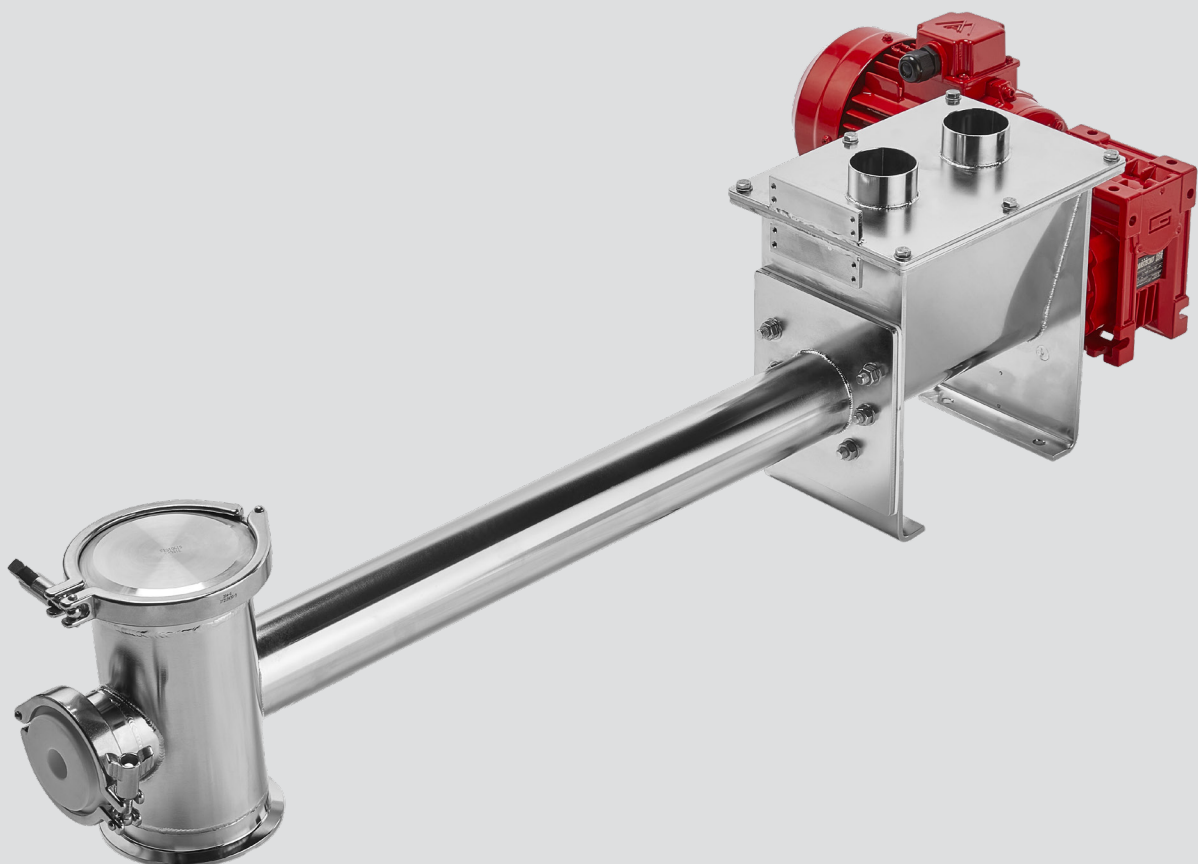




DRY MATERIALS MICROBLENDER

MARCH 2022



**Azano's AZ Series
Microblender reliably and
accurately blends most
dry materials encountered
in industrial manufacturing
processes, pilot plants and
laboratories.**

The versatility of design allows for the application of a variety of auger systems and options, where the selection is dependant upon the characteristics of the product to be handled and required degree of feed rate accuracy that can be achieved.

Material Conditioning

Model AZ-2200 is a prerequisite of feeder accuracy to maintain gravimetric uniformity of material at the feed auger. The unique conditioning/feeding combination is not available with other designs.

Azano selects the conditioning mechanism to suit the application that will provide the optimum conditions with the minimum of material agitation or degradation.



DESIGN FEATURES

Capacity

Model	2L to
AZ-2200	200 L/hour

Metering Auger

On the standard units, the stainless steel metering auger is designed with a helical coil format to maintain an accurate feed of materials without compaction or pressure.

The auger is screwed on to the end of the gearbox drive shaft and requires no tools for disassembly.

For special applications, solid flight augers are available in a variety of configurations to suit requirements.

