

# MBC

## Double Cone Solids Blender



### APPLICATION

The double cone blender is used to produce homogeneous solid-solid mixture. Mixing is a common process step in the manufacture of products for industries such as food, cosmetics, pharmaceutical, chemical, detergents, fertilizers and plastics.

Examples of materials or substances mixed in this way include pharmaceutical granules, semolina flour, seeds, starch, coffee beans and ground coffee, cocoa, chocolate flakes or granules, powdered milk, baby food, preparations to make dehydrated soups and creams, leaf waxes, detergent granules, soap flakes, artificial fertilizers, plastic in powder, ground or pellet form, fibreglass, etc.

### PRINCIPLE OF OPERATION

The main body of the blender consists of two cone-shaped sections welded at their bases to a central cylindrical section. The axis of rotation is perpendicular to the cone axis and passes through the cylindrical section. The driving motor is located at one of the two lateral supports holding the blender body.

The solids are introduced into the blender through the loading aperture. In this type of blender, mixing takes place axially, as a result of the powder moving through the different sections. Mixing is thorough but it depends on the rotating speed.

The mixture is discharged through a hermetically closing butterfly valve which can be operated manually or automatically.

The skid has an electrically secured safety perimeter guard to prevent operators from gaining access during use. In the event of accidental access, for safety reasons the process will be stopped.

### DESIGN AND FEATURES

The series consists of 6 models with a total capacity of 160 to 4200 litres and a useful capacity of 65% of the total.

This blender is especially designed for sensitive mixtures with risk of breakage where the generation of dusts is to be avoided. Mixing times vary between 5 and 20 minutes depending on the mixture.

There are two apertures: the loading and cleaning aperture, and the discharge opening, which incorporates a butterfly valve that can be operated automatically or manually.

The apertures are sealed hermetically in order to avoid contamination from the outside during the mixing process.

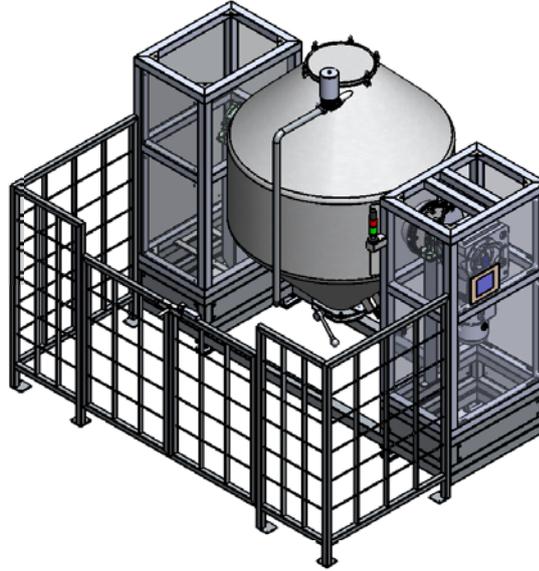
The interior of the blender incorporates a cone mounted on the pivot axis on both sides. This system eliminates the formation of dead spaces and facilitates gravity discharge.

## DESIGN AND FEATURES

The skid is manufactured in AISI 316 (EN 14404) for all parts in contact with the product and AISI 304 (EN14301) for the rest of the equipment. Standard finish is Ra<0.8 on the inside and 2B on the outside.

Easy to clean, both manually and with an automatic CIP system, thanks to its hygienic design and the absence of entrapment areas.

It has perimeter safety protection with a door, is manufactured in accordance to EC safety standards.



The automatic stop positions are: loading, unloading and sampling. Before stopping in one of the above three positions, it performs a cycle that will slow down the mixer so that it can be accurately positioned and brought to a stop.

This equipment has been designed -in contrast to the "V"-type blender- to handle mixtures of granulated products and powders, or mixtures of products with high and different densities, with a loading of 65% of the total capacity of the equipment, unlike the 50% loading in a "V"-type blender, which handles mixtures of powders with the same bulk density.



Vacuum loading port



Vacuum discharge port

## MATERIALS

Parts in contact with the product	AISI 316 (EN 14404)
Structure and other metal parts	AISI 304 (EN 14301)
Internal finish	Ra<0,8
External finish	2B

## OPTIONS

Motors, instrumentation and valves are available in accordance to ATEX protection, as an option.

Interior and exterior mirror polishing also optional.

The unit can be equipped with an automated loading system for introducing powders and granules into the blender body by means of a vacuum unit with self-cleaning hoses. It prevents creation of dust.

The loading and unloading systems can be automated on request with a butterfly valve with pneumatic dosing system.

The skid can also be provided with a complete monoblock vacuum unit with liquid ring pump.

It may include an automatic vacuum suction discharge system.

