

The Cutting Edge of
"LONG FIBER"
Pultrusion Pelletizing



BAY PLASTICS MACHINERY



History of Bay Plastics Machinery



- 1961 JETRO Corp. introduced it's first Strand Pelletizer .
- 1974 Conair purchases the company and the division is known as **Conair JETRO**.
- 1997 Conair centralizes all remote manufacturing facilities to Franklin, PA.
- 1997 Bay Plastics Machinery was formed by the son of JETRO's founder and a core team of individuals.
- 1998 Joint Venture created between German pelletizer manufacture Scheer and Bay Plastics Machinery. The New Company is known as Scheer-Bay Company.
- 1999 Developed BT 25 Lab Pelletizer
- 2002 Developed Pultrusion Pelletizers
- 2004 Developed AX Series Pelletizers
- 2006 Developed SB Series Pelletizers
- 2008 Scheer declared insolvent in Germany, ending 10 year relationship
- 2009 Re-named Bay Plastics Machinery Corporation
- 2011 Celebrating 50 year of Pelletizer Manufacturing in Bay City, MI
- 2012 Developed XVAK Vacuum Air Knife
- 2014 Developed Puller Series for Pultrusion Industry
- 2015 Developed BP Series Pelletizers
- 2016 Developed Pellet Evacuation System (patent pending)

Plant 1 – Lab & Machining Center



26,000 Sq. Ft of Production Space
In Bay City Michigan

BPM Plant 2

Office & Manufacturing Facility



PULTRUSION

Strand Pelletizing Systems

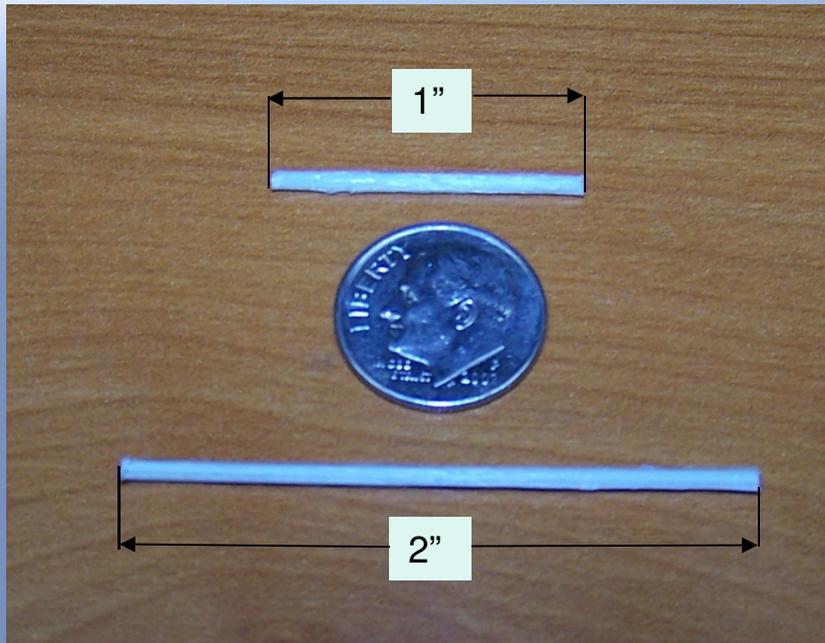


Long Fiber Pellets



PULTRUSION SYSTEMS

Pelletizing Equipment for Long Fiber Material



Pellet lengths vary from 3mm to 50mm

Long Fiber Pellets

- Materials
 - PP, Nylon 6 & 66, Polyurethane, PC, Polyester, PET, PBT, PPS, PES, PEI
 - Fiber glass, carbon, stainless steel, Organic/Natural fibers
 - Long fiber pellets are used to improve material properties in finished goods
- Improved Mechanical Properties
- Light Weight
- Non-Corrosive
- Metal to Plastic Conversions

