

Big Bag

Unloading station with blender



Application

The table blender system for solids feeding enables the addition of solids in a circulating liquid medium, from the solid product storage phase.

The Big Bag unloading stations enables the ergonomic handling and dosing of solid food products with similar grain sizes, such as sugar, powdered milk and salt, stored in BigBags of approximately one tonne in weight.

This solids feeding system + table blender was developed for use in the dairy sector in particular, or in industries such as beverage production, where sugar solutions are required to produce syrups.

Operating principle

The equipment is based on a structure that supports the weight of the Big Bag vertically, with a hopper for the raw material contained in the bag.

There is a lifting and transfer system based on a block and tackle for handling the Big Bag.

Various components are included to both facilitate the emptying of the hopper and transport the raw material to the table blender. These include rotary valves, butterfly valves, endless screws, vibrators and extractors, which are selected based on the product and use.

The venturi and pump aspiration creates negative pressure at the base of the hopper. When the hopper valve opens, the solids are drawn and easily dissolve as they pass through the pump casing.

It is recommended to use batch operations until all the solids are added and to continue recirculating for a while once all the solids have been added to ensure the most uniform solution possible.

In-line operations can also be used for some cases, depending on the solid added and the quality of the solution required.

Design and features

Hoist: 2000 kg

Structure: 1650 x 1350 x 5235 mm (width x depth x height) with crosspieces intersected with the lateral pieces and the rear part of the structure.

Structure profiles based on calculations. Profiles 120 x 120 x 4 and 100 x 100 x 3 inox 304, girder made from galvanized cast iron.

Hopper material 304 and 316.

Anti-caking system and safety guards: protection elements made from aluminium.

Solenoid valve for the seal cooling circuit.

Frequency inverter for the centrifugal pump.

Double mechanical seal.

Complete mixing with product recirculation using a tank.

Automatic butterfly valve for hopper.

In-line mixer for each model to break up possible lumps in the end product when required.

Centrifugal pump if required.

Stainless steel electric panel with control system.

Technical specifications

Materials:

Parts in contact with the product	AISI 316
Other materials	AISI 304
Guards	Aluminium
Seals in contact with the product	TR08 FDA cellular silicone / EPDM

Surface finish:

Internal	2B, with removed and polished welds $Ra \leq 0.8 \mu m$
External	2B, with brushed welds

Operating thresholds*

Capacity:	1.000 and 1.500 kg bags
Working pressure:	Atmospheric
Working temperature:	up to 65°

It is recommended to install the unloading stations in an area with controlled humidity and without flushing.

Big Bag

Unloading station with blender

Technical specifications

Type	Centrifugal pump		In-line mixer		Flow rate (m³/h)	Solids intake* (kg/h)				Hopper volume (l)
	Model	Power (kW)	Model	Power (kW)		Sugar up to 25°brix	Sugar up to 50°brix	Powdered milk 20%	Thickeners up to 400 cP	
MM-2	HCP	7,5	-	-	40	-	-	3300	-	45
MM-2M	50-190		ME-4110	7,5		3700	2400	-	650	

MM-2: blender model

MM-2M: blender model+mixer

Type	Max. dosing rate			Big bag capacity
	Sugar up to 65°brix	Powdered milk 20%	Thickeners up to 400 cP	
BF / BE	4.000 kg/h	3.500 kg/h	1.000 kg/h	2.000 kg

BF: big bag station with fixed base for unloading using an endless screw

BE: big bag station with extraction for direct unloading

*The applications mentioned in the technical data sheet are standard applications, but the equipment is adaptable for use with other applications based on customer needs. Please consult the technical office regarding other applications or models.

Options

Load cells for transportation by deduction.

°Brix meter.

