ROCKER

INSTRUCTION MANUAL

Model: HansaBioMed, TFF-Easy / TFF-MV / TFF-EVs

VIDEO

Tanfil 100

HansaBioMed TFF Hollow Fibers, hereinafter referred to as cartridge, can be used for EV purification, separation, concentration from diluted matrices, such as cell conditioned media, urine, plasma, etc. Before loading, sample preparation is recommended, such as centrifugation, to eliminate large particles and prevent from the membrane clogging.

	TFF-Easy	TFF-MV	TFF-EVs Small
Material	Polysulfone (PSU)	Polysulfone (PSU)	Polyethersulfone (PES)
Pore Size	5 nm	150 nm	50 nm
Retentate	EVs	Medium & large EVs	> 50 nm EVs, Nanoparticles
Permeate	Water and small molecules (< 100 kDa)	Small EVs, proteins, soluble molecules	Water and small molecules (< 250 kDa)

*** Sterility: HansaBioMed TFF cartridge are provided sterile. Once used, please sterilize by Beta-irradiation. Do NOT autoclave.**

*** Storage: Store the cartridge at room temperature.**

Min Part Diaphragm

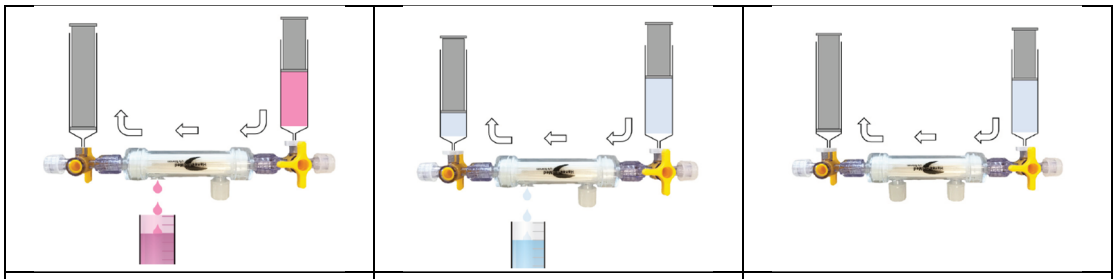
Position	Designation	Position	Designation
1, 1a	Sample Injection Nozzle	4	Permeate / Filtrate Nozzle
2	Flow Valve	5	Flow Valve
3	Permeate / Filtrate Nozzle	6, 6a	Sample Injection Nozzle

Usage Guide

- All these cartridges suitable for both: 1. manual and 2. mechanical use.

1. Manual Use

The general workflow is shown below, please refer to instruction of each cartridge for detail information.



Step 1. Sample Injection and Filtration	Step 2. Washing	Step 3. Retentate Recovery

2. Mechanical Use

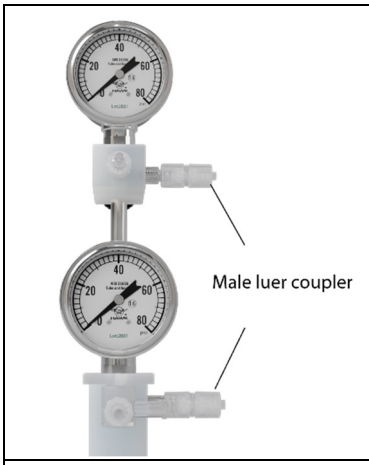
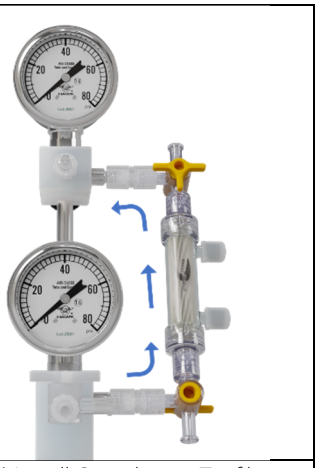
Installation, operation, and cleaning of the TFF System, please refer to instruction manual of Tanfil 100.

A. HansaBioMed TFF Cartridge Installation

1. Screw 2 male luer couplers each to feed and retentate gauge mounting block of Tanfil 100, TFF System.
2. Remove the caps from sample injection nozzle (1, 6) of the HansaBioMed TFF cartridge.

* Please keep all caps for cartridge storage.

3. Attach sample injection nozzle (1, 6) of HansaBioMed TFF cartridge directly to coupler.
   * The retentate gauge mounting set and capsule bracket set are adjustable to fit height of catridge.
   * Keep tubing length as short as possible to reduce hold-up volume.
4. Attach male luer lock-1/8" hose barb connector(s) to permeate nozzles (3,4) to collect filtrate.
5. Rotate the flow valves (2,5) in the position indicated in the A.3 figure below to start processing.
6. Load the sample and start processing. Refer to Tanfil 100 instruction manual for operation.
   * The recommend flow rate for HansaBioMed TFF cartridge is 30-40 mL/min.
   * Max. operating pressure of HansaBioMed TFF cartridge is 15 psi (1 bar), do not exceed it.

		
(A.1) Connectors on Tanfil 100	(A.3) Connectors on Cartridge	(A.4) Install Cartridge on Tanfil 100

B. HansaBioMed TFF Cartridge Cleaning and Storage

The cartridge is reusable, once the filtration process is ended, please wash the cartridge with following reagent for several times. After washing with chemicals (NaOH, NaClO, Ethanol), please wash with at least 50 mL of MilliQ water to remove the chemical.

* For cell culture, the cartridge is recommended for single use to keep the sterility and prevent from contamination.

	General Wash	Easy Fouling → Hard Fouling	
Cleaning Solution	MilliQ Water	0.5N~1N NaOH	0.05% NaClO

* Using 40℃ ~50℃ cleaning solution to enhance the cleaning effect.
* If pyrogenic agents exist, wash the cartridge with 96% Ethanol (5~10 mL) to remove potential pyrogenic agents.
* Storage: Let the cartridge dry at room temperature.

Ordering Information

184100-01(02)	Tanfil 100, Tangential Flow Filtration System, AC100-240V, 50/60Hz, US plug (EU plug)
184100-62	Tanfil 100 repair kit (Includes luer connectors, tubing, etc)
184100-47	TYGON®, Sani-Tech Ultra-C Platinum-cured Silicone Tubing, ID 1/8" x OD 1/4", 50 ft
184100-48	Pharmed BPT Tubing, ID 1/8" x OD 1/4", 25 ft

HBM-TFF1	TFF-Easy Polysulfone Hollow Fibers
HBM-TFFMV	TFF-MV Polysulfone Hollow Fibers
HBM-TFFEVS-S	TFF-EVs Polyethersulfone Hollow Fibers