

Data Sheet

Hardware for Pod disposable depth filter systems

Innovative, high-performance Pods are ideal for primary and secondary clarification in lab, pilot and process-scale applications.

Millistak+® and Clarisolve® depth filter media are offered in a scalable, disposable format, the Pod Filter System. Accommodating applications from lab to pilot to process scale, the Pod format offers greater flexibility because of its unique modular design.

The Pod system is ideal for a wide variety of primary and secondary clarification applications, including cell cultures, yeast and *E. coli* lysates post centrifuge, *E. coli* refolds, media, vaccines, plasma proteins and sera.

The system's modular design allows users to operate the system with as few as one at pilot scale and as many as 30 Pod filters installed at the process scale. These options make it easy to configure a system for a specific application, and conveniently reconfigure it as process capacity requirements scale-up or down.



Benefits

- Modular format offers scalability from 5 to 12,000 liters or more
- Optional 100% disposable flow path eliminates need for housing, CIP, cleaning validation
- Robust construction is easy to use and set up
- Increase your installed surface area by 6x within the same footprint

Linear Scalability

The innovative Pod filter system consists of seven filter sizes and two expandable holders. No matter what size Pod filter you choose, the same flow path and configuration ensures a linearly scalable solution from bench to process scale.

Easy to Use

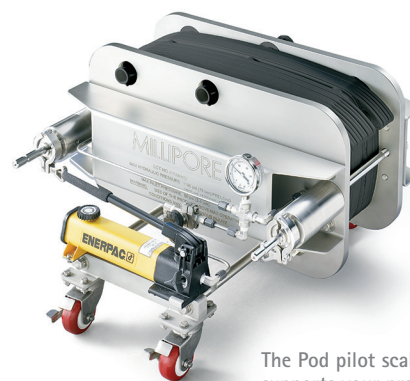
With the compact, modular design of our Pod system, you can increase productivity and shorten cycle times.

Installation and set-up of the Pod system is simple and straightforward. The unique design of the disposable adapters makes it easy to connect the Pods to the process piping. The self-contained and disposable nature of the system protects operators from exposure to biohazards and eliminates maintenance as well as cleaning validation requirements.

Configurations

- **Pilot scale holder** – accommodates up to two full size Pods. An optional accessory kit expands capacity to 5 full scale Pods. Total surface area is dependent on media grade.

- **Process scale holder** – accepts from five to ten Pods per rack. Up to three racks can be stacked for process flexibility. Total surface area is dependent on media grade.
- **Disposable adapters** – connect Pods to process piping, creating disposable flow path.
- **Disposable diverter plates** – enable more than one media grade on a single rack
- **Disposable feed and filtrate manifolds** – make your flow path 100% disposable by replacing the stainless steel manifolds with disposable versions. Available for 1, 2, and 3 rack process scale holders.



The Pod pilot scale holder supports your process as you scale up.

Pod Holder Specifications*

Surface Area	Pilot Scale	Process Scale
Materials of construction		
Manifold	N/A	316 L stainless steel
Diverter plate	Polypropylene	Polypropylene
End plates	304 stainless steel	304 stainless steel
All metal surfaces in contact with process fluids	N/A	316 L stainless steel
Manifold surface finish, internal	N/A	Electropolished, Ra <0.5 μm (<20 micro-inches)
End plate clamp and guide rods	17-4 PH steel	17-4 PH steel
All other metal surfaces	304 stainless steel	304 stainless steel
TC gaskets	Thermoplastic Elastomer (TPE)	Thermoplastic Elastomer (TPE)
TC clamp	304 stainless steel 2 piece clamp	304 stainless steel 2-piece clamp
Performance properties	Capable of supporting and sealing pod filters up to 50 psig maximum operating pressure at 25 °C. Inlet and outlet connection to the pods and vents are via disposable adapters.	
Maximum differential pressure		
Forward	50 psid (3.5 bar) at 25 °C; 15 psid (1.0 bar) at 80 °C	
Reverse	30 psid (2.1 bar) at 25 °C	
Regulatory information	Sealing materials and plastics in contact with the product meet USP <88> biological reactivity test for Class VI plastics and are Title 21 CFR 177.2600 and 177.1550 compliant.	

