

# Aviation Fuel Filtration & Water Separation

Filter vessels, coalescer / separator systems and filtration elements for Jet A-1, Jet A and AVGAS handling — engineered, fabricated and tested in ERGIL's ISO 9001 facilities.



EI 1581 6TH ED.

EI 1590

EI 1596

ASME VIII DIV.1

ASME U &amp; U2

AD-2000

PED / CE

ATEX

DNV

GOST-R

# A complete filtration train from one source.

|    |                                                 |    |
|----|-------------------------------------------------|----|
| 01 | Cover                                           | 01 |
| 02 | Contents & the ERGIL difference                 | 02 |
| 03 | The aviation fuel filtration chain              | 03 |
| 04 | ERG.FSW.V – Vertical filter / water separator   | 04 |
| 05 | ERG.FSW.H – Horizontal filter / water separator | 05 |
| 06 | ERG.MF.V – Vertical micro filter                | 06 |
| 07 | ERG.MF.H – Horizontal micro filter              | 07 |
| 08 | Dirt defence & pre-filtration vessels           | 08 |
| 09 | Clay treater vessels                            | 09 |
| 10 | Sieve basket strainers                          | 10 |
| 11 | Model schedule – filter / water separators      | 11 |
| 12 | Model schedule – micro filters                  | 12 |
| 13 | Cartridge & element specifications              | 13 |
| 14 | RX quick-opening closures & cartridge handling  | 14 |
| 15 | Instrumentation, control & options              | 15 |
| 16 | Skid & modular systems                          | 16 |
| 17 | Selection guide                                 | 17 |
| 18 | Quality, certification & global delivery        | 18 |
| 19 | Contact                                         | 19 |

## THE ERGIL DIFFERENCE

Every vessel in this catalogue is designed, welded, painted, assembled and pressure-tested inside our own works in Mersin, Türkiye – including the quick-opening closures. One engineering team owns the scope from process datasheet to FAT report, which is why lead times hold and interfaces fit.

### 35+

YEARS OF VESSEL  
ENGINEERING

### 150

COUNTRIES SERVED

### 100%

WELDS INSPECTED &  
TESTED

### 4

DESIGN CODES OFFERED

## THE RANGE AT A GLANCE



**ERG.MF.V.01-.08**

Vertical micro filter / water  
separator



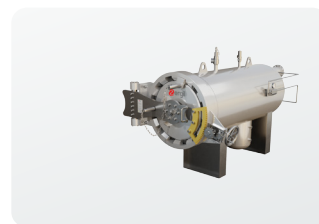
**ERG.MF.H.01-.08**

Horizontal micro filter vessel



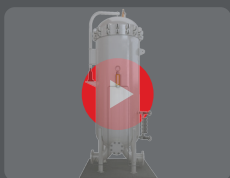
**ERG.FSW.V.01-.10**

Vertical filter / water separator



**ERG.FSW.H.01-.10**

Horizontal filter / water separator



WATCH · 2 MIN

**How aviation fuel filters and water separators work**

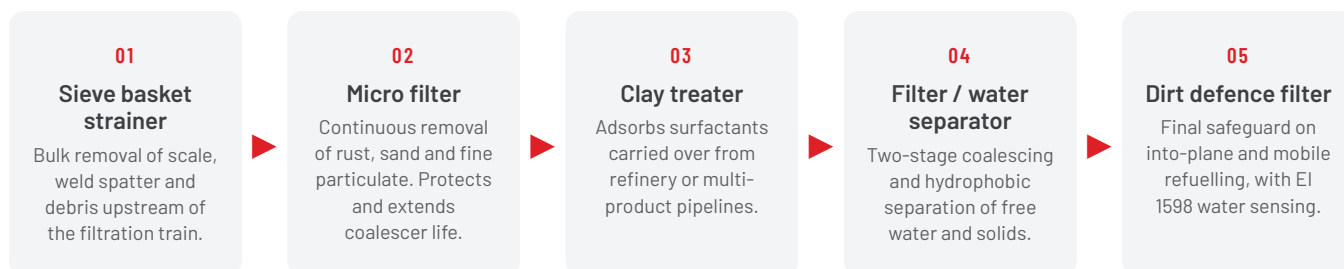
Scan to watch · [youtube.com/watch?v=IJA-1\\_BEQ5o](https://youtube.com/watch?v=IJA-1_BEQ5o)



## THE FILTRATION CHAIN

# Clean, dry fuel is a sequence — not a single vessel.

Aviation fuel picks up water and particulate at every transfer. ERGIL supplies each stage of the chain as a matched set, so element ratings, vessel sizing, differential-pressure alarms and drain philosophy are consistent from receipt to into-plane delivery.



STAGES 01, 02 AND 04 FORM THE CORE TRAIN · STAGE 03 IS FITTED WHERE SURFACTANT CARRY-OVER IS CREDIBLE · STAGE 05 APPLIES TO INTO-PLANE AND MOBILE REFUELLING

## GOVERNING STANDARDS

**EI 1550** Handbook on equipment used for the maintenance and delivery of clean aviation fuel — the governing document for how a fuel handling system is designed, operated and monitored.

**EI 1596** Design and construction of aviation fuel filter vessels. Governs the pressure envelope, element mounting, sump geometry, connections and marking of every vessel in this catalogue.

**EI 1581** Specifications and qualification procedures for aviation jet fuel filter / separators. ERGIL filter / water separators are offered to the 6th Edition, Category C, Type S.

