

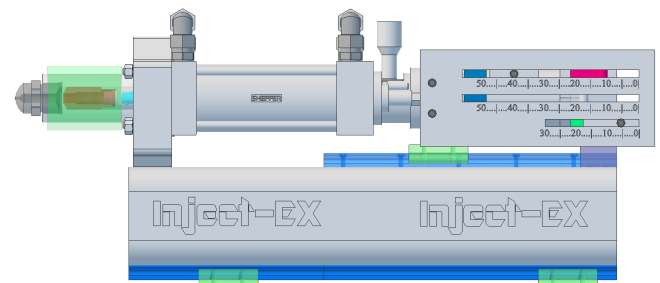
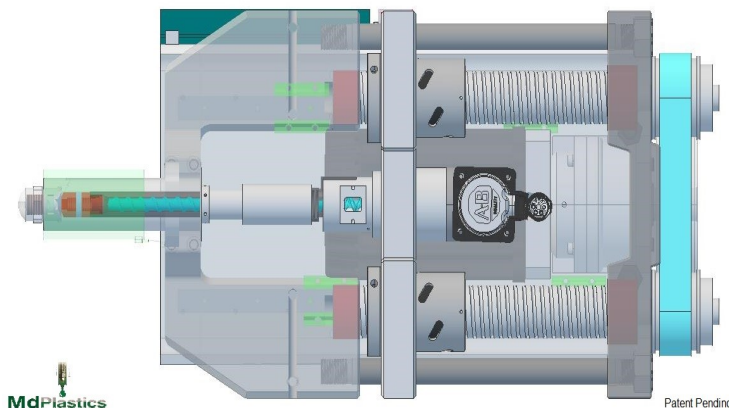
# Inject-EX™ Plasticating Unit Patent Pending

The new “Inject-EX”™ Plasticating Unit for Thermoplastics Improves the Science of Injection Molding by utilizing a State of the Art Posi-Melt™ Stationary Screw and Plunger Assembly that is coupled to a Drive Unit...the whole Assembly Reciprocates to displace a precise amount of polymer into the Mold All along ONE Axis. The “Inject-EX”™ addresses three deficiencies of the Old Reciprocating Screw design; a. Viscosity Variation in part caused by poor Melt Pool Preparation and Homogenization, b. Variations in the Quantity of melt dispensed due to poor closure of the NRV and c. Dynamic movement of the molten polymer across the shutoff mechanism due to inconsistent decompression and pressure variances of the Melt Pool. The amount of Mass that was displaced is unknown without the use of expensive in-mold cavity sensors.

## “Inject-EX”™ Features:

- Stationary Posi-Melt™ screw that Provides a Consistent Output-Recovery time, No disruption of Solids Bed Compaction, Each pellet is subject to similar Heat & Shear History and a Dispersed & Homogenized Melt Pool
- Smaller Footprint / Polymeric Output
- Inline Polymer Flow for Less Energy Usage and Pressure Drop
- Ultra Precise Shot Control as a result of utilizing our patented Mechanical Shutoff Mechanism/Plunger
- The use of a Temp-Tek™ Melt Sensor for Melt Density Verification
- Less parts/pieces compared to a Screw/Pot machine design for a smaller Carbon Footprint
- Can be programed to behave like an Injection Blow or Low Pressure Injection unit

Inject-EX Model 14-24 71 EL



Hydraulic Execution

The “Inject-EX”™ Plasticating Unit is sold as;

- New Molding Machine (contact us for a list of OEM's that use our technology)
- A Stand Alone Injector for Multi-Shot Molding
- Micro-Molding System Producing Parts In-Line for Immediate Assembly

## Description of “Inject-EX”™

Hydraulic Model: HY-14-24-HZ/TP

- 14mm x 22:1 Plasticating Screw
- 24mm Diameter Plunger
- 71 gram Shot Size
- Injection Pressure, 26,256 psi
- Injection Velocity 14"/second
- Plasticizing Capacity, 8.35 g/s