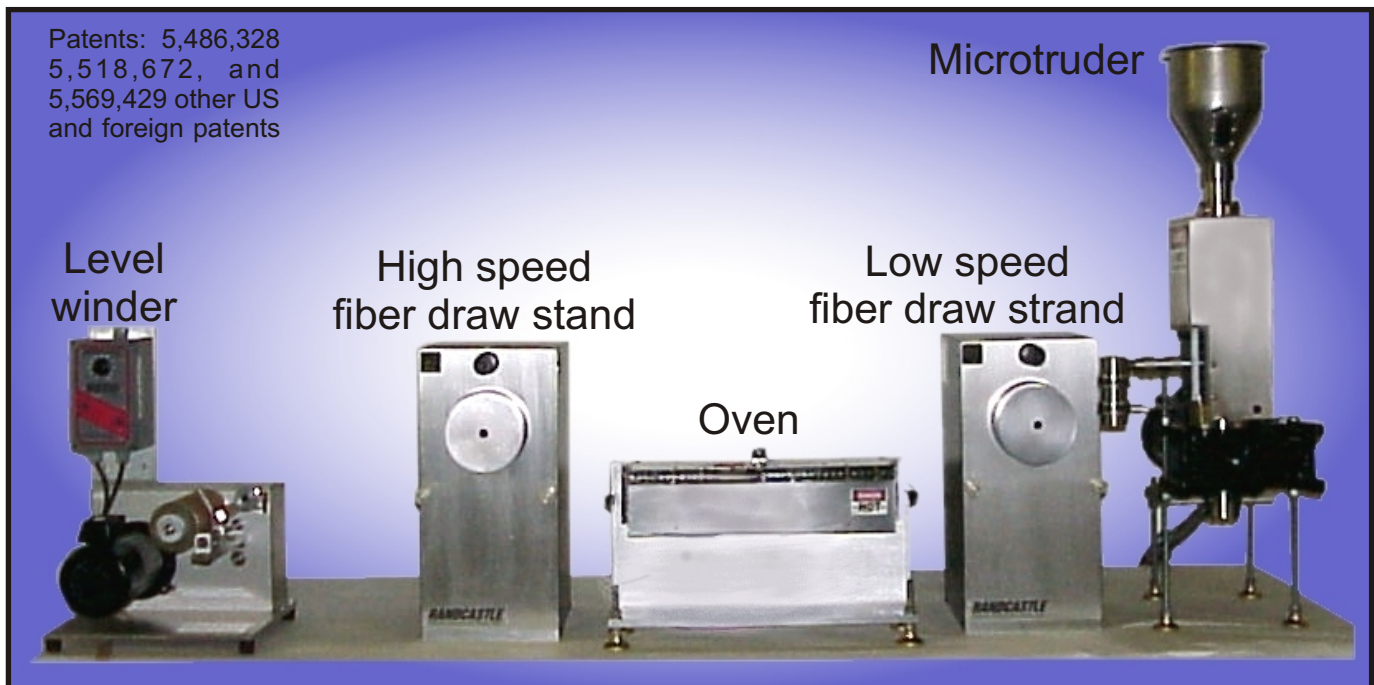


RANDCASTLE'S

Fiber Lines

Introduction: This flexible line is used for research and development for mono and coextruded fiber. Built with extruders between $\frac{1}{4}$ and $1\frac{1}{4}$ inches, our patented Surge Suppression system offers outstanding pressure stability. Studies have shown that pressure stability can be better than with a gear pump at a fraction of the cost saving greatly on the cost of a laboratory fiber line.



