VISION EASE®

Technical Tip

Polycarbonate Edging

There are three basics in successful polycarbonate edging:

- **Clean:** Remove all debris from edging chamber.
- **Dry:** No moisture should be present while reducing size.
- **Slow Down:** Typical removal rate of 5.0mm increments.

Polycarbonate's unique qualities process differently than other ophthalmic materials:

- High index lenses may crack from the edges as a result of lenses cut in a method that creates too much heat or stress. These may not be visible for weeks after processing.
- Always use sharp, dry cutting wheels. Edging temperatures have been measured over 600°F – near the melting point of polycarbonate – when using dull, damp cutting wheels.

The following recommendations will help you in achieving high quality:

- Remove cutting debris from clamping pads.
- Make sure the diamond wheels are sharp and free of debris.
- If edging plastic and polycarbonate lenses, alternate the materials. The plastic lenses will "clean" the wheels between polycarbonate lenses.
- Router style edgers produce the least amount of heat during operation.
- Do not allow any moisture contact with the cutting surface while reducing lens size. Any moisture on the cutting surface will actually increase cutting heat with polycarbonate.
- Remove cutting debris from edging chamber between each lens.
- Slowly reduce size while reducing lens. Removing too much material at once will induce stress and possibly create block slippage.
- Wet edge polishing can be successful on an edger, as long as no size reduction takes place at this time.
- Size lenses precisely to frame. Polycarbonate does not dry out and shrink like other materials.
- Light safety beveling/chamfering on front and backsides helps remove edging stress.
- Assure exact shape match to frame.
- Do not use any solvents or alcohol in cleaning or edge treatments. Isopropyl alcohol (IPA) is safe to use.

Polycarbonate lenses are the most durable on the market today, but heat, stress, or chemicals can permanently damage the lens.