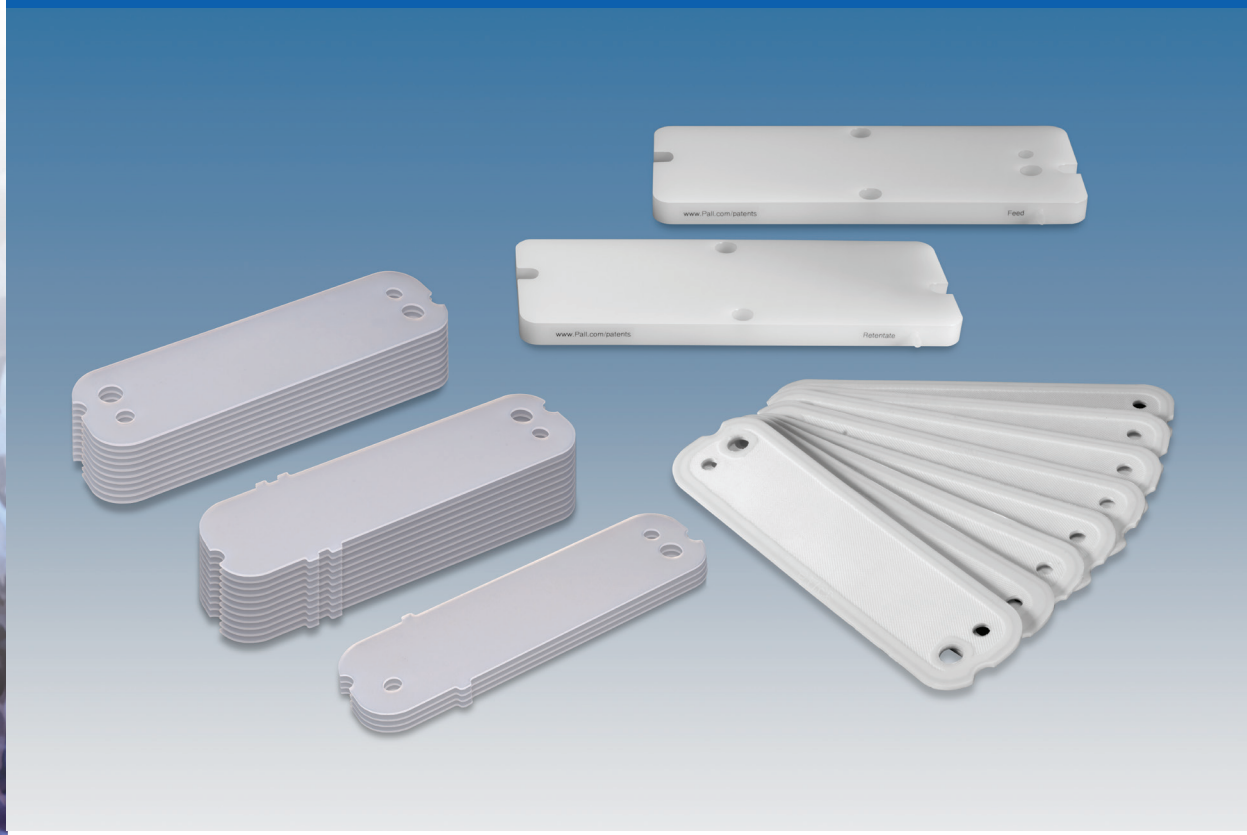
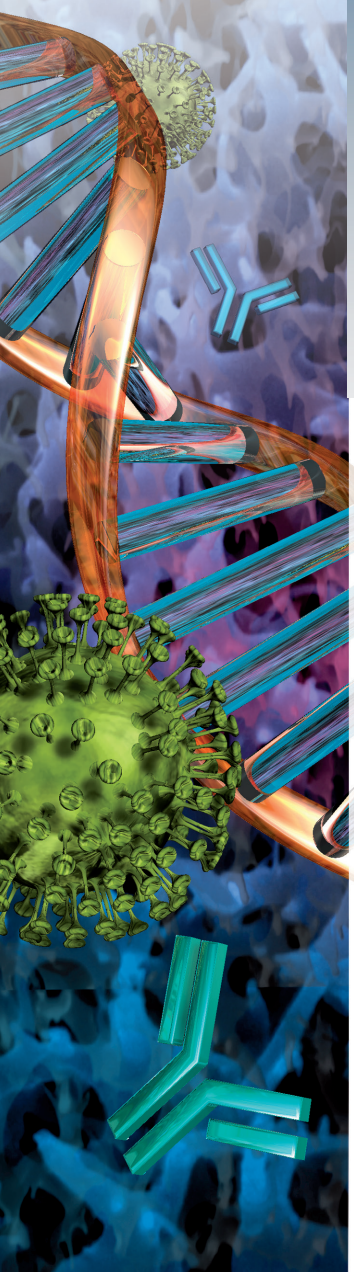
PALL Biotech

USD3284

Cadence™ Single-Pass TFF Modular Kit





Single-pass tangential flow filtration (SPTFF) with 'build-it-yourself' versatility

Single-pass tangential flow filtration has revolutionized how TFF is implemented in biotech, vaccine, blood plasma, and other applications. The Cadence modular kit provides additional functionality to the standard SPTFF product offering for the biopharmaceutical industry by enabling the product/technology portfolio to be used with any type of membrane and cassette format that Pall currently offers. The Cadence modular kit provides the flexibility that is needed to perform with today's challenging applications.

