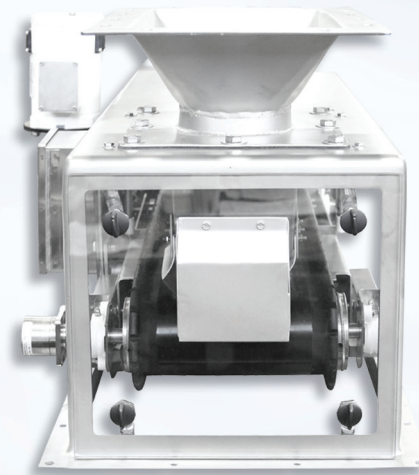


# MERRICK MODEL 960 WEIGH BELT FEEDERS

## ENGINEERING SPECIFICATIONS

All Model 960 models are available for either gravimetric or volumetric applications. All versions are supplied standard with the MERRICK XTRA DC motor controller. Gravimetric versions are supplied with the Genetix® touchscreen 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. Volumetric models are accurate to ±1% by volume and ±3% by weight. Gravimetric models are accurate to ±1% of set rate and ±0.5% totalized weight.



### GRAVIMETRIC BELT FEEDER APPLICATION

The Model 960G is a general purpose belt feeder designed to gravimetrically meter chemicals into a process at an adjustable feedrate. The feeder belt speed is varied automatically to meter material into a process at a desired set point. Belt speed is determined by a MERRICK Genetix® process controller by integrating the belt load with the belt speed. A gravimetric feeder is used for closed-loop process control.

### VOLUMETRIC BELT FEEDER APPLICATION

The Model 960V is a general purpose belt feeder designed to volumetrically meter chemicals into a process at an adjustable feedrate from 0-100%. Volumetric feedrate is achieved by varying the speed of the belt with a DC motor controller. The rate of speed can be adjusted either locally or remotely. In local mode, belt speed is set via a 0-100% potentiometer. In remote mode, the belt speed is set via a 4-20 mA signal isolator.

### FEEDRATE SPECIFICATIONS IN FT<sup>3</sup>/HR (M<sup>3</sup>/HR)

SHEAR GATE HEIGHT <sup>2</sup> IN INCHES (MM)	GEAR REDUCER RATIO			
	100:1	200:1	500:1	1500:1
	BELT SPEED IN FEET/MIN (METERS/MIN)			
	17.8 (5.43)	8.9 (2.71)	3.6 (1.10)	1.2 (0.37)
0.6 (15.7)	27.6 (0.78)	13.78 (0.39)	5.42 (0.15)	1.84 (0.05)
1.0 (25.4)	44.52 (1.26)	22.26 (0.63)	8.96 (0.25)	2.99 (0.08)
1.5 (38.1)	66.74 (1.89)	33.37 (0.94)	13.44 (0.38)	4.48 (0.13)
2.0 (50.8)	88.99 (2.52)	44.51 (1.26)	17.92 (0.51)	5.94 (0.17)
2.5 (63.5)	111.25 (3.15)	55.63 (1.58)	22.36 (0.63)	7.43 (0.21)
3.0 (76.2)	133.51 (3.78)	66.74 (1.89)	26.84 (0.76)	8.92 (0.25)
3.4 (85.9)	149.97 (4.25)	75.00 (2.12)	30.17 (0.85)	10.03 (0.28)

\* Shear gate height must be 2x maximum particle size.

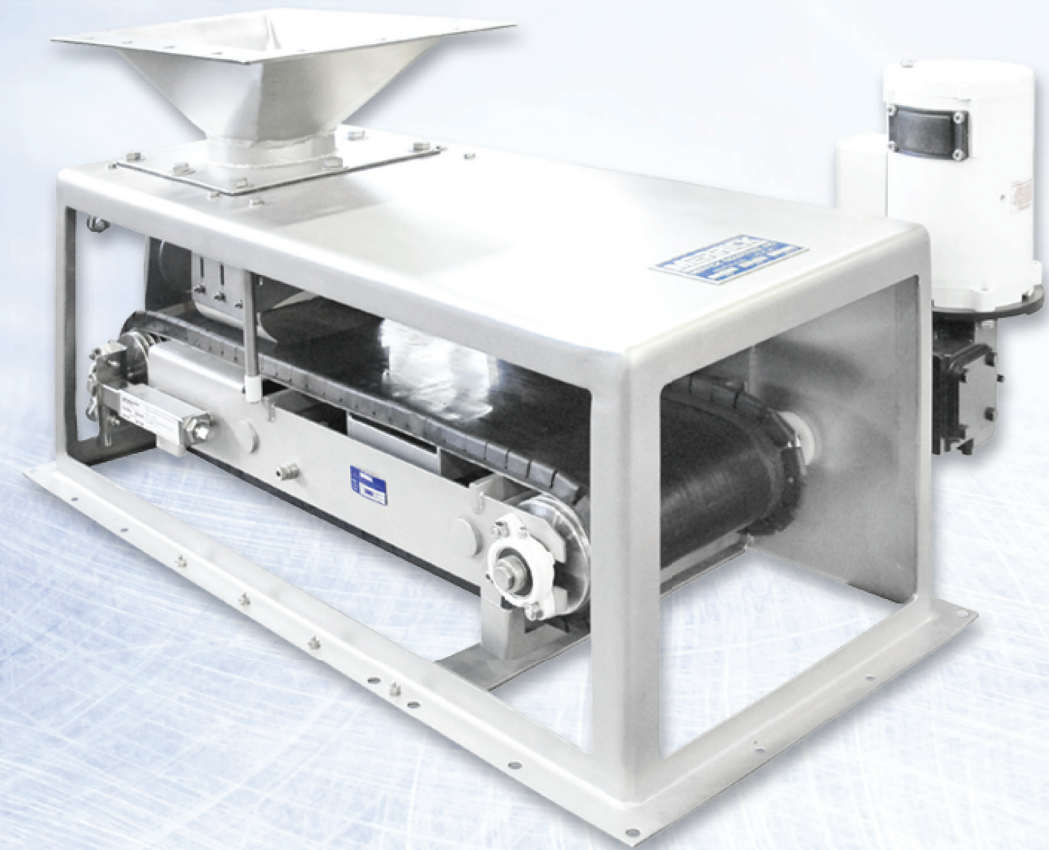
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COMPANIES

