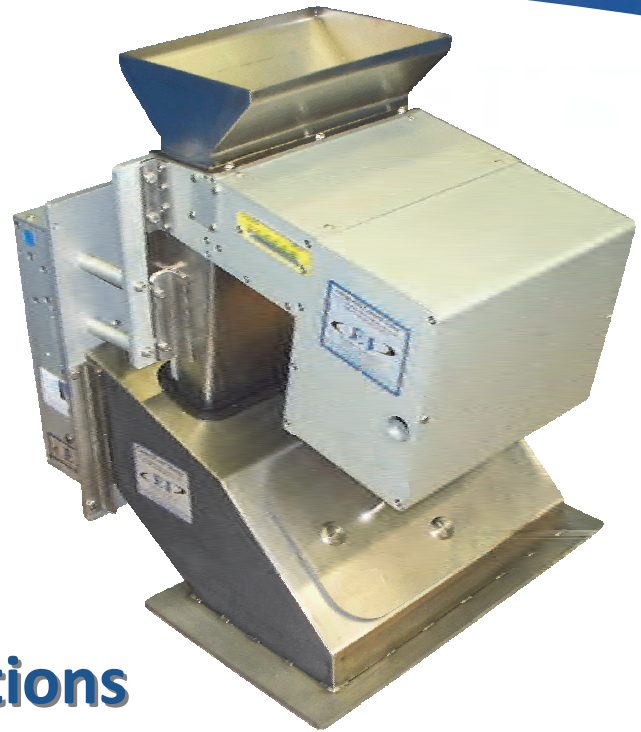


CentriFeeder® With ICV

The CentriFeeder™ with Integrated Control Valve accurately measures and controls the flow of any dry, free-flowing solid. Through the use of a highly customizable touch screen HMI, a PID control loop is established that regulates the integrated control valve feeding our patented CentriFlow® Meter. The outcome is an easily maintained, consistent flow that can, under some conditions, be controlled over a very high turndown range, for batching, ratio-control or for any application where a controlled flow is required.



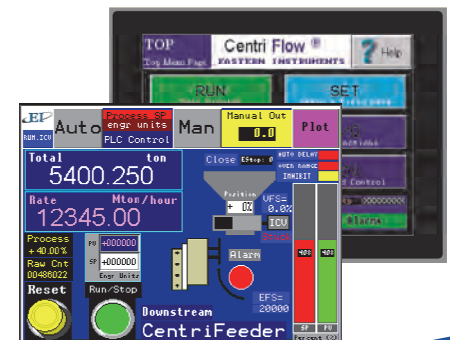
Specifications

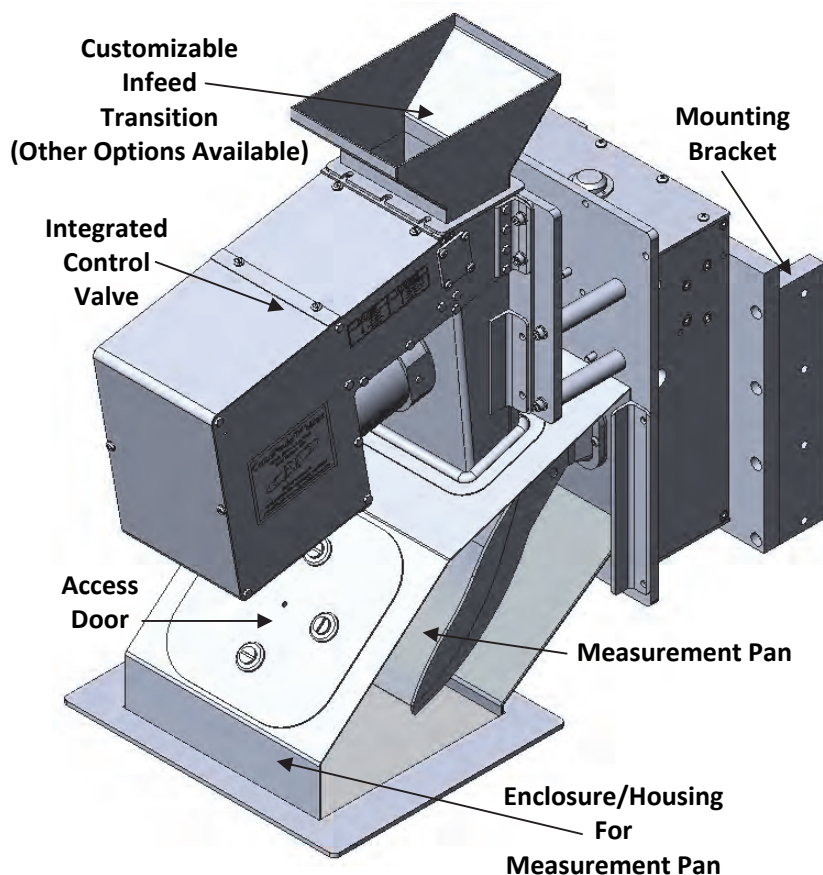
Digital Electronics

- ◆ White Painted Carbon Steel or SS Enclosure (14" x 12" x 8")
- ◆ Power
 - Input Power 20 VA
 - Input Frequency 47-63 Hz
 - Input Voltage 115/230 VAC converted to 24 VDC via internal power supply
- ◆ Remote Reset Capabilities
- ◆ Flow Rate or Totalization Alarm/Preset Capabilities
- ◆ Large, convenient, color, touch screen HMI with Flow Rate and Totalization displayed simultaneously on main screen
- ◆ 2 Gigabyte, Compact, Flash Card for data storage
- ◆ Can store calibration data for multiple products
- ◆ Electronics can be installed within 10 ft of the feeder with standard interconnect cables (included). Longer lengths available.

