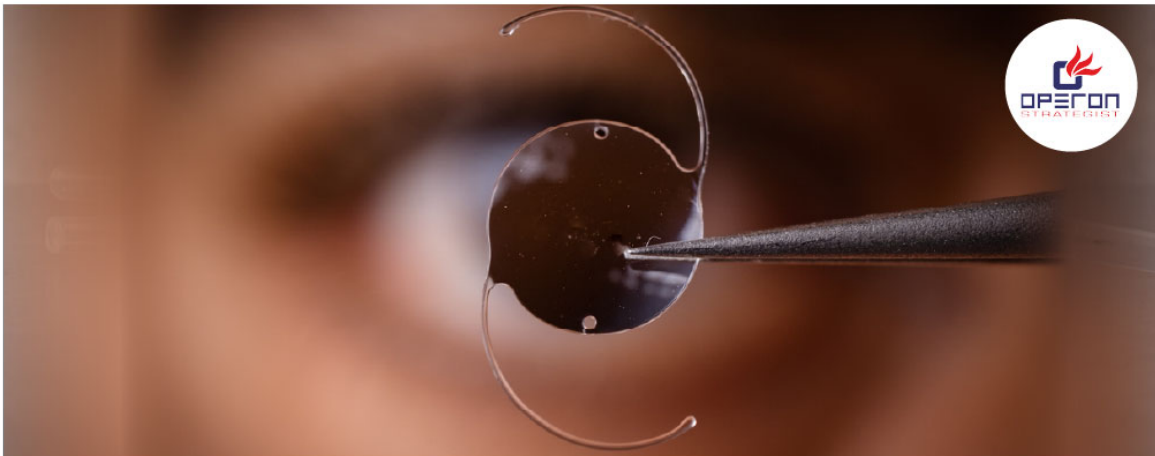


IOL Cast Molding Technology in Algeria: Future of Lens Manufacturing



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Introduction: A New Era of IOL Manufacturing in Algeria

With Algeria's healthcare sector growing rapidly, there is an increasing need for advanced vision correction technologies. IOL Cast Molding Technology is becoming the go-to solution for high-quality, large-scale intraocular lens (IOL) production.

Unlike outdated lathe-cutting methods, cast molding enables manufacturers in Algeria to produce consistent, biocompatible lenses with complex designs like toric and multifocal optics — with faster turnaround and lower costs.

What is IOL Cast Molding Technology?

This process involves injecting medical-grade polymers into precision molds and curing them under UV or thermal conditions. The result? A high-clarity, surgically safe intraocular lens with exact geometry and optical power.

- Supports hydrophilic & hydrophobic acrylic lenses
- Ideal for cataract and refractive surgeries
- Compliant with international standards

Step-by-Step: IOL Cast Molding Process

1. Mold Design and Fabrication – Designing precision molds from stainless steel or glass.
2. Polymer Preparation – Mixing hydrophobic or hydrophilic acrylics with UV-initiators.
3. Injection into the Mold – Filling under pressure for defect-free geometry.
4. Curing (UV or Thermal) – Stabilizing the lens by converting polymer to solid.
5. Demolding and Edge Finishing – Polishing edges for safety and comfort.
6. Visual and Optical Quality Inspection – Testing clarity, power, and smoothness.
7. Packaging and Sterilization – Sterilizing with steam, EtO, or gamma radiation.

Why Algeria Needs Cast Molding in Ophthalmic Devices

- Mass Production & High Precision
- Design Flexibility (toric, aspheric, multifocal)
- Surface Clarity & Better Outcomes
- Easier Regulatory Validation
- Export Competitiveness

Market Potential for IOLs in Algeria

- Over 300,000 cataract surgeries annually
- Growing geriatric population
- Government incentives for domestic device production
- Export opportunities to Morocco, Tunisia, Egypt, EU

Regulatory Pathway for IOLs in Algeria

IOLs are regulated by DPM (Direction de la Pharmacie et du Médicament). Requirements include:

- Technical documentation
- Biocompatibility & clinical safety evidence
- ISO 13485 QMS compliance
- CE/FDA approval for export markets

Cast Molding is documentation-friendly, ensuring traceability, validation, and consistent quality.

Operon Strategist: Leading IOL Plant Consultants in Algeria

We provide end-to-end support for IOL manufacturing:

- [Turnkey cleanroom setup](#) (ISO Class 7/8)
- [ISO 13485 certification](#) & [QMS documentation](#)
- Tech file, device master record & [CE/FDA registration](#)
- [Process validation](#), sterilization, UDI labeling
- Algeria/EU/India/US regulatory support