



Remanufactured rotary vacuum drum filter by TriStar LTD. One of a pair of completely rebuilt filters including new drives, new hood, and wash system.

TriStar Ltd will rebuild your existing rotary vacuum drum filter to like-new condition or remanufacture a used unit to your specifications. We have 18 years of experience in remanufacturing with dozens of installations world-wide.

## Benefits of Remanufacturing

**Significant Cost Savings** – A remanufactured RVDF from TriStar is 60% to 70% the cost of a new unit. Rebuilds can often be purchased with maintenance budget dollars. Reusing major components such as the drum, grids, frame, vacuum components, and vat save on materials costs. Conversions to EDG-trac™ Knife Advance improves filter performance.



Rotary vacuum drum filter before rebuilding

**Short Delivery Times** – Typical delivery and time to bring on-line for a TriStar remanufactured filter is 8-10 weeks.

**Energy Savings** – If desired, TriStar can upgrade the filter's components so that the entire filter uses less energy. Fewer moving parts, highly efficient drives, and precise control all reduce energy consumption.



Rebuilt 3x1 rotary vacuum drum filter upgraded with EDG-trac™ Knife Advance System filtering candle filter backwash

## EDG-trac™ Knife Advance System Encoded Digital Guidance

The proprietary EDG-trac™ Knife Advance System from TriStar improves filtration performance and energy efficiency on all pre-coat type RVDF's.

- **Retrofit to All Manufacturers** – Upgrade during a complete rebuild or retrofit in the field.
- **Improve Filtration Performance** – Ideal solids penetration into pre-coat is 2-5 microns. EDG-trac™ can cut as little as 1.4 microns per drum revolution at a drum speed of 0.2 RPM which extends pre-coat life by not cutting away clean pre-coat.

- **Reduce Energy Consumption** – Single motor, VFD design is highly energy efficient.
- **Reduce Time Between Cycles** – Retract speed is PLC controlled allowing the filter to be recycled and put back on line quickly
- **Fully Automated** - PLC control permits precise adjustment of cutter speed and allows for automatic cutter retraction. Readout shows knife position and speed.



EDG-trac™ Knife Advance retrofitted to Eimco rotary vacuum drum filter

# Remanufacturing Process



**Frame Repair or Replacement** - If the frame is usable we will sandblast, straighten, repair, and paint. Often, however, carbon steel frames are too far gone and need complete replacement. TriStar will make a brand new stainless or carbon steel frame.

**Vat Repair or Replacement** - Like the frame, if the vat is usable we will refurbish it and make any needed modifications.



**Drum Drive Upgrade** - As a standard, TriStar upgrades the drum drive mechanism to a direct-drive, variable speed system. PLC control makes drive speed control easy and precise. If desired, we will rebuild the existing drive mechanism to like-new condition.

**Agitator Drive Upgrade** - Most OEM agitator drive mechanisms are located below the vat where they are subject to dripping and corrosion. TriStar moves the drive up above the vat where it is out of harm's way.

We also replace inefficient chain-driven mechanisms with a variable frequency, direct-drive motor which can be controlled via PLC.



**Full Automation Upgrade** – The use of variable frequency drives allows precise control of drum speed, agitator frequency, and knife advance. Level controls, flow meters, and other sensors are used to measure all filter parameters. TriStar ties all drive systems and sensors together with our own control panels running custom automation routines. Full automation of the filtration cycle is then possible.

**Skid-Mounted Systems** – Entire RVDF systems can be skid mounted. The systems are pre-wired and pre-plumbed. In addition to the filter they include:

**Vacuum System** including vacuum pump, filtrate pump, vacuum receiver, and air/water separator.

**Pre-Coat System** - Pre-coat filter skids include a tank, mixer, pump, valves and controls to handle pre-coat makeup and application.



*Complete skid-mounted 3'x4' Pre-Coat RVDF system with vacuum system, pre-coat system, and full automation*

## Testing, Pilots, Parts, and Service

**Lab Testing** – TriStar operates its own lab for testing filter applications and sizing filters.

**Pilot Studies** – If on-site testing or piloting is required, TriStar will run a pilot study in your plant.

**Parts and Service** – We provide most RVDF parts such as Wear Plates, Bearings, Drives, Knife Blades, Vacuum Pumps, and Filter Cloths.



*Dip-Leaf Test Apparatus in TriStar Lab*

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