**EI 1590** Specifications and qualification procedures for aviation fuel micro filters, covering the qualification of micro filter elements.

**EI 1598 / 1599** Electronic water sensors and dirt defence filter elements used on into-plane and mobile refuelling equipment.

## WHERE THESE SYSTEMS WORK

- Refineries and product terminals
- Airport fuel farms and hydrant systems
- Bulk storage and pipeline receipt points
- Heliports and defence fuel installations
- Refuellers, dispensers and mobile equipment

Vessels are offered horizontally or vertically oriented, on legs or skirt, with ladders, platforms and cartridge handling jib cranes where footprint or element count requires it.

## INSIDE A FILTER / WATER SEPARATOR

## STAGE 01 · FILTRATION

Fuel enters the coalescer element from the inside and passes outward through graded media. Solid particulate is captured here, before it can reach and blind the separator stage.

## STAGE 02 · COALESCING

Dispersed water — too fine to settle — is merged into droplets large enough to fall under gravity. This is the step surfactants defeat, which is why clay treatment matters upstream.

## STAGE 03 · SEPARATION

Fuel passes the hydrophobic separator element while the coalesced droplets are repelled and fall to the sump, where they are drained off manually or automatically.

ERG.FSW.V.01 - .10

# Vertical filter / water separator

Designed to EI 1581 6th Edition, Category C, Type S. The first stage coalesces free water into droplets large enough to fall out of the fuel; the second stage rejects those droplets at a hydrophobic barrier and passes only dry fuel. Type S qualification allows use at any filtration point in an aviation fuelling system, including receipt points where significant water and dirt loading is expected.



ERG.FSW.V SERIES VERTICAL HOUSING

## DESIGN

- Vessel design to EI 1596
- Code: ASME VIII Div.1, EN AD-2000 or GOST
- ASME U & U2 Stamp, PED / CE, DNV, NBR, TUV, GOST
- Carbon steel standard; stainless and duplex on request
- Epoxy internal / external paint system as standard
- EI 1581 6th Ed., Category C, Type S

## CONFIGURATION

- Swing-bolt head or ERGIL RX quick-opening closure
- Buna-N O-ring closure seal for extreme pressure duty
- Rod or screw-base cartridge mounting
- Sloping cartridge plate draining to the sump
- Permanently marked inlet, outlet and drain connections
- Water collection sump with drain and level connections

## TEN SIZES

ERG.FSW.V.01 through .10 cover 30 to 500 m<sup>3</sup>/h (132 to 2,202 gpm) on vessel diameters from 400 to 1,100 mm.

## TWO ELEMENT STAGES

Coalescer counts run from 6 to 20 elements, with a matched separator set of 3 to 8. Full schedule on page 11.

## WHY VERTICAL

Least plot area of any configuration, natural plate drainage and clean top access for element change.



WATCH · PRODUCT FILM  
How aviation filters and water separators work

Scan to watch · youtube.com/watch?v=IJA-1\_BE05o



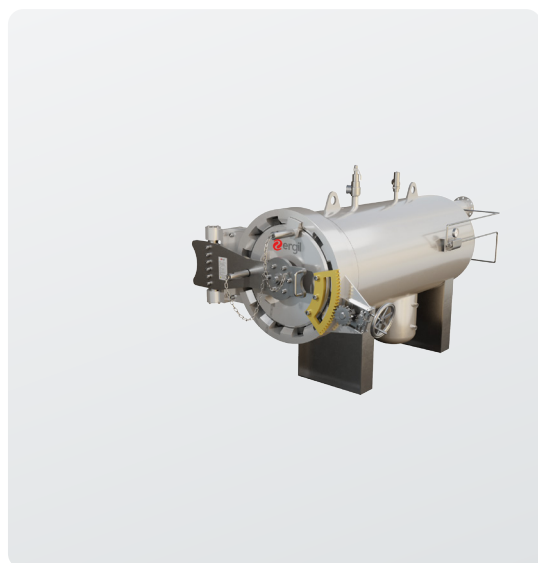
PRODUCT PAGE  
Aviation Water Separators (Vertical)

[ergil.com/separator-filter-vessels/aviation-water-separators-vertical/](http://ergil.com/separator-filter-vessels/aviation-water-separators-vertical/)

ERG.FSW.H.01 - .10

# Horizontal filter / water separator

The horizontal ERG.FSW.H carries the same EI 1581 6th Edition, Category C, Type S duty in a low-profile envelope with a generous water sump. Horizontal geometry gives the collected water a long, quiet residence path before drainage, and puts every element within reach from grade. Shown here with an ERGIL RX1 quick-opening closure for rapid element change-out.



ERG.FSW.H SERIES WITH RX1 QUICK-OPENING CLOSURE

## DESIGN

- Vessel design to EI 1596
- Code: ASME VIII Div.1, EN AD-2000 or GOST
- ASME U & U2 Stamp, PED / CE, DNV, NBR, TUV, GOST
- Carbon steel standard; stainless and duplex on request
- Epoxy internal / external paint system as standard
- EI 1581 6th Ed., Category C, Type S

## CONFIGURATION

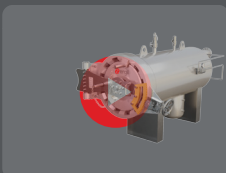
- Swing-bolt head or ERGIL RX quick-opening closure
- Buna-N O-ring closure seal for extreme pressure duty
- Rod or screw-base cartridge mounting
- Sloping cartridge plate draining to the sump
- Permanently marked inlet, outlet and drain connections
- Extended horizontal sump for high water loading

## ERGIL RX QUICK-OPENING CLOSURE

Designed and manufactured in-house. Full-bore access to the element bundle in minutes rather than hours, with a safety interlock that will not release under pressure. Available on any vessel in this catalogue.