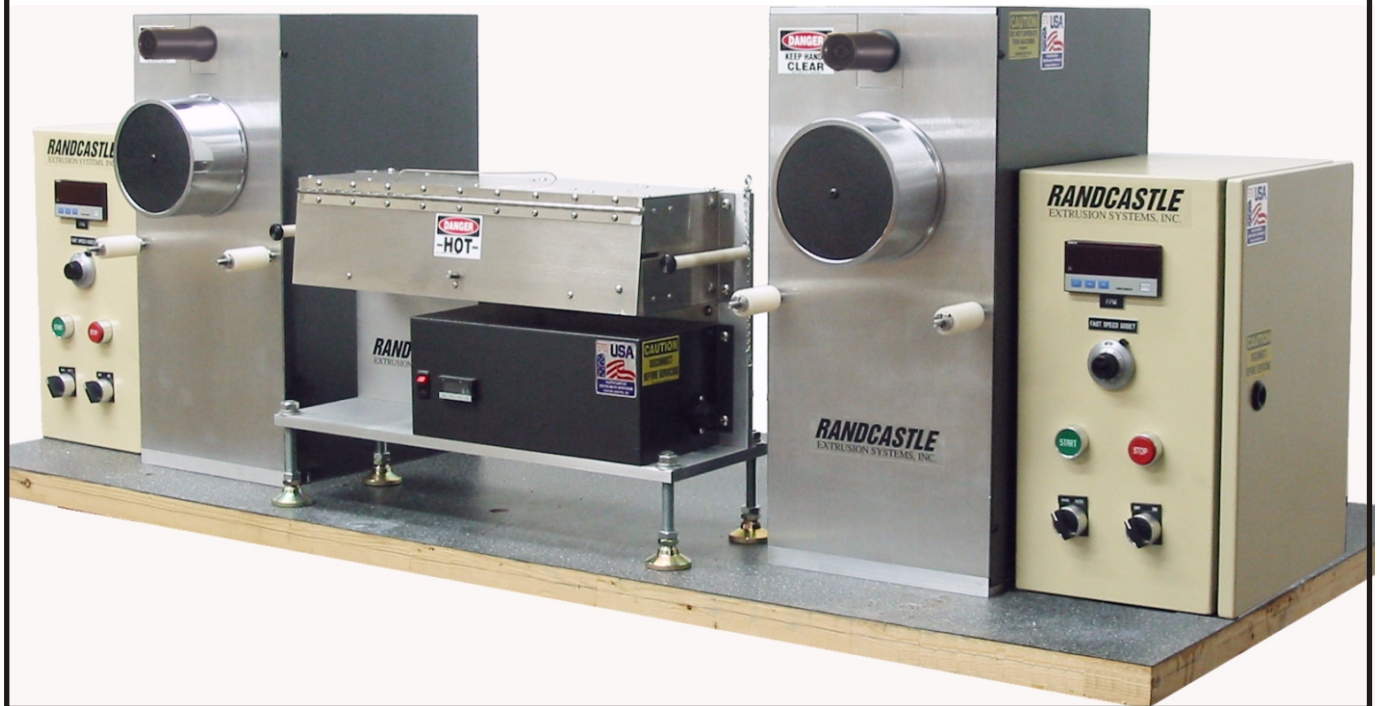
Dies: Monolayer dies can be from 1 to 10 fibers. Dies for research into coextrusion applications are typically of single fiber design.

Fiber Draw Stands: Draw stands come in low and high speed designs. The air bearing idler rolls allows multiple wraps for consistent draw. Draw stands can be either individually controlled or optionally linked so that all the stands maintain the same draw ratio when the master unit is changed. The DC motor and control offer outstanding speed range and can be further customized for your application.