CentriFeeder with ICV

- ◆ Available in Aluminum or SS versions
- ◆ Power: 60 Watts (6" Feeder)
90 Watts (12" - 24" Feeder)
- ◆ Virtual Flow Stop™ protects delicate products
- ◆ Auto Delay Function prevents control overshoot
- ◆ Run Modes (Auto and Manual)
- ◆ Low RPM, AC, Brushless Servo
- ◆ Integral Linear Position Sensor regulates blade position to within 1:1000 (based on stroke)
- ◆ Convenient Front Mounted Flow Access Panel
- ◆ Mechanical/Electronic Valve Position Indicators
- ◆ Live Bulk Density Output via Ethernet





TAG MAPPING FOR REMOTE COMMUNICATIONS TO A PLC

| COMMUNICATIONS OUTPUTS |
|--|
| Data Transmitted from CentriFeeder® to PLC |
| Flow Rate |
| Totalization |
| Zero Readback |
| Product: Multiple Cal. Option |
| Remote Alarm Target |
| Meter's Internal Temperature |
| Auxiliary 4-20 mA Output |
| Dynamic Cal. Value Readback |
| Bulk Density |
| Status Not Ready Bit |

| COMMUNICATIONS INPUTS |
|--|
| Data Transmitted from PLC to CentriFeeder® |
| Remote Reset |
| Remote Zero |
| Product: Multiple Cal. Option |
| Dynamic Cal. Value |
| Remote Target (Remote Alarm) |

Volumetric and Flow Rate Capacities of the CentriFeeder®

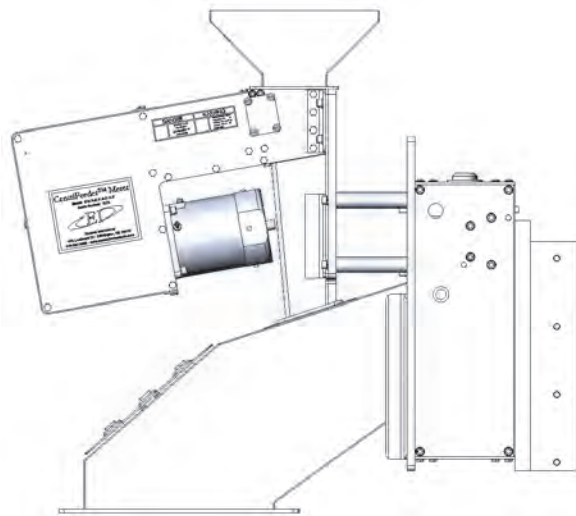
| Volumetric Capacity | | |
|---------------------|--|--|
| Meter Size | Min Vol. Capacity ft ³ /min | Max Vol. Capacity ft ³ /min |
| 6 | 2.03 | 10.13 |
| 12 | 4.50 | 22.50 |
| 24 | 9.00 | 45.00 |

| (30 lb/ft ³ Density) | | | | |
|---------------------------------|---------------------|---------------------|---------------------|---------------------|
| Meter Size | Min Flowrate lb/min | Max Flowrate lb/min | Min Flowrate kg/min | Max Flowrate kg/min |
| 6 | 60.75 | 303.75 | 27.56 | 137.78 |
| 12 | 135.00 | 675.00 | 61.23 | 306.17 |
| 24 | 270.00 | 1350.00 | 122.47 | 612.35 |

| (60 lb/ft ³ Density) | | | | |
|---------------------------------|---------------------|---------------------|---------------------|---------------------|
| Meter Size | Min Flowrate lb/min | Max Flowrate lb/min | Min Flowrate kg/min | Max Flowrate kg/min |
| 6 | 121.50 | 607.50 | 55.11 | 275.56 |
| 12 | 270.00 | 1350.00 | 122.47 | 612.35 |
| 24 | 540.00 | 2700.00 | 244.94 | 1224.70 |