## ELEMENT HANDLING

- Jib crane and trolley systems for large element bundles
- Axial withdrawal – no confined-space entry
- Change-out times measured against terminal turnaround windows



WATCH · PRODUCT FILM  
**Cartridge coalescers, filters & water separators**

Scan to watch · youtube.com/watch?v=10Xg8qcvBnI



PRODUCT PAGE  
**Aviation Water Separators (Horizontal)**

[ergil.com/separator-filter-vessels/aviation-water-separators-horizontal/](http://ergil.com/separator-filter-vessels/aviation-water-separators-horizontal/)

ERG.MF.V.01 - .08

# Vertical micro filter / water separator

The ERG.MF.V series is a vertical, cartridge-mounted micro filter and water separator for Jet A-1, Jet A and other stored products. Its compact envelope and high-efficiency internals give long element life on a small footprint, which makes it the natural choice for indoor plant rooms and congested terminal skids. Supplied on support legs or a skirt, with ladders and platforms added as size and location require.



ERG.MF.V SERIES VERTICAL HOUSING

## DESIGN

- Vessel design to EI 1596
- Code: ASME VIII Div.1, EN AD-2000 or GOST
- ASME U & U2 Stamp, PED / CE, DNV, NBR, TUV, GOST
- Carbon steel standard; stainless and duplex on request
- Epoxy internal / external paint system as standard
- Micro filter elements qualified to EI 1590

## CONFIGURATION

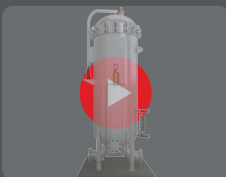
- Swing-bolt head or ERGIL RX quick-opening closure
- Buna-N O-ring closure seal for extreme pressure duty
- Rod or screw-base cartridge mounting
- Sloping cartridge plate draining to the sump
- Permanently marked inlet, outlet and drain connections
- Vertical orientation — minimum plot area

## WHY VERTICAL

- Smallest plot area of any configuration — ideal indoors
- Natural drainage of the element plate to the sump
- Top-access element change with clear lifting height

## MATERIALS

- Carbon steel — epoxy internal / external as standard
- Stainless steel 304L / 316L for corrosive or coastal sites
- Duplex where chloride or velocity duty demands it



WATCH · PRODUCT FILM  
Micro filter & water separator in operation

Scan to watch · youtube.com/  
watch?v=IJA-1\_BEQ5o



## PRODUCT PAGE

### Aviation Micro Filter

[ergil.com/separator-filter-vessels/aviation-micro-filter/](http://ergil.com/separator-filter-vessels/aviation-micro-filter/)

ERG.MF.H.01 - .08

# Horizontal micro filter vessel

Where headroom is limited or element counts are high, the horizontal ERG.MF.H carries the same filtration duty on a low-level, walk-up envelope. Elements are withdrawn axially through the head, so a single operator can change a full cartridge set without lifting gear. Horizontal vessels also suit skid-mounted and mobile installations where centre of gravity matters.



ERG.MF.H SERIES HORIZONTAL HOUSING

## DESIGN

- Vessel design to EI 1596
- Code: ASME VIII Div.1, EN AD-2000 or GOST
- ASME U & U2 Stamp, PED / CE, DNV, NBR, TUV, GOST
- Carbon steel standard; stainless and duplex on request
- Epoxy internal / external paint system as standard
- Micro filter elements qualified to EI 1590

## CONFIGURATION

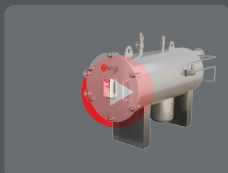
- Swing-bolt head or ERGIL RX quick-opening closure
- Buna-N O-ring closure seal for extreme pressure duty
- Rod or screw-base cartridge mounting
- Sloping cartridge plate draining to the sump
- Permanently marked inlet, outlet and drain connections
- Horizontal orientation — low silhouette, walk-up access

## WHY HORIZONTAL

- No overhead lifting height required for element change
- Large element counts without a tall pressure envelope
- Preferred for skid, refueller and mobile installations

## ACCESS

- Swing-bolt head as standard
- ERGIL RX quick-opening closure for frequent element change
- Davit or trolley arrangement for large-diameter heads



**WATCH · PRODUCT FILM**  
**Cartridge coalescers,  
 filters & water  
 separators**

Scan to watch · youtube.com/  
 watch?v=10Xg8qcvBnI



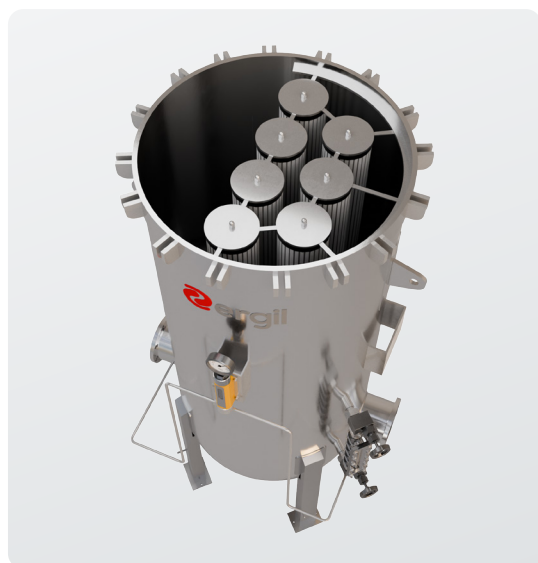
**PRODUCT PAGE**  
**Aviation Micro Filter**