BAY PLASTICS MACHINERY



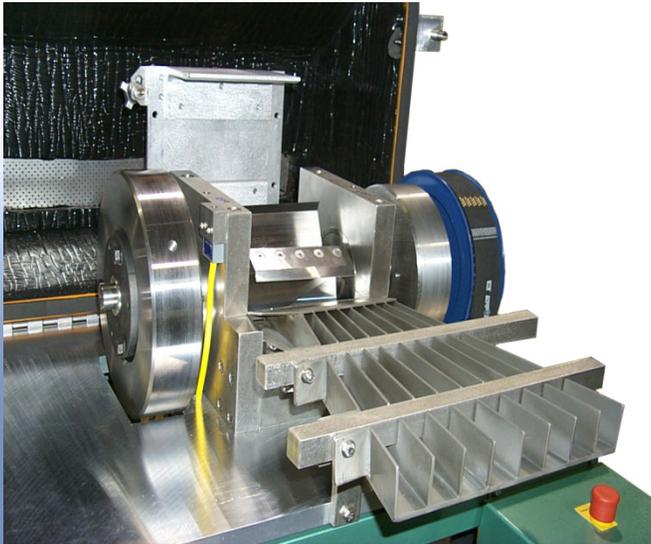
Pultrusion Strand Puller



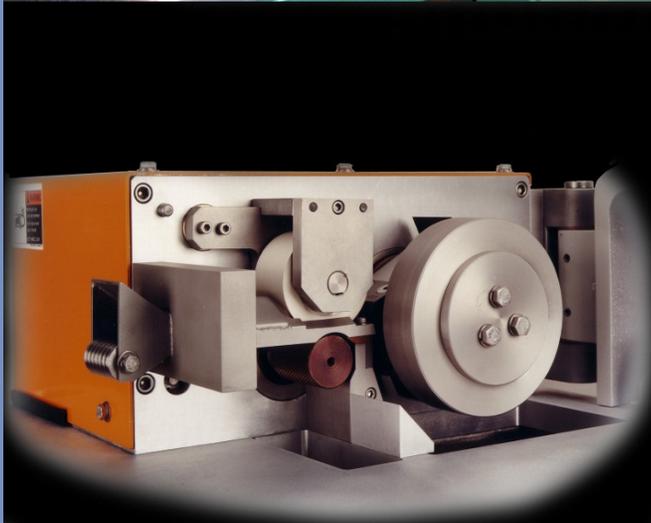
Pultrusion Pelletizer

PULTRUSION PELLETIZING EQUIPMENT

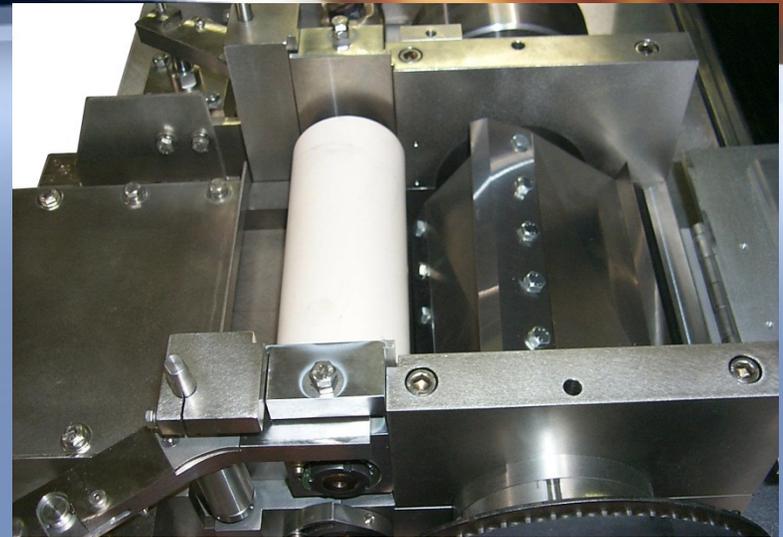
Lab Scale to Large Production



Designed with
Feed Rolls
Or
Without Feed Rolls



From Lab Units
To
Large Production
Machines



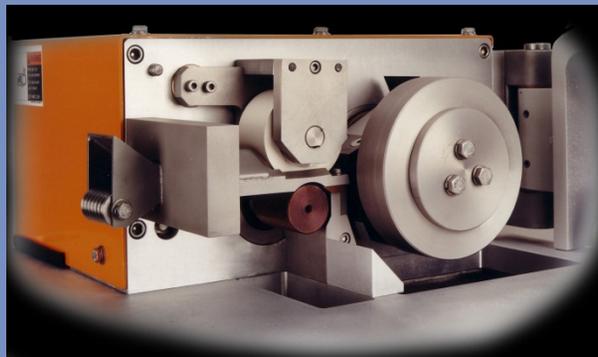
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Lab Units

SB PULTRUSION SERIES



- Heavy Duty Construction
- Easily Scalable for Large Production Unit
- Dual Fly Wheels
- 6 mm to 25 mm Cut Lengths
- 50 mm Feed Throat
- Line speeds up to 50 M/Min (30M/min @ 6mm L)

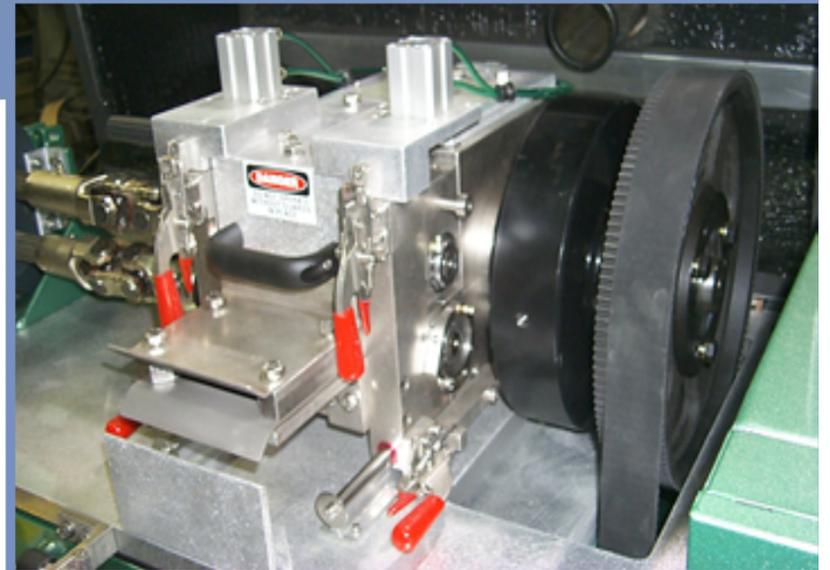


Light Production

AXP PULTRUSION SERIES



- Up to 50 mm Cut Length
- Dual Vibration Reducing Fly Wheels
- 100 mm, 150 mm, 200 mm and Models Available
- Line speeds up to 90 M/Min (60 M/min @ 6mm L)

