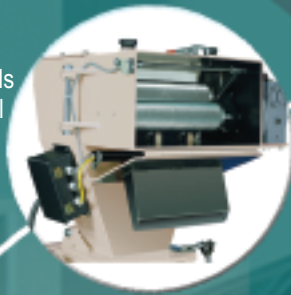


# Scrap Reclaim Systems for Blown and Cast Film

The optional feed rolls feature both upper and lower driven rolls and an exclusive undercut knurl design to reduce wear



An optional edge trim air exhauster mounted on the grinder receives trim scrap



Fluff conveying blowers are included on our film reclaim granulators



A cyclone can be mounted on your full feed hopper



Dual Chamber Film Grinder (shown with optional feed roll assembly and pneumatic assist)

TFH450 Fluff Feed Hopper

## Film Reclaim Systems Reduce Cost and Improve Quality

Cumberland's film scrap reclaim systems can reduce your costs by grinding scrap and conveying it directly back into your extruder. This process offers numerous advantages over repelletizing. Scrap is restored to its original feedstock value, and no additional heat history is added to the material. Contamination risk and labor costs

are reduced because material is not handled as often. Repelletizing costs, which often run \$.15—\$.25 per pound are eliminated, and scrap inventory is reduced or eliminated. With Cumberland's scrap reclaim systems, you will see an improved finished product and a high return on your investment.

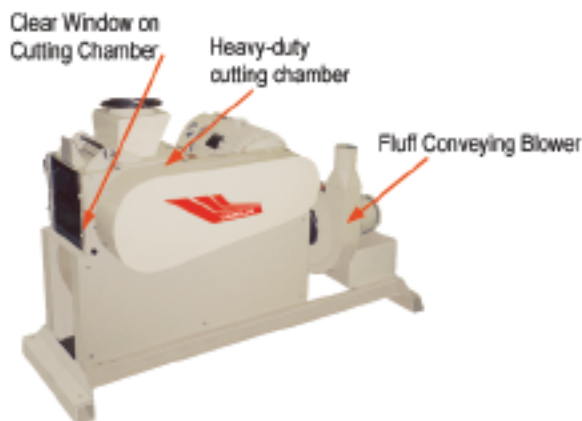
# Scrap Reclaim Systems for Blown and Cast Film

Cumberland film grinders are designed to handle a wide range of materials and can be equipped with feed roll assemblies for automatic feeding of scrap roll stock. Each film grinder comes with the following features:

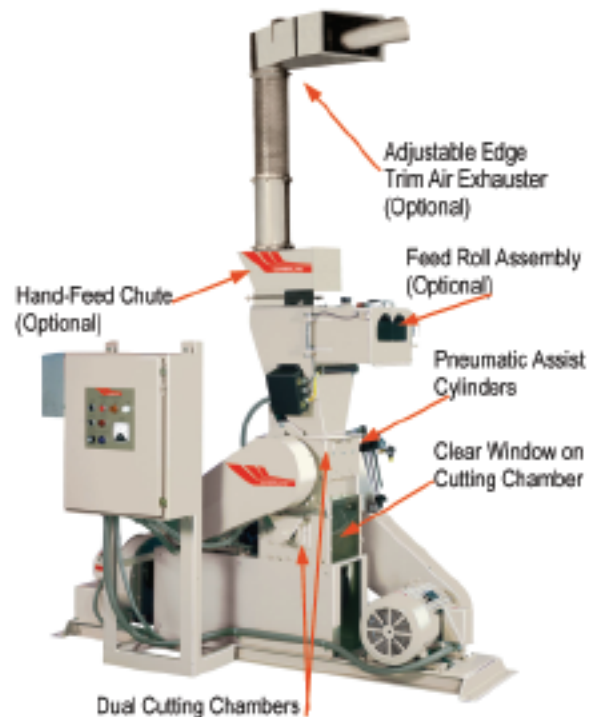
- Heavy-duty single or dual cutting chamber
- High-shear, slant-angle scissor cut design for trouble-free operation
- Machined plate cutting chambers
- Outboard-mounted bearings with shaft scraper blades to eliminate failure caused by material contamination
- Clear window on the cutting chamber for constant process monitoring.

Our dual cutting chamber film grinders feature high-performance dual-stage design, perfect for tough applications such as high-speed cast film lines. Scrap film first passes through a primary upper cutting chamber, then through a secondary lower chamber with a smaller screen. The dual chamber grinders provide high throughputs and higher bulk densities with less heat generation and screen blinding. They are excellent for tacky, heat-sensitive materials, like LLDPE and PVC. The dual chamber design permits very high line speed edge trim because the top chamber stays evacuated to enable efficient ingestion of materials.