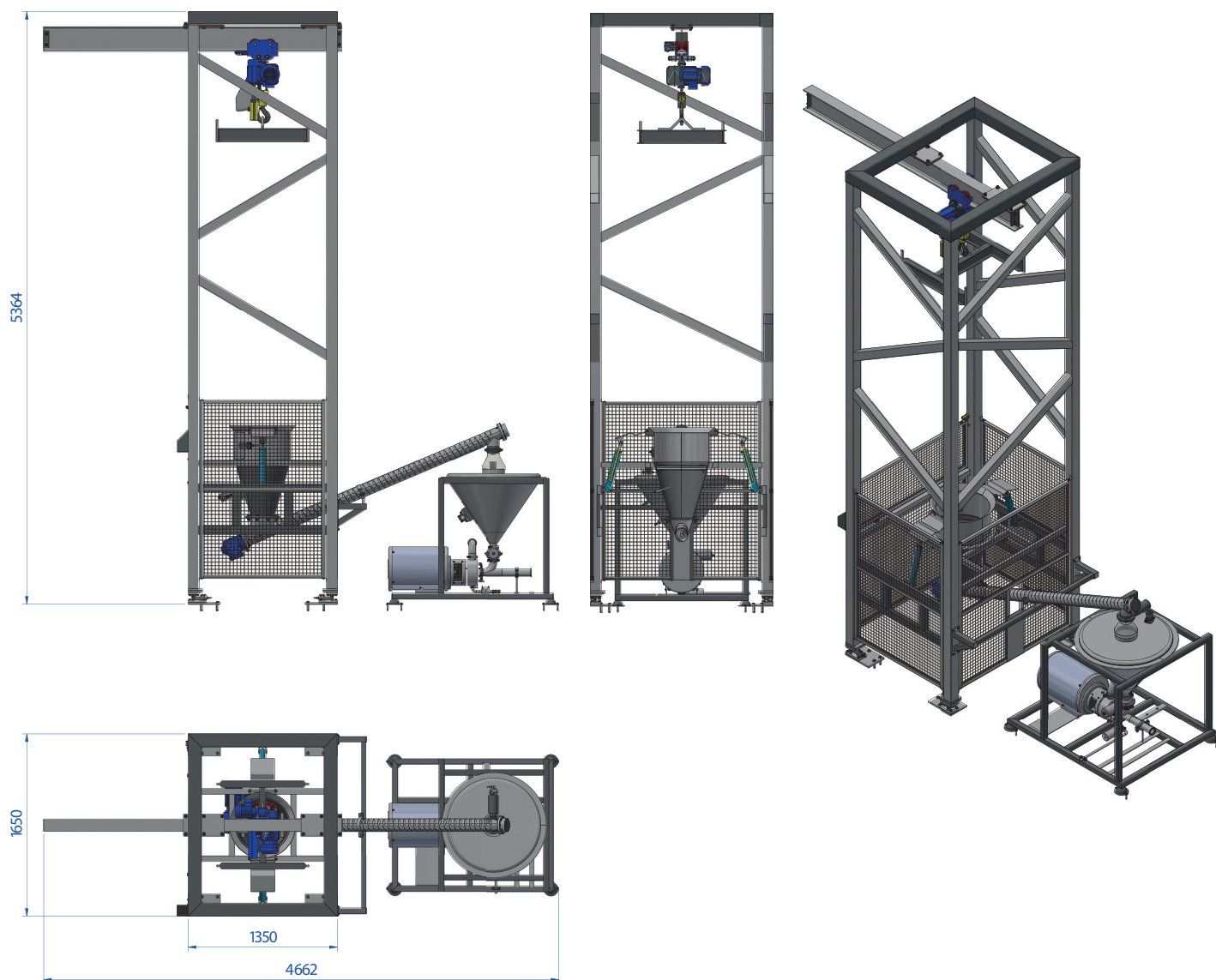
MVE100 electric vibrator for the blender hopper.

A regulating diaphragm valve for the venturi.

