



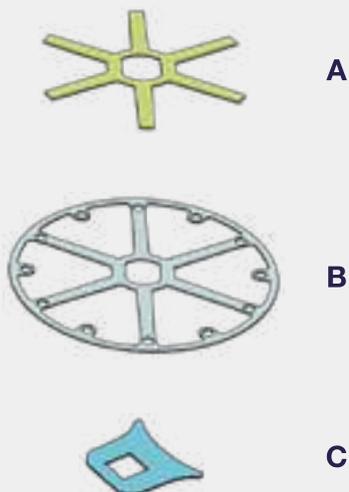
AL

Automatic
Lamellar Filter



Mechanical Self-Cleaning Filter

Lamellar filtration technology



The Lamellar filter is an **automatic self-cleaning filter**, manufactured for more than 40 years, with an all metallic robust construction, suitable for severe conditions. The filter is composed by one or more filtering elements, each one made by several **filtering disks (A)** separated in between by a **spacer (B)**. The filtration degree is achieved by the gap between the filtering disks.

Each filtering element is connected to an electric motor on top. A **fixed cleaner (C)** positioned between each gap between two consecutive disks, is used to remove the particles captured between the disks during the cleaning phase. The cleaning is achieved through **mechanical dislodging of impurities** by the dovetail shaped cleaner, and not by simple scraping as other mechanical filters do.

Small filters can be **manually operated** (no need of any motor). The Lamellar filtering elements are available from ~80 micron filtration degree and above. The filter has a very **robust and reliable construction** and it is designed especially to filter any severe and sticky fluid with high concentration of impurities.

The unique features of FILTREX lamellar filtration

The Lamellar filter does not require any backwash fluid. Since the operation doesn't rely on differential pressure, it may be **installed** either **upstream or downstream of pumps**. Operators simply drain the impurities collected at the bottom of the vessel using the drain valve. **Drainage** can be either **manual or automatic**, and is not necessary at each cleaning cycle. This prominent feature means **significant savings** in operational costs.

The sturdy and rugged construction will withstand **severe operational conditions**, including vibration, high viscosity, backflows, and even loss of external power (for filters with manual operation).

Advantages

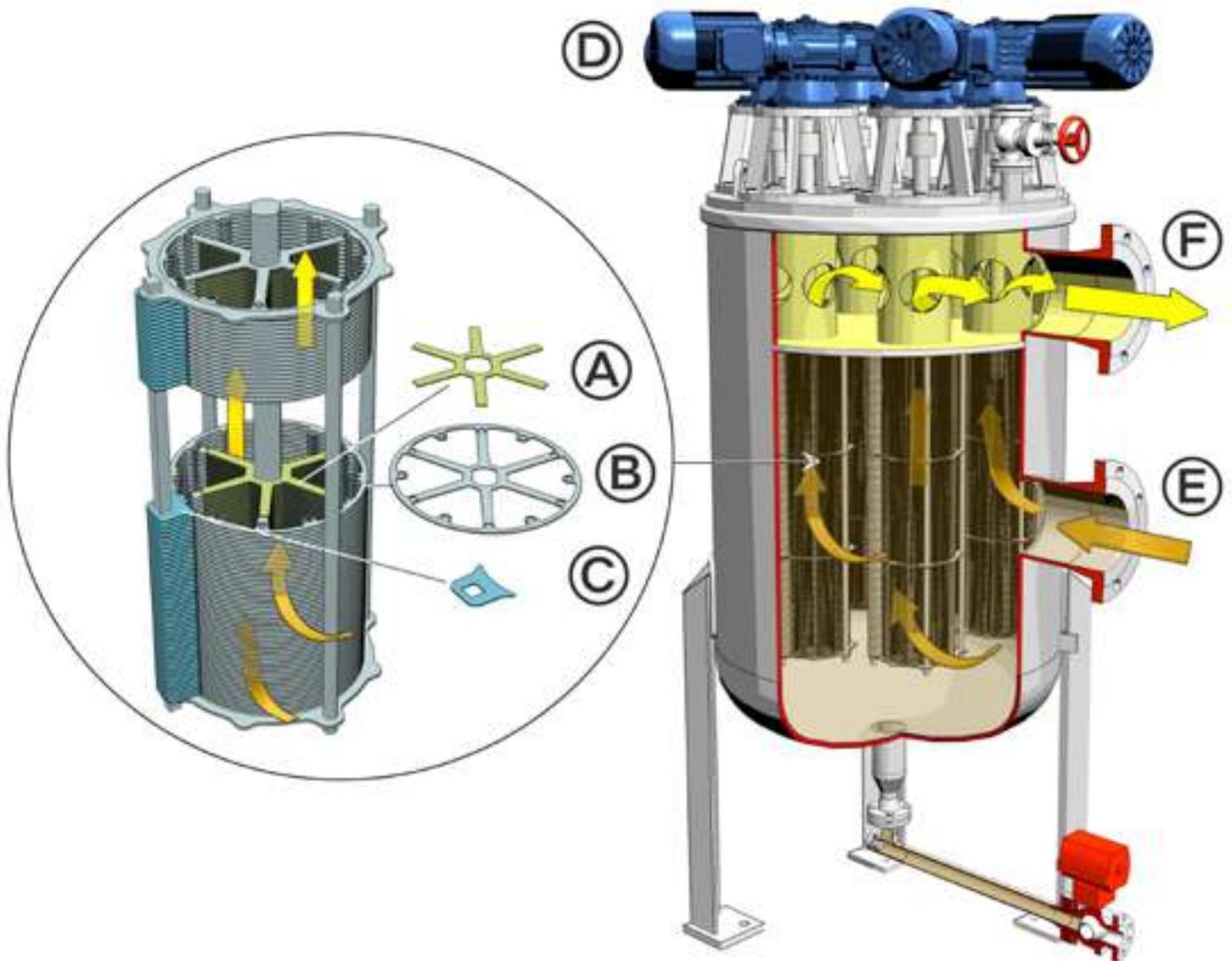
- **100% cleaning efficiency** due to the mechanical scraping process
- There is **no backwash fluid required**, resulting in huge savings on operational costs
- The **auto-cleaning feature**, greatly reduces the operator's workload
- **Drainage** may be **fully automatic or manual**, allowing for easy operation and flexibility
- May be **used as a pre-filter** in applications with large contaminant contents
- **No need for costly spares storage**. The duration of the internal system is indefinite