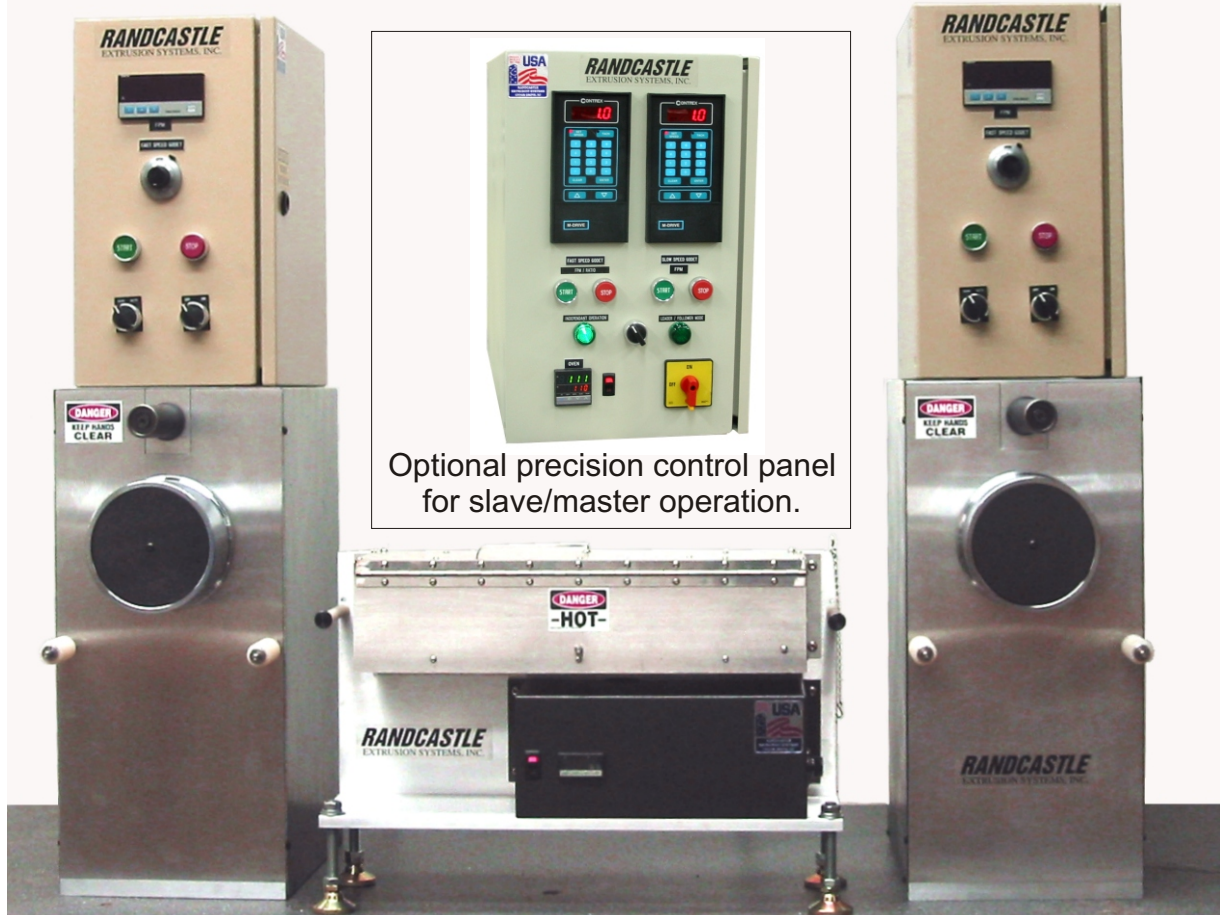
Oven: This oven is precision temperature controlled for accurate drawing. The oven is hinged for easy threading and is heavily insulated for safety.

Level Winder: The winder control has adjustable tension so it adjusts to the line speed automatically. Two models are available with either a fixed or adjustable traverse rate. In both cases, the winder tension is separately adjustable.

Control Panels Placed On Bench



Control Panels Placed On Draw Stands



Air Bearing Guide Roll

Friction Roll

Output Guide

Winder

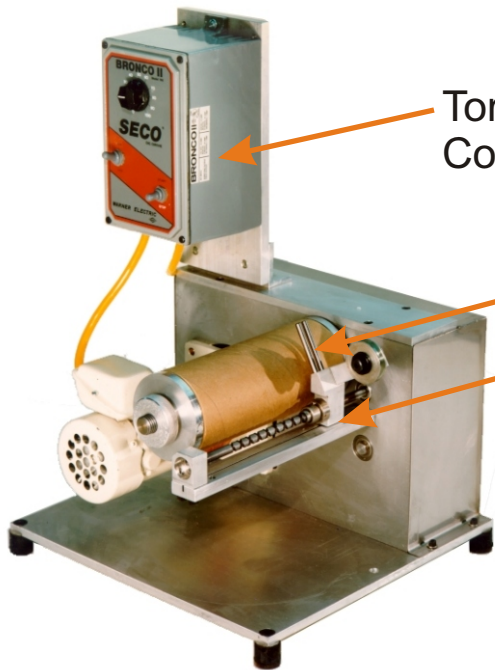
Torque Control

Guide

Removable Traverse For Fiber/Film.



