

## Tilt-To-Load Drum Tumblers

### Power Tilt Allows Easy Floor-Level Loading

- Rotate closed plastic, steel, or fiber drum
- Thorough corner-over-corner mixing action
- Saves time, labor and money



### Tilt-To-Load Drum Tumblers

- Rotate your drum at: 5 to 20 RPM  
(4 to 16 RPM for 50Hz models)
- Capacity:  
800 Lb. (363 kg) Full Drum  
400 Lb. (181 kg) Half-Full Drum \*
- Handle your drum:  
29" to 37" (74 to 94 cm) tall  
18" to 23.5" (46 to 60 cm) in diameter

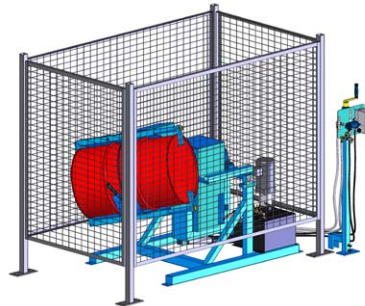
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- Use a separate drum for each batch
- No container to purge between batches
- Common drums make economical vessels

### Mixing in a Closed Drum Means Less Hazards

Using a Morse Drum Rotator eliminates spills, splashing of dangerous contents on workers, and risk of contamination. Now you can get the benefits of mixing inside closed shipping drums and have the machine do the work of loading and unloading itself! Morse 310 Series models accept the drum upright at floor level. The user controls hydraulic tilting action that raises the drum into position for rotating. A second valve allows the operator to start and stop the hydraulic motor that drives rotation. You minimize time, labor and operating cost by eliminating extra moves required for getting drum into mixing position. Rotate various sized drums, weighing up to 800 Lb. (363 kg) at 5 to 20 RPM.

Install all Morse Rotators in accordance with OSHA requirements for [enclosure and safety interlock](#), etc. so the rotator automatically turns off when enclosure door is opened. One way to accomplish this is with a Morse enclosure with safety interlock.



Safety enclosure with Safety Interlock (drum tumbler sold separately).

For OSHA compliance, see OSHA subpart O.1910.212(a)(4) "Barrels, containers, and drums. Revolving drums, barrels, and containers shall be guarded by an enclosure which is interlocked with the drive mechanism, so that the barrel, drum, or container cannot revolve unless the guard enclosure is in place."

Power connections and motor controls must comply with applicable codes.

### Load upright drum at floor level



Load drum into the rotator with the drum holder in the lowered position, the hinged ratchet plate and the top clamps both open. The Morse [Model 152 Drum Truck](#) is shown loading the drum into the rotator. Can also load with [Model 81 Drum Spotter](#) or [Model 92 Below-Hook Drum Lifter](#) (inset).

### Secure your drum in holder



Secure drum in the rotator using the cinch chain and ratchet, and tightening the top clamps (inset).

### Powered lift and rotate



Turn the motor on to activate the hydraulics. Raise the drum to the top position by raising the TILT control valve. To begin rotating, raise the ROTATE control valve.

\* Half-full Capacity is an indication of the capacity for tilting an unbalanced, bottom-heavy drum. A partially full drum with an unbalanced and shifting load is harder to tilt than a full drum.

## Tilt-To-Load Drum Tumbler Model Numbers

| Model #       | Motor Style       | Phase | Volts | Hertz | Amp Draw | Controls   | Drum RPM | Domestic Ship Weight | Domestic Ship Dimensions               |
|---------------|-------------------|-------|-------|-------|----------|--|----------|----------------------|--|
| 310-1-115     | TEFC              | 1     | 115   | 60    | 23 **    | NEMA 4X Start/Stop   | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-1-220-50  | TEFC              | 1     | 220   | 50    | 9.7      | NEMA 4X Start/Stop   | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-1-230     | TEFC              | 1     | 230   | 60    | 11.5     | NEMA 4X Start/Stop   | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-220-50  | TEFC              | 3     | 220   | 50    | 5.6      | NEMA 4X Start/Stop   | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-230     | TEFC              | 3     | 230   | 60    | 5.8      | NEMA 4X Start/Stop   | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-380-50  | TEFC              | 3     | 380   | 50    | 3.2      | NEMA 4X Start/Stop   | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-440-50  | TEFC              | 3     | 440   | 50    | 2.8      | NEMA 4X Start/Stop   | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-460     | TEFC              | 3     | 460   | 60    | 2.9      | NEMA 4X Start/Stop   | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-3-575     | TEFC              | 3     | 575   | 60    | 2.1      | NEMA 4X Start/Stop   | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-A         | Air Motor ***     | -     | -     | -     | -        | On/Off Air Valve.<br>Filter, regulator,<br>lubricator included | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-E1-115    | Explosion proof * | 1     | 115   | 60    | 23 **    | NEMA 7/9 Start/Stop  | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-E1-220-50 | Explosion proof * | 1     | 220   | 50    | 9.7      | NEMA 7/9 Start/Stop  | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-E1-230    | Explosion proof * | 1     | 230   | 60    | 11.5     | NEMA 7/9 Start/Stop  | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
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| 310-E3-380-50 | Explosion proof * | 3     | 380   | 50    | 3.2      | NEMA 7/9 Start/Stop  | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-E3-440-50 | Explosion proof * | 3     | 440   | 50    | 2.8      | NEMA 7/9 Start/Stop  | 4 to 16  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |
| 310-E3-460    | Explosion proof * | 3     | 460   | 60    | 2.9      | NEMA 7/9 Start/Stop  | 5 to 20  | 1240 Lb. (564 kg)    | L77" W55" H59"<br>(196 x 140 x 150 cm) |

| Model # | Description  | Ship Weight Adder | Ship Dimensions                        |
|---------|--|-------------------|--|
| 3212X-P | Fully enclosed crate for export of Tilt-To-Load Drum Tumbler | 441 Lb. (200 kg)  | L71" W51" H55"<br>(180 x 130 x 140 cm) |

\* **ONLY NON-Explosion Proof** AC models include a pre-wired control box with start, stop functions. Models with Explosion Proof motor have no wiring from the NEMA 7/9 control box to the motor. Please consult an electrician to complete the wiring in accordance to your local code. Explosion Proof motors are rated for Class I Group D, and Class II Groups F and G.

\*\* Requires 30 Amp circuit, and can have amp spikes higher than that.

\*\*\* Air powered models require plant air at 50 to 60 psi and flowing at a rate of 60 scfm. Filter, Regulator, Lubricator and valve (part # 90010-P) are included.

Please contact your Morse dealer

Website: [morsedrum.com](http://morsedrum.com)