

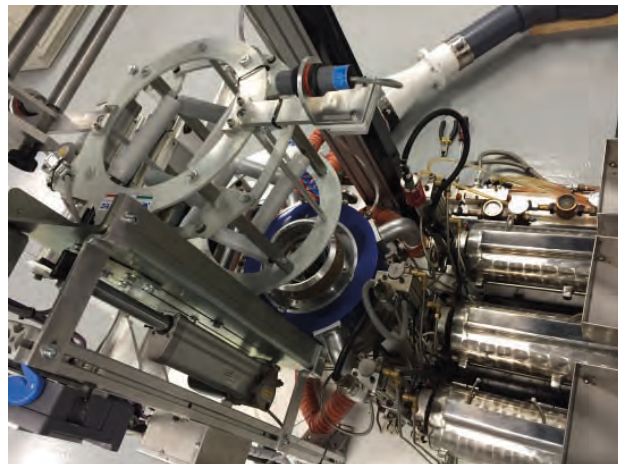
# D.R. Joseph Blown Film Lab and Seminar Center

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The DRJ Blown Film Lab is a versatile R&D environment which houses a 3-layer blown film line, accompanied by a variety of state of the art quality assurance equipment. DRJ offers the lab space and equipment for rent to customers interested in R&D development on a economical scale, avoiding the costs related to full size production testing. All equipment is separately metered, and conveniently maintained on an isolated, secure server. The DRJ Blown Film Lab is an ideal setting for:

- Establishing Processability
- Product development
- Testing new formulations
- Short prototype runs



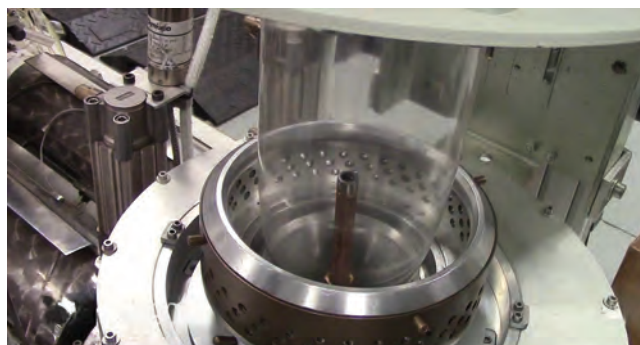
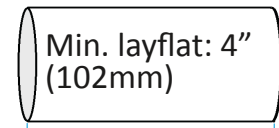
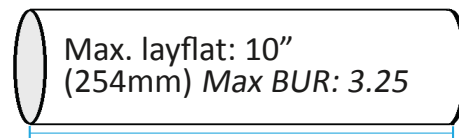
### Our 3 layer line features:

- 0.787" (20mm), 30:1 Barrier Screws with temperature controlled water cooled feed throat
- Regulated chilled cooling air (AEC BFC)
- Inverter Controlled Dual Lip Air Ring with low and standard BUR lip sets
- Gammatec Soft Silicone Roller Bubble Cage
- Oscillating Haul-Off
- Automatic Width Control with auto calibration for fast startups (DR Joseph LF-Sizer)
- Edge Guide
- Surface Winder – Torque Tension Control
- Max Production Rate: 20 lbs./Hour (9.1 kg/hr)
- Max Line Speed: 100 feet/minute (30.5 mpm)
- Formulation Change-Over Time: ~5-10 minutes

Die Dia.	Die Gap 1	Die Gap 2	Die Gap 3
1.97" 50mm	.039" 1.0mm	.059" 1.5mm	.079" 2.0mm

Experienced personnel are on hand to aide running the blown film line. Extrusion services are offered on an hourly basis, with additional services available such as resin drying, and film property testing (see reverse side for more info). For rental inquiries, contact us at [drjlab@drjosephinc.com](mailto:drjlab@drjosephinc.com)

### Available Roll Formats (3" or 2" Core):



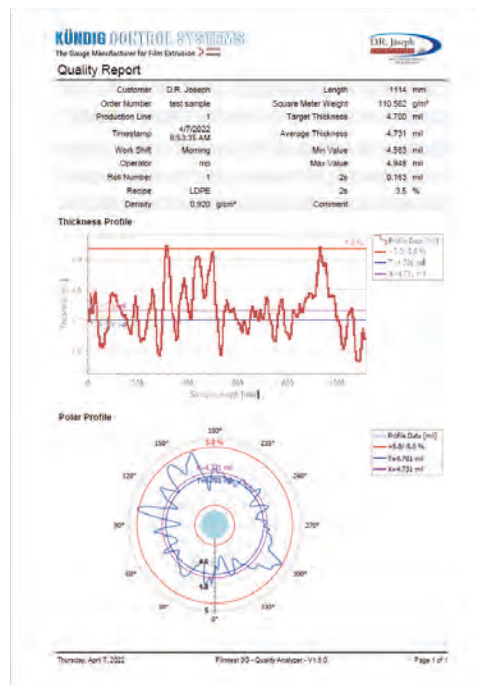
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**Westlake**  
[www.westlake.com](http://www.westlake.com)

# Available QC Equipment



## The QC equipment includes:

- **Offline thickness measurement ISO Cert.**
- **Tensile and peel strength ASTM D882, D3354**
- **Elmendorf tear ASTM D1424, D1922, D689, TAPPI T414, ISO 6383-1, 6383-2, 1974**
- **Dart impact testing ASTM D1709**
- **Haze/gloss light transmission ASTM D1003, D1044**
- **Coefficient of friction ASTM D1894**
- **Color spectrography ASTM D2244, E308, E1164, ISO 7724, 5036, 6174**  
Gloss: ASTM D2457, D523 7668 DIN 67530, JIS 8741 DIN 5033 ISO 2313
- **Burst tester (2 types) ASTM D1922, D1424, D689, TAPPI T414, ISO 6383-1, ISO 6383-2, ISO 1974**
- **FLIR infrared camera**
- **Fiber optic inspection camera**
- **Oven for heating samples (max temp. 518°F / 270°C)**



Sample Gauge Profile Report



A technician is available to perform quality assurance tests with the available equipment, and produce the respective QC data reports. While reliable and repeatable QC data can be furnished with testing, please note that DRJ labs is not currently an accredited lab, and testing / results are supplied on an as-is basis.

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