



DAVIS STANDARD®

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PELLETIZING

SINGLE SCREW EXTRUDER 12" (305 mm) Melt Feed

OVERVIEW

Typical Process Applications

The modular extruder can be designed to receive molten feed material from a reactor or holding vessel, single or twin screw extruder, continuous mixer, mill or other device. Additives can be incorporated and mixed with the main product through a feed port, injection pump or satellite side arm extruder. Degassing of volatiles may be included where required. The product is then discharged to downstream equipment on a continuous basis.

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

Drive: Precise variable speed constant torque and constant power to suit process

- AC or DC
- Typically direct connected

Drive Coupling: Flexible gear type

- All other types available

Gear Reducer: High torque capacity, minimum 1.5 service factor

Thrust Bearing Section: May be integral to or separate from the gear reducer to receive screw thrust load

- Typically 100,000 hr. B-10 life

Lube System: Closed loop for gear reducer / thrust bearing sections

Product Feed Section: Various size, shapes and methods to suit the process

- Jacketed for heating and cooling

Screw Seal: Various types available for melt, gaseous or solids sealing

Barrel: Various bimetallic linings for wear resistance

- Single length or sectional
- Length to diameter ratio to suit
- Venting/degassing ports when necessary
- Injection and satellite extruder ports

Downstream Connection: Bolting style head flange is typical to downstream equipment

- "C" clamp and others are optional

Barrel Temperature Control

- Steam, hot water, hot oil or resistance heating available
- Air, water or oil cooling typical
- Multiple zones for process dependant profile

Feed Screw: Designed for highest processing performance and output

- Various design types
- Various flight tip wear surfacing available

Machine Support: For precise structural alignment and integrity

- Water cooled centerline supports
- Structural sub base when needed
- Sole plates (fixed) or movable designs are available

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

