

MV

V-Type Solids Blender



APPLICATION

The V-type 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 pharmaceuticals, flour for confectionery, fish meal, refined or white flour, whole wheat flour, flour for coating, dextrans, enzymes, coffee, cocoa, milk powder, chocolate, gelatine, crème caramel and dessert powder, baby food, custard powder, starches, seeds, pigments, colorants, cosmetics, powdered or granulated plastics, fiberglass, etc.

PRINCIPLE OF OPERATION

The unit consists of two cylinders arranged in a "V" shape with an angle of 80°. A manually actuated inspection and loading port is provided at the end of each cylinder, allowing access to its interior. The product outlet is located at the point where the two cylinders are joined and is fitted with a manually or automatically actuated butterfly valve. The geared motor and the bearing system are located within the lateral supports holding the blender body.

The solids are introduced into the blender through the loading aperture. The mixing performance is of 50%, that is, with each turn of the blender, the product located in the two cylinders moves into the central common section, and this is repeated continuously. The speed is not high, which makes this unit especially suitable for products that need to be maintained cold.

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

The unit is provided with a guard rail with electrical safety to prevent the operator from accessing it when in operation. If anyone should gain access to the unit, for safety reasons, the operation will cease.

DESIGN AND FEATURES

The series consists of 10 models with a total capacity of 50 to 4200 litres and a useful capacity of 50% of the total. Mixing times vary between 3 and 15 minutes depending on the mixture.

The actual mixing is thorough and fast. The unit is ideal for sensitive mixtures.

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

The interior of the unit is especially designed to prevent the formation of dead spaces and facilitates gravity discharge.

The unit incorporates a guard rail with electrical safety, according to EC safety standards.

The unit is manufactured in AISI 316 (EN 14404) quality for all parts in contact with the product and AISI 304 (EN 14301) for the supports and the rest of the equipment. The internal and external surfaces have a bright polished finish.

Due to the polished surface and absence of edges or corners, the unit can be easily cleaned either manually or automatically with CIP system.

The system offers a clear added value. The unit's large production capacity, the high quality of the resulting mixture, and the low energy and maintenance costs directly contribute to an increase in profitability.

On request, the loading and discharge systems can be automated with a butterfly valve with pneumatic dosing system.

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



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	Bright polish
External finish	Bright polish

OPTIONS

This unit allows the incorporation of a liquid spray system to introduce liquids in spray form during the process. The injector is connected to the spray nozzles by means of a rotary system and is fed with additives from a pressurized tank or by means of a variable speed displacement pump at constant pressure.

The automatic stop positions are: loading, discharging, and sampling. Before stopping at one of these three positions, the system performs a cycle which slows down the mixer in order to reach the stopping position with the highest possible accuracy and remains halted at that point.

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

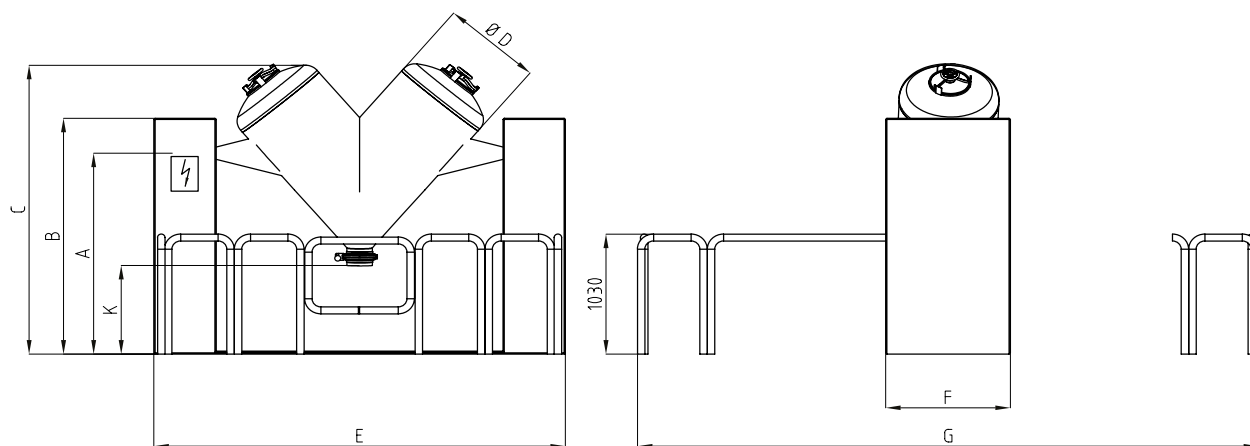
It is possible to install an automated vacuum discharge system. It includes a product receiving hopper with an automated self-cleaning filter; as well as a control panel for the unit.