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# MODEL 960 WEIGH BELT FEEDERS



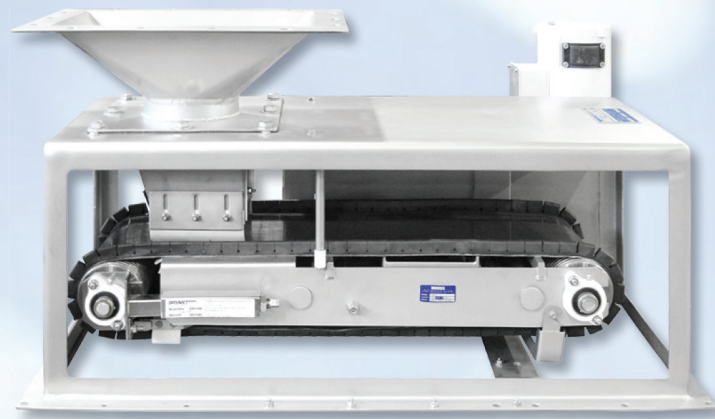
DESIGNED EXCLUSIVELY FOR  
WATER TREATMENT APPLICATIONS



# MERRICK MODEL 960 WEIGH BELT FEEDERS

## A NEW CONCEPT IN METERING

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 Model 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 over 100 years of MERRICK's chemical metering experience, the Model 960 feeders were developed.



**Model 960 Belt Feeder**

Model 960 feeder designs are available for most water and waste water metering applications. The most common application for Model 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 models are available for either gravimetric or volumetric applications.

## EASY MAINTENANCE

Simplicity and access are the keys to easy maintenance. The Model 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 removable rear door provides access to the speed encoder and rear belt take-up. The Model 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.

## A NEW CONCEPT IN CONTROL

Performance and reliability of the Model 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.

## COMPACT DESIGN

Because of the importance of floor space in a water plant, the Model 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.

# MERRICK MODEL 960 WEIGH BELT FEEDERS

## STANDARD FEATURES

Non Slip Auto Belt Tracking Pulleys

Commercially Available Stainless Steel Strain Gauge Load Cell

Commercially Available Sealed, Corrosion Resistant Bearings

Optional Infeed Connections and Adapters

Optional End Doors (Steel or Lexan)

Rugged 7 Gauge Construction for Long Life

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

Rubberized Endless Conveyor Belt

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

Machined Reference Bars for Precise Weigh Deck Alignment and Optimal Accuracy

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

## SPECIFICATIONS

### OPTIONS

- Stub for Connection of Dust Collection
- Bolted Pan to Seal Bottom of Enclosure
- 304 or 316 Stainless Steel Construction
- All End Doors Available in Steel or Lexan
- A-B Powerflex 40 Standard
- Isolation from Excessive Vibration

### ACCESSORIES

- Gates: Knife Gates, Rotary Bin Gates and Butterfly Gates for Day Bins or Chemical Isolation
- Flex Connections: Inlet and Discharge
- Inlet Adapters: Isolate Feeder from Day Bin or Silo
- Dust Collectors: Wall or Floor Mounted
- Electronics: DC and AC Controls and Motors

## GENETIX® PROCESS CONTROLLER

The Genetix® process controller for scales and weigh feeders is a powerful single-board controller for a range of applications: from small single-scale installations to large multi-feeder blending systems. It does not require an operator display to function and can be connected to most modern PLC systems using Devicenet™, Controlnet™, Profibus®, Ethernet, and other industrial interfaces.

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