Draw Stand

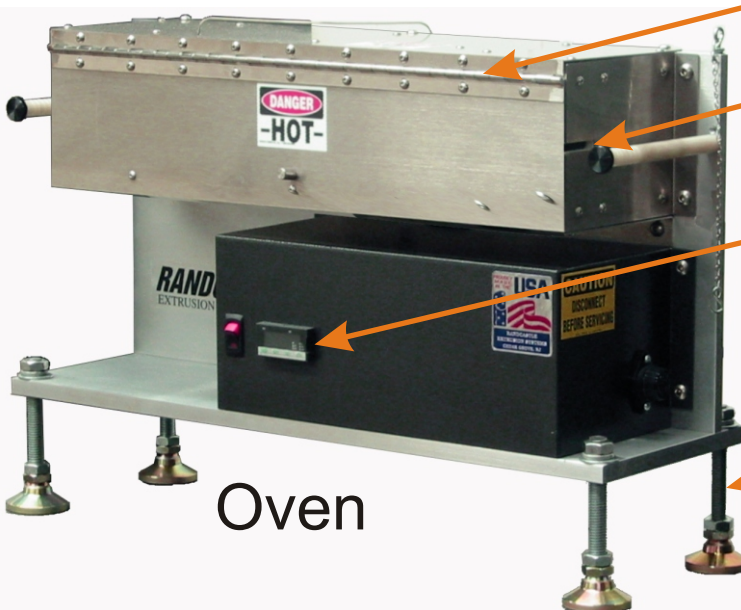


Hinged Access Door

Inlet

Digital Temperature Control

Height Adjustment



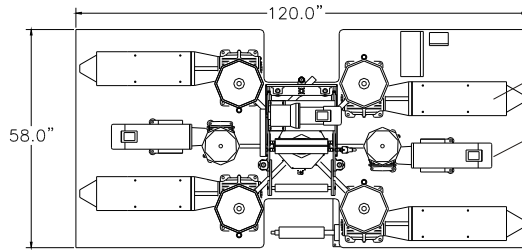
Oven

Randcastle Lines

Randcastle extrusion lines are available in a variety of sizes to meet your application needs. Typical lines are shown below including our latest developments: *Coextrusion blown film capable of up to 15 layers and our state of the art 50:1 L/D compounder.*

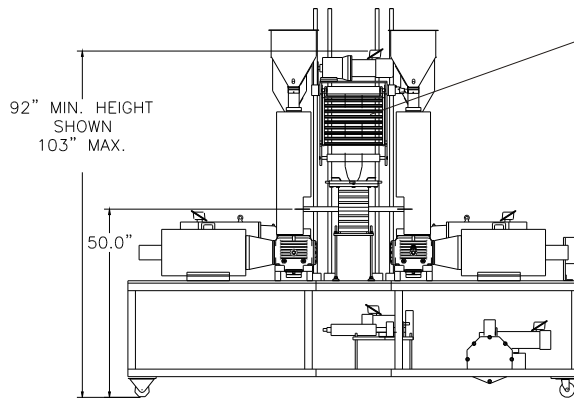
**World's
Most
Compact
Line!**

Six Extruder 11 Layer Line



Four 1 inch
Microtruders

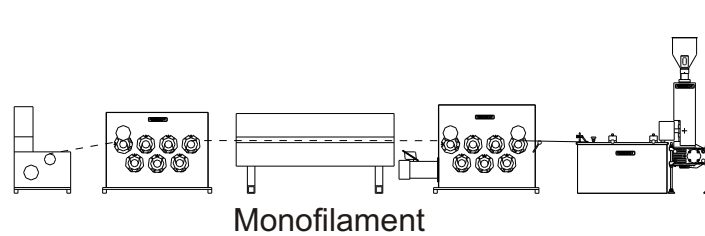
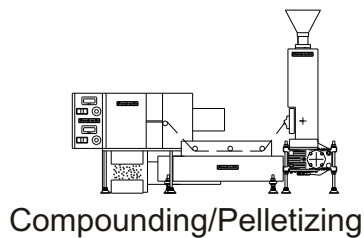
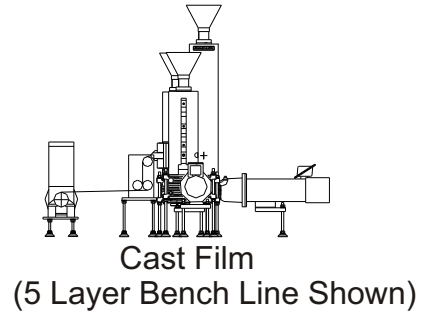
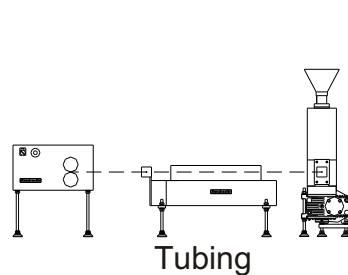
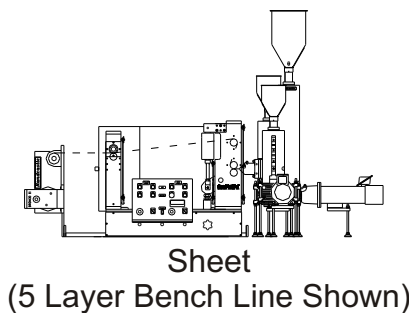
Two ½ inch
Microtruders