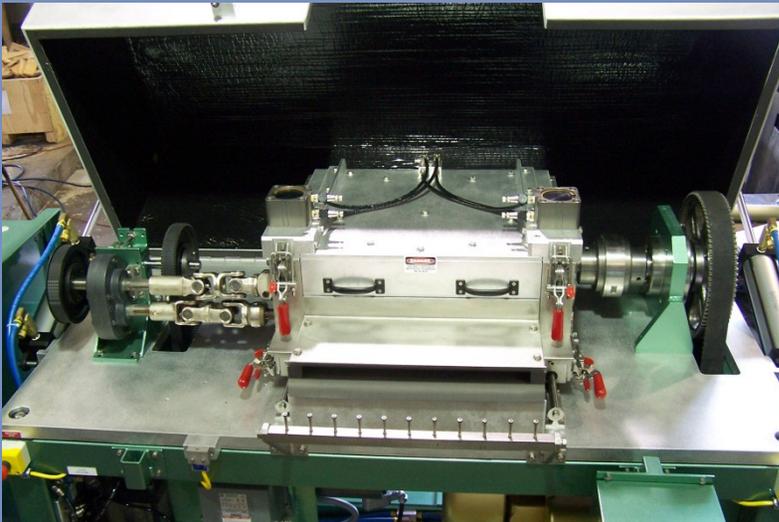


Large Production

BXP PULTRUSION SERIES



- Line speeds up to 120 M/Min (90M/min @ 6mm L)
- Cutting Gap of 0.013mm
- Five Sizes Available
- Up to 800 mm Wide
- Cut Length from 8 to 50 mm

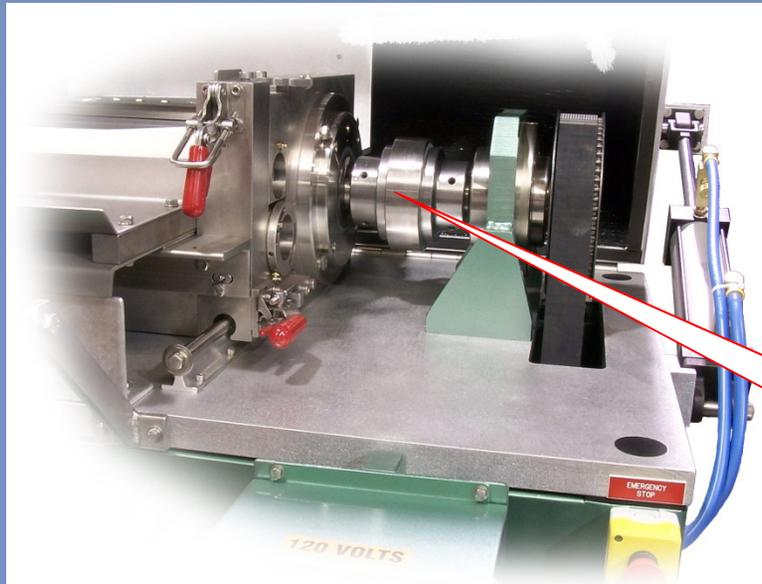
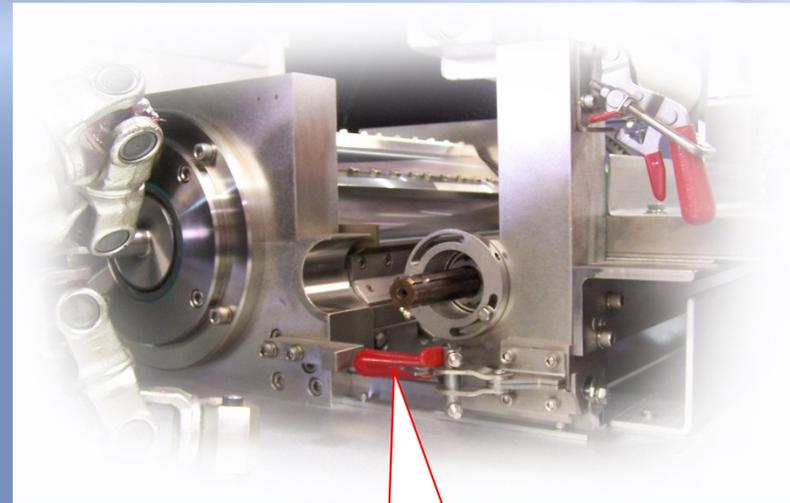


Large Production

BXP PULTRUSION SERIES



- Close Distance between Nip and Cut Point
- Easy Cutting Gap Adjustment
- Easy to Clean
- Easy to Maintain

