



## Pelletizing

# Underwater Pelletizers Model 1 / 1X Pelletor®

## OVERVIEW

### Typical Process Applications

The pelletizer receives molten homogeneous feed material from an extruder or pump and creates pellets on a continuous basis. Accurate pellet size uniformity is by precise knife speed control. Interchangeable die plates allow various normal, micro or macro pellets to be produced. Fixed upward, fixed downward or rotatable extrusion orientation allows ease of purging or processing a broad product inlet viscosity range.

## FEATURES

### Typical Materials Processed

- Low, Medium, High and Linear Low Density Polyethylenes
- Co-Polymers (EVA, EMA, EMAA, EAA, etc.)
- Impact and Crystal Polystyrene
- Polypropylene
- Thermoplastic Elastomers (SBR, SIS, SBS, etc.)
- EPDM
- Polyamide (Nylon)
- ABS
- SAN
- Polyester
- Acetal
- Wax Blends
- Filled Polymers
- Cross Linkable Polymers
- Hot Melt Adhesives
- Polybutylene
- Polyurethane
- Polycarbonates
- Rubber
- Food
- Others

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## TYPICAL FEATURES, BENEFITS AND OPTIONS

**Pelletizer Assembly:** Precise alignment unaffected by feed device movement

- Upward or downward extrusion dependant on process needs

**Body:** Provides product feed entrance and uniform distribution to die plate

- Extreme thermal stability to maintain precise alignment
- Allows “wet” die face startups
- Easily cleanable
- Fully cored and insulated for effective vapor or liquid heating
- Internal nickel plating optional

**Cutter shaft and Bearing Assemblies:** Promote precise knife to die face alignment for maximum pellet quality

- Large bearing separation
- Precision bearing run out

**Lube System:** Closed loop for precise die and sleeve bearing run out and life

**Cutter Blade Adjustment Assembly:**

- 0.001” (25 mm) per turn
- Gap or contact cut modes
- Manual “on the fly” hand wheel or remote pushbutton

**Die Plate:** Designed for highest pellet processing performance and output

- Various design types
- Orifice diameter and length to diameter ratio process specific
- Full orifice field heating
- Multiple zones vapor or liquid heating for highest processing performance and pellet uniformity
- “Wet” start up capable
- Various wear reduction and insulation surfacing available
- Full central support

**Knife and Hub assembly:** Allows precise pellet cutting with efficient quenching and separation to prevent agglomeration

- Quick change out as an assembly without moving the pelletizer

**Water Housing and Cutting Chamber:** Swing bolt connected to body

- Victaulic and other type water inlet and slurry water outlet connections
- Smooth tangential pellet discharge to prevent twinning / agglomeration

**Machine Support:** Caster wheels for floor movement and rigid for structural integrity

**Instrumentation:** Product pressure, pressure protection and temperature probes as well as control and indication sensors

**Drive Coupling:** Axial slide type for fixed motor and adjustable shaft

**Drive:** Precise direct connected AC variable speed constant torque and broad speed range to suit process

