

Microza UNA Hollow-Fiber Modules

Description

The UNA Series (hollow-fiber filtration) modules are designed for reverse osmosis (RO) pretreatment applications. Aria Filtra® systems incorporating UNA modules can replace conventional upstream operations such as flocculation, settling, and granular media filtration. The modules provide consistent high-quality effluent, independent of incoming raw water quality, without the use of coagulating chemicals, typically achieving a silt density index of less than 2 to 3 and a turbidity of less than 0.08 NTU. These robust Aria Filtra systems have a comparatively small footprint, are modular in design, and are fully automated. They may be easily incorporated into the existing deionized water infrastructure.

Applications

Microza® UNA module systems are designed to optimize the performance and extend the life of RO membranes.

Features

- Hollow-fiber construction with 0.1 micron (μm)-rated membrane for removal of particles, bacteria, colloidal silica, and for reduction of turbidity
- Polyvinylidene fluoride (PVDF) membrane resistant to oxidizing agents
- Filtration from outside fiber to inside of fiber:
 - Large surface area per module for excellent throughput, resulting in compact systems and exceptional tolerance for high contaminant levels
 - Removal of foulants by unique and periodic air-scouring combined with permeate back flushing
 - Minimum prefiltration required (e.g., 400 μm self-cleaning strainers for removal of tramp solids)
- Low operating costs
 - Greatly extended time between RO membrane cleanings (due to high-quality RO prefiltration), resulting in reduced downtime and chemical / disposal costs
 - High water recovery rates (typically up to 95% to 98%) to minimize cost per volume of water produced

OPERATING PARAMETERS

PERFORMANCE*	
Process capacity typical range	2.2 to 6.8 m ³ /h (10 to 30 gpm)
DIMENSIONS	
Membrane area	50 m ² (538 ft ²)
Module length	2,160 mm (85 in.)
Module diameter	165 mm (6.5 in.)
OPERATING CONDITIONS	
Max. operating temperature	40°C (104°F)
Max. transmembrane pressure	3 bar (45 psi)
Max. inlet pressure	4 bar (58 psi)
pH range	1-10
MATERIALS	
Membrane	PVDF
Housing	ABS
Potting material	Polyurethane
Gaskets	Silicone
Preservative	40% calcium chloride

*Please contact Aria Filtra for operating manual and system sizing, as capacity per module is dependent on feedwater quality, temperature, and other factors.

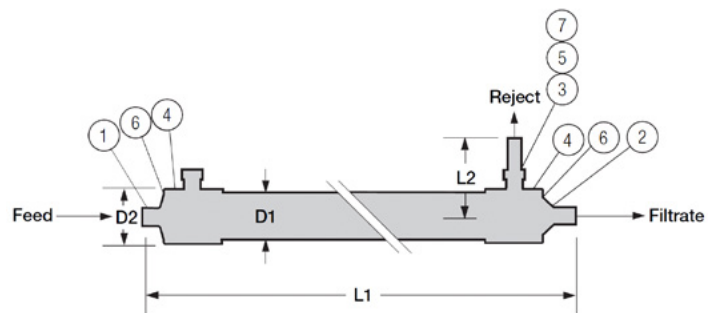
Unit conversion: 1 bar = 100 kilopascals

PART NO. / ORDERING INFORMATION

Model part number	UNA-620A
Length (L1)	2,364 mm (93 in.)
Length (L2)	272 mm (10.7 in.)
Diameter (D1)	165 mm (6.5 in.)
Diameter (D2)	221 mm (8.7 in.)

ACCESSORIES AND SPARE PARTS

ITEM	MATERIAL
1. Adapter feed connection	304 SS
2. Adapter permeate connection	PVC
3. Adapter reject connection	PVC
4. Cap nut feed and permeate connections	AS (20% GF)
5. Nut reject connection	PVC
6. O-ring for feed and permeate adapter	Silicone
7. Gasket reject connection	Silicone



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Aria Filtra, a division of Trojan Technologies, is the filtration partner of choice for municipal and industrial customers that need reliable access to consistent, high-quality water. With more than two billion gallons of installed capacity spanning six continents, Aria Filtra has the process expertise, proven technology, and intelligent systems that customers trust to reliably tackle their most complex water treatment challenges. Featuring industry-leading durability, reliability, and ease of operations, our broad portfolio of solutions ensures mission-critical functions continue to work as needed, day in, day out, for years to come. Learn more at AriaFiltra.com.

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