



ACCSX™ Series – Accessory Filtration Excellence Built to Support. Engineered to Last.

ACCSX-MAGSEP™ – Magnetic Separators Technical Overview

Filtracore Asia's **ACCSX-MAGSEP™ Magnetic Separators** are easy-clean, extractor-type magnetic separators engineered for continuous removal of ferrous contamination from liquid process streams. They are installed upstream of pumps, valves, heat exchangers, filter housings, and other sensitive downstream assets to reduce equipment wear, fouling, and unplanned maintenance events.



All ACCSX-MAGSEP™ units utilise a **quick-release extractor assembly**, allowing the complete magnetic rod pack to be withdrawn axially for off-line cleaning without disturbing process connections. Captured ferrous debris is released once the extractor is removed, enabling fast, repeatable maintenance with minimal labour input and reduced production disruption.

The ACCSX-MAGSEP™ family comprises three industry-standard geometries: **ACCSX-MAGSEP-IL™ inline (T-type)** separators for

pressurised pipelines, **ACCSX-MAGSEP-CH™ chamber-type** separators designed to increase residence time in higher-flow or higher-viscosity service, and **ACCSX-MAGSEP-DRW™ drawer-type** separators for gravity-fed or free-flowing product streams. Each geometry is available in sanitary and industrial configurations aligned with standard industry interfaces.

Magnetic assemblies are based on **rare-earth neodymium (NdFeB) technology**, with magnet grade, rod diameter, and geometry selected to suit operating flow rates, viscosity, and installation constraints. The ACCSX-MAGSEP™ range is engineered to integrate seamlessly into existing process lines while supporting predictable performance and straightforward maintenance under plant operating conditions.

Protect. Simplify. Reduce Downtime.

Technical Specifications - ACCSX-MAGSEP™

- **Separator Type:** Easy-clean, quick-release extractor-type magnetic separator
- **Separator Geometries:** Inline (T-type) – ACCSX-MAGSEP-IL™; Chamber-type – ACCSX-MAGSEP-CH™; Drawer-type – ACCSX-MAGSEP-DRW™
- **Magnet Material:** Rare-earth Neodymium Iron Boron (NdFeB)
- **Standard Magnet Grades:** N35 / N42 / N52 (application-specific selection)
- **Typical Magnetic Field Strength (Reference):**
 - Bare rod surface:
 - N35: ~9,000–10,000 Gauss
 - N42: ~11,000–12,000 Gauss
 - N52: ~13,000–14,000 Gauss
 - Sleeve surface (effective field): typically 20–30 % lower, depending on sleeve thickness and finish
- **Magnetic Verification:** Calibrated gaussmeter measurement at defined rod and sleeve inspection points; verification records available per unit
- **Rod Diameter (Default Baseline):**
 - DN25–DN40: Ø25 mm
 - DN50–DN80: Ø25 mm (multi-rod)
 - DN100–DN150: Ø32 mm
 - DN200–DN250: Ø32 mm (multi-rod)
 - Drawer-type: Ø25 mm to Ø32 mm depending on chute width
- **Rod Sleeve:**
 - Material: Non-magnetic stainless steel
 - Wall thickness: 0.8–1.2 mm (typical)
- **Wetted Materials:**
 - Sanitary configuration: SS316L (all product-contact parts)
 - Industrial configuration: SS304 or SS316
- **Surface Finish (Sanitary):**
 - Standard hygienic polish: $R_a \leq 0.8 \mu\text{m}$
 - Electropolished option: $R_a \leq 0.6 \mu\text{m}$
- **Welding (Sanitary):** TIG-welded, crevice-controlled internal joints; no adhesives or coatings on wetted surfaces
- **Connections:**
 - Sanitary: Tri-Clamp, SMS, DIN hygienic unions
 - Industrial: ANSI / EN flanges; threaded connections where specified
- **Seal / Elastomer Options:** EPDM (standard), FKM (Viton®), Silicone
- **Design Pressure (Liquid Service):**
 - Inline / Chamber types: 6–10 bar @ 20 °C (standard); higher ratings on request
 - Drawer type: Atmospheric / low-pressure service only



- **Operating Temperature (Magnet-Limited):**
 - N35 / N42: up to ~80 °C continuous
 - N52: up to ~60–70 °C continuous
 - High-temperature magnet grades available on request (derating applies)
- **Recommended Line Velocity (Pressurised Systems):**
 - Inline type: ≤ 1.5 m/s (Optimal for maximum residence time)
 - Chamber-type (CH): > 1.5 m/s (Recommended to reduce local velocity and improve capture probability)

Note: At velocities > 1.5 m/s, capture efficiency for weakly magnetic or sub-mm particles decreases significantly due to fluid shear.

- **Recommended Viscosity Range:**

- Inline type: < 10 cP
- Inline / Chamber: 10–50 cP
- Chamber-type: > 50 cP
- Drawer-type: Gravity-fed / free-flowing products

▪ **Maintenance:** Extractor-type assembly allows axial removal and off-line cleaning; cleaning frequency dependent on contamination load

▪ **Application Role:** Process-protection device; not a micron-rated or absolute filtration system

- **Compliance (When Specified & Documented):**

- Food-contact compliant variants available
- FDA 21 CFR
- EU Regulations (EC) 1935/2004 & 10/2011



OEM compatibility and interchangeability references are provided for general guidance only and relate to separator geometry, installation interface, and intended application category. Mechanical, hydraulic, and operational interchangeability is not guaranteed. Users must verify dimensional compatibility, connection type and size, pressure and temperature ratings, magnetic configuration, access clearances for extractor removal, and applicable regulatory or site-specific requirements prior to installation or retrofit.

Magnetic separators are process-protection devices intended to intercept ferrous and weakly magnetic contamination. They do not provide micron-rated, nominal, or absolute filtration and are not a substitute for filtration systems. Separation performance is influenced by operating conditions including flow velocity, fluid viscosity, magnetic exposure time, particle size, and magnetic permeability. Complete removal of all metallic contaminants cannot be guaranteed under all operating conditions.

Magnetic field strength values, gauss readings, and performance characteristics are based on typical reference measurements and may vary depending on magnet grade, rod diameter, sleeve thickness, surface finish, temperature, and measurement methodology. Where specified, magnetic field verification is performed using calibrated instruments at defined inspection points; reported values reflect effective field strength at the measurement location and are not guaranteed minimums unless explicitly stated.

Sanitary and food-contact-compliant configurations are available when specified and documented. Compliance is achieved through controlled selection of wetted materials, surface finishes, and elastomers and must be confirmed at time of order. It is the user's responsibility to ensure suitability for the intended process, cleaning regime, and regulatory environment.

All technical information is provided for reference and specification support. FiltraCore Asia reserves the right to modify designs, materials, and specifications as part of continuous product improvement without prior notice.

All OEM product names are trademarks of their respective holders. Use of these names does not imply affiliation or endorsement. Images shown have been professionally enhanced for visual clarity. Actual product details and appearance may differ.



■ sales@filtracoreasia.com ■ www.filtracoreasia.com ■ +65 89-FILTER (+65 89-345837)

All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability of such products for their own use. Since actual use is beyond our control, no guarantee, expressed or implied, is made by FiltraCore Asia regarding the effects or results of such use. FiltraCore Asia assumes no liability arising from the use of these products. This document is not to be construed as complete, as additional information may be necessary under specific conditions or due to applicable laws and regulations.

© 2025 FiltraCore Asia. All rights reserved. All trademarks and registered trademarks are the property of their respective owners.