

## FMC Roto-Louvre Dryer

Mfg: FMC

Model: 803-33

Stock No. SGMPB181.345

Serial No.

FMC Roto-Louvre Dryer. Model 803-33, Order # jk5992 803. Roto-Louvre Dryers are used to dry or roast products for the food, chemical or mineral industries. This Roto-Louvre Dryer was purchased new about ten years ago by a major cereal manufacturer and never installed. Their application was to dry cereal at a rate of 20 lbs/min with the incoming cereal at 20% moisture and the dried cereal at 8% moisture. Please open the attached pdf to see the Roto-Louvre Dryer Specifications. (ACN5450)

### Roto-Louvre Dryer Specifications

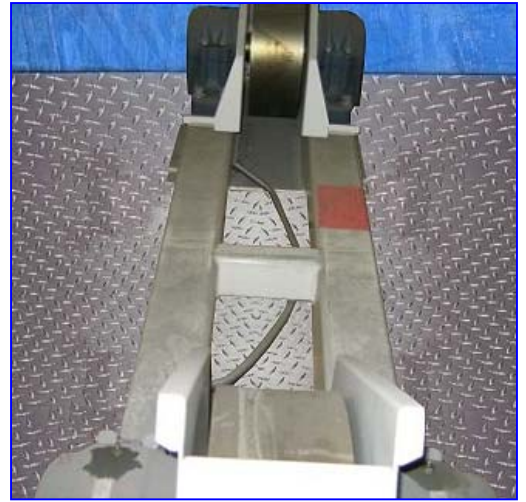
- Operates at rotating speed of 1-3 rpm.
- Anti-friction trunnion and thrust rollers with steel supporting bases
- Revolving feed end plate
- Material inlet chute
- Special radial louvers
- Approx. 5' 6" inside dia.
- No. 16 gauge internal perforated screen; 1/8" round perforations on 3/16" staggered centers having 5' 6" O.D. x 2' 0" I.D.
- 6" pitch butt welded sectional flighting with discharge section and tangential chain drive
- Mild carbon structural plate construction throughout
- Shell to be 7 gauge mild steel, all solid construction, welded airtight with no covers, no cleanout doors, nor sampling ports.
- Insulation of shell
- Mild steel spiral will begin immediately at the feed opening and end 3' 0" from the discharge end and will be nominal 5' 6" O.D X About 2' 0" I.D. of No. 10 gauge steel and 6" pitch, continuous butt weld type.
- No. 16 gauge mild steel perforated plate, having 1/8" round perforations on 3/16" staggered ctrs will be wrapped around the outer diameter of the flighting. Maximum clearance between flighting and perforated plate to be 1/32"
- 1/2" thick lifter bars will be welded between flights, spaced every 12" and declined 30" from horizontal, w/ lifters being on the carrying side of the flighting. The perforated plates will be welded to the lifter bars.
- (30) 4" X 1/4" bars will be welded on the outside of the perforated plate full length at points where lifters are welded on inside of perforated plate.
- Special 7 gauge steel radial louvers will be provided to be welded to the I.D. of the shell and bolted to the bars on the outside of the perforated plate.