The task

Reliable and efficient filtration of:

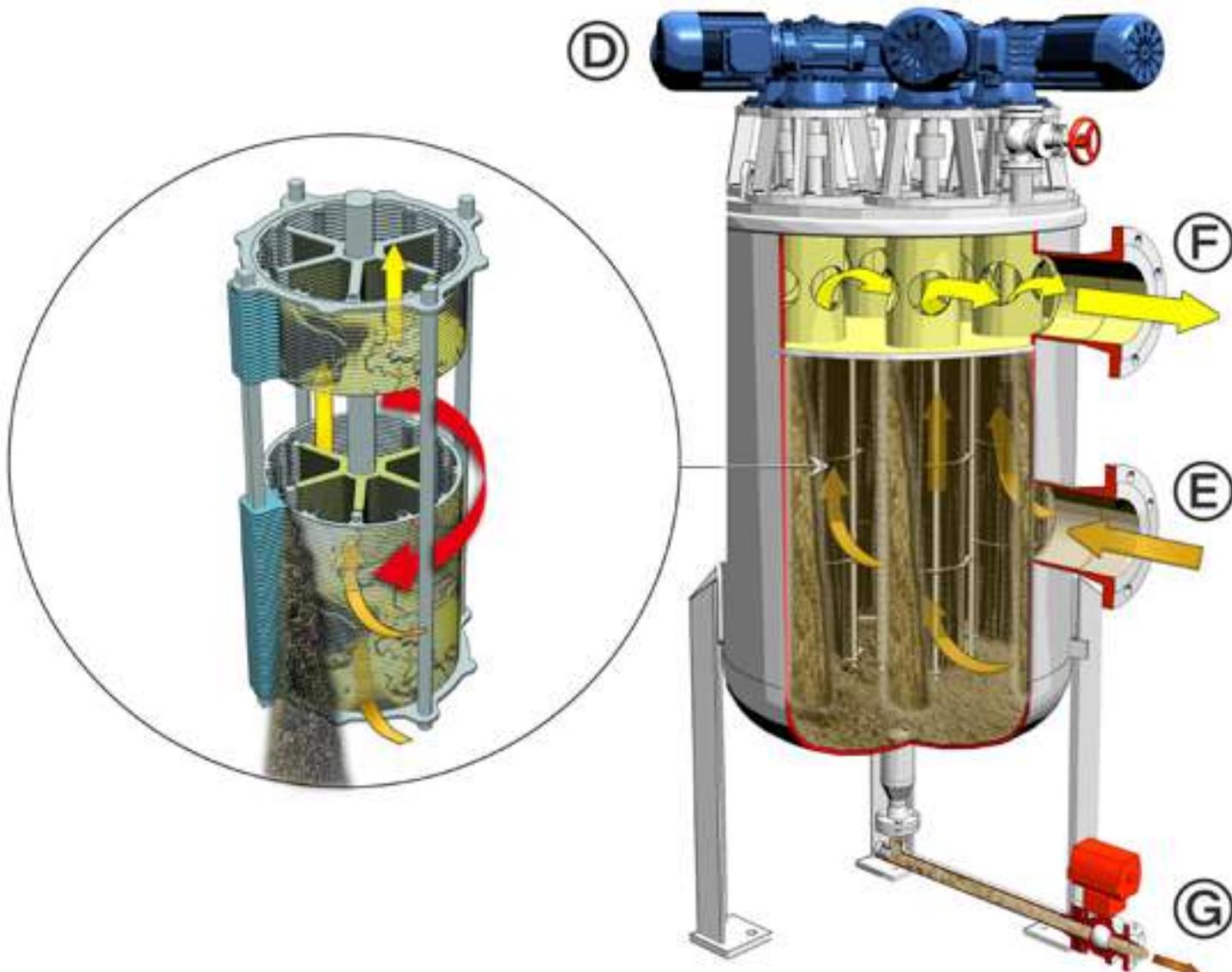
- Fluids with high viscosity and contamination
- Natural Oil Blend
- Used Cooking Oil
- Tallow
- Sticky Fluids
- Crude Oil
- HCGO
- Heavy Fuel Oil
- Heavy Feedstocks, Residues