Tower

Free Standing
Base

Additional Randcastle Lines



FiberBro2000NPE.CDR

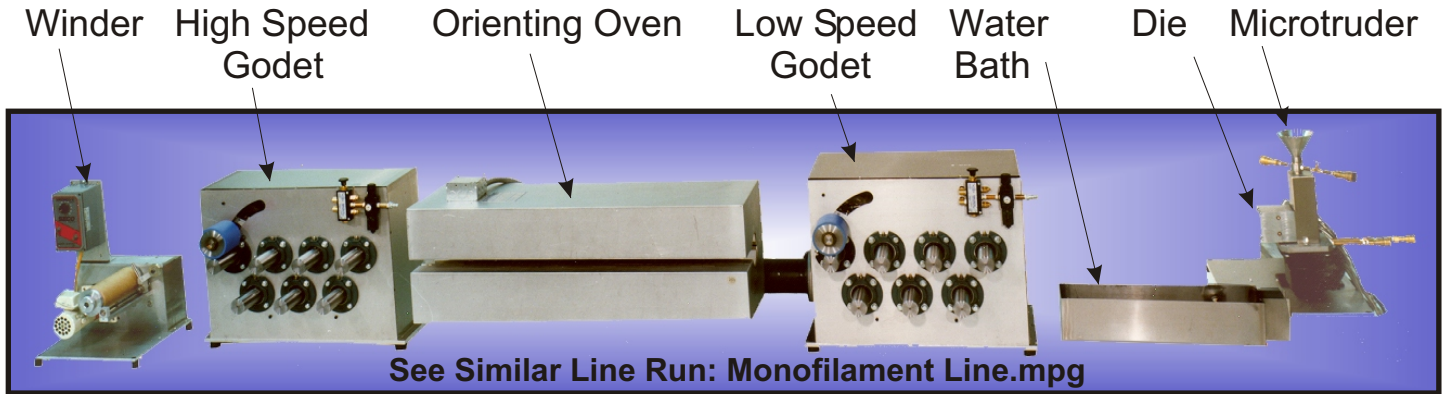
For more information on Randcastle's line, contact:

Randcastle Extrusion Systems, Inc.
74 Sand Park Rd.
Cedar Grove, NJ 07009-1210 USA

Tele: 973-239-1150
Fax: 973-239-0830
email: kluker@mail.eclipse.net
Web Site: www.randcastle.com