Metering Tube

The stainless steel feed metering tube is welded to a mounting plate made of materials compatible with the feed chamber. The mounting plate is held in place by stainless steel set screws with the option of butterfly nuts to allow for quick removal and access to the chamber to assess, clean and for maintenance. Sealing is accomplished using general purpose industrial gaskets for general applications and EDPM for food quality grade and sanitary applications.

Optional features for metering tubes include additional length to approximately 0.6m and a variety of specialised end fittings to suit individual applications requirements such as drop “down tube” at the end with a grille on the top.

Feed Chamber and Hopper

The combined feed chamber and standard 30L hopper available on the AZ-2200 provides an economical solution where the storage capacity is acceptable. The AZ-2200 feeder can be produced in mild steel, stainless steel and food grade stainless steel as required. All options may be supplied with an integral hopper, circular inlet or with a feed chamber inlet flange to suit storage hoppers supplied by others.

A range of non-standard options such as, chamber only, hopper lid, materials screen, extra-large hoppers are available to suit specific requirements.

Azano feeders are available with meters augers positioned off centre and with specially designed feed chambers to provide a self-emptying feature.

Gearbox

All Azano gear drive units are fully sealed, robust design reduction gearboxes, designed and manufactured for a long, low maintenance service life, that provides many years of consistent, accurate feeding and trouble-free operation.

MOTOR

The standard motor is an AC fixed speed unit sized to suit the particular feeder drive requirements. For low rangeability variable speed drive applications, control units are available to provide manual or automatic variable speed adjustment when coupled to the AC motor. In addition, an AC motor drive with a standard high turndown mechanical variator is also available.

Where high turndown is required, the feeder can be coupled with DC motors with manual or automatic variable speed controllers.

AC and DC automatic variable speed units are available that accept a 4-20mA DC input to allow for adaptation to process control systems.

Drive Shaft Seal

The specially designed, braided Teflon packed down drive shaft seal is spring loaded to eliminate the need for periodic adjustment. The auger action carries material away from the seal ensuring long service under normal conditions.

Tests

Azano test facilities are used to carry out performance reports prior to taking delivery of any Azano feeder. Alternatively, feeders are available for hire to clients requiring more detailed testing on site or for any noxious products.

Backup

Azano's many years in the industry provides the ability and expertise to select the design features required to accurately feed a vast variety of materials.

Since the handling characteristics of materials vary from one source to another, the Azano AZ series are designed to provide a high degree of versatility ensuring success where others fail.

ENGINEERING SPECIFICATIONS

Models AZ-2200

Hopper Capacity

30L

Option: Circular chamber inlet or chamber only to suit connection to bulk storage. Larger capacity storage hoppers are available.

Other inlet configurations to suit specific application requirements are also available.

MATERIALS OF CONSTRUCTION

Auger, Feed Tube and Drive Shaft

Stainless Steel

Chamber and Hopper

Chamber can be mild steel, industrial 304, 316 stainless steel or food quality stainless steel.

Seals

Teflon

Motor & Gearbox Cases

Standard is aluminium (may vary depending upon size of feeder and application).

POWER REQUIREMENTS

400V 50 Hz three phase
Optional: 230V 50 Hz single phase or any other to suit specific requirements

Ambient Temperature Limits

0-45°C

OPERATION

The AZ-2200 feeders incorporate dual concentric feed chamber input shafts, the inner of which drives the feed auger, and low speed drives the outer conditioning auger, essentially inducing a "conditioning mechanism".

The configuration of the outer "conditioner" is designed to homogeneously flow material from the hopper to the feed chamber and is selected to suit each material and simultaneously "condition" the material to a constant bulk density as it transitions to the feed chamber auger.

All of the material in the feed chamber is kept in motion, avoiding separation or stagnation, with the aim of uniform presentation into the feed auger throughout its circumference and exposed length.

The material being conveyed by the metering element (feed tube and auger) at any time is gravimetrically uniform with any minor variations in feed rate resulting from characteristics peculiar to the material sample and/or variations in speed of the drive unit.

Adjustments to feed rate within the capacity of the feed auger are made by varying the speed of the drive motor output of the variator (where used).

Change of capacity is achieved with an exchange of auger and feed tube.

Accuracy

±0.5 to 2% (of design feed rate) with the majority of materials. Azano's AZ series of volumetric feeders, frequently produce high accuracy where gravimetric control had previously been considered a necessity.



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