Integrated Control Valve Features & Benefits

| | | |
|--------------------------|---|--|
| Material of Construction | <ul style="list-style-type: none"> • Aluminum • Engineered to Order | <ul style="list-style-type: none"> • Stainless Steel |
| Servo Configuration | <ul style="list-style-type: none"> • 60 Watts (6" Feeder) • Engineered To Order | <ul style="list-style-type: none"> • 90 Watts (12" & 24" Feeder) |
| Blade Configuration | <ul style="list-style-type: none"> • Hard Coat Anodized Aluminum • NP3 Coated Aluminum • NP3 Coated Stainless Steel • Engineered to Order | <ul style="list-style-type: none"> • Polished Aluminum • Polished 304 Stainless Steel • Thermal Spray Coated (SS) |
| Bottom Seal Construction | <ul style="list-style-type: none"> • High Wear Resistant UHMW • Polyethylene Terephthalate (PET) • Acetal Resin | <ul style="list-style-type: none"> • Low Friction PTFE • UHMW • Engineered to Order |
| Wiper Construction | <ul style="list-style-type: none"> • 1/32" Low Friction PTFE • 1/32" UHMW • Engineered to Order | <ul style="list-style-type: none"> • 1/16" Low Friction PTFE • 1/16" UHMW |



**Very
Low Profile
Design:
Less Than 24" Tall!**

CentriFeeder® Mechanical Customizable Features

| | | |
|---|--|--|
| Material of Construction (External Meter/Valve) | <ul style="list-style-type: none"> • Aluminum • Engineered to Order | <ul style="list-style-type: none"> • Stainless Steel |
| Electronics Enclosure Material of Construction | <ul style="list-style-type: none"> • Painted Carbon Steel • Engineered To Order | <ul style="list-style-type: none"> • 304 Stainless Steel |
| Flow Surfaces | <ul style="list-style-type: none"> • All-Welded 304 SS - Polished • All-Welded 304 SS - Thermal Spray • 301 SS Pan Liner - NP3 Coated • 301 SS Pan Liner - PTFE • Engineered to Order | <ul style="list-style-type: none"> • All-Welded 304 SS - NP3 Coated • All-Welded 304 SS - Ceramic Tile • 301 SS Pan Liner - Polished • 301 SS Pan Liner - UHMW |

Additional Mechanical Options

VibraWeigh®, 60 Hz, 110 VAC (220 VAC Also Available)

Integral vibration device to assist with reduction/elimination of build-up on Measurement Pan (typically used with powdery substances)

Pulsed Air System

Air system that pulses a high pressure stream of air to blow off unit – Set via HMI (pulse time/duration & period/frequency of the pulses)

Air Purge

For moisture and dust control and cooling when ambient temperature exceeds 50°C (122°F)

Internal Heater (Local or Remote Electronics Options)

Heat internals of meter up to 60°C (140°F) for use with process temperature changes with a rate of 5°C/hr or greater – requires High Temperature Option

High Temperature Option (Aluminum and SS Exterior)

Includes SS Backplate (for standard aluminum exterior construction), insulation foam, and Internal Temperature monitor/compensation option

Additional Electronics Options

Weighted Count Output

Included read relay (AC or DC up to 2 amp) – Provides user selectable pulse based on a unit of weight (for example 1 pulse every 100 lbs)

High Speed Frequency Output

Flow Rate Proportional (0-5000Hz) Opto-Isolated

Remote Communication Protocol-Ethernet

Ethernet (IP or DF1) – HMI to PLC: Flow & Totalization data, Zero Read-back, Internal Temperature, Alarm Target (std) – additional data available (depending on options) PLC to HMI: Reset Zero, Reset Total/Count, Alarm Target (std) additional data available such as Multiple Cal or Bulk Density

Remote Communication Protocol-DeviceNet

DeviceNet – HMI to PLC: Flow & Totalization data, Zero Read-back, Internal Temperature, Alarm Target (std) – additional data available (depending on options) PLC to HMI: Reset Zero, Reset Total/Count, Alarm Target (std) additional data available including Multiple Cal.

Remote Communication Protocol-Profibus

Profibus – HMI to PLC: Flow & Totalization data, Zero Read-back, Internal Temperature, Alarm Target (std) – additional data available (depending on options) PLC to HMI: Reset Zero, Reset Total/Count, Alarm Target (std) additional data available including Multiple Cal.

Flow Linearization

Flow Linearization via Valve Position

Analog Communication (By Wire)

Remotely reset zero via a customer supplied contact closure. Start/Stop, Setpoint and Flow Rate also available

Internal Temperature Monitor/Compensation #1

Thermistor with .1°C resolution & 2°C accuracy – Remote Electronics Cable changes to 6 conductor (Limited to 50 ft)

Multiple Calibration Capabilities

Up to 8 distinct calibrations – Selectable via HMI screen or via PLC with PLC Communication option

Enclosure Heater

40 Watt heater – used when ambient temperature (location of electronics) is below operating range (-10° C or 14°F)

Filling Run Screen

An optional run screen which integrates all of the necessary settings, as well as start/stop and total reset capabilities onto a single, easy to use screen for seamless filling or batching operations.

Filtering (4-20 mA and Rate)

Allows smoothing of the otherwise instantaneous output delivered by the CentriFlow Electronics. The 4-20 mA filter functions as a local filter only, while the rate filter filters the output transmitter over Ethernet or other Internet Protocol