## GR1 Single-Chamber Film Grinder



## GR2 Dual-Chamber Film Grinder

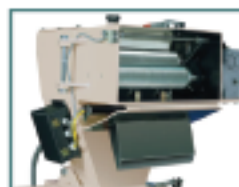


### Feed Roll Assembly

- Both upper and lower rolls are driven
- "Doctor" blade on lower roll reduces wrapping
- Hinged front door with clamp for easy access
- Hinged feed roll box with clamp for easy cleaning
- Pneumatic cylinders on models 20 and 30
- Angled feed roll geometry helps feed thicker films
- Steep wall grinder chute improves scrap feed
- Safety switches on all hinged and accessible components
- Exclusive feed roll undercut knurl design reduces wear
- DC drive with heavy-duty hollow shaft gearbox

### Available Options:

- Feed Roll Assembly
- Hand-Feed Chute
- Edge Trim Air Exhauster
- Flywheel for heavy hand feeding
- Sound enclosure
- Carbide-coated blades
- Remote mount control panel
- Special Voltage



Feed Rolls for Scrap Film Roll Stock



Adjustable Edge Trim Air Exhauster



Hand-Feed Chute for Loose Scrap

# Scrap Reclaim Systems for Blown and Cast Film

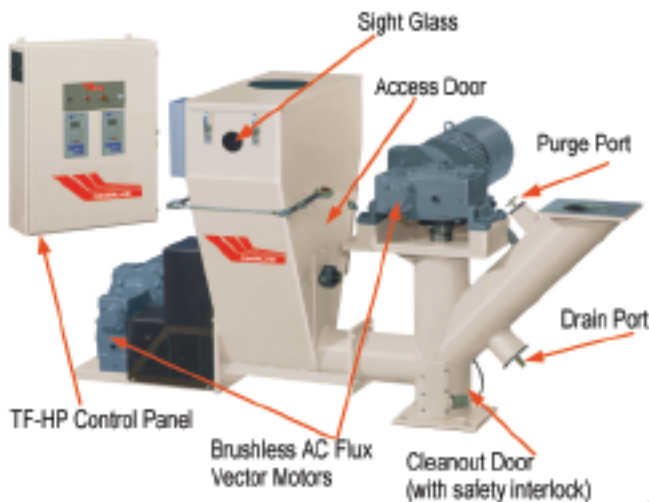
Cumberland's fluff feed hoppers are designed to feed a percentage of the fluff directly back into the extruder throat. The unique dual-stage design ensures that the fluff is mixed with the virgin material above the extruder throat. Each auger is independently adjustable and can be set to follow the extruder screw speed by monitoring a tachometer signal from the extruder.

The TE unit is designed to re-feed edge trim only. The TFH will handle up to 30% of the edge trim and/or scrap. The TFH-HP is designed for those applications where scrap re-feed greater than 30% is common.

## TE and TFH Systems for Efficient Edge Trim and Roll Stock Recycling

- Patented dual-stage fluff feed assembly
- Metering and mixing is slaved to the extruder via signal isolation circuitry
- Independently adjustable horizontal and vertical drives precisely control fluff metering and homogeneous mixing of the pellet/fluff mixture at the extruder throat
- Exclusive vertical auger design provides thorough mixing to assure constant extruder screw pressure and improved gauge control, resulting in better product
- TE units equipped with DC motors
- TFH units equipped with inverter duty AC motors and ammeters

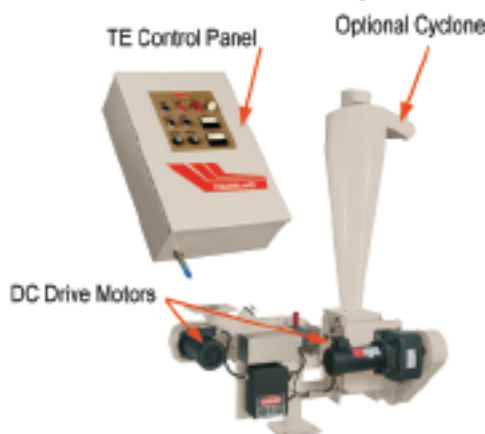
### 600TFH-HP Fluff Feed Hopper



### High-Performance TFH-HP Models Handle the Toughest Film Scrap Conditions

- High-performance vertical feed auger incorporates vertical compaction and mixing to allow the maximum fluff re-feed percentages possible.
- Heavy-duty re-feed pedestal
- Vertical side-access door on pedestal for easy cleaning
- Brushless AC flux vector drive motors:
  - ⇒ 150% torque rating, full torque @ 0 RPM, stall torque to 150% @ 0 RPM for 1 minute
  - ⇒ Built-in (internal) overload protection and electronic reversing
  - ⇒ Adjustable acceleration and deceleration
  - ⇒ Programmable auto-restart

