

STRUCTURE



High Speed Mixer

Best Solution for Mixing Application

Sejong Pharmatech has launched a new SM series high-speed mixer.

The new high-speed mixer has broadened the range of choices for customers from a lab specific SM-5 to a large sized SM-600 and designed to meet various GMP standards in different countries.

Stylish external design fashioned in stainless steel 316L also fully satisfies customers.

The internal vessel is polished to ensure smooth movement of ingredients while enabling various processes including mixing, assembling, micro-granules, granules, etc. in a short time to significantly improve productivity.

Also, with Sejong Pharmatech's independent new technology, it can carry out automatic cleaning of the internal vessel upon completion of tasks by adopting a new automatic cleaner, or C.I.P. system.



Vessel Double-Jacket

Vessel Double-Jacket is optional.

It has a double-jacket vessel, not a single one, to provide warm water inside the jacket to produce dry powder. In the vessel jacket part, as there are Inlet and Outlet ports for warm water, it is connected with a separate water heater.

Exclude Model

• SM-5C



Air and Electrical Device Box Separation

By separating the electric and air components inside the equipment, it is designed to facilitate maintenance and repair of an internal part of the machine.

The left air box has an embedded air filter regulator and air solenoid valve inside whereas the right box holds electric parts such as PLC and inverter to significantly ameliorate repair and maintenance and sealing.

Furthermore, as it has sealing packing on the box, it prevents water from flowing in during mixer cleaning.



HMI System

Newly developed HMI system based on the Windows system is designed to allow users to use and operate without any difficulty.

Also, it acquired a 21CFR Part 11 approval for the U.S. FDA with PLC or HMI programming to allow various functions such as storing and bringing in mixing data, etc. and printing them. It is also compatible with other devices.

The biggest advantage of Sejong Pharmatech's HMI system is in that it can easily transmit data to Supervisory Control and Data Acquisition (SCADA System).

STRUCTURE



Automatic C.I.P System

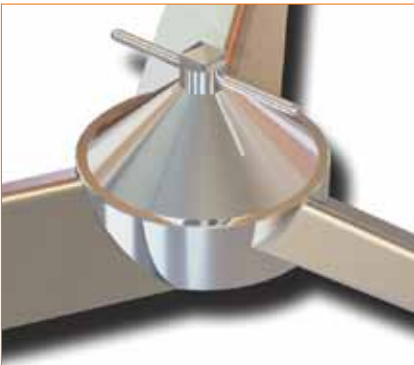
The newly developed CIP system offers excellent cleaning performance. It allows you to choose from three types of water including cool water, warm water, and purified water as well as detergents in the order that the user has specified and is programmed to control the time for water supply. Also it has a touch screen on the upper part of the system to allow the CIP system to work independently. In particular, the high-pressure CIP pump will ensure remarkable cleaning capability that completely cleans and drains agitator, chopper, vessel, discharge damper, etc.

Exclude Model
• SM-5C ~ SM-50



Automatic Binder Spray System

The automatic binder spray system is adopted with a view to solve the problem of inconvenience during ingredient input into the manual binder and thus, ensure easier binder input (option). In addition, the new automatic binder spray system can select from peristaltic pump, spray gun, diaphragm pump, or nozzle, depending on the viscosity of binder's liquid. Plus, all binder liquid tanks are provided in a single type, thus allowing additional supply.



Agitator Impeller Lifting System

As part of the automatic CIP cleaning function, it is designed to raise the specifically mounted impeller to clean the air seal part of agitator impeller after completing the mixing process. Also, it helps to inspect the agitator air seal part after cleaning, it serves to perfectly block any cross pollution of the internal part of the vessel.

Exclude Model
• SM-5C ~ SM-50



Rubber Mount

Rubber mount will be supplied to absorb vibration

Touch Screen



Operation

This screen is to configure production conditions, system environments and all information on operation including mixing system operation and stop, speed modulation, etc.



Monitoring

This screen displays the overall environment in which the machine runs and various machine operation status and data values by touch screen.



Safety Message Function

This screen allows users to check a particular part if the alarm rang when a problem occurred during mixing process. It also gives solutions for the problems.



Reporting

Show various data on logging, products, alarm, machine, operation, and files while demonstrating speed of agitator/ chopper, current value, etc. in the form of graphs.



Machine Configuration Function

A function to configure various operational functions suitable for different machine types. It allows users to configure a range of features including machine type, account-management, system language, PLC setting, DB path setting, production operation report saving path, etc. This configuration function is only accessible to the manufacturer whereas operators are only able to reference.



Supervising Function

A supervising function that can assign operating rights on equipment according to different level of production operators



C.I.P. Cycle

A screen for configuring data on washing process, it allows you to input, save and print out a washing recipe for a product.



Mixing Cycle

A screen for configuring mixing data, it allows you to set up the name, manufacturer's serial number and mode, save and print out a manufacturing recipe for a product.

※ The above contents are subject to change without prior notice for the technical development.

