

# MERRICK

## SERIES 960 BELT FEEDERS



**Model 960-S**  
with Optional Flex Connection and  
Stainless Steel Construction

**Designed Exclusively for  
Water Treatment Applications**

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## Designed for the Market It Serves

Merrick is the inventor of the weigh belt feeder and has been supplying models for world wide industries since the 1920's. However, due to the stringent demands of water and wastewater treatment, the Series 960 designs started with a blank sheet in the early 1990's. Because of chemical metering problems unique to the water industry, special features were required for reliability, long life, low maintenance and simplicity. With the suggestions of water plant operators and maintenance personnel, along with Merrick's nearly 100 years of chemical metering experience, the Series 960 feeders were developed.

Series 960 feeder designs are available for most water and waste water metering applications. All designs are available in either carbon steel, 304 stainless steel or 316 stainless steel. In all cases, all feeder interior components are supplied in stainless steel construction.

Designed for plant life operation, all weldments are manufactured from 7 gauge (3/16") steel. Carbon steel weldments are epoxy painted for lasting corrosion resistance.

The most common application for Series 960 feeders is to meter pebble lime into Slakers. The compact length and wide range of capacities permit them to be used on slakers from 400 to 10,000 Lbs/Hr.

All Series 960 models are available for either gravimetric or volumetric applications. All versions are supplied standard with the Merrick XTRA<sup>®</sup> DC motor controller. Gravimetric versions are supplied with the Merrick MC<sup>3</sup> touchscreen microprocessor controller. Volumetric models are accurate to 0.1% by volume and 0.3% by weight. Gravimetric models are accurate to 0.1% of set rate and 0.5% totalized weight.



Model 960 Supplied in Carbon Steel with No End Doors

## Compact Design

Because of the importance of floor space in a water plant, the Series 960 was designed with a small footprint. With an infeed-to-discharge distance of only 24.8 inches, the Model 960 can be used for both dissolver and slaker applications. Its size makes it an easy retrofit to existing plant applications.

## Easy Maintenance

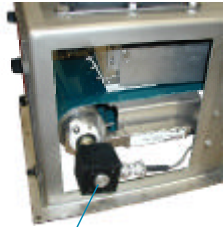
Simplicity and access are the keys to easy maintenance. The Series 960 comes standard with a full length side door to permit unrestricted access to its fully cantilevered conveyor. The cantilever design permits easy belt replacement. A removeable rear door provides access to the speed encoder and rear belt take-up.

The Series 960 uses a shaft mounted gear reducer to drive the head pulley. There are no drive belts, chains or pulleys to require maintenance.

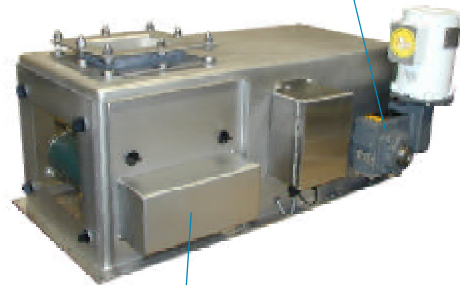
For those applications requiring additional maintenance access, all models are available with optional end doors. The Model 960-S, for slaker applications, is supplied standard with this feature.

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# FEATURES AND BENEFITS

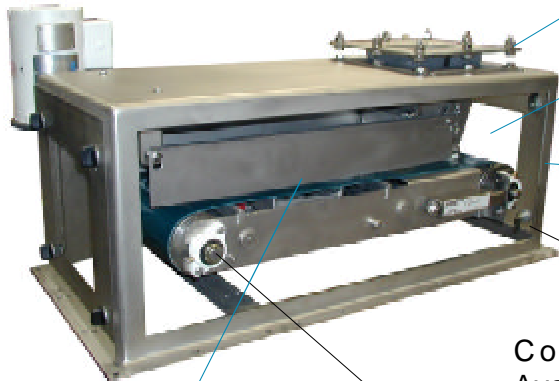


NEMA 4 Speed Encoder for Dust and Moisture Protection on Driven Pulley for Slippage Detection



