

**APPLICATION ▼**

Precise volumetric and gravimetric feeding of free to very poorly flowing powders as well as lumpy, moist or bridge building materials. Constant feeding of bulk goods with a flowability ffc from 1 to 5.

This feeder can be upgraded with a scale and used in a gravimetric loss-in-weight or batch feeding process at any time.

**DESIGN ▼**

Numerous different feeding tools are easily replaceable that facilitate adaption to the powders in order to find the best possible feeding quality and precision for the fed material. All parts in contact of the fed material are stainless steel 316L (1.4404).

Disassembling the feeder is very easy and done by a few simple steps. The feeder is very easy to clean.

The agitator gently moves the bulk material constantly through the wide opening of the channel into the screws for a steady feeding.

Screws are very easy to interchange due to bayonet fasteners.

**CONTROLLER ▼**

The ZD 22 FB is controlled by optionally:

- S7-1200 with Siemens HMI panel
- Frequency converter with inbuilt touch panel
- Gravimetric controller Siemens Siwax FT or FTC.

Central control systems for multiple feeder or multi-component operations are available. A variety of protocols is available for connection to the plants host systems.

Depending on the control system, stepper motors or AC motors are available.

**HAZARDOUS LOCATION OPTIONS ▼**

**ATEX Cat.:** 3D/3D (inside/outside) → Equipment suitable for zone 2 and 22 (available)

**Protection (IP):** IP 54 (standard) / higher on request

**SCREWS AND RATES ▼**

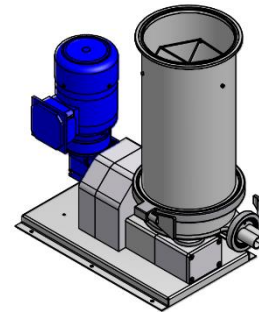
The proper feeder screws are determined based on the material being fed. The actual feeding rates depend on the material and its characteristics.

**The following rates are theoretical values for the material Semolina being fed volumetrically.**

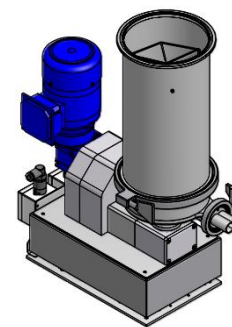
For feed rates at the upper and lower limits of the theoretical range, check with a Three-Tec Test technician or run a test in our laboratory.

Speed range: 1 - 500 rpm / Diameter: 22 mm / Asynchronous motor

Screw ▶							
Shape ▶	Double concave screw			Twin auger screw			Double Spiral
Type of drive ▶	⊖ /AC	⊖ /AC	⊖ /AC	⊖ /AC	⊖ /AC	⊖ /AC	⊖ /AC
Pitch [mm] ▶	11	22	33	11	22	33	20
flow [dm <sup>3</sup> /h] ▶	2.09 – 93.50	6.52 – 291	7.30 - 326	4.15 – 164	7.46 – 295	10.67 – 422	9.39 - 406

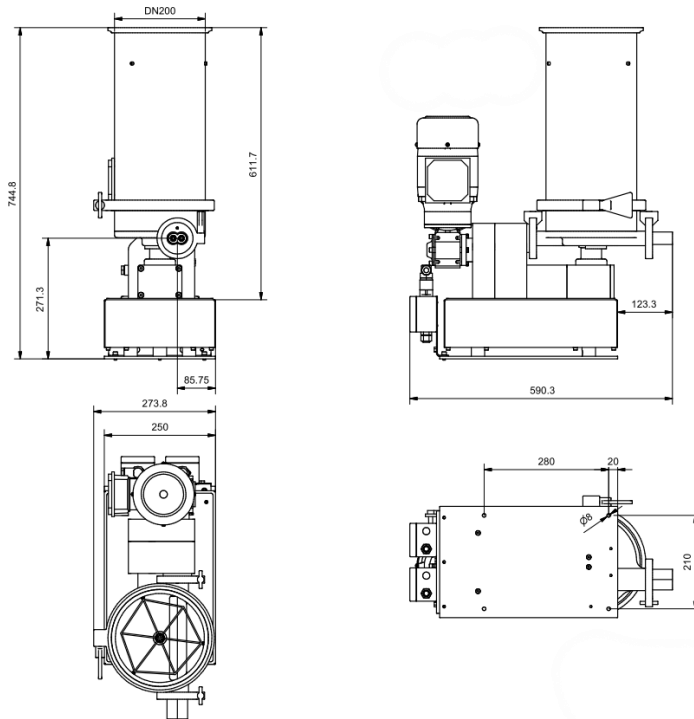


ZD 22 FB



ZD 22 FB gravimetric

**DIMENSIONS** ▼ [mm]



ZD 22 FB with scale

**Caution:** These measurements are for general reference only. Please consult dimensional drawing for exact measurements.

**ADDITIONAL HOPPERS** ▼

Volume [dm <sup>3</sup> ]	Height [mm]	Diameter [mm]	Weight [kg]
7	250	200	2
More on request	-	-	-

**MATERIALS:** ▼

- Parts in contact with material: Stainless steel DIN 1.4404 (AISI 316L) or superior, electro polished + single welded.
- Non contact parts: steel and aluminum, primed and painted.
- Gaskets / Seals: PTFE, Silicon and Teflon
- Painting: RAL 9010 clean white

**TECHNICAL DATA:** ▼

- Voltage: 110 – 240 V, 50 – 60 Hz
- Feeder weight: ≈ 20 kg (without scale)
- Speed range: 1 – 500 rpm
- Hopper capacity: 1.5 l (standard)
- Hopper Extension: 7 l

**OPTIONS** ▼

- Various extension hoppers (customer's choice)
- Vertical or horizontal outlet in any length
- Various bottom scrapers (2 or 3 arms) with or without wall scrapper
- PTFE gaskets with gas flushing
- Dust-tight +/- 50 mbar (g) or gas purged sealings
- Safety guard
- Flow inhibitor
- Ionization
- Special paint or finish
- PVDF or stainless steel execution
- Various Screws
- Extended screws with extended outlet
- Various control systems

**QUALITY AND DOCUMENTATION** ▼

The Quality Management System matching the requirements for ISO 9001:2008 and additionally GMP guarantee throughout high quality products.

- Risk assessment
- GMP Documentation
- Manual
- Material and surface certificates
- We are in progress to introduce the QMS ISO 9001:2008