

FQ -136 Single Disc Grind Mill



1.1 Design Features

The FQ-136 is a belt-driven, 36" (914 mm) single revolving disc mill, designed for optimum tram alignment, minimal vibration, lasting durability and high capacity heavy-duty operation in the 1st and 2nd stages of the wet corn grinding process. Belt drive designs reduces floor space requirements as motor sits above machine on heavy duty motor mount. Designed for attachment to a maximum of 250 horsepower (186 kW), the mill can operate up to 1,800 rpm.

Rotating elements are precision balanced and mounted in a massive one-piece steel weldment base, which maintains shaft and bearing alignment. Motor plate and support are heavy duty-weldments and part of the machine base. There is no need for additional motor support.

The FQ-136 mill features quick belt change capability with spacer blocks beneath the bearing housing, belts can be changed without removing motor, motor support, or bearing housing, thus not disturbing rotor shaft while maintaining proper disc and shaft alignment, resulting in less downtime.

All parts in contact with process material are 316 stainless steel for increased operating life. The disc is solid stainless steel with renewable parts at wear points. Devil's Tooth-style grinding plates are cast from special iron alloys in segments, for ease of replacement and low cost, and are balanced in sets. Dual hinged door opens from either direction for ease of plate changes.

The heavy duty steel shaft is machined to close tolerances with the bearing mounting surfaces ground. A hard-coated, stainless steel sleeve protects the shaft from process material and from the stuffing box packing that seals the around the shaft. The stuffing box and packing are split for easy removal.

A quick-release, spring-loaded assembly maintains constant loading pressure between the plates to allow foreign objects to pass through without damaging the plates and includes a safety lock that prevents accidental clashing of the grind plates. Plate position is adjusted by a manual control hand wheel with dial indicator (read in thousandths of an inch) on the hand wheel shaft to gauge the gap between the plates.

The FQ-136 is designed to run in a dry and clean environment. To prevent corrosion, the ambient temperature should range from 21° - 43°C (70° - 110°F). Proper installation and care will maintain the FQ-136 for years of use.

1.2 Specifications

First Grind Capacity: 500 MTPD (20,000 bushels)/day

Second Grind Capacity: 1000 MTPD (40,000 bushels)/day

Weight FQ-136 (without motor) 2722 kg (6000 lb)

Approximate Dynamic Load on Foundation 3402 kg (7,500 lb)*

Floor Load (125% of static weight) *inclusive of out-of-balance load at 0.005" displacement

Dimensions 1.2m x 1.3m x 2.3m (48" W x 49" H x 89" L)

Operating Space Required 3.1m x 3.4m x 5.5m (10' W x 11' H x 18' L)

HP, Maximum Mechanical 186.4 kW (250 HP) at 1,800 RPM

Grinding Plates

60 degree segments (6 per half set)

Plate Adjustment Manual, 38.1mm (1½") total travel (

Grinding Area 5019 cm² (778 in²)