Big Bag

Unloading station with blender

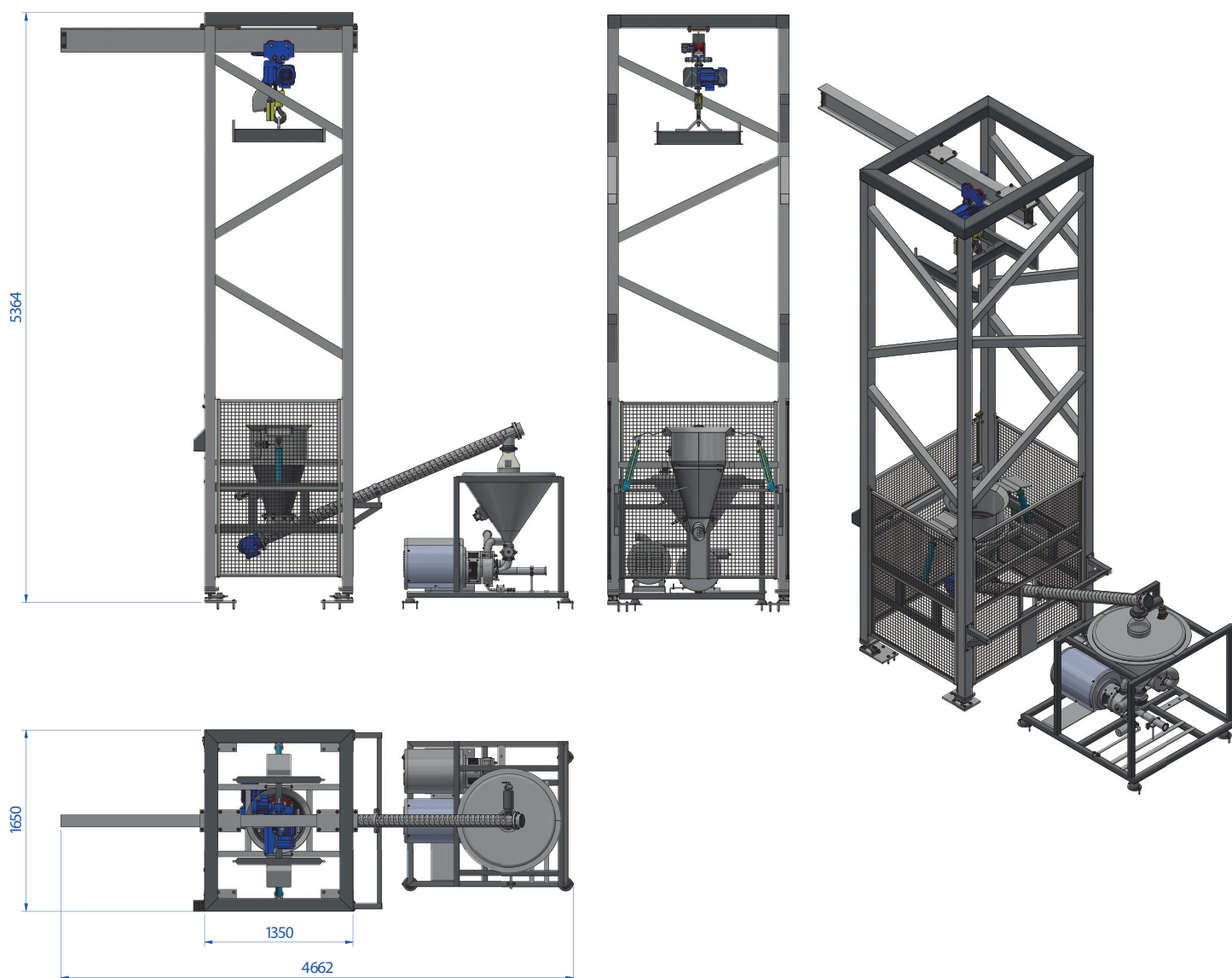
Dimensions of BigBag station with fixed base: BFMM-2