The loading/discharge can be carried out with pneumatically actuated retractable hermetic bellows. This system and the vacuum loading/discharge can be combined.



Discharge of the mixed product

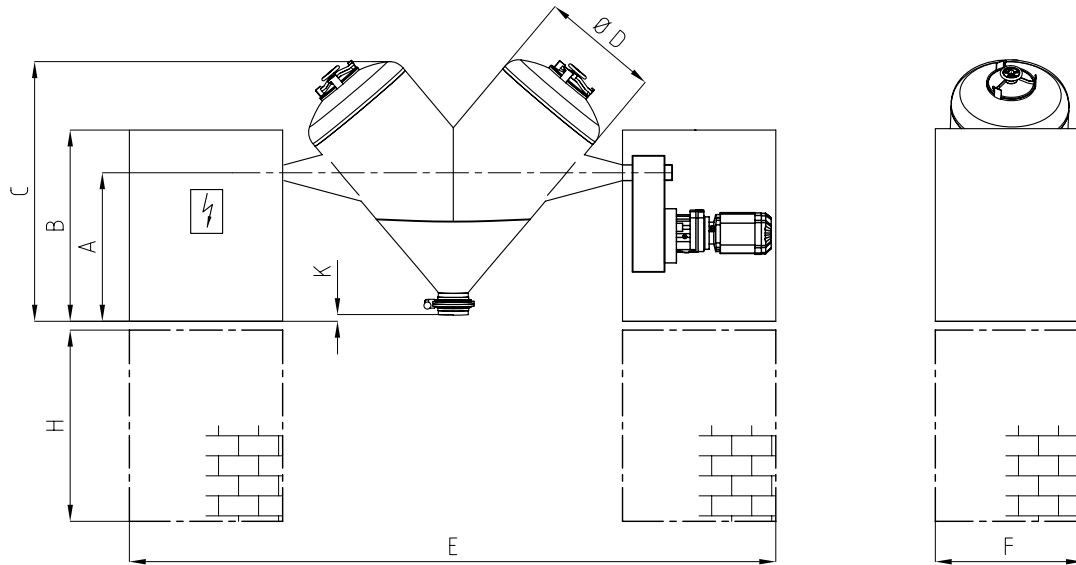
GENERAL DIMENSIONS



Model	Total Volume (litres)	Useful Volume (litres)	A	B	C	ØD	E	F	G	K	kW*	Weight (kg)
MV50	50	25	1040	1400	2210	300	1950	500	2500	600	0,37	450
MV100	100	50	1010	1400	2210	375	2100	500	2500	600	0,55	800
MV250	250	125	1075	1500	2260	500	3040	750	2750	650	1,5	995
MV400	400	200	1075	1550	2360	590	3210	900	3300	650	1,5	1050
MV600	600	300	1072	1550	2480	675	3480	1000	3400	650	1,5	1158
MV1000	1000	500	1500	2000	2600	800	3700	1000	4000	760	2,2	1320

