

Modular Loss-in-Weight Feeder Application

The 570-E1 is designed to feed various materials into a process at a designated feedrate with gravimetric precision.

Theory of Operation

The discharge device of the feeder is operated at a variable speed to deliver material from the feeder hopper into a process. A weight signal output is supplied for closed-loop process control (see MC³ Specification Sheet).

Materials of Construction

- 304 Stainless Steel on all Metal Components
- Glass Bead 2B Finish
- All Welds Continuous and Ground Smooth

Hopper Capacities

- 0.75 Ft³ Base Hopper
 - 0.75 Ft³ Extension Hopper*
- *Unit will support up to two (2) extensions

Hopper Cover

- 3" (76 mm) Dia. Infeed Connection Stub
- 2" (51 mm) Dia. Vent Connection Stub
- LEXAN[®] Viewport
- Variable Cover Orientation
- Latex Flexible Connections for Infeed and Vent Stubs

Discharge Devices

- Single Auger
 - Solid, Helix w/Center-Rod, Open Helix
 - 0.375" to 3.000" (9.5 – 76 mm) Dia.
 - Bayonet Mount with ¼ Turn Lock
- Twin Intermeshing Augers
 - Solid, Helix w/Center-Rod, Open Helix
 - 0.750" to 2.000" (19 – 51 mm) Dia.
 - Bayonet Mount with ¼ Turn Lock
- Vibratory
 - Flat, V-Tray or Tube
 - 2.000" to 6.000" (51 – 152 mm) Width

Drive Components

- 0.25 HP DC, Washdown TENV Motor (AC Motor available)
- Feeder Mounted SCR Motor Speed Controller
- Lubricant-Free, Steel Reinforced, Polyurethane Drive Belt with Elastomer Tensioner



Feed Rates

- Volumetric Throughput: 0.05 to 25 Ft³/Hr (0.0014 – 0.71 M³/Hr).
(Multiply Volumetric Rate by Bulk Density of Material to Compute Gravimetric Feed Rate)
- Volumetric Feed Range 500:1
- Gravimetric Control as Low as 1 Lb/Hr (0.45 Kg/Hr).

Standard Features

- Auto-Locking, Quick Disconnect Latches on all Material Contact Parts
 - Hopper, Hopper Cover, Spool, Discharge, Spout and Gearbox
- Patented Auger Shaft Seal, Triple Labyrinth with Floating Rotor
- Certifiable Calibration Weights
- Removable Drive Belt Guard
- Adjustable Feeder Support Feet with Vibration Isolating Rubber Pads

Weight Sensing Device

- Single Strain Gauge Load Cell
 - Stainless Steel, Hermetically Sealed, Temperature and Pressure Compensated
 - 350 Ohm Bridge
 - 2 or 3 mV/V Signal
 - 15 Volt Excitation Maximum

Hopper Agitator (optional)

- Independently Driven, 0.25 HP DC, Washdown TENV Motor (AC Motor Available)
- Feeder Mounted SCR Motor Speed Controller
- Dual Hopper and Discharge Spout Rotating Blades

Control

- MC³ Touch Screen Microprocessor
- Continuous, Batching and Rate-Controlled Batching Loss-in-Weight Applications
- Communication Interfaces:
 - Merrick Serial Communications Protocol
 - Modbus ASCII, Modbus +
 - DeviceNET,
 - DF1, Data Highway +

Power Requirements

- 115 Volts, 1 Phase, 60 Hertz
- 15 Amp Service

Ambient Temperature Limits

- 0° to 77° C (32° to 170° F)

Gravimetric Turndown

- 15:1 from Maximum Feedrate

Shipping Weight

- 269 Lbs (122 Kg) Standard
- 335 Lbs (152 Kg) with Agitator

Accuracy

- Up to +/- 0.25% of Set Rate

Optional Accessories

- Manual Refill Hopper Cover
- Hazardous Location Electrical Components
- Chemical Duty or BISSC Certified Motors and Reducers
- Special Materials of Construction
- Hung-from-Above and Wall Support Structures Available
- Extended Discharge Spout Lengths
- Spout available with Vertical Discharge and End-Bearing Auger Support