Big Bag

Unloading station with blender

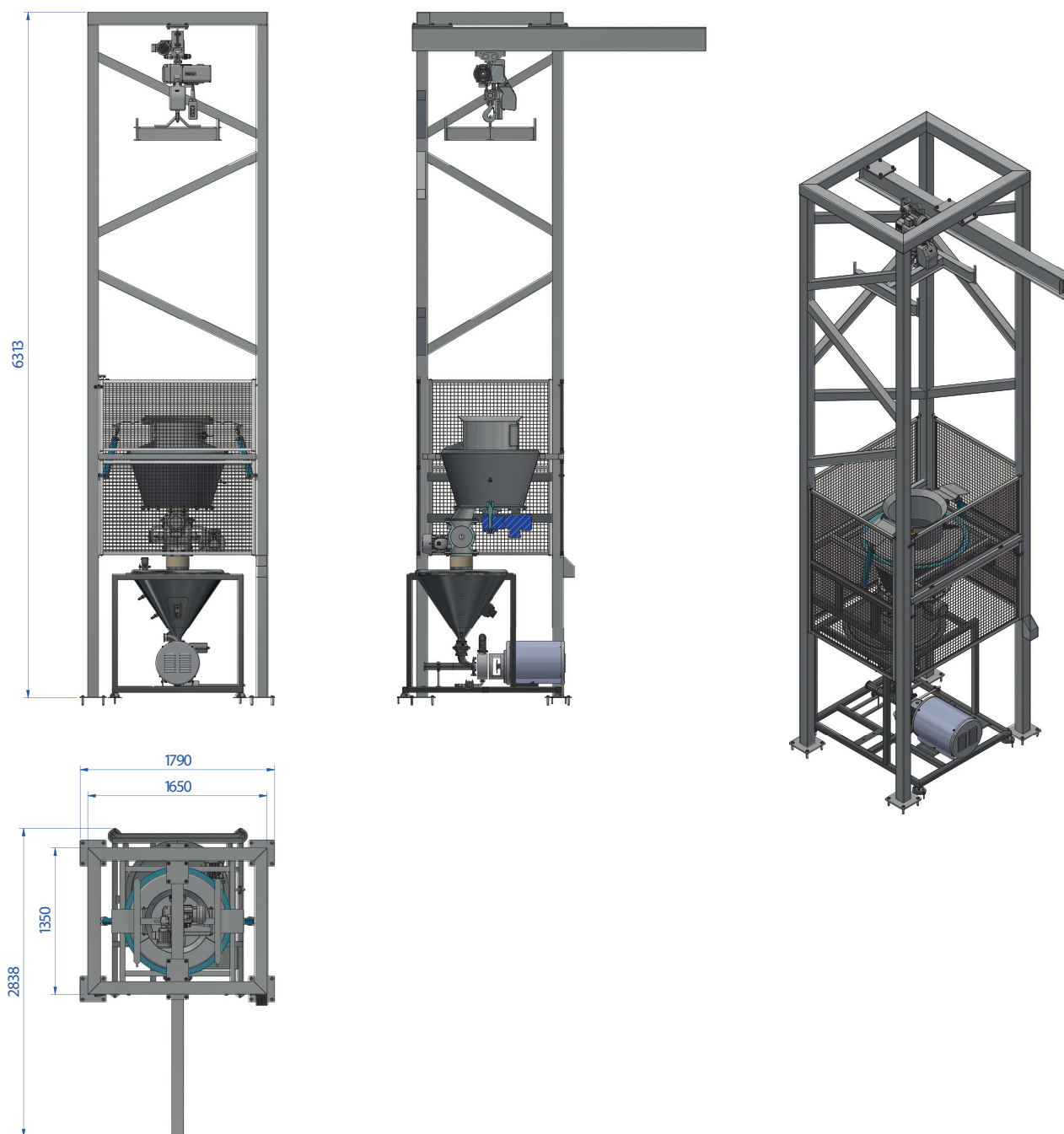
Dimensions of BigBag station with fixed base: BFMM-2M



Big Bag

Unloading station with blender

Dimensions of BigBag station with extraction: BEMM-2



Big Bag

Unloading station with blender

Dimensions of BigBag station with extraction: BEMM-2M