* Geared motor

GENERAL DIMENSIONS

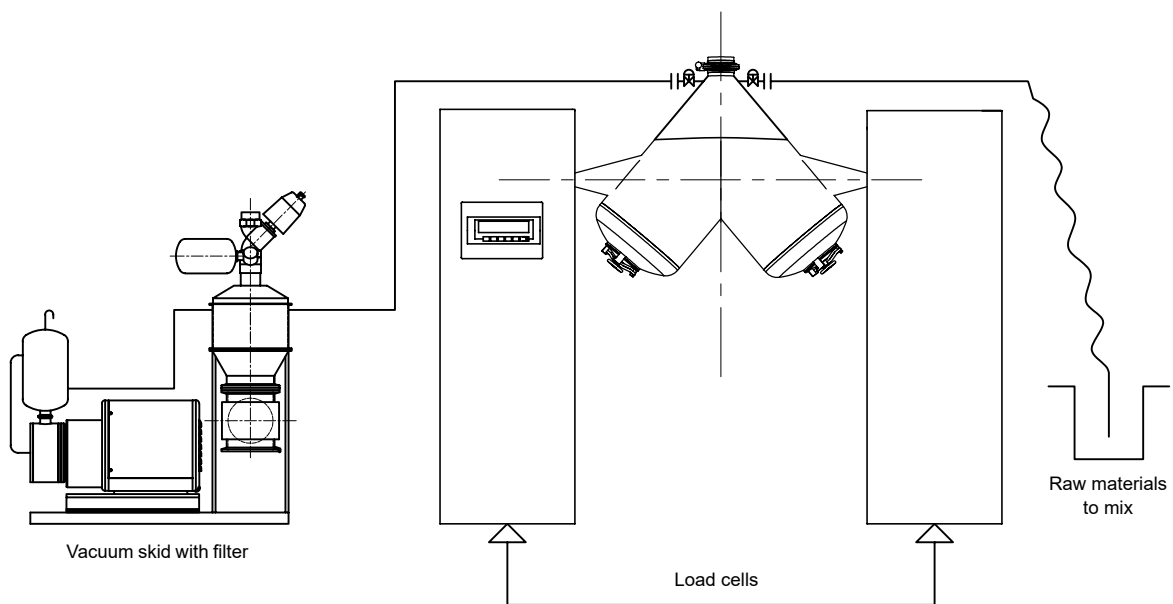


Model	Total Volume (litres)	Useful Volume (litres)	A	B	C	ØD	E	F	H	K	kW*	Weight (kg)
MV1400	1400	700	1540	1800	2400	850	3800	1000	as requested	0	3	1450
MV2000	2000	1000	1540	2100	2800	1000	3900	1000		0	3	1880
MV3300	3300	1650	1560	2400	3200	1150	4200	1000		0	4	2100
MV4200	4200	2100	1560	2500	3400	1250	4500	1000		0	5,5	2500

* Geared motor

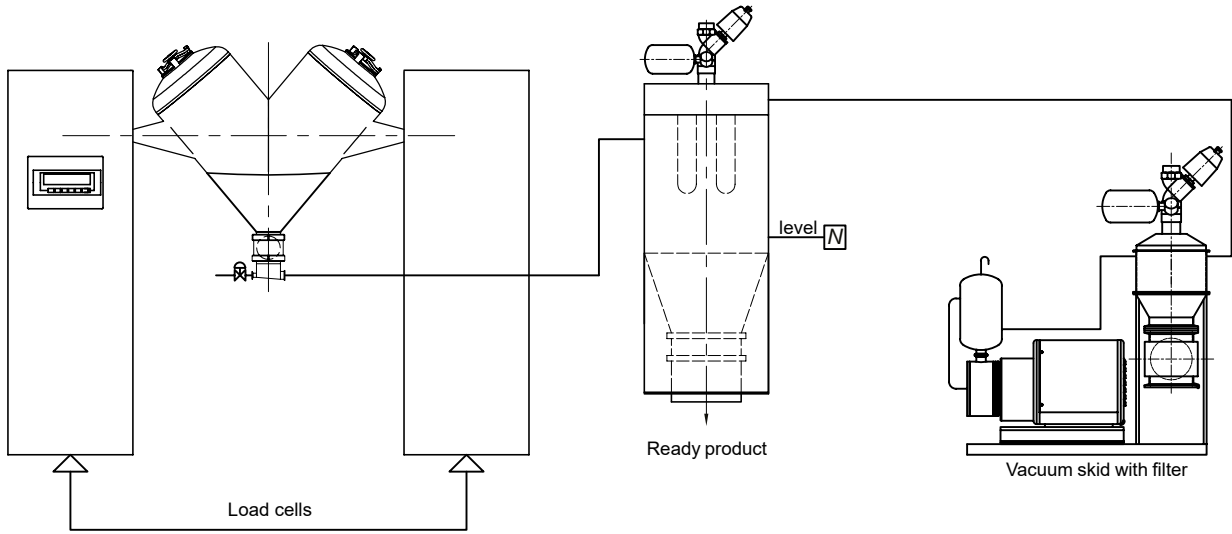
OPTIONS

Vacuum loading system

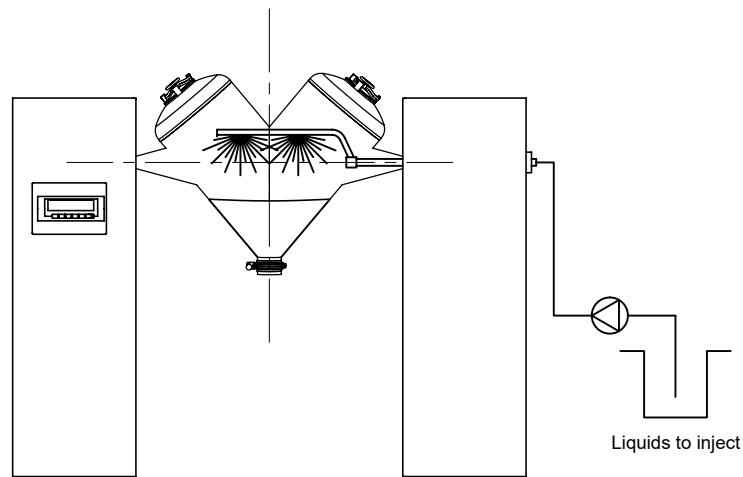


OPTIONS

Vacuum discharge system



Liquids injection system



Loading and/or discharge system by gravity, with hermetic retractable bellows