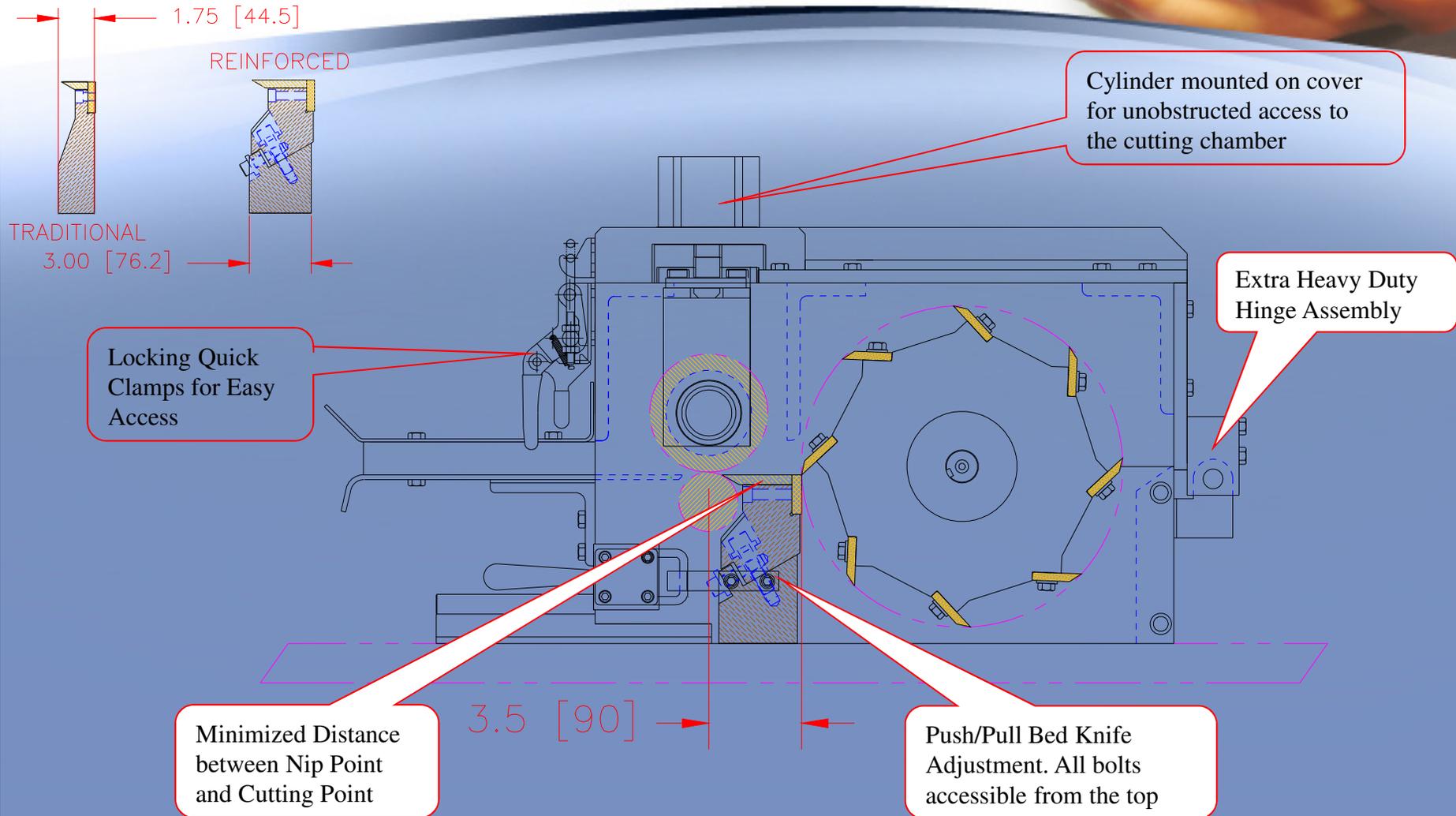


Coupling Drive, No
Tools Required for
Removal

Slide Out Front End, Allows for
Easy Access for Maintenance and
Cleaning

Large Production

BXP PULTRUSION SERIES

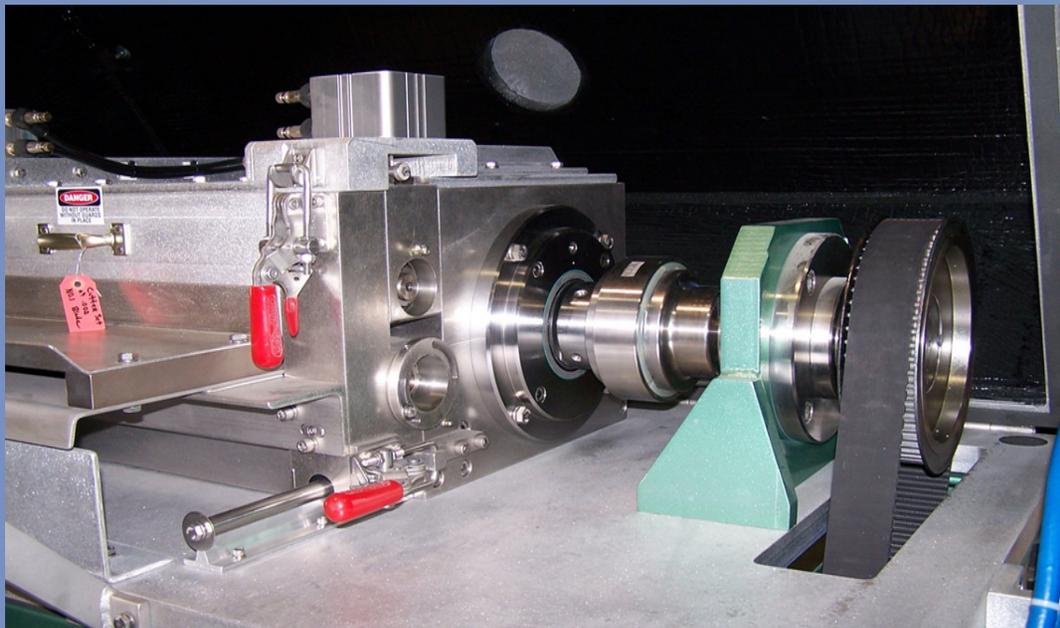


Precise Gap Adjustment



“NEAR ZERO” (.0005” / .012mm) Precision gap control is easily achievable with our unique bed knife holder, and rotor isolation coupler. The robust bed knife holder is specifically designed to provide stability when cutting this very demanding material. The isolation coupler removes the side