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
**Volumetric and Flow Rate Capacities of the CentriFeeder®**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Min Flowrate</th>
<th>Max Flowrate</th>
<th>Min Flowrate</th>
<th>Max Flowrate</th>
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<tbody>
<tr>
<td>6</td>
<td>60.75</td>
<td>303.75</td>
<td>27.56</td>
<td>137.78</td>
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<tr>
<td>12</td>
<td>135.00</td>
<td>675.00</td>
<td>61.23</td>
<td>306.17</td>
</tr>
<tr>
<td>24</td>
<td>270.00</td>
<td>1350.00</td>
<td>122.47</td>
<td>612.35</td>
</tr>
</tbody>
</table>

**Integrated Control Valve**

**Customizable Infeed Transition (Other Options Available)**

**Access Door**

**Mounting Bracket**

**Enclosure/Housing For Measurement Pan**

**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 Capacity**

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Min Vol. Capacity $\text{ft}^3$/min</th>
<th>Max Vol. Capacity $\text{ft}^3$/min</th>
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<td>6</td>
<td>2.03</td>
<td>10.13</td>
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<td>12</td>
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<td>24</td>
<td>9.00</td>
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<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Min Flowrate</th>
<th>Max Flowrate</th>
<th>Min Flowrate</th>
<th>Max Flowrate</th>
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<tbody>
<tr>
<td>(30 lb/ft³ Density)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>60.75</td>
<td>303.75</td>
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</tr>
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<tbody>
<tr>
<td>(60 lb/ft³ Density)</td>
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<tr>
<td>6</td>
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<td>540.00</td>
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<td>244.94</td>
<td>1224.70</td>
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</table>
### Integrated Control Valve Features & Benefits

| Material of Construction | • Aluminum  
|                          | • Engineered to Order  
|                          | • Stainless Steel  
| Servo Configuration      | • 60 Watts (6” Feeder)  
|                          | • Engineered To Order  
|                          | • 90 Watts (12" & 24" Feeder)  
| Blade Configuration      | • Hard Coat Anodized Aluminum  
|                          | • NP3 Coated Aluminum  
|                          | • NP3 Coated Stainless Steel  
|                          | • Engineered to Order  
|                          | • Polished Aluminum  
|                          | • Polished 304 Stainless Steel  
|                          | • Thermal Spray Coated (SS)  
| Bottom Seal Construction | • High Wear Resistant UHMW  
|                          | • Polyethylene Terephthalate(PET)  
|                          | • Acetal Resin  
|                          | • Low Friction PTFE  
|                          | • UHMW  
|                          | • Engineered to Order  
| Wiper Construction       | • 1/32" Low Friction PTFE  
|                          | • 1/32" UHMW  
|                          | • 1/16" Low Friction PTFE  
|                          | • 1/16" UHMW  

### CentriFeeder® Mechanical Customizable Features

| Material of Construction (External Meter/Valve) | • Aluminum  
|                                              | • Engineered to Order  
|                                              | • Stainless Steel  
| Electronics Enclosure Material of Construction | • Painted Carbon Steel  
|                                              | • Engineered To Order  
|                                              | • 304 Stainless Steel  
| Flow Surfaces                                | • 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  
|                                              | • All-Welded 304 SS - NP3 Coated  
|                                              | • All-Welded 304 SS - Ceramic Tile  
|                                              | • 301 SS Pan Liner - Polished  
|                                              | • 301 SS Pan Liner - UHMW  

Very Low Profile Design: Less Than 24” Tall!
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 at 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