[ergil.com/separator-filter-vessels/aviation-micro-filter/](http://ergil.com/separator-filter-vessels/aviation-micro-filter/)

## DIRT DEFENCE

# Dirt defence & pre-filtration vessels

Dirt defence filter vessels take out rust, sand and pipeline debris before it reaches the coalescer stage, and act as the last line of defence on into-plane and mobile refuelling equipment. Used with an EI 1598 electronic water sensor, they are the accepted retrofit route for existing filter monitor vessels – keeping the vessel, changing the protection strategy.



MULTI-ELEMENT CARTRIDGE HOUSING – TOP VIEW

## DESIGN

- Vessel design to EI 1596
- Code: ASME VIII Div.1, EN AD-2000 or GOST
- ASME U & U2 Stamp, PED / CE, DNV, NBR, TUV, GOST
- Carbon steel standard; stainless and duplex on request
- Epoxy internal / external paint system as standard

## CONFIGURATION

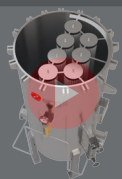
- Element bundle sized to duty and change-out interval
- Designed for use with EI 1598 electronic water sensing
- Retrofit envelopes for existing filter monitor vessels
- Horizontal or vertical orientation
- Differential pressure monitoring connections as standard
- Drain, sample and vent connections to EI 1596

## WHAT IT PROTECTS AGAINST

- Rust and mill scale released by pipeline and tank movement
- Sand and airborne solids picked up at open transfer points
- Premature coalescer blinding and unplanned change-outs

## WHERE IT SITS

- Upstream of the coalescer stage in fixed installations
- On refuellers and dispensers as a monitor-vessel retrofit
- Paired with electronic water sensing for into-plane delivery



WATCH · PLAYLIST

**ERGIL filtration & separation film library**

Scan to watch · [youtube.com/playlist?list=PLfJwyqlcEvY...](https://youtube.com/playlist?list=PLfJwyqlcEvY...)



PRODUCT PAGE

**Particulate filtration**

[ergil.com/drain-systems/particulate-filter/](https://ergil.com/drain-systems/particulate-filter/)



## SURFACTANT REMOVAL

# Clay treater vessels

Surface active agents are the one contaminant a coalescer cannot fight. Even at trace levels they disarm the coalescing stage, letting water through a filter that reports itself as healthy. Clay treaters adsorb those surfactants upstream, and are normally installed immediately ahead of the filter / water separator.

## THE PROBLEM

Surfactants reach aviation fuel by refinery carry-over and by cross-contamination in multi-product pipelines. They lower the interfacial tension between fuel and water, so droplets no longer coalesce and instead pass the separator stage as a stable haze. The differential pressure gauge shows nothing unusual. The failure is silent.

## THE REMEDY

A clay treater passes fuel through attapulgite or equivalent adsorbent media that captures the surface active agents, restoring the interfacial tension the downstream coalescer relies on. Media is changed on a differential-pressure and fuel-quality basis.



ERGIL CLAY TREATER VESSEL

**PRODUCT PAGE****Filters & coalescer vessels**[ergil.com/separator-filter-vessels/filters-coalescer/](https://ergil.com/separator-filter-vessels/filters-coalescer/)

## DESIGN

- Vessel design to EI 1596 and ASME VIII Div.1 / AD-2000
- Cartridge or loose-media configuration
- Carbon steel, stainless or duplex construction
- Swing-bolt or RX quick-opening media access

## OPERATION

- Installed directly upstream of the filter / water separator
- Differential pressure and sampling connections as standard
- Media changed on differential pressure and fuel quality
- Interfacial tension testing confirms treater performance

BULK FILTRATION

# Sieve basket strainers

The cheapest element you will ever change is the one you never had to. A sieve basket strainer takes the coarse load – scale, weld spatter, gasket debris, construction dirt – off the front of the filtration train, so micro filter and coalescer elements are spent on the contamination they were qualified for.



ERGIL SIEVE BASKET STRAINER – FLANGED, BOLTED COVER

CONSTRUCTION

- Perforated basket in carbon steel, stainless steel or alloy
- Perforation and mesh selected for the fuel and duty
- Simplex or duplex arrangement for uninterrupted flow
- Quick-opening cover for basket removal and cleaning
- Baskets cleaned and re-used – no consumable cost

DESIGN

- ASME VIII Div.1, AD-2000 or GOST pressure design
- Flanged connections to ASME B16.5 or EN 1092
- Differential pressure connections as standard
- Vent, drain and sample points
- Epoxy internal / external coating on carbon steel

WHERE IT EARNS ITS PLACE

Upstream of micro filters at pipeline and marine receipt points, after any construction or maintenance activity that has opened the line, and permanently on multi-product systems where batch changes disturb the pipe wall. In commissioning it is routinely the difference between one element set and three.



