

Spectrum Digital Literature Instructions

KrosFlo® MiniKros® Pilot TFF System Brochure

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(optimized for letter-sized paper)

KrosFlo®

MiniKros® PILOT SYSTEM

Pilot & Production Scale Tangential Flow Filtration System

*Sterile & Single-Use Flow-Path
For TFF Bioprocessing*

*Process Optimization & Control
With Data Collection*

NEW! KrosFlo® MiniKros® PILOT SYSTEM



KrosFlo® MiniKros® PILOT SYSTEM

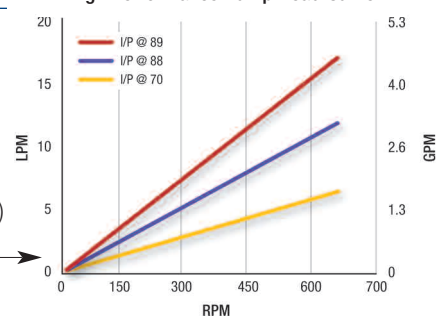
The MiniKros® Pilot System is designed to provide precise and reproducible control and documentation of process separations ranging from 10 to 1000 liters. The incorporated pressure and flow monitor directly interfaces with the peristaltic pump drive to provide precision flow-control, pressure warning alarms and automatic pump shut-off for safe-guarding the process and assuring sample protection. The system also includes Spectrum's proprietary KF Comm Data Collection Software that automatically collects, records and graphs real-time data for convenient monitoring of the over-all process while maintaining batch records.



PERISTALTIC PUMP & PUMP HEAD

- Provides precision flow control
- 650 RPM pump drive with reversible motor
- 115 or 230 VAC (50/60 Hz)
- IP 66 rated / Stainless Steel for easy wash down
- Standard 13 LPM pump head (stackable for 24 LPM capacity)
- High performance 17 LPM pump head (optional)

High Performance Pump Head Curve



DIGITAL PRESSURE MONITOR & DISPOSABLE TRANSDUCERS

- Records & displays inlet, outlet, permeate and TMP pressures
- Allows 5 user defined high/low pressure alarm points with auto pump shut-off
- Three sterile, disposable pressure transducers; Luer-Lok™ for minimum hold-up volume

FLOW MONITOR & DISPOSABLE FLOW METERS

- Calculates & displays feed flow rate for standard Masterflex® Tubing
- Calibration available for non-standard tubing
- Records & displays permeate flow rate
- Disposable permeate flow meters for up to 0.5 LPM and 4.5 LPM

KF Comm DATA COLLECTION SOFTWARE

Automatically collects, records and graphs real-time process data in our proprietary software to save time, insure reproducibility and provide comprehensive batch records.

Records Real-time Input

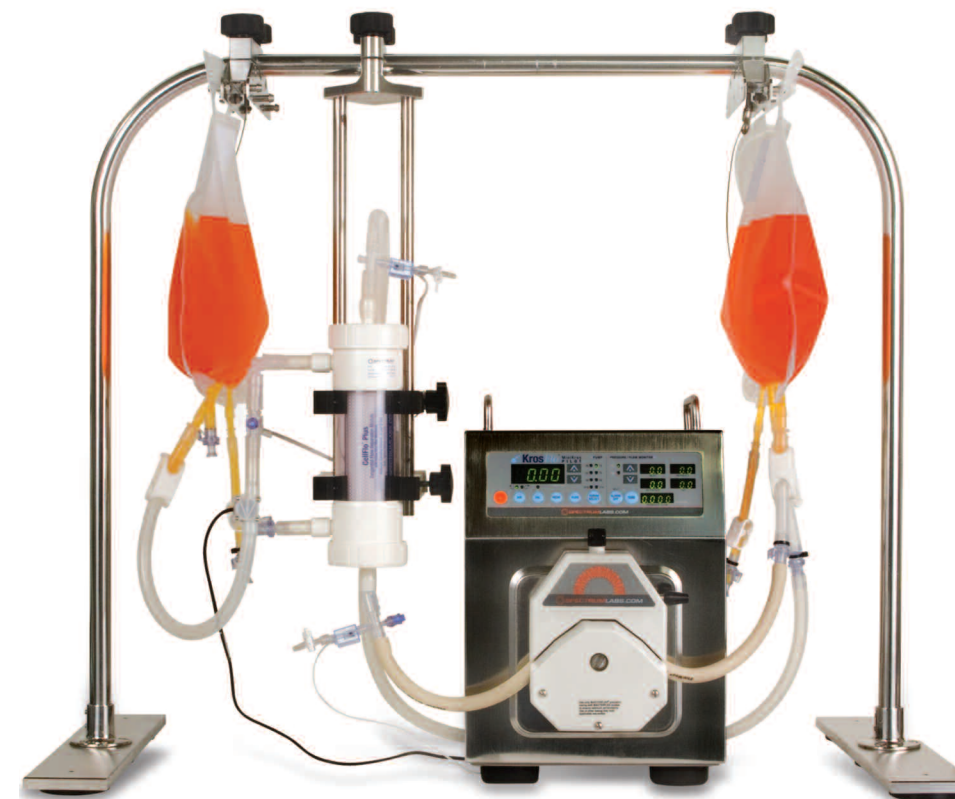
Inlet Pressure Feed Flow Rate
Retentate Pressure Permeate Flow Rate
Permeate Pressure