Removable Access Door for Speed Encoder and Belt Take-up Access

Commercially Available Direct Drive Gear Reducer (No Chains or Pulleys)



Feeder Internals All Stainless Steel for Corrosion Resistance (Including Carbon Steel Models)

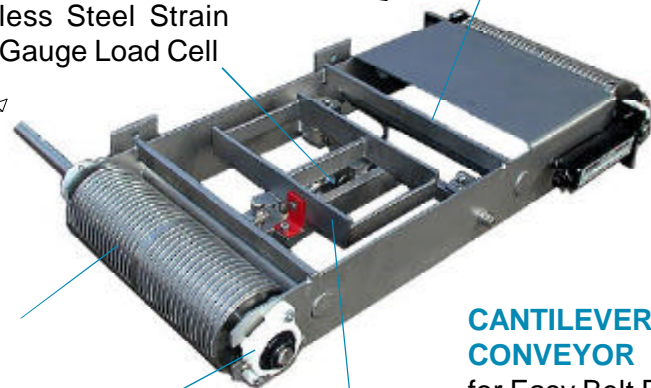
Optional Infeed Connections and Adapters

Optional End Doors (Steel or Lexan)

Rugged 7 Gauge Construction for Long Life

Commercially Available Stainless Steel Strain Gauge Load Cell

Machined Reference Bars for Precise Weigh Deck Alignment and Optimal Accuracy



**CANTILEVERED CONVEYOR**

for Easy Belt Replacement and General Maintenance (Belt Removed for Clarity)

Non-Slip Auto Belt Tracking Pulleys

Commercially Available Sealed, Corrosion Resistant Bearings

Machined Weigh Deck with 3-Point Suspension for Easy, Precise Alignment

## MODEL 960-S SHOWN WITH LEXAN\* (TRANSPARENT) DOORS

\* LEXAN is a Registered Trademark of GE Plastics

## 21<sup>ST</sup> Century Technology for a New Concept in Control

Performance and reliability of the Series 960 are supplied through Merrick control innovations. All Model 960's are supplied standard with the XTRA DC motor controller. Utilizing a variation of Pulse Width Modulating technology, the drive permits a standard turndown of 60:1 or 100:1 with an optional tachometer. Another benefit is the drive's efficiency. Utilizing a very low form factor, horsepower is not lost as heat. This permits the use of smaller motors to generate an incremental higher horsepower. The elimination of power robbing heat permits the drive to run at maximum turndown 24/7 without concern for motor or drive damage.



XTRA Motor Controller



MC<sup>3</sup> Controller

When a belt weigher is required, gravimetric control is supplied by a Merrick MC<sup>3</sup> microprocessor controller. This advanced controller is operator friendly with all functions activated by a graphical touch screen interface. Built-in diagnostics provide maintenance personnel quick resolution to any alarm or malfunction.

### Options:

- **Materials of Construction**  
304 or 316 Stainless Steel
- **Bottom Pan**  
Bolted Pan to Seal Bottom of Enclosure to Make Dust Confining
- **AC Drives and Motors**  
A-B Powerflex 40 Standard
- **End Doors**  
All Doors Available in Either Steel or Lexan
- **Shock Mounts**  
Isolation from Excessive Vibration
- **Dust Vent Connection**  
Stub for Connection of Dust Collection System

### Accessories:

- **Gates**  
A Full Line of Knife Gates, Rotary Bin Gates and Butterfly Gates for Day Bins or General Chemical Isolation
- **Flex Connections**  
Various Styles for Inlet and Discharge
- **Inlet Adapters**  
Various Styles to Isolate Feeder from Day Bin or Silo
- **Dust Collectors**  
Wall or Floor Mounted, 310 or 600 CFM
- **Electronics**  
Selection of DC and AC Controls and Motors

Specification Sheets are available for all Series 960 Models and Accessories



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