



Cross-flow filtration



Dead-end filtration system Stirred Cell

Introduction

The AHP47 Stirred Cell is a high-pressure, chemically resistant stirred cell that performs a wide variety of membrane separations. With a maximum pressure rating of 1000 psig (69 bar), the AHP47 is ideally suited to simulate the flow dynamics of reverse osmosis (RO) filtration, Nano filtration (NF), ultrafiltration (UF), and microfiltration (MF) systems. Stainless steel (316L) construction and chemically resistant components make it an ideal choice to filter aqueous and non-aqueous solutions.

Dead-end filtration separates particles from liquids flowing vertically into the filter. The filtered materials deposit into a cake on the filter's surface, clogging the membrane relatively quickly.

To overcome the resistance of the membrane, dead-end filtration systems require a booster or vacuum pump that can supply the force needed to create the appropriate flow rate. Unlike cross-flow filtration systems, dead-end filtration is intermittent since the membrane must be cleaned or replaced after set intervals to maintain optimal performance. Any 47 mm diameter membrane disk can be used with the stirred cell, which provides excellent versatility. This instruction manual describes the functions, features, configuration, start-up, and operation of the AHP47 Stirred Cell.



Dead-end filtration system 3932154	
Features and Technical Specifications Parameter	Description
Membrane Size:	47- mm diameter (1.5 inches)
Active Membrane Area:	14.6 cm ² (2.26 in ²)
Processing Volume:	300 mL
Hold-Up Volume:	1 mL
Maximum Pressure:	69 bar (1000 psig)
Maximum Temperature:	121 °C (250 °F) at 55 bar (800 psig)
PH Range:	Membrane dependent
Connections:	
Permeate Outlet:	1/8-inch diameter 316L SS tubing
Pressure Inlet:	¼ inch FNPT
Wetted Materials of Construction	
Cell Body:	316L Stainless Steel
O-rings:	Buna-N, others available as options
Gaskets:	Buna-N, others available as options
Stir Bar:	PTFE-coated magnet
Dimensions:	
Cell Body Diameter:	5.2 cm (2.0 inches)
Cell Top Width (assembled w/clamp)	10.3 cm (4.0 inches)
Cell Bottom Width (assembled w/clamp)	13.4 cm (5.25 inches)
Cell Height:	22.2 cm (9.5 inches)
Assembled Weight	(6 lb.)
Autoclavable	Yes

Material

All supplied fittings are made of SS 316 material. Its autoclave. Note : Contact For Chemical compatibility

Safety compliance:
CE certification

Applications :

- Flow Geometries
- Dead-end MF
- Cross-flow filtration
- Silt Density Test

Ordering Information		
Description	QTY	Part No.
AHP47 Components 3932154		
Stainless steel cell body	1	3932154-1
Cell top	1	3932154-2
Cell bottom	1	3932154-3
10 hex screw pkt/ 6	1	3932154-4
Hex Key	1	3932154-5
Bottom O-rings	2	3932154-6
Top Gasket	2	3932154-7
Permeate Tube 1 mtr	2	3932154-8
Stir bar assembly ss pre-filter	1	3932154-9
Stir bar retriever	1	3932154-10
User Manual	1	3932154-11