RANDCASTLE'S

MONOFILAMENT LINES

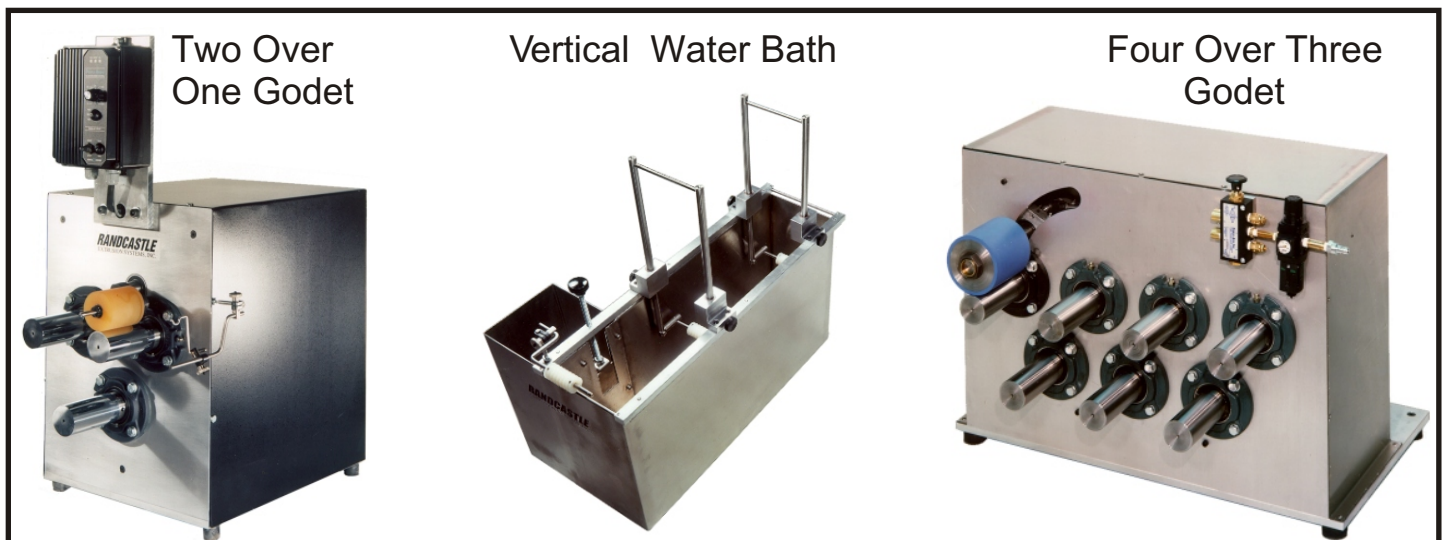


IDEAL LAB LINE: Randcastle's laboratory monofilament lines are ideal for small scale development. Our smallest lines make a single monofilament at rates as low as 10 grams per hour. Our larger lines can make up to 10 filaments and accept conventional pelletized feed stocks. See our Microtruder brochure for additional information. Lines are available in several styles and sizes including the bench mounting four over three godet configuration shown in the line above. Typical draw ratios range from just over 1:1 to 12:1. Additional godets and ovens allow for secondary drawing or annealing.

PATENTED TECHNOLOGY: All Randcastle lines offer the patented Surge Suppression Technology for more uniform pressures from the extruder. Although we offer conventional gear pumps, Surge Suppression Technology can sometimes offer more uniform pressures, simpler control, and much lower costs than gear pumps. A copy of our published Antec paper describes the process more fully.

DIES: Dies include interchangeable spinnerets in various L/D's and bronze filters. Single, six, and ten filament dies are available. Coextrusion dies are available in up to three layers.

GOSETS: Godets have chrome plated rolls driven at a single speed by a serpentine timing belt. Precision bored bearing housings insure the alignment of godet rolls for filament tracking. Godet speeds may be controlled individually or by maintaining draw ratio during operation. The godets feature a high friction pneumatic nip roll to facilitate thread up and for alternate use as a two roll puller.

