

Rotary Atomizer Type FS15

*for atomization
of fluid feeds in
spray drying*

- Direct drive
- Sealed bearings -
no oil lubrication
- No product
contamination by
lubricant
- For pharmaceutical and
food applications
- For abrasive and non-
abrasive feeds
- Patented atomizer
wheel



Rotary Atomizer, Type FS15

The atomizer drive

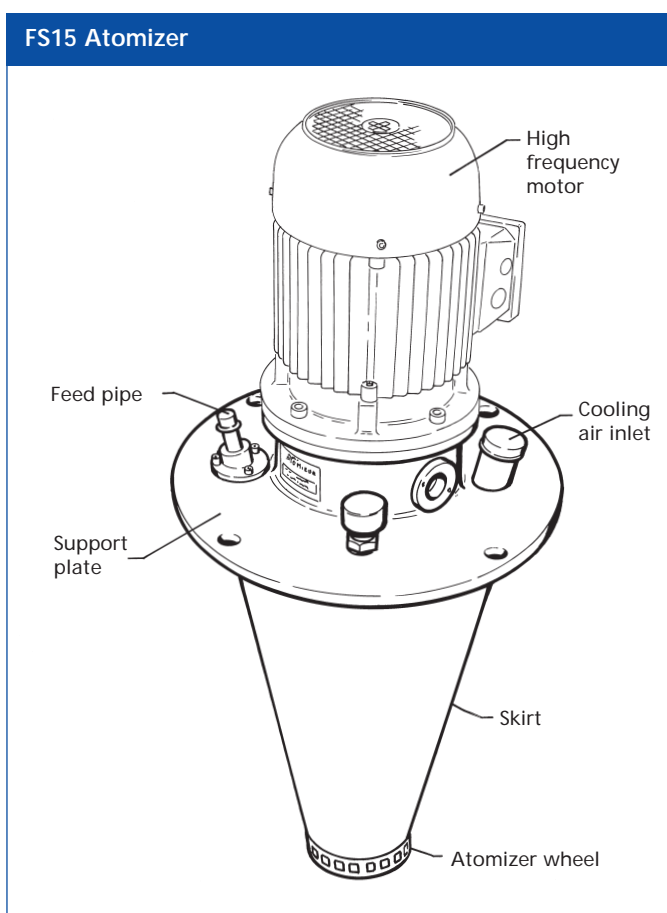
The atomizer drive consists of two parts. The upper part comprises the motor and its support. The motor is a 2-pole, high frequency/high speed, vertical flange type, and the power is transmitted from the motor to the spindle via a flexible coupling. The lower part of the atomizer comprises the support for the spindle bearings, feed pipe assembly and the conical protective skirt. The drive is designed according to the flexible spindle concept, so that the irregularities in the feed rate and other minor imbalances in the atomizer wheel can be compensated without spindle and bearing damage. The monitoring system comprises:

- Spindle vibration alarm as protection against excessive vibration conditions (optional extra for heavy duty applications).
- Flooding alarm as protection against feed leakage on the supporting plate.
- Tachometer to register variable spindle speed adjusted by control of frequency converter (optional extra).
- Ammeter and running hour-meter installed in the spray dryer control panel to indicate the operating performance.

All parts of the atomizer exposed to feed and product are fabricated in stainless steel and comply to the hygienic requirements stated in US 3-A, EN 1672-2 and similar national sanitary directives.

The atomizer wheel

The FS15 atomizer can operate with either a channel or nozzle type (for non-abrasive feed) or an insert type (for abrasive feed) wheel of 150 mm diameter. The channel wheel is equipped with either 36 high straight channels or 16 high curved channels. The straight channel wheels are used in cases where there is no specific requirements of bulk density in the final product. The curved channel wheels produce higher bulk density (higher than on a straight channel wheel) in case of organic products. The nozzle wheel is equipped with 8 bushings. If the steam is introduced into the wheel body, it may result in powders with higher bulk density in case of organic products. The patented design of insert type wheel consists of 8 inserts. The wheel parts exposed to feed are abrasion-resistant and easily replaceable. The conical inserts and a bottom plate of the stainless steel wheel are made from alumina or advanced ceramic material.



Specification

| | |
|-----------------------------|--|
| Wheel speed range | 10,000 - 20,000 rpm |
| Feed rate range | max. 1000 kg/h at 20,000 rpm max. 2500 kg/h at 10,000 rpm |
| Feed pipe | 1/2" |
| Cooling air pipe atomizer | 1" BSP |
| Cooling air pipe Motor | 4" |
| Motor size | Max. 10 kW at 20,000 rpm |
| Weight (inclusive of motor) | 148 kg |

Noise Level

The sound pressure level (SPL) in the surroundings of FS 15 atomizer exceeds 70 dB(A). This depends mainly on the atomizer wheel rpm, atomizer load, motor size and type, and the surroundings of the atomizer.