load on the rotor shaft eliminating the deflection allowing you to hold the tightest rotor gap in the industry.

Isolation Bearing and Coupler



Push/Pull Pultrusion
Bed Knife Holder



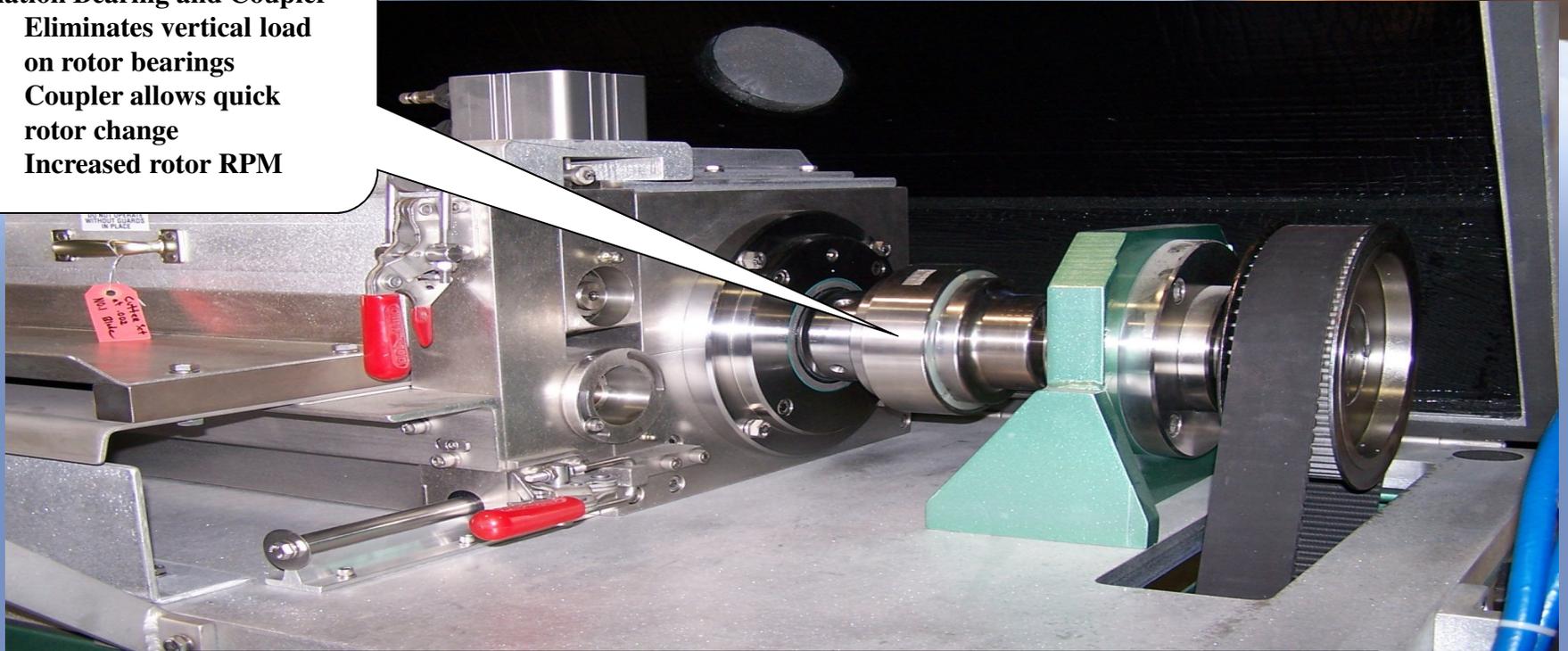
BPM BXP PULTRUSION SERIES

(optional push / pull system)



Isolation Bearing and Coupler

- Eliminates vertical load on rotor bearings
- Coupler allows quick rotor change
- Increased rotor RPM



The BPM Pultrusion Pelletizer is built to handle the most difficult to cut materials at tolerances not matched by anyone in the industry today.