Calculates & Trends Data Points

Transmembrane Pressure Volumetric Throughput
Filtration Flux Rate Concentration Factor
Shear Rate

The System for a Single-Use Solution! VERSATILE & FLEXIBLE SUPPORT STANDS FOR SINGLE-USE BIOPROCESSING

Combined with either the KrosFlo® Module Stand or the KrosFlo® MBT® (Module-Bag-Tubing) Flow-path Stand, the complete system offers the versatility and flexibility needed to operate either single-use hollow fiber TFF modules, pre-assembled MBT® flow-paths or custom-designed, complex TFF manifold systems. While the stands quickly and easily "support" single-use bioprocessing, the MiniKros® Pilot System simplifies process control and optimization.



APPLICATIONS

- Cell Harvesting / Clarification
- Cell Perfusion
- Lysate Clarification
- Bacterial Concentration
- Microparticle Washing
- Nanoparticle Diafiltration
- Macromolecular Isolation
- Virus & VLP Purification
- Protein Purification
- Antibody Purification
- Desalting and Buffer Exchange

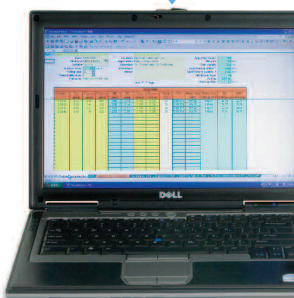
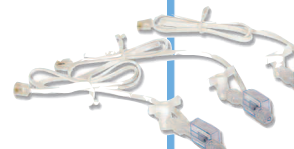
KrosFlo® SINGLE-USE HF MODULES

The largest selection of hollow fiber (HF) membrane types, MWCO's and surface areas; available dry, pre-wetted or irradiated; ready-to-use.



KrosFlo® SINGLE-USE MBT® FLOW-PATHS

Irradiated, custom-built Module-Bag-Tubing systems provide complete product isolation in a single-use environment for process protection and easy validation.



SELECTION GUIDE & ORDERING INFORMATION

KrosFlo® MiniKros® PILOT TFF System

Part Number	Description
SYM3-011-01N	MiniKros® Pilot System, UL & CE Certified (110V) Integrated Components: 650 RPM Pump Drive with 13 LPM Pump Head Digital Flow Monitor & Pressure Monitor 3 Pressure Transducers & Cables 2 Permeate Flow Meters (0.5 LPM & 4.5 LPM) KF Comm Data Collection Software and Cables
SYM3-012-01N	MiniKros® Pilot System, UL & CE Certified (220V) Integrated Components: 650 RPM Pump Drive with 13 LPM Pump Head Digital Flow Monitor & Pressure Monitor 3 Disposable Pressure Transducers & Cables 2 Permeate Flow Meters (0.5 LPM & 4.5 LPM) KF Comm Data Collection Software and Cables
SYM3-111-01N	MiniKros® Pilot System (110V) with KrosFlo® Module Stand
SYM3-112-01N	MiniKros® Pilot System (220V) with KrosFlo® Module Stand

System Accessories

Part Number	Description
EZST-M3K-01N	KrosFlo® Module Stand (supports up to 3X KrosFlo® modules and tubing)
EZST-F20-01N	KrosFlo® MBT® Flow-path Stand (supports up to 2X MiniKros®, three 20 liter bags and tubing)
ACST-KHD-02N	KrosFlo® Module Holders (for use with Flow-path Stand), 2/pkg
ACM3-SKT-01N	MiniKros Pilot Starter Kit; includes assembly tools and fittings
ACM3-FKT-01N	MiniKros Pilot Replacement Fittings Kit
ACTU-E26-25N	Extended Life Silicone Tubing, size 26 (1/4 in. ID); 25 ft/pkg
ACTU-E73-25N	Extended Life Silicone Tubing, size 72 (3/8 in. ID); 25 ft/pkg
ACTU-E82-25N	Extended Life Silicone Tubing, size 82 (1/2 in. ID); 25 ft/pkg
ACM3-H3S-01N	Pump Head with 3 Stainless Steel Rollers, 13 LPM Standard
ACM3-PHP-01N	Pump Head with 3 Stainless Steel Rollers, 17 LPM High Performance
ACPM-499-03N	Disposable Pressure Transducers, Sterile, 3/pkg
ACM3-FML-01N	Permeate Flow Meter, 0.05 to 0.5 LPM
ACM3-FMH-01N	Permeate Flow Meter, 0.2 to 4.5 LPM



KrosFlo® MBT® (Module-Bag-Tubing) Flow-path Systems are custom-built to specific applications.