The Lamellar filter is an **automatic selfcleaning filter** with a strong rugged construction suitable for severe conditions. The all-metal filter is composed by one or more filtering elements, each one made by several **filtering disks (A)** separated in between by a **spacer (B)**. The filtration degree is achieved by the gap between the filtering disks. Each filtering element is connected to an **electric motor** on top (D). A **fixed cleaner (C)** positioned between each gap between two consecutive disks, is used to remove the particles captured between the disks during the cleaning phase.

The feed enters from the **inlet nozzle (E)** and goes through the filtering element from outside to inside the elements. Solid particles bigger than the filtration degree are retained on the outer side of the elements while the filtered feed flows inside and leaves the housing through the **outlet nozzle (F)**.



As solids accumulate on the filter element, the **filter pressure drop increases**. When the set point is reached, the self-cleaning phase automatically starts.

The self-cleaning can be initiated **automatically**, based on the pressure drop set point, **by time** or **by operator request**. During the cleaning phase, all the impurities will fall on the bottom of the filter where they are collected to be disposed from the **drain valve (G)** which can be either automatic or manual.

The filter minimizes **the flushing oil consumption**, considering that the impurities collected on the bottom will be simply drained out. The concentration of the drained flow will be hence very high, being composed mainly by the particles and sludge to be removed from the stream, minimizing then the feed loss.

3D operation video



RESEARCH AND TESTING

Research has always been at the top of **FILTREX** priorities. The company has invested heavily in sophisticated testing rigs and laboratories. This effort has produced the most advanced filtering equipment available today. Filters are routinely tested in “real life” environment. **FILTREX** Lamellar filters are still on duty after **40 years of operations**.



Fuel Oil & Gas Oil Filters
Montalto di Castro Thermal Power Station, Italy



Heavy Fuel Oil Filter
Shoaiba Power Plant I and II, Saudi Arabia



Feed Filter for Heavy Coker Gas Oil
St. Charles, USA



Process Fluid Filter - Food Industry
Casale Cremasco, Italy



Orimulsion & Gasoil Filters
Brindisi Sud Power Station, Italy



Natural Oil Blend (UCO, Tallow, Vegetable Oil) Pre-filter
Pernis Refinery, Netherland



FILTREX s.r.l. with its headquarters and state of the art manufacturing facilities in Milan (Italy), **provides filtration solutions and technical services** to many industries such as hydrocarbon, chemical, environment protection, power generation, water treatment, Navy and marine transport.

FILTREX operates from its headquarters in **Italy** and through **worldwide branches**, and has received prestigious certifications for **quality and standards** of engineering and manufacturing.

FILTREX provides its customers with a comprehensive scope of **work, services and supply**, preparing the engineering design specifications and P&ID's, purchasing equipment and materials, fabricating and assembling the filters into module(s) in its fabrication shop, furnishing data books and operating manuals, and providing **technical services** for inspection, installation, commissioning, start up and after start up.

FILTREX Corporate HQ
Milan (Italy)



FILTREX Manufacturing Unit
Vignate, Milan (Italy)

The LAMELLAR is only one of the comprehensive range of filters manufactured by FILTREX.

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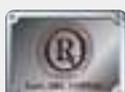
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