- Flighting welds will be continuous, butt welded on carrying side and ground smooth.
- Lifters will be continuously welded to the flighting on both ends.
- Perforated plate will be button welded to the lifters. Horizontal seams of perforated plate will be staggered welded 1" at 3" centers to lifters.
- Button welds and stagger welds will be ground flush.
- 4' X ¼" bars will be placed over the ground welds of the centerline of the lifters and fillet welds will be stagger welded 2" at 6" centers both sides for the entire length.
- Flanged radial louvers will be bolted to the 4" bars. The outside flanges of the (3) radial louvers will be wrapped w/ the 7 gauge dryer shell skin which will have rows of holes for plug welding to the radial louver flanges.
- The feed and discharge end of each dryer will be fitted w/ air seals.
- The feed air seals will consist of an annular seal ring supported by a series of leaf spring segments.
- The discharge end seal will consist of a belt wrapped around the periphery of the rotating flange, and fixed to the discharge hood.
- Air inlet and exhaust connectors will be included.
- Drive machinery will be of heavy tangential final chain driver directly powered thru a flexible coupling by a variable speed motor/reducer unit.
- Reducer will be an incline helical type unit w/ adapter for direct mounting of a "C" flange 10 hp motor. Speed variation will be provided by a variable frequency controller.
- Welded carbon steel hygienic base for the tangential drive and the motor/reducer combination.
- The motor/reducer, couplings, sprockets, bearings, and guards will be shop assembled to the hygienic tangential drive base.
- Carbon steel painted guards complying w/ GMI standards will be provided for the dryer trunnion wheels, tangential chain drive and couplings.
- Discharge hoods of 10 gauge, 204 stainless steel; corners coved, welds continuous and pockets and shelves eliminated where possible.
- Inside will be no. 2B finished material w/ all welds ground and polished.
- Outside will be no. 2B finished material w/ all welds ground flush.
- Discharge hood will have an 18" dia. Access/inspection door and (2) inspection ports.
- Hood will have a square flanged product dischg. Connection located at the bottom of the hood.



- Stainless steel discharge hood support legs will be furnished for top or bottom support
- Trunnion bases and drive bases will all be of the hygienic tube type design.
- Trunnions and bearings will be shop assembled to their bases. Final alignment will be field adjusted.
- Discharge end flange and feed end bars will be continuously welded to the shells.
- All exterior carbon steel surfaces that will receive paint will have welds continuous, smooth, clean and w/o weld splatter. Surfaces included will be hygienic bases, distributing ring, and shell surfaces not covered by insulation.
- Supports for the distributing ring will be square tubing w/ continuous welded end plates.
- Inside surfaces will be cleaned and coated w/ FDA approved mineral oil.
- Wood caps will be provided for all openings on dryers and discharge hoods for protection against weather during shipment.
- White neoprene rubber gasketing will be furnished for all gasketed surfaces.
- (2) New York blower (or equal) no. 454 DH inlet fans, type 20, arrangement no. 9, complete w/ inlet and outlet flanges, cleanout door, drain, v-belt drive, and drive guards, link-belt bearings, browning v-belt sheaves and guards. Fans driven by 25 hp, 1750 rpm energy efficient, TBFC, 480 v, 3 ph, 60 HZ, design "B" motor which will be field mounted. Fans will be sized for moving 10,100 cfm of air at 215F and 6" SP. Motors have power to handle 70F inlet air.
- (2) New York blower (or equal) no. 404 DM exhaust fans, Type 20, fans to have same features as noted for the inlet fans except that they will be of class II construction and will be driven by energy efficient, TEFC, 460 v, 3 ph, 60 HZ. Design "B" 40 hp motors which will be field mounted. Fans will be sized for moving 10,500 cfm of air at 175F and 11" SP. Motors to have power to handle 70F inlet air.
- (4) fans will be furnished w/ an opposed blade outlet damper complete w/ flanges and drilled to match fan outlet configurations. Dampers will be air foil design w/ lingo out of the air stream. An automax pneumatic operator and pneumatic positioner w/ integral 4-20 MA transducer will be mounted on each damper.
- (2) pace and bypass damper w/ operators and positioners have been included for control of the recycled air.



Each dryer will be furnished w/ steam coils for heating the required air volumes from 70F to 250F and 275F respectively, utilizing 150 psig saturated steam. The coils will be copper tube/copper fin w/ non-ferrous headers. The entire coil will be block tin coated and furnished in flanged castings.

**Painting:**

The dryer shell interior surfaces will be cleaned, free of splatter, and coated with FDA approved mineral oil to inhibit oxidation.

All exterior surfaces which are not stainless or covered by insulation will be sandblasted to an SSPC-SP6 finish and receive paint as furnished on JK5570 in GMI Color.

\_\_\_\_\_ to be covered with insulation will receive one (1) shop coat of our standard high temperature aluminum paint.

Purchased finished components will have manufacture's standard paint or no paint if not compatible with your finish.

**Welding:**

FMC Corp. through John Canterbury and GMI through Walter Romashko have exchanged welding samples. The FMC samples are to be a benchmark or standard for welds of sufficient quality to eliminate grinding requirements.