Please contact us to arrange for a design and quotation.



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*Sterile & Single-Use Flow-Path
For TFF Bioprocessing*

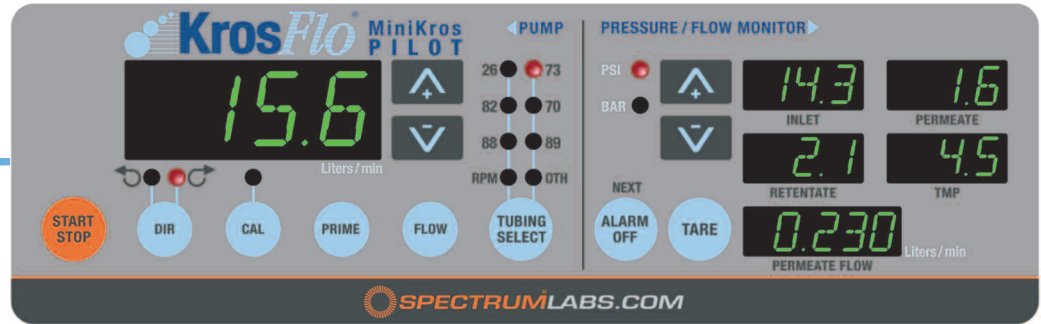
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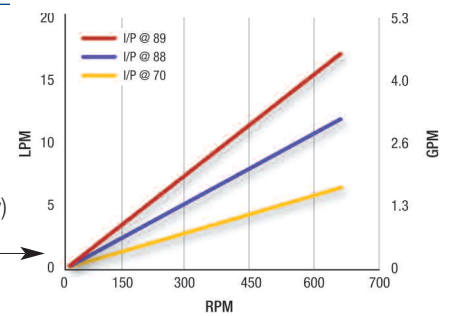
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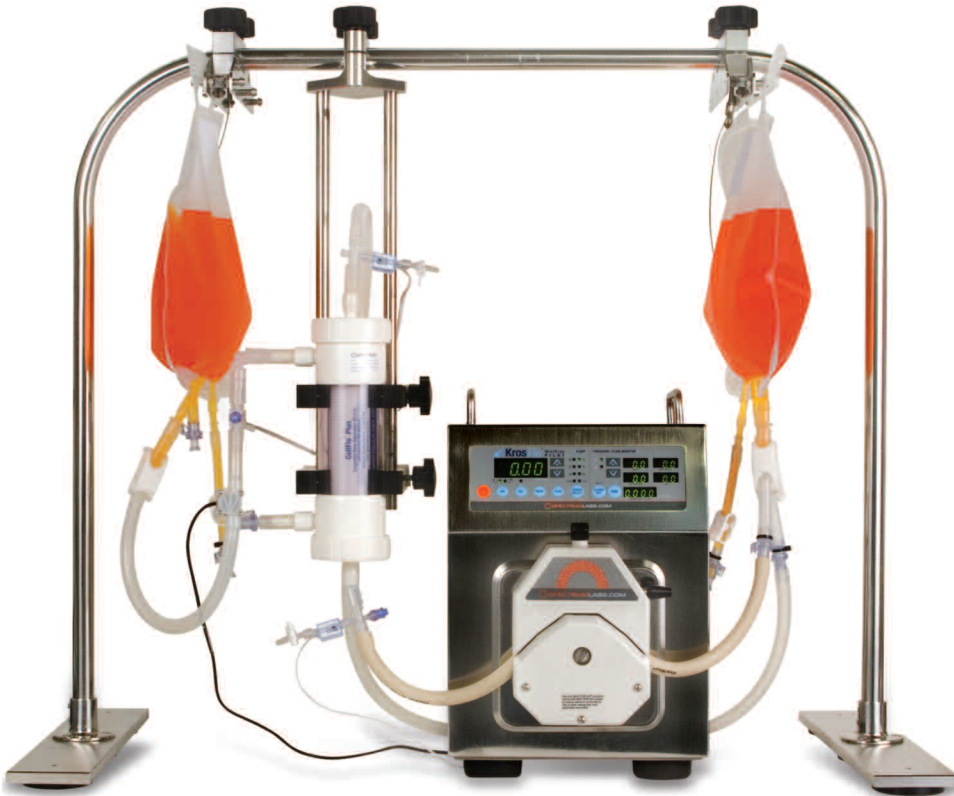
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