Pod Disposable Manifold Specifications*

Pod Disposable Manifold	Specifications
Materials of construction	
Polypropylene	Max. operating pressure: 50 psi
Double braided silicon tubing	Hot water sanitization: 1 cycle of 80 °C for 30 minutes
Silicone gaskets	Toxicity: Component materials comply with the requirements of USP <88> biological reactivity tests for Class IV plastics
Glass filled nylon clamps	

*No holder required for lab scale pod

Ordering Information

Description	Qty/Pk	Catalogue No.
Pilot Scale Holder		
For pod configurations from 1 to 2 filters	1	MPODPILOT
Pilot holder expansion kit allows for pod configurations up to 5 filters	1	MPODPILOTX
Process Scale Holders		
1-rack holder; for 5 to 10 filters; Gemü® valves	1	MPODSYS1A
1-rack holder; for 5 to 10 filters; ITT valves	1	MPODSYS1B
1-rack holder; for 5 to 10 filters; no valves	1	MPODSYS1N
1-rack expansion kit; for 5 to 10 filters; no valves or casters	1	MPODSYS1X
2-rack holder; for 5 to 20 filters; Gemü® valves	1	MPODSYS2A
2-rack holder; for 5 to 20 filters; ITT valves	1	MPODSYS2B
3-rack holder; for 5 to 30 filters; Gemü® valves	1	MPODSYS3A
3-rack holder; for 5 to 30 filters; ITT valves	1	MPODSYS3B
Holder Replacement Parts*		
Hydraulic pump		MPODHYPUMP
Hydraulic system pressure gauge		MPODHYGAGE
Hydraulic fluid		MPODHFLUID
Clamp insert		MPODINSERT
1.5 in. TC stainless steel clamp for use with MPODINSERT		YY2004045
Clamp rod knob		MPODCRKN0B
Clamp rod for 2 filters		MPODCR0D02
Clamp rod for 5 filters		MPODCR0D05
Clamp rod for 10 filters		MPODCR0D10
Manifold elbow, 90 °C, 1.5 in. 316 stainless steel		MPODSELB0
Manifold tee, 1.5 in. 316 stainless steel		MPODSSTEE
Manifold spool, 1 in. x 6.60 in. L		MPODMANSPH
Manifold spool, 1.5 in. x 13.16 in. L		MPODMANSPV
Manifold bracket assembly		MPODMANBRK
Replacement diaphragm for 1 in. Gemü® MPODVALVEA		MPODVLVADIA
Replacement diaphragm for 1 in. ITT MPODVALVEB		MPODVLVBIDIA
Holder Accessories*		
1-rack Disposable feed and filtrate manifold		MPODDSPMAN1
2-rack Disposable feed and filtrate manifold		MPODDSPMAN2
3-rack Disposable feed and filtrate manifold		MPODDSPMAN3
Disposable adapter kit** 3 through adapters, 3 blind adapters	1	MPODADAPT
Disposable adapter kit** 6 through adapters, required if using MPODDIVERTR	1	MPODADPTF
1.5 in. TC sanitary gauge, 0–4 bar (0–60 psi)	1	MPOD60PSIG
1.5 in. TC EPDM gasket	10	HGTC150EP
1.5 in. TC stainless steel clamp	1	YY2004045
Diaphragm valve, 1 in. Gemü®	1	MPODVALVEA
Diaphragm valve, 1 in. ITT	1	MPODVALVEB
Disposable diverter plate	10	MPODDIVERTR
Pod pilot holder handle	1	MPODPLTHNDL
End Plate Replacement Kit		
This kit replaces the bronze bushings with linear ball bearings to facilitate movement of the end plate. The kits come with one end plate, new guide rods and associated hardware.		
Pod Retrofit Kit for MPODPILOT		MPODRET1
Pod Retrofit Kit for MPODPILOT with extension rods		MPODRET2
Pod Retrofit Kit for process scale holders		MPODRET3

*Consult your sales associate for replacement part and accessory availability.

**The disposable adapter kit must be ordered with individual Pod filters in order to install the Pod filter in the holder.



To Place an Order or Receive Technical Assistance

In the U.S. and Canada, call toll-free
1(800)-645-5476

For other countries across Europe, call
+44 (0) 115 943 0840

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