

AMFM™ Filtration System

Industry Challenge

Throughout plant operation and maintenance outages, including cleaning and underwater repairs, filtration frequently represents a substantial portion of generated waste and related costs.

Additionally, multiple manual filter changeouts during an outage or decommissioning activity expose workers to avoidable radiation exposure and result in critical path delays due to work stoppages.

DEI Solution

The AMFM-X product line features a submersible filtration system employing a patented ultrasonic regeneration process, rejuvenating the capacity of its filters multiple times throughout their extended service life. The AMFM-X systems:

- Engineered for continuous 24/7/365 operation (with an automated ultrasonic regeneration process, eliminating the need for human intervention)
- Filtration takes place upstream of the pumps to safeguard them from contamination

Applications

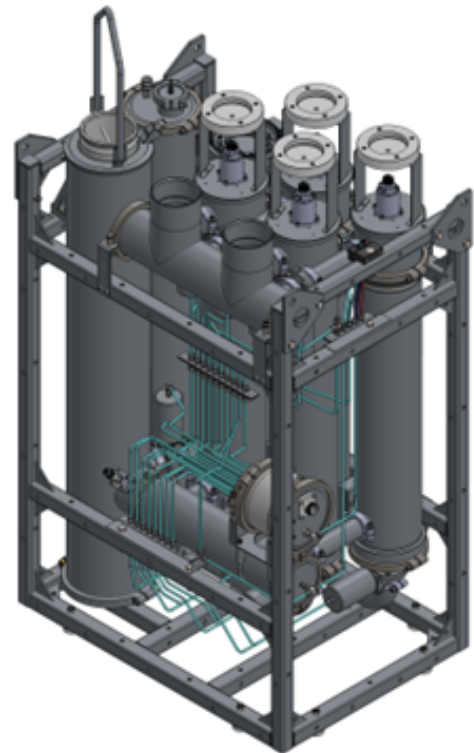
AMFM-X filtration systems distinguish themselves with economic benefits compared to traditional counterparts. Through the elimination of disposable plastic filters and offering a compact, low-maintenance design, they provide cost-effective solutions. The continuous operation capability of the AMFM-X product line makes it especially suitable for replacing:

- Outdated or unreliable purification equipment installed in the plant's fuel pool
- High-flow plastic filtration systems employed for supplementary filtration during outages

Benefits

DEI's innovative solution ensures uninterrupted operation and eliminates the need for disposable filters to assist with:

- Reducing exposure to radioactive doses
- Lowering overall capital equipment costs
- Decreasing downtime during outages
- Substantially minimizing waste stream operations



AMFM-X750 Filtration System



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Nuclear Products and Technology

AMFM™ Filtration System



AMFM System Specifications and Requirements: X750 vs. X1500

Specification	AMFM-X750	AMFM-X1500
Nominal Flow Rate (gpm)	750	1500
Weight (lbs.)	1750	3500
Envelope Dimension (feet)	4' L x 3' W x 7' H	5.5'L x 3' W x 7' H
Filters	5	10
Inlet Suction Ports	2	4
Filter Life	10+ years	
Filter Size	8" Diameter x 40" length	
Filter Media Rating	sub-micron to >1 micron	
Electrical	(1) 3 Phase 480 V Receptacle	
Plant Air Required	Yes	

Industry Experience and Case Studies

Insights from DEI customers who have achieved substantial cost savings through implementing AMFM filtration systems.



AMFM Filtration Systems Ready for Shipment

Plant Type	Cost Savings
BWR	\$917,900
BWR	\$563,600/outage
BWR	\$223,700
BWR	\$484,500/year
PWR	\$173,000
PWR	\$1,811,400



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