Load cells can be installed for product quantity confirmation.

It is also possible to incorporate an automatic system with PLC and touch screen to control the skid.

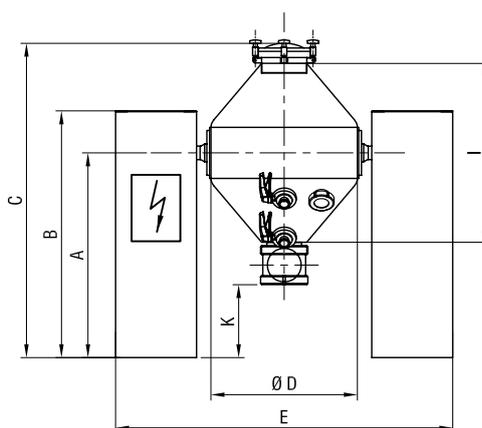


Double cone blender with an automatic loading/discharge system



Discharge of the mixed product

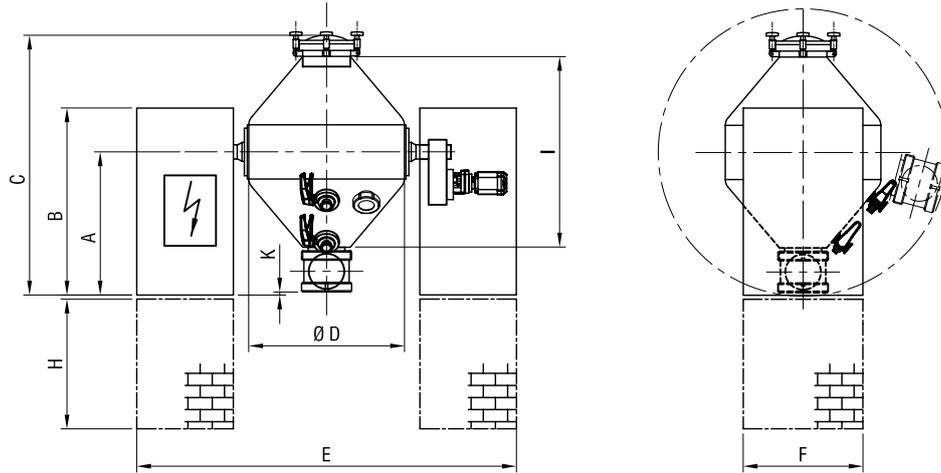
## GENERAL DIMENSIONS



Model	Total Volume (litres)	Useful Volume (litres)	A	B	C	ØD	E	I	K	kW*	Weight (kg)
MBC160	160	100	1265	1450	1800	650	1500	800	600	1,1	810
MBC650	650	400	1540	1725	2350	1000	1850	1350	600	2,2	1158
MBC950	950	600	1630	1850	2550	1200	2000	1500	600	3	1320

\* Geared motor

## GENERAL DIMENSIONS

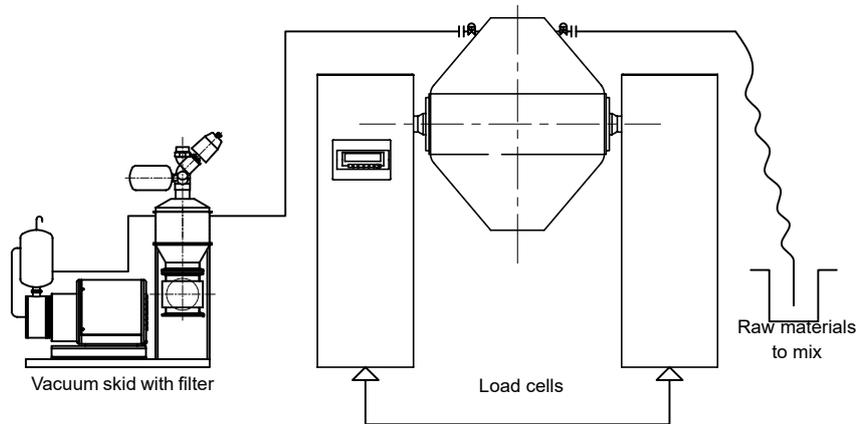


Model	Total Volume (litres)	Useful Volume (litres)	A	B	C	ØD	E	F	H	I	K	kW*	Weight (kg)
MBC1600	1600	1000	1090	1600	2180	1500	3300	1000	as requested	1750	0	4	1800
MBC3000	3000	2000	1350	1850	2700	1700	3500	1000		2220	0	5,5	2100
MBC4200	4200	2730	1370	1870	2740	2100	4500	1000		2740	0	7,5	2500

\* Geared motor

## OPTIONS

### Vacuum loading system



### Vacuum discharge system