Features and Benefits

- Fully modular design, which provides the ability to assemble any staging configuration up to nine stages in series
- Use of any existing Pall membrane type and molecular weight cutoff
- Use of any existing Pall 93 cm^2 or 186 cm^2 cassette type and screen channel format
- A single kit can be used to create multiple assembly types

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Overview

The Cadence modular kit is a process development tool that comes with manifold plates and all the necessary gasket types to allow the user to assemble any SPTFF configuration up to nine stages in series. Simply purchase the Pall Centramate™ cassettes of your choice and assemble them in a Cadence SPTFF holder or a standard Centramate holder. Utilizing conventional Pall TFF cassette building blocks with either Delta regenerated cellulose or Omega™ polyethersulfone membrane ensures accurate scalability, proven selectivity, and low protein binding attributes.
These products utilize proprietary technology, as well as technology licensed from SPF Innovations, and may be covered by one or more patents. See pall.com/patents.

Applications and Operational Benefits

Until now, the Cadence SPTFF product has been available with 10 kD and 30 kD Delta regenerated cellulose membrane in a medium screen channel format. Many applications can benefit from the advantages of SPTFF technology, but require different membrane types and cassette formats. Different types of staging configurations may also be required to achieve the target concentrations for some of today's challenging applications. The Cadence modular kit provides the flexibility that is needed in process development while capitalizing on the benefits of SPTFF technology.

Enhance downstream processing to increase capacity and reduce costs – The Cadence SPTFF technology can eliminate or reduce the size of intermediate storage tanks and associated cleaning of tanks when used for in-process volume reduction before or after existing steps.

Enable in-process volume reduction – Depending on the initial concentration and product characteristics, a volume concentration factor (VCF) of 2 to 20x (or higher) can be achieved.

Optimize processing of highly shear-sensitive products – SPTFF processing results in only one pass through the pump and module, reducing shear exposure. For products that are sensitive to pumping, the pump can be completely eliminated by using pressurized vessels to flow the process fluid through the module. Further benefits are achieved by eliminating mixing or foaming issues associated with recirculation back to the feed tank with conventional TFF systems.

Enable continuous processing – Cadence SPTFF products allow for concentration in a single pass through the device, eliminating the recirculation loop and the need to accumulate a batch. This makes it an enabling technology for continuous bioprocessing.

Product Platform – Similar to other Cadence SPTFF devices, the Cadence modular kit is used in conjunction with standard Pall cassettes with either Delta regenerated cellulose or Omega polyethersulfone membrane. These membrane types provide the high flux, high selectivity and low protein binding characteristics.

Specifications

The operating characteristics for any single-pass TFF process must be established empirically by performing trials and analyzing the results. Pall's team of technical specialists is available to assist in conducting trials to develop operating conditions necessary to achieve the desired process objectives.

Materials of Construction

Gaskets	USP Class VI Pharmaceutical grade, platinum cured silicone
Manifold plates	USP Class VI Ultra-high-molecular-weight (UHMW) polyethylene
Connections	1/8 inch hose barb

Operating Limits

Maximum pressure	4.1 barg (60 psig)
Maximum feed flow rate	250 mL/min
Processing temperature range	Ambient Up to 40 °C for 4 hours cleaning pH range: 2 – 13

Ordering Information

Cadence modular kit part number: **SPTFFMKPD9**
Kit contents: 1 x Feed manifold
1 x Retentate manifold
25 x Gaskets

Holder part numbers (ordered separately):
Cadence SPTFF holder: **CSPHM0330**
Centramate standard TFF holder: **FS001K10**

Number of Cassettes each holder type can accommodate:

	Cadence SPTFF Holder		Centramate Holder	
	Min	Max	Min	Max
T01	4	30	1	21
T02	3	21	1	15

Standard Pall Centramate cassettes (93 cm^2 or 186 cm^2 nominal size) are ordered separately. The number of cassettes required will depend on the application. Pall's team of technical specialists is available to provide guidance on format configuration and membrane/cassette selection.

PALL Biotech

Corporate Headquarters
Port Washington, NY, USA
+1.800.717.7255 toll free (USA)
+1.516.484.5400 phone
biopharm@pall.com e-mail

European Headquarters
Fribourg, Switzerland
+41 (0)26 350 53 00 phone
LifeSciences.EU@pall.com
e-mail

Asia-Pacific Headquarters Singapore
+65 6389 6500 phone
sgcustomerservice@pall.com
e-mail

Visit us on the Web at www.pall.com/biotech
E-mail us at biotech@pall.com

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