PRODUCT PAGE  
**Basket strainers**  
[ergil.com/filtration-systems/basket-strainer/](http://ergil.com/filtration-systems/basket-strainer/)

| ARRANGEMENT         | TYPICAL USE                                       | OPERATING NOTE                                                  |
|---------------------|---------------------------------------------------|-----------------------------------------------------------------|
| Simplex             | Fixed installations with planned shutdown windows | Flow is isolated for basket removal and cleaning                |
| Duplex              | Continuous receipt and dispatch lines             | Transfer valve diverts flow so one basket is cleaned in service |
| Temporary / conical | Commissioning and post-maintenance flushing       | Removed once the line has proven clean                          |

Indicative arrangement only. Basket perforation, mesh and vessel size are fixed against the line size, flow rate and expected contamination profile in the technical offer.

## FILTER / WATER SEPARATORS

# ERG.FSW.V and ERG.FSW.H standard model range

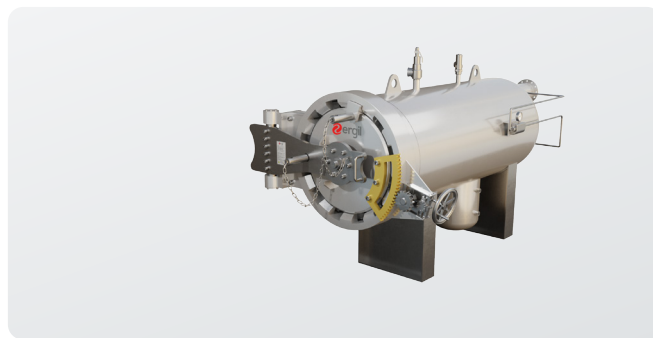
Ten standard sizes to EI 1581 6th Edition, Category C, Type S. The same element schedule applies to both the vertical (ERG.FSW.V) and horizontal (ERG.FSW.H) housings – orientation is chosen on plot area and access, not on duty.

| MODEL        | VESSEL OD<br>MM | FLOW RATE |                   | COALESCER ELEMENTS |           | SEPARATOR ELEMENTS |           |
|--------------|-----------------|-----------|-------------------|--------------------|-----------|--------------------|-----------|
|              |                 | GPM       | M <sup>3</sup> /H | QTY & OD           | LENGTH MM | QTY & OD           | LENGTH MM |
| ERG.FSW.V.01 | 400             | 132       | 30                | 6 × 4"             | 400       | 3 × 4"             | 400       |
| ERG.FSW.V.02 | 600             | 264       | 60                | 5 × 6"             | 600       | 2 × 6"             | 600       |
| ERG.FSW.V.03 | 700             | 396       | 90                | 7 × 6"             | 600       | 3 × 6"             | 600       |
| ERG.FSW.V.04 | 800             | 528       | 120               | 8 × 6"             | 710       | 4 × 6"             | 710       |
| ERG.FSW.V.05 | 800             | 793       | 180               | 8 × 6"             | 1120      | 4 × 6"             | 1120      |
| ERG.FSW.V.06 | 900             | 925       | 210               | 12 × 6"            | 840       | 5 × 6"             | 840       |
| ERG.FSW.V.07 | 900             | 1,057     | 240               | 12 × 6"            | 915       | 5 × 6"             | 915       |
| ERG.FSW.V.08 | 900             | 1,321     | 300               | 12 × 6"            | 1120      | 5 × 6"             | 1120      |
| ERG.FSW.V.09 | 1100            | 1,585     | 360               | 20 × 6"            | 915       | 8 × 6"             | 915       |
| ERG.FSW.V.10 | 1100            | 2,202     | 500               | 20 × 6"            | 1120      | 8 × 6"             | 1120      |

Models shown vertical; the horizontal equivalent of each size is ERG.FSW.H with the same suffix (ERG.FSW.V.05 → ERG.FSW.H.05). Flow rates are nominal clean-element duty on Jet A-1. Design pressure, connection rating and final dimensions are fixed against the project process datasheet.



ERG.FSW.V – VERTICAL HOUSING



ERG.FSW.H – HORIZONTAL HOUSING

## READING THE MODEL CODE

ERG.FSW.V.05 – ERGIL filter / water separator, vertical, size 05.  
Substitute H for a horizontal housing of the same duty.

## BETWEEN SIZES

Select the next size up. Running a vessel above its rated flow shortens element life and can carry water past the separator stage.

## OUTSIDE THE RANGE

Duties above 500 m<sup>3</sup>/h are met with multiple vessels in parallel or a purpose-engineered housing. Ask us.

## MICRO FILTERS

# ERG.MF.V and ERG.MF.H standard model range

Eight standard sizes from 15 to 546 m<sup>3</sup>/h, all built on a common 152 mm element. Micro filters are sized on throughput and change-out interval – a larger element count on the same duty buys longer service life, not finer filtration.

| MODEL       | FLOW RATE |                   | RATING<br>MM | MICRO FILTER ELEMENTS |           |     |
|-------------|-----------|-------------------|--------------|-----------------------|-----------|-----|
|             | L/MIN     | M <sup>3</sup> /H |              | OD MM                 | LENGTH MM | QTY |
| ERG.MF.V.01 | 250       | 15                | 3-5          | 152                   | 377       | 1   |
| ERG.MF.V.02 | 750       | 45                | 3-5          | 152                   | 1,118     | 1   |
| ERG.MF.V.03 | 1,300     | 78                | 3-5          | 152                   | 1,118     | 2   |
| ERG.MF.V.04 | 2,600     | 156               | 3-5          | 152                   | 1,118     | 4   |
| ERG.MF.V.05 | 3,900     | 234               | 3-5          | 152                   | 1,118     | 6   |
| ERG.MF.V.06 | 6,500     | 390               | 3-5          | 152                   | 1,118     | 9   |
| ERG.MF.V.07 | 7,800     | 468               | 3-5          | 152                   | 1,118     | 11  |
| ERG.MF.V.08 | 9,100     | 546               | 3-5          | 152                   | 1,118     | 13  |

Models shown vertical; the horizontal equivalent of each size is ERG.MF.H with the same suffix. Nominal filtration rating 3-5 µm. Element quantity is set by the rated flow; vessel diameter and dimensions follow the element count and are confirmed in the offer.



