

MERRICK



VOLUMERIK[®] Volumetric Screw Feeder Series 100

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SERIES 100 VOLUMETRIC SCREW FEEDERS

The Series 100 Feeder is a Millennium design incorporating new technologies to maximize reliability and enhance flexibility. Simplicity and intelligence best describe this innovative design. The Series 100 design was fashioned around the capabilities of a proprietary control system, the Pulse Width Modulated (PWM) DC motor controller. The capabilities of this drive have greatly simplified the mechanical design while increasing capabilities and flexibility, thus providing a high return on investment.

PWM Drive Simplifies Mechanical Design

The Merrick XTRA™ drive provides a 60:1 turndown at full torque over the entire range. When used in conjunction with a tachometer, the range can be expanded to 100:1. This technology will permit motor operation over the full turndown range, 24 hours per day without overheating or causing motor damage. The expanded turndown range offers many mechanical benefits:

- ❖ *A single auger can now cover a wider range of feedrates.*
- ❖ *The wider turndown range eliminates the need for chain drives and sprockets to tweak output speed to match feedrate requirements.*
- ❖ *Elimination of chains and sprockets means chain guards are no longer required.*

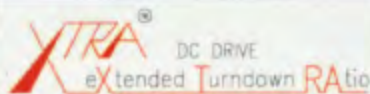
Mechanical Innovations Lower Operating Costs

- ❖ *No external bearings.* Rather than support the auger with external bearings, Merrick direct couples the auger shaft in the quill of the gear drive reducer. By utilizing the drive reducer internal bearings to support the auger, external bearings are no longer required.
- ❖ Merrick utilizes an *innovative auger and conditioning helix (overwind) configuration.* Whereas augers with overwind material conditioners are not unique, the Merrick design offers lower operating costs and greater flexibility. Competitive material conditioning auger designs are one piece fabrication with the overwind welded to the auger. The Merrick design is a two piece construction. The overwind is welded to a drive shaft stub that remains permanently installed in the feeder. Thus, the Merrick auger is a traditional design easily changed by screwing into the stub-overwind assembly. The simple design without an overwind attached lowers auger replacement costs, significantly. The screwed connection makes replacement fast and easy.

- ✓ *All Stainless Steel Construction*
- ✓ *Mechanical Hopper Agitator/Material Conditioning Helix*
- ✓ *Direct Coupled Reducer/Auger (no chains or sprockets)*
- ✓ *Pre-Wired, NEMA 4X, Feeder Mounted Controls*
- ✓ *Adjustable Leveling Feet*
- ✓ *Helix sizes from 0.50" to 6.00" Diameter*
- ✓ *Spring Loaded, no Maintenance Teflon* Auger Seal*
- ✓ *Easily Converts to Loss-in-Weight*



* Teflon is a registered trademark of E. I. Du Pont de Nemours and company



**MERRICK's Exclusive XTRA Drive
DC Motor Speed Controller**
(See the XTRA Specification Sheet for more details)