



## Technology Labs

Parkinson Technologies hosts two state-of-the-art technology labs at our corporate headquarters in Woonsocket, Rhode Island. Here, with guidance from our technical experts, customers gain valuable hands-on experience using our equipment to conduct product/process development trials, and to manufacture samples for testing, analysis, and marketing purposes.



The Marshall and Williams Plastics Extrusion and Orientation Pilot Lab Facility is the most versatile plastic film and sheet extrusion and orientation laboratory commercially available for customer use. It provides a unique opportunity to develop products, optimize processes, generate samples for pre-marketing evaluation, and even produce low volume quantities of commercial materials.

### Typical Lab Trial Goals

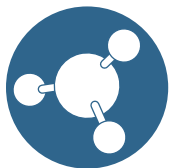
- Development of Equipment Specifications
- Formulation/Product/Process Development
- Customer Demonstrations
- Marketing Samples
- Semi-production Runs

### Typical Applications

- Packaging Films
- Barrier Films
- Shrink Labels & Sleeves
- Filtration Media
- Battery Separators
- Capacitor Dielectric Films
- Optical Films

### Typical Materials

- Polypropylene (PP)
- Polystyrene (PS)
- Polyethylene (PE)
- Polyethylene terephthalate (PET)
- Polylactide (PLA)
- Polyhydroxyalkanoates (PHA)
- Polyether ether ether ketone (PEEK)
- Polyvinylidene fluoride (PVDF)
- Polytetrafluoroethylene (PTFE)
- Other fluoropolymers
- Polyamide (PA)
- Ethylene vinyl acetate (EVA)
- Ethylene vinyl alcohol (EVOH)



## Extrusion and BIAX Tech Labs

# TECHNOLOGY LABS

## Marshall and Williams Plastics Extrusion and Orientation Pilot Lab

- Up to seven layer co-extrusion and 250 lb/hr
- Four single-screw extruders
- Optional Leistritz twin-screw extruder for in-line compounding
- Dies
  - 12" Cloeren™ monolayer
  - 12" NORDSON EDI™ triple manifold multilayer with "naked edge" skin layers
  - Optional tie-layer feedblock for four-layer and five-layer structures
  - 20" Cloeren™ with seven-layer variable geometry (VG™) feedblock
  - 24" NORDSON EDI™ monolayer
- **Casting machine** - two or three roll horizontal design with air knife, electrostatic wire, or polishing nip pinning devices
- **MDO** - single stage, two-stage, patented Compression Roll Drawing (CRD), and temperatures up to 550°F
- **TDO** - 90" maximum width, three heated zones plus one cooling zone, temperatures up to 650°F, draw ratio up to 12:1
- Corona treating
- Precision winding
- Scantech x-ray thickness measurement
- Desiccant-style resin dryers
- Gravimetric blending, on primary extruder
- Manual weighing, mixing and blending stations

## IR TDO

Parkinson Technologies has recently added capabilities for running high temperature narrow web applications.

- Six IR heated temperature zones, up to 1,300°F
- 3-1/2" - 36" material width with up to a 10:1 TD stretch ratio

## Property Testing Lab

Available to all lab customers in support of their trial activities.

- Optical microscope with digital imaging for layer thickness measurement and surface defect analysis
- Tensile testing machine - tensile strength, elongation, C.O.F.
- Shrinkage baths and ovens
- Gurley Densometer for porosity testing
- Moisture analyzer
- Dyne Pens for surface energy measurement

## Key Filters Advanced Melt Filtration Lab

Key Filters' advanced melt filtration lab offers the opportunity to test different polymers with the latest generation of screen changers. The Key Filters lab has a complete 2-1/2" single screw pelletizing extrusion line for testing material and filter combinations with continuous screen filtration capabilities.

- KCH Continuous Belt technology provides a constant and uniform extrusion pressure
- Applications in all extrusion processes including pipe and profile, film, sheet, compounding and blow molding
- MSC/CSC Manual Slide Plates offer an economical choice for frequently and required process shut downs
- Custom engineered solutions for your most difficult applications



**PARKINSON** TECHNOLOGIES INC

DUSENBERY® CONVERTING SYSTEMS  
MARSHALL AND WILLIAMS PLASTICS  
PARKINSON WINDERS  
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