ERG.MF.V – VERTICAL HOUSING



ERG.MF.H – HORIZONTAL HOUSING

## WHERE THE MICRO FILTER EARNS ITS KEEP

A micro filter upstream of the filter / water separator carries the particulate load that would otherwise blind the coalescer. Coalescer elements are the expensive consumable in an aviation fuel system; micro filter elements are not. Sizing the pre-filter generously is almost always cheaper over a five-year horizon than sizing it tightly.



### PRODUCT PAGE

#### Aviation Micro Filter

[ergil.com/separator-filter-vessels/aviation-micro-filter/](http://ergil.com/separator-filter-vessels/aviation-micro-filter/)

## ELEMENTS

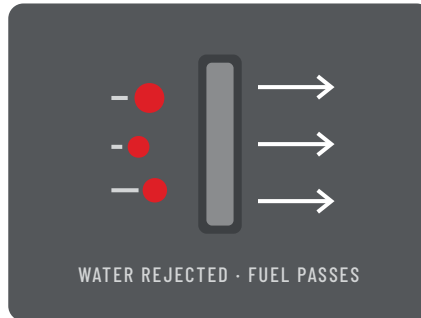
# Coalescer, separator and micro filter cartridges

A vessel is only as good as the element set inside it. Every housing in this catalogue is supplied with a matched, qualified cartridge set — sized on the vessel's rated flow, its allowable differential pressure and the change-out interval the site can live with.

**COALESCER**

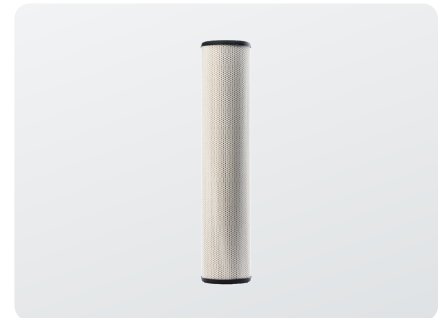
First stage. Fine solids are captured while dispersed water is coalesced into droplets heavy enough to fall to the sump.

|                |                          |
|----------------|--------------------------|
| Qualification  | <b>EI 1581</b>           |
| Flow direction | <b>In-to-out</b>         |
| Element OD     | <b>100 / 150 mm</b>      |
| Mounting       | <b>Rod or screw base</b> |

**SEPARATOR**

Second stage. A hydrophobic barrier rejects the coalesced water and passes only dry fuel to the outlet.

|                |                           |
|----------------|---------------------------|
| Qualification  | <b>EI 1581</b>            |
| Flow direction | <b>Out-to-in</b>          |
| Element OD     | <b>100 / 150 mm</b>       |
| Media          | <b>Coated / synthetic</b> |

**MICRO FILTER**

Pre-filtration. Continuous removal of rust, sand and particulate, with a large surface area for long service life.

|                |                  |
|----------------|------------------|
| Qualification  | <b>EI 1590</b>   |
| Flow direction | <b>Out-to-in</b> |
| Element OD     | <b>152 mm</b>    |
| Rating         | <b>3–5 µm</b>    |

| ELEMENT      | QUALIFICATION | FLOW DIRECTION | OD MM     | NOMINAL LENGTHS MM                  | QTY PER VESSEL |
|--------------|---------------|----------------|-----------|-------------------------------------|----------------|
| Coalescer    | EI 1581       | In-to-out      | 100 / 150 | 400 · 600 · 710 · 840 · 915 · 1,120 | 6 – 20         |
| Separator    | EI 1581       | Out-to-in      | 100 / 150 | 400 · 600 · 710 · 840 · 915 · 1,120 | 3 – 8          |
| Micro filter | EI 1590       | Out-to-in      | 152       | 377 · 1,118                         | 1 – 13         |

Element lengths are matched to the housing; the model schedules on pages 11 and 12 give the quantity fitted to each size. Alternative degrees of filtration are available by changing element type within the same housing.

**WATCH · PRODUCT FILM****Cartridge coalescers, filters & water separators**

Scan to watch · [youtube.com/watch?v=10Xg8qcvBnl](https://youtube.com/watch?v=10Xg8qcvBnl)



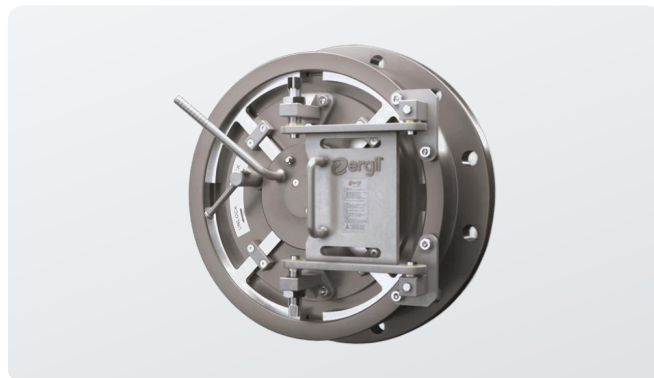
## ERGIL RX QUICK-OPENING CLOSURES

# Built around the element change-out

Every hour a filter vessel is open is an hour a terminal is not moving fuel. ERGIL designs and manufactures its own quick-opening closures, so the pressure envelope, the closure and the handling arrangement are solved as one problem — and arrive as one delivery.

