

METHOD AND APPARATUS FOR CONTACT LENS MOLD FILLING AND ASSEMBLY

ABSTRACT

An apparatus for forming contact lenses, wherein front curve mold halves are filled with a hardenable transparent material, such as a polymerizable hydrogel, and back curve mold halves are coupled to the front curve, therein forming a lens. More particularly, the apparatus includes a conveyor means for transporting pallets of mold halves to the apparatus, an array of piston structures for raising and aligning the back curves with respect to the filled front curve halves, reciprocating means for reciprocating the piston array to couple pairs of front and back curves, and a vacuum chamber and vacuum drawing means for maintaining a vacuum around the curves during coupling. In addition, there is provided individual spring biasing to each reciprocating element whereby sensitivity to thickness variations and pallet misfeeds may be minimized. Further, there is provided a vacuum sleeve, through which the pistons reciprocate within the vacuum chamber, which sleeve preserves the vacuum within the chamber.

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