### 350TE Fluff Feed System



Models	TE	TFH	TFH-HP
Patented dual-stage fluff feed	X	X	X
Metering slaved to extruder speed	X	X	X
Isolation circuitry	X	X	X
Independent auger drive control	X	X	X
Exclusive auger design to ensure thorough mixing	X	X	X
Access door in hopper for cleaning	X	X	X
Optical level sensor (with blow-off kit) in fluff supply hopper	Opt.	X	X
Access door in feed tube for cleaning	Opt.	Opt.	X
DC drive motors	X	—	—
Brushless AC inverter duty motors	—	X	—
Brushless AC flux vector drive motors	—	—	X

Models	TE	TFH	TFH-HP
Extruder Size	2.5'	3.5'-8"	4.5'-10'
	60 mm	90-200 mm	115-250 mm
Fluff Re-feed Amount	≤ 20%	≤ 30%	> 30%

# Scrap Reclaim Systems for Blown and Cast Film

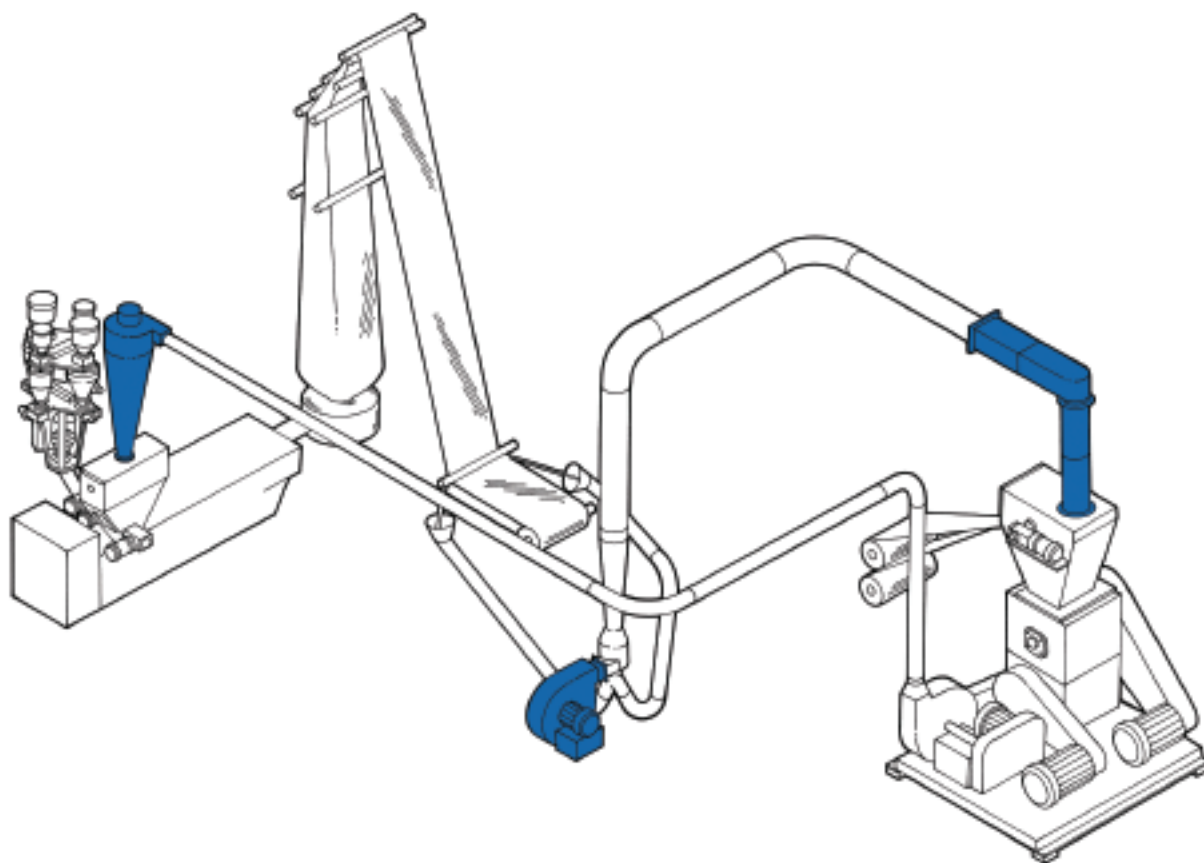
## Film Scrap Conveying Systems

Cumberland's edge trim conveying systems are designed to convey edge trim to the grinder. An additional blower mounted on the grinder conveys fluff back to the extruder.

A typical conveying system consists of two bellmouth pickups for the edge trim, one Y-tube to connect the venturi inlet on the blower, a trim blower, cyclone, edge trim air exhauster (mounted on grinder), and a fluff conveying blower (included with grinder).

## Standard Options

- Interconnecting tubing, bends, and couplers
- Dual inlet edge trim air exhauster
- Manifold with additional bellmouth pickup for center trim
- Sound enclosure for blower
- Inlet silencer for blower
- Special voltage



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