**RX1**

Davit-mounted, gear-operated closure for larger diameters and frequent access. The handwheel drives the locking ring; the davit carries the cover clear of the opening so one operator can work the head unaided.

**RX2**

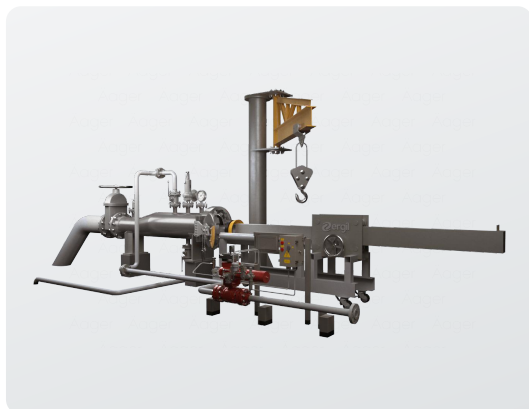
Compact lever-operated closure with a marked lock / unlock quadrant and an integral pressure-warning device. Chosen where headroom is tight and the head is opened on a routine change-out cycle.

**WHY IT MATTERS**

- Full-bore access to the element bundle in minutes, not hours
- Safe under high pressure and in harsh conditions
- Pressure-warning and interlock arrangements available
- Designed, machined and tested in ERGIL's own works
- Retrofittable to existing filter vessels

**A PRODUCT LINE IN ITS OWN RIGHT**

ERGIL RX closures are supplied worldwide as standalone equipment for pig traps, filter vessels and pressure vessels of every kind. Full range, sizing data and operating instructions at [rxclosure.com](http://rxclosure.com).

**CARTRIDGE HANDLING SYSTEM**

Jib crane and trolley arrangement for withdrawing and re-loading heavy element bundles. The cartridge set is taken on the hook, run out along the trolley beam and set down at grade — no manual lifting into an open head and no confined-space entry. Recommended on large-diameter horizontal vessels and on any installation where the change-out has to be completed inside a fixed maintenance window.



**CLOSURES**  
[rxclosure.com](http://rxclosure.com)  
[rxclosure.com](http://rxclosure.com)



**HANDLING**  
**Handling systems**  
[ergil.com/pipeline-pigging-systems/](http://ergil.com/pipeline-pigging-systems/)

## OPTIONS

# Instrumentation and control

Connections for the full option list are provided on every vessel, whether or not the instrument is supplied with it. Adding monitoring later should never mean cutting into a certified pressure envelope.

|                                     |                                                                     |
|-------------------------------------|---------------------------------------------------------------------|
| <b>Automatic air eliminator</b>     | Vents entrained air on start-up and continuously in service.        |
| <b>Differential pressure gauge</b>  | Direct-reading element condition; the primary change-out trigger.   |
| <b>Pressure relief valve</b>        | Thermal and overpressure protection of the closed vessel.           |
| <b>Pilot control valve</b>          | Modulates flow on rising water level or high differential pressure. |
| <b>Pilot tester</b>                 | Verifies control-valve response without interrupting delivery.      |
| <b>Water slug control valve</b>     | Closes on a sudden water slug before it reaches the outlet.         |
| <b>Electrical water-level alarm</b> | Remote annunciation of sump level to the control room.              |
| <b>Liquid level gauge</b>           | Local visual confirmation of collected water.                       |
| <b>Water drain valves</b>           | Manual or automatic sump drainage.                                  |
| <b>Sampling connections</b>         | Upstream and downstream fuel quality sampling points.               |

## FUEL QUALITY MONITORING

Differential pressure trending, electronic water sensing to EI 1598 and conductivity measurement can be integrated into the vessel package and wired to a common local panel or to the terminal DCS.

## HAZARDOUS AREA

Electrical items supplied to ATEX / IECEx as required by the area classification, with certificates included in the documentation dossier.

## SKID PACKAGES

Complete filtration trains delivered as a tested, single-lift modular skid – vessels, valves, instrumentation, piping and control panel. See page 16.



## MODULAR DELIVERY

# The whole filtration train, delivered as one unit

A filtration train assembled on site is a sequence of interfaces — foundations, pipe spools, wiring, valves, and a commissioning window that depends on every trade turning up in the right order. Built as a skid, it becomes one item on the programme: fabricated, piped, wired and function-tested in our works, then set down and connected.



MODULAR JET FUEL FILTRATION SKID — MULTI-VESSEL TRAIN ON A COMMON FRAME WITH ACCESS PLATFORM

## SHORTER SITE PROGRAMME

Piping, supports, instrumentation and wiring are complete before the skid leaves the works. Site scope reduces to setting the frame and making the terminal connections.

## TESTED BEFORE IT SHIPS

Pressure testing, function testing and FAT are carried out under workshop conditions, where a defect costs hours rather than a mobilisation.

## ONE INTERFACE

A single supplier owns the vessels, the closures, the elements, the valves and the control panel — and a single guarantee covers the assembled unit.