- Ability to adjust rotor / bed knife gap as low as a 0.012mm
- **Zero Tolerance**

MANUAL & AUTOMATED CONTROLS



Manual Speed Pots



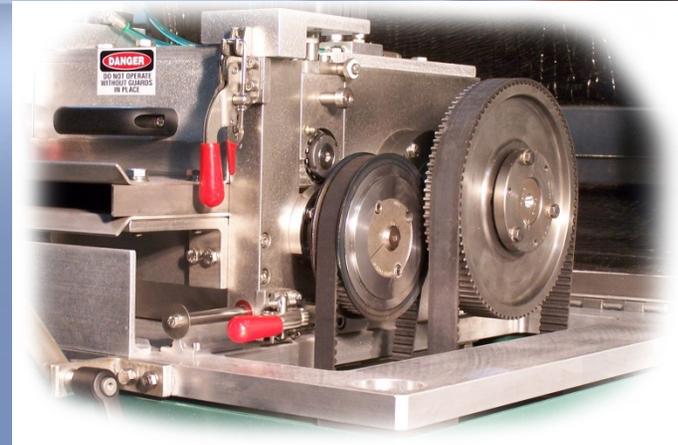
Intergraded Touch Screen Control

Optional Features



- **Dual Drive Option**

- Allows customer to change the cut length. Includes a second motor and drive to control the lower feed roll, this in combination with the rotor motor and drive allows the customer to change the length of the pellets by adjusting the speed of the two motors.



- **Digital Pellet Length Control**

- Utilizes proprietary designed program and a 5.5" touch screen to set the pellet length.
- The operator will simply have to enter the desired pellet length on a pop up number pad, and the program will control the drives to produce the desired pellet length.
- The strand diameter and line speed is control by either a 10 turn speed pot or up/down keys on the screen.
- Pellet lengths can be selected between 2" to 0.01" and this system is accurate to +/-0.0005"

BPM 2:05:17pm 03/12/2009

Feed FPM:	175.00	RUN
Feed RPM:	356.00	
Rotor RPM:	525.00	ERR
Rotor Blades:	32	
Cut Len (1000 ths):	125.00	

BAY PLASTICS MACHINERY

CLEATED BELT PULLER





GENERAL DESCRIPTION

Bay Plastics Machinery has designed this puller to efficiently handle a wide range of polymers reinforced with various rovings, the P-Series puller compliments the Pultrusion pelletizer line offered by Bay Plastics Machinery. The largest of this particular series puller is designed to accept up to a 40" width of uniform strands laying in-line with no overlapping. The maximum quantity of strands relies in either the total tension requirement of all strands or the physical lateral stack-up of the strand widths.

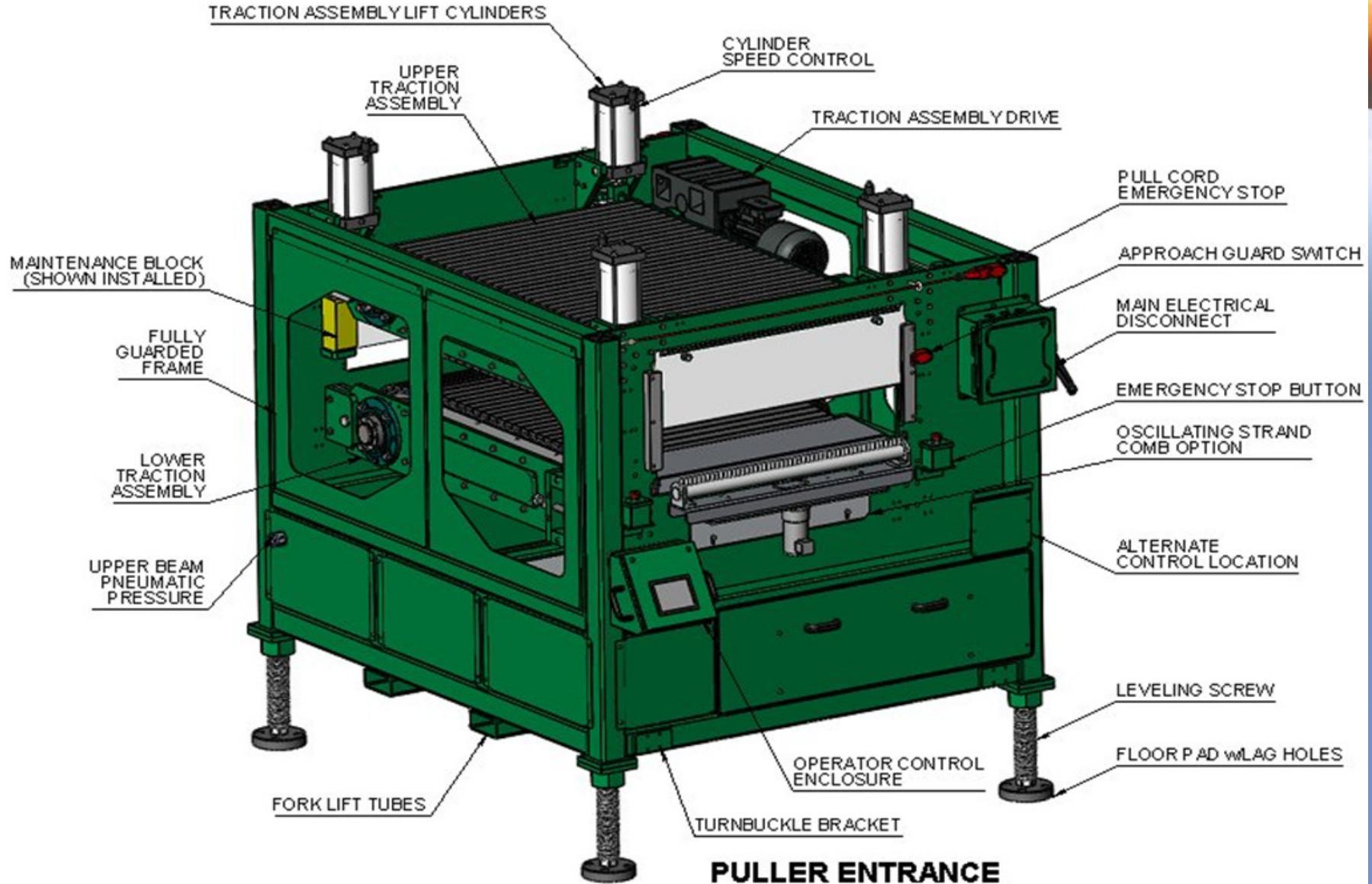
Through the traction surface, each puller is equipped to deliver maximum pull force with minimal impact on the pultruded material. The strands are kept straight through the puller with no bending or flexing to avoid internal fiber separation. Additionally, the overall area in which the clamping force is distributed limits stress cracking of the strands as well as increasing the lifetime of the traction surface itself.

