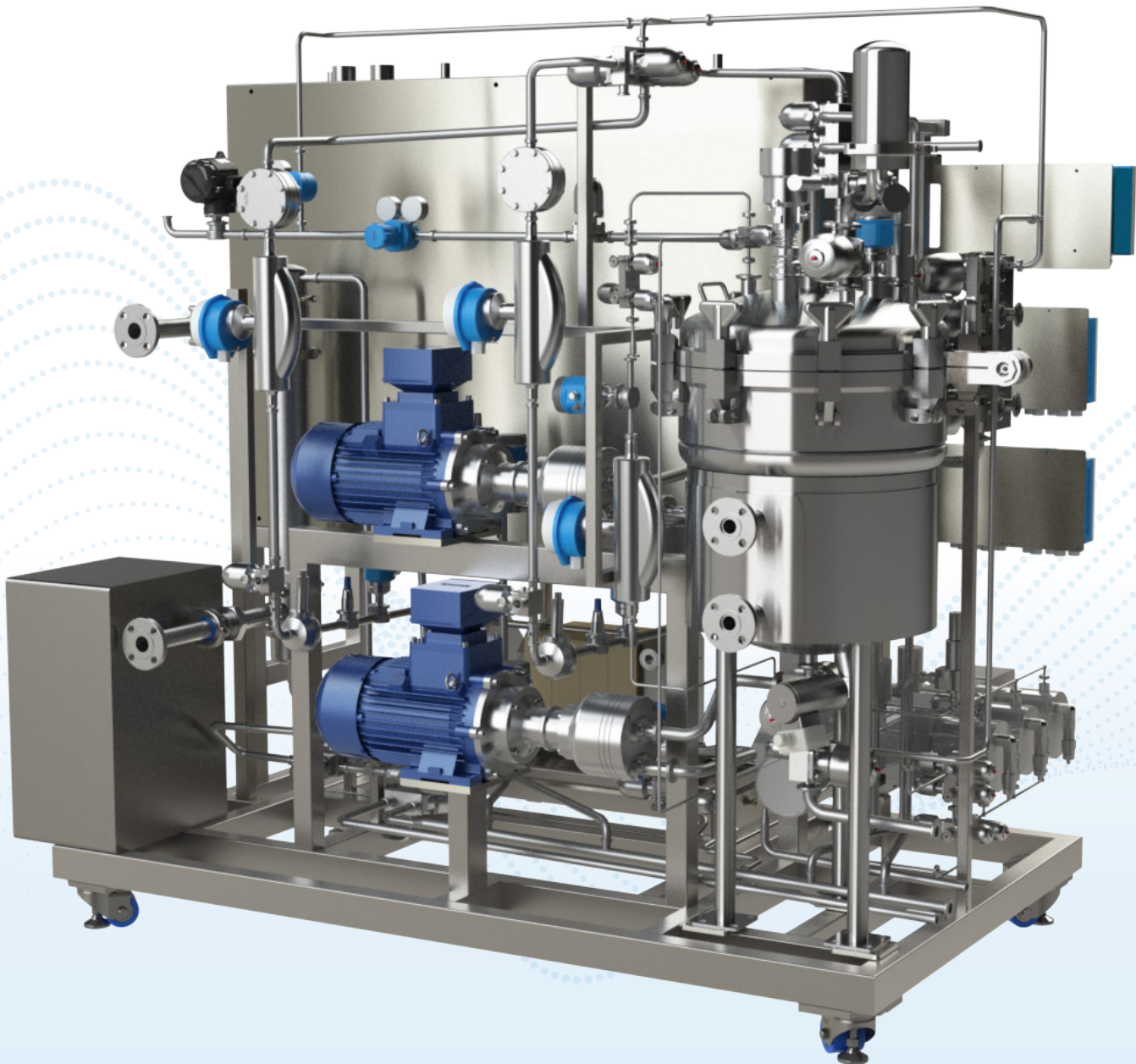
All our automated systems run on the OCELOT™ System Control software platform, created to seamlessly integrate with your existing operations. Each UF/DF TFF system offers a range of automation features to enhance your synthesis processes:

- » Manual or automated control
- » Automated CIP
- » Seamless transfer between filtration and buffer flush (no process pause)
- » Modern, user-friendly HMI
- » Browser-based method editor and batch reporting tool, including remote viewing/editing capabilities
- » 21 CFR Part 11 compliance, with electronic signature and audit trail capabilities
- » Export data, integrate via OPC UA, or direct communication with other controllers/DCS, and customize batch reports to meet your specific needs

powered by **OCELOT™**  
SYSTEM CONTROL

# Free to Customize

While the standard UF/DF TFF models are suitable for typical applications, we understand that your synthesis processes or multi-product applications may require a customized solution. Our experienced engineers and designers are ready to create a tailored solution based on our core designs. **Customizable options include integrated filter integrity testing and a bottom-mounted agitator for the retentate tank.**



# Training

Our dedication to providing the best in customer support is about more than just keeping your systems and columns up-and-running – our service extends to making sure your operators know how to use and maintain the installed equipment.

## Build Skills and Knowledge

### *Focused Training*

- » Operation/Automation
- » Maintenance

### *Flexible*

- » On-site, in-person learning and development
- » Virtual training, classroom and interactive
- » Customer-specific needs

# Maintenance Plans

Ensure trouble-free operation of your equipment for years with a maintenance plan created to meet your specific needs. Whatever your requirements, we work with you to configure the right plan, schedule, and pricing.

## Warranty

We offer an extendable 1-year warranty, service contracts and a personalized level of service for peace of mind and timely support when you need it.

### *Service Plan Packages*

- » Basic
- » Silver
- » Gold
- » Platinum



# Our Expertise, Your Confidence



The Fluid Management Business Unit of Asahi Kasei Bioprocess is devoted to solving therapeutic product safety, efficiency and purity challenges within the pharmaceutical and bioprocessing industries.

With technology platforms for virus filtration, inline buffer formulation, chromatography, and oligonucleotide synthesis, our bioprocessing systems, columns, and automation solutions advance GMP manufacturing of critical drug substances around the world. Built with pride, built with quality, built to exceed your high expectations. "Built for You."



## Technical Support Network

A reliable technical support network is available throughout North and South America, Europe and Asia.

## Warranty

We offer an extendable 1-year warranty, service contracts and a personalized level of service for peace of mind and timely support when you need it.



[REQUEST A QUOTE](#)

## Technical Client Services

Technical Client Services (TCS), is a customer-centric interface to our product and science experts. Our TCS team will guide your process and engineering needs as your personal liaison for inquiries.

Contact us to learn more about how TCS can support your virus filtration and downstream processing equipment needs.



**Asahi Kasei Bioprocess America, Inc.**

Technical Client Services

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