## TYPICAL SKID SCOPE

- Micro filter, clay treater and filter / water separator vessels
- Interconnecting pipework, isolation and control valves
- Differential pressure monitoring and water level alarms
- Access platform, handrails, stairs and local control panel

## WHERE IT FITS

- Airport fuel farms and hydrant pump houses
- Terminal receipt and dispatch points
- Offshore and marine installations — DNV certified
- Plants where plot area is fixed and cannot be extended



### WATCH · SKID SYSTEMS

#### ERGIL modular skid systems in build

Scan to watch · [youtube.com/watch?v=Pq6EHdLEVWk](https://www.youtube.com/watch?v=Pq6EHdLEVWk)



### LEARN MORE

#### Skid systems

[ergil.com/skid-systems/](https://ergil.com/skid-systems/)



SELECTION

# Choosing the train

Selection starts with where the fuel has been, not with the flow rate. The table below is the starting point our engineers use; the technical offer then fixes the vessel size, element count and instrumentation against your process datasheet.

| FILTRATION POINT                | RECOMMENDED TRAIN                                         | GOVERNING CONSIDERATION                                              |
|---------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------|
| Receipt from pipeline or marine | Basket strainer → micro filter → filter / water separator | High and variable solids loading; protect the coalescer stage first. |
| Multi-product pipeline receipt  | Basket strainer → clay treater → filter / water separator | Surfactant carry-over is the governing risk, not particulate.        |
| Bulk storage transfer           | Micro filter → filter / water separator                   | Steady duty; size for change-out interval rather than peak flow.     |
| Hydrant / into-plane delivery   | Filter / water separator → dirt defence filter            | Final safeguard with EI 1598 electronic water sensing.               |
| Refueller and mobile equipment  | Filter / water separator or dirt defence filter           | Horizontal, low centre of gravity, minimum change-out time.          |

## WHAT WE NEED TO SIZE A VESSEL

01

Product, flow rate and operating temperature range

02

Design and operating pressure, and available differential

03

Filtration point in the system and applicable EI category

04

Site constraints: plot area, headroom, area classification



REQUEST A QUOTATION

Send us your process data

ergil.com/request-a-quote/



DOWNLOADS

Data sheets & catalogues

ergil.com/downloads/

## ASSURANCE

# Engineered. Certified. Tested.

More than three decades of continuous development in aviation fuel handling, backed by ISO 9001 certified facilities, 3D modelling and modern fabrication equipment – and by field performance in refineries, terminals, heliports and airports.

**ENGINEERED**

All products engineered to industry requirements and designed to ASME B31.4, ASME B31.8 and ASME Section VIII Div.1. In-house engineering support across every discipline, with 3D computer modelling from concept through to fabrication drawings.

**CERTIFIED**

ASME U Stamp, NBR, TUV, CE / PED, AD-2000 and GOST-R certification available. Vessel design to EI 1596; separator qualification to EI 1581 6th Edition; micro filter elements to EI 1590.

**TESTED**

100% of welds inspected and tested. Hydrostatic and, where required, pneumatic testing witnessed to the project ITP, with a full documentation dossier issued at handover.

**BEYOND THE VESSEL**

- EPC scope completion and engineering submittals
- Performance guarantees on supplied equipment
- Construction supervision and site installation support
- Training, spare parts and operational guarantees
- Repair and revision work on site for stamped vessels

**DOCUMENTATION DOSSIER**

- Design calculations and general arrangement drawings
- Material certificates to EN 10204 3.1
- WPS, PQR and welder qualification records
- NDT reports and hydrostatic test certificate
- Paint and dimensional inspection reports
- Installation, operation and maintenance manual

**35+**

YEARS IN VESSEL ENGINEERING

**150**

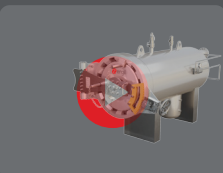
COUNTRIES SERVED

**ISO**

9001 CERTIFIED FACILITIES

**U2**

ASME U &amp; U2 STAMP



WATCH · PLAYLIST

**ERGIL filtration & separation film library**Scan to watch · [youtube.com/playlist?list=PLfJwyqlcEvY...](https://youtube.com/playlist?list=PLfJwyqlcEvY...)

## Äger GmbH

Germany Head Office + R&D + Sales  
Herzogspitalstraße 24  
Munich 80331  
Germany  
+49 (0) 89 1250 15240  
www.aager.de  
sales@aager.de

Turkey Head Office + Sales  
Ağaoğlu My Office 212  
No: 3 B Blok /175  
PK 34218 Güneşli – Bağcılar  
Istanbul / Turkey  
+90 212 485 40 07  
+90 212 485 40 42  
www.ergil.com  
sales@aager.de

Turkey Factory + Engineering + R&D + Sales  
Mersin Tarsus OSB.13.CD.NO:7  
P.K: 33540 Mersin, Turkey  
+90 324 676 44 04  
+90 324 676 44 03  
sales@aager.de

UAE Sales + Warehouse  
Jumeirah Lake Towers, X2 Tower 1906  
P.O. Box: 123661 Dubai, UAE  
+971 4 450 8051  
+971 4 450 8041  
sales@ergil.com

KSA Sales + Warehouse  
Q1-14, The Business Quarter,  
King Faisal Road,  
Al Khalidiyyah Al Janubiyah,  
Dammam, KSA  
+966(0)13-816-3441  
sales@ergil.com



WEBSITE



REQUEST A QUOTE



YouTube