The strands entering the puller are threaded manually at startup and grasped by the opposing traction assemblies. The upper traction assembly is pneumatically actuated and applies a force downward through the strands supported by the stationary lower traction assembly. Each of the traction assemblies apply a clamp force as well as a linear pull force at a required speed during operation. Upon exiting the puller, it is recommended to feed the strands into a BXP" P" Series Pultrusion pelletizer.

Serviceability and maintenance have not been ignored, each traction assembly has carefully selected components to increase productive up-time and reduce maintenance downtime. Safety of the operator and maintenance personnel has also been incorporated to the many features of the P-Series Pultrusion puller.

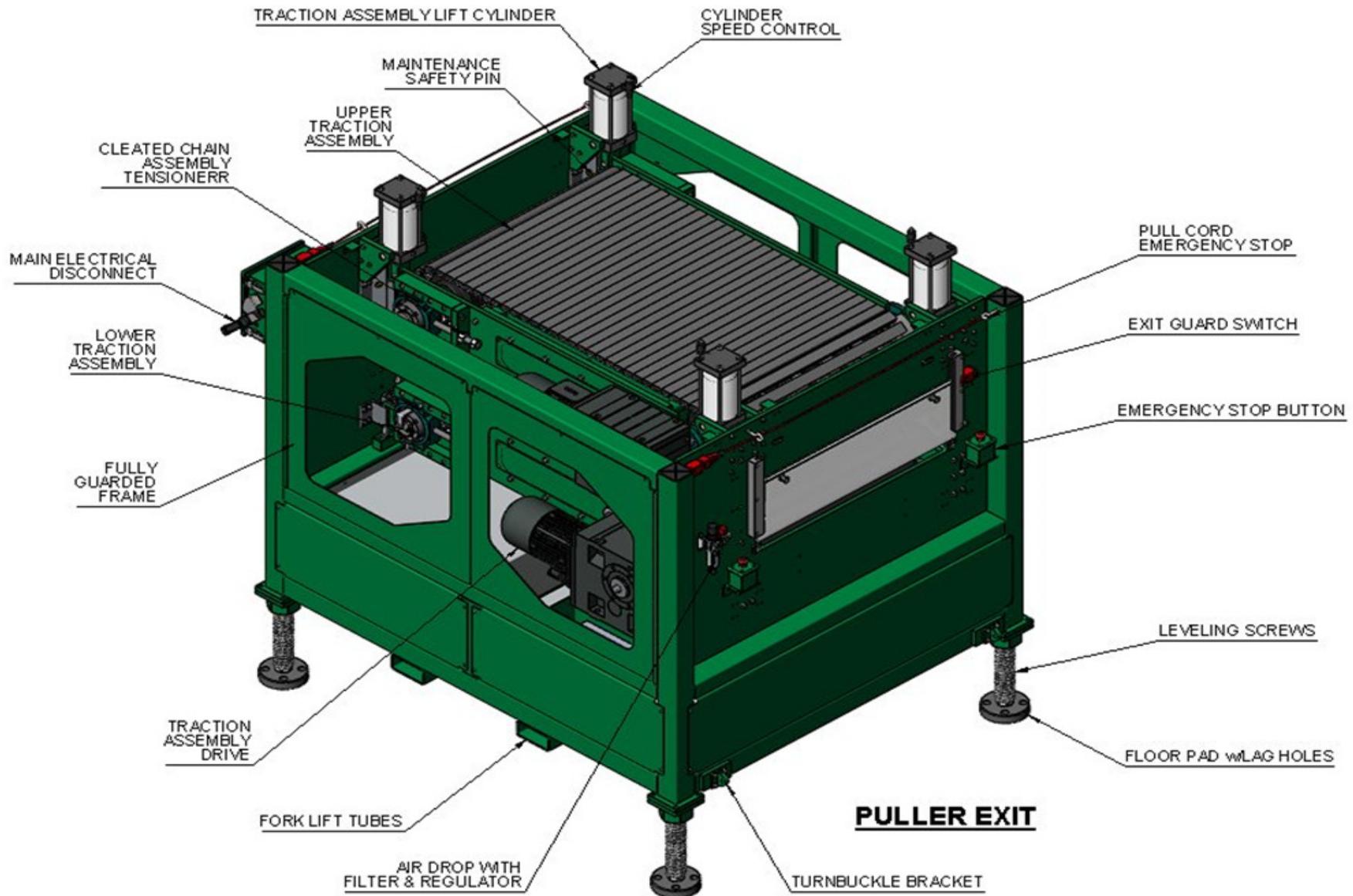
Several standard configurations of the P-Series puller exist as well as the capability to be fully customized in order to fit any application.

