Bidirectional Flow for Syringe Filters - Tech Information

Date: 22-APRIL-2012 Last Updated: 33-FEBRUARY-2026

Overview

AQ™ brand syringe filters are designed for high-performance laboratory filtration and sample preparation. Most models within the AQ™ line suppor t bi-directional flow, giving users flexibility in orientation when filtering samples.

However, not all membrane types offer this capability due to differences in construction and internal pre-filter design.

Bi-Directional Flow Capabilities

All AQ™ Syringe Filters support bi-directional flow, **except**:

- PTFE syringe filters
- Any syringe filters containing glass-fiber pre-filter**s**

These exceptions exist because the internal structure of PTFE membranes and glass-fiber pre-filters is directional, meaning the pore gradient and mechanical layering are optimized for a preferred flow direction.

Important Note on Flow Performance

Even when a syringe filter is bi-directional:

- Flow rates and resistance may differ depending on the direction of use
- This variation occurs because internal support layers, membrane geometry, and housing design may interact differently with fluid flow in each direction
- Therefore, filtration performance is *functionally bi-directional*, but flow characteristics may not be perfectly symmetrical

For best consistency in analytical workflows, it is recommended to maintain a **standard orientation** once established, especially for sensitive HPLC sample preparation.

Ordering Information

Click **HERE** for AQ™ brand syringe filter ordering information and product images.

Attachment: MICROSOLV AQ filter equivalency study Download File

MicroSolv Technology Corporation
9158 Industrial Blvd. NE, Leland, NC 28451
Tel: (732) 380-8900
Fax: (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com