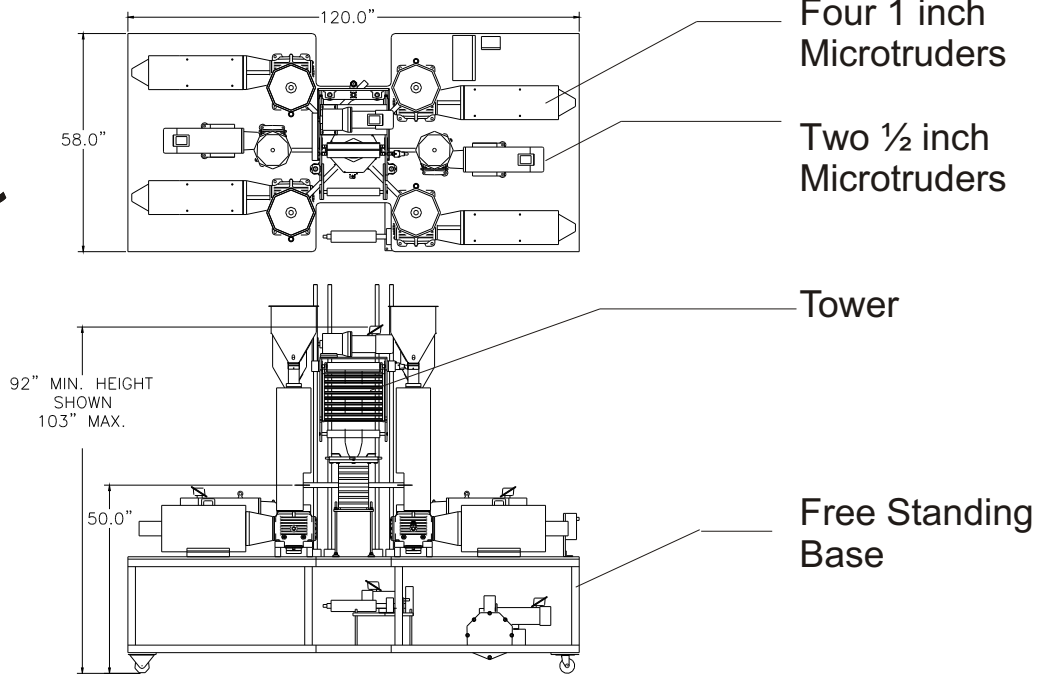


Randcastle Lines

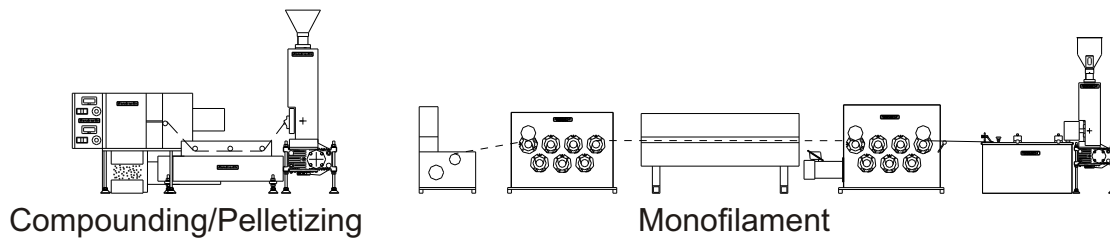
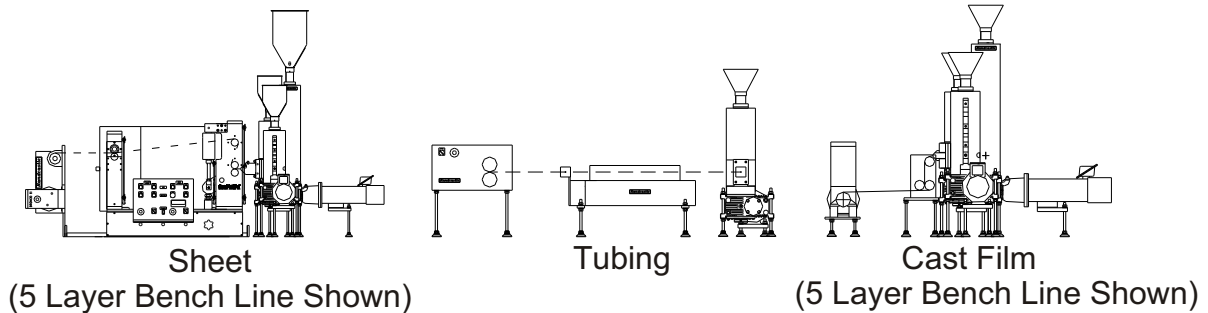
Randcastle extrusion lines are available in a variety of sizes to meet your application needs. Typical lines are shown below including our latest development: *Coextrusion blown film capable of up to 15 layers.*

**World's
Most
Compact
Line!**

Six Extruder 11 Layer Line



Additional Randcastle Lines



MONOFILBRO.CDR

For more information on Randcastle's line, contact:

Randcastle Extrusion Systems, Inc.
74 Sand Park Rd.
Cedar Grove, NJ 07009-1210 USA

Tele: 973-239-1150
Fax: 973-239-0830
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