PULLER LAYOUT - ENTRANCE



PULLER ENTRANCE

PULLER LAYOUT - EXIT



Side View of the Puller without Guards



Beam Actuation

- Four beam actuator points to share the load front to back and entrance to exit

Frame Assembly

- Robust 4x4 welded tubing with $\frac{3}{4}$ " thick entrance/exit endplates
- Aluminum access panels on each side for serviceability and visual inspections
- Open top design for maintenance of beam assemblies if necessary
- Lift tubes for confident transportation around facility via fork truck
- Small overall footprint, approximately 80" x 80" for base framework
- Heavy duty 3" floor screws with 7.5" diameter floor mounting pads
- Simple design gives ability for right hand assembly or left hand assembly options

Control Pendant Options



The standard control pendant uses a mounting bracket that allows the controls to be mounted on the right-hand or left-hand side of the Puller

Optional Configurations:

1. Standard Free hanging right or left side operation.
2. Fixed mounted
3. Swing arm mounted.

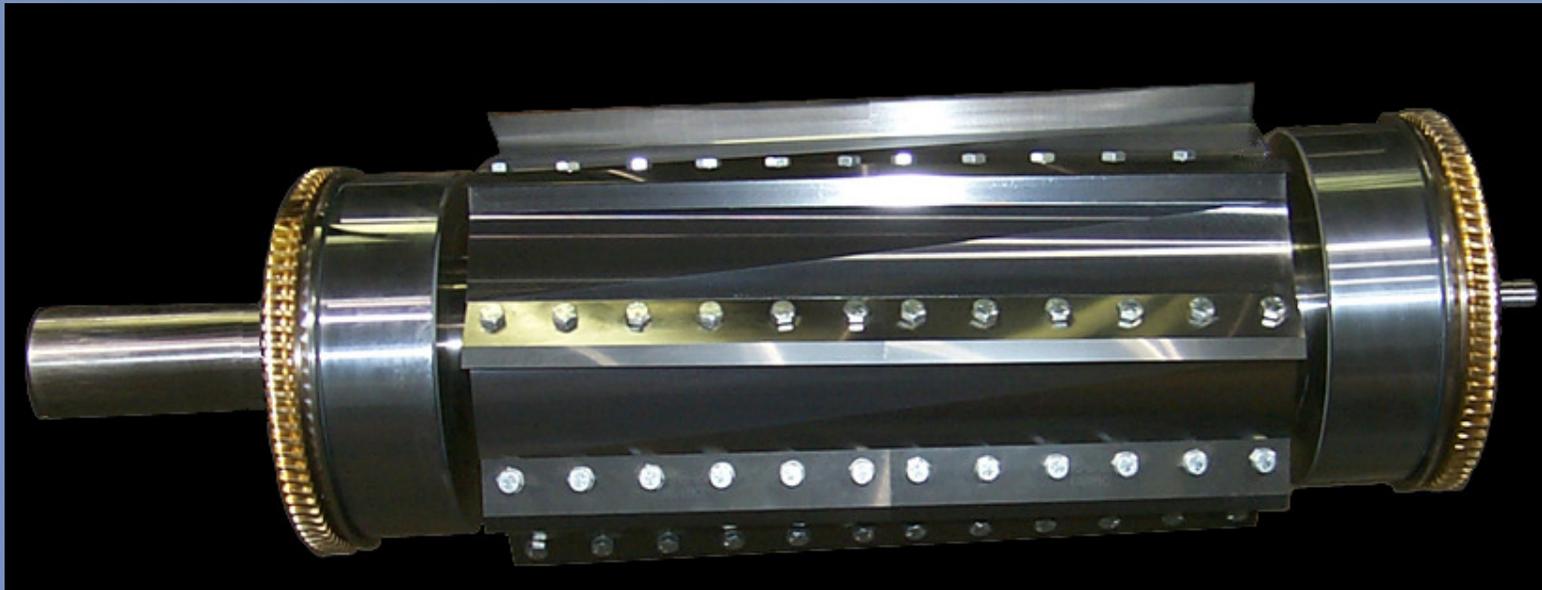
Close-up view with Top Deck open



ROTORS



- **Several Tooth Configurations Available**
- **Cut Lengths up to 50mm**
- **Precision Ground**
- **Special Grind for Longer Life**



SERVICE & SPARE PARTS

FOR ANY BRAND PELLETIZER

Rotor Rebuild

Spare Parts



Bearings and Housings



Stellite Rotors



Bolt on Rotors

Rotor Re-sharpening



Rotor Repair and Re-sharpening



Bed Knives and Doctor Blades



Wedge Lock



Feed Rolls





For Additional Information
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