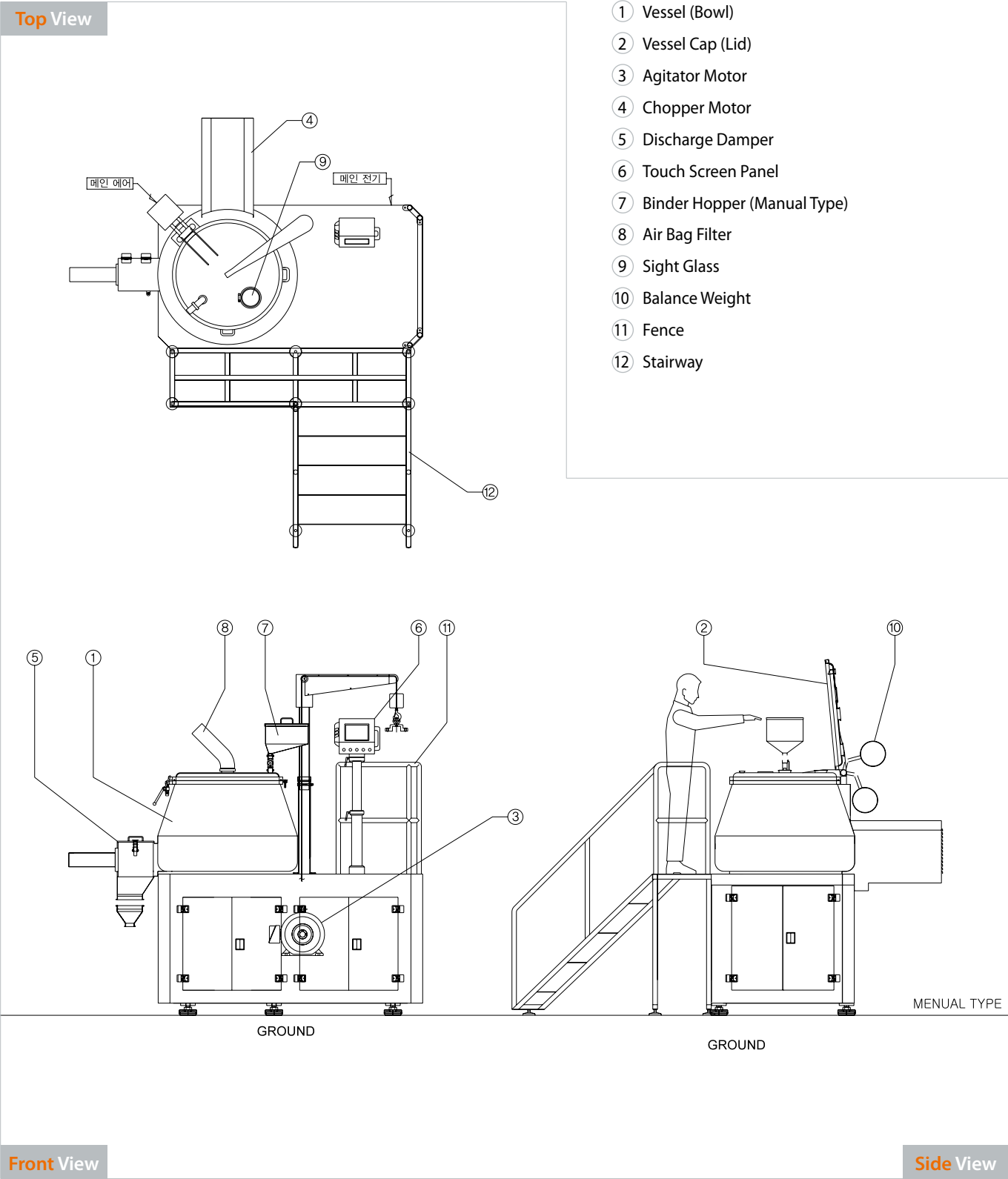
Product Specification

SM-100 ~ SM-600							
Description		Model					
		SM-100	SM-200	SM-300	SM-400	SM-500	SM-600
Full Capacity (ℓ)		240	455	670	850	1,050	1,280
Work Capacity (Density=0.7)	(ℓ / Batch)	100	200	300	400	500	600
	(kg / Batch)	70	140	210	280	350	420
Agitator	Drive Motor (kW)	11.0	15.0	22.0	30.0	37.0	45.0
	Speed (R.P.M)	5~120	5~120	5~105	5~90	5~80	5~75
Chopper	Drive Motor (kW)	5.5	7.5	11.0	11.0	11.0	18.5
	Speed (R.P.M)	50 ~ 3,400					
Compressed Air Consumption (ℓ/min)		200				400	
Total Electric Power (kW)		16.5	22.5	33.0	41.0	52.0	63.5
Binder Spray System (Option)	Spray Gun Type	○					
	Nozzle Type	○					
Binder Spray System Pump (Option)	Spray Gun Type	Perstaltic Pump					
	Nozzle Type	Diaphragm Pump					
Spray Gun Quantity (ea)		1					
Solution Tank for Binder Spray System (ℓ)		100				150	200
CIP System (Option)		○					
Powder Loading System (Option)		○					
Vessel Jacket (Option)		○					
Control Type (Option)	Standard	○					
	H.M.I (21CFR Part 11)	○					
Dimension (mm)	W	2,650	2,860	3,000	3,148	3,199	3,580
	D	1,458	1,651	1,956	2,119	2,222	1,614
	H	2,632	2,762	2,898	2,979	2,985	3,053
Weight (kg)		2,200	2,750	3,195	3,720	4,350	4,900

※ The above work capacity(kg) is calculated at a density of 0.7 and can vary depending on the density.
※ The above specification is subject to change without prior notice for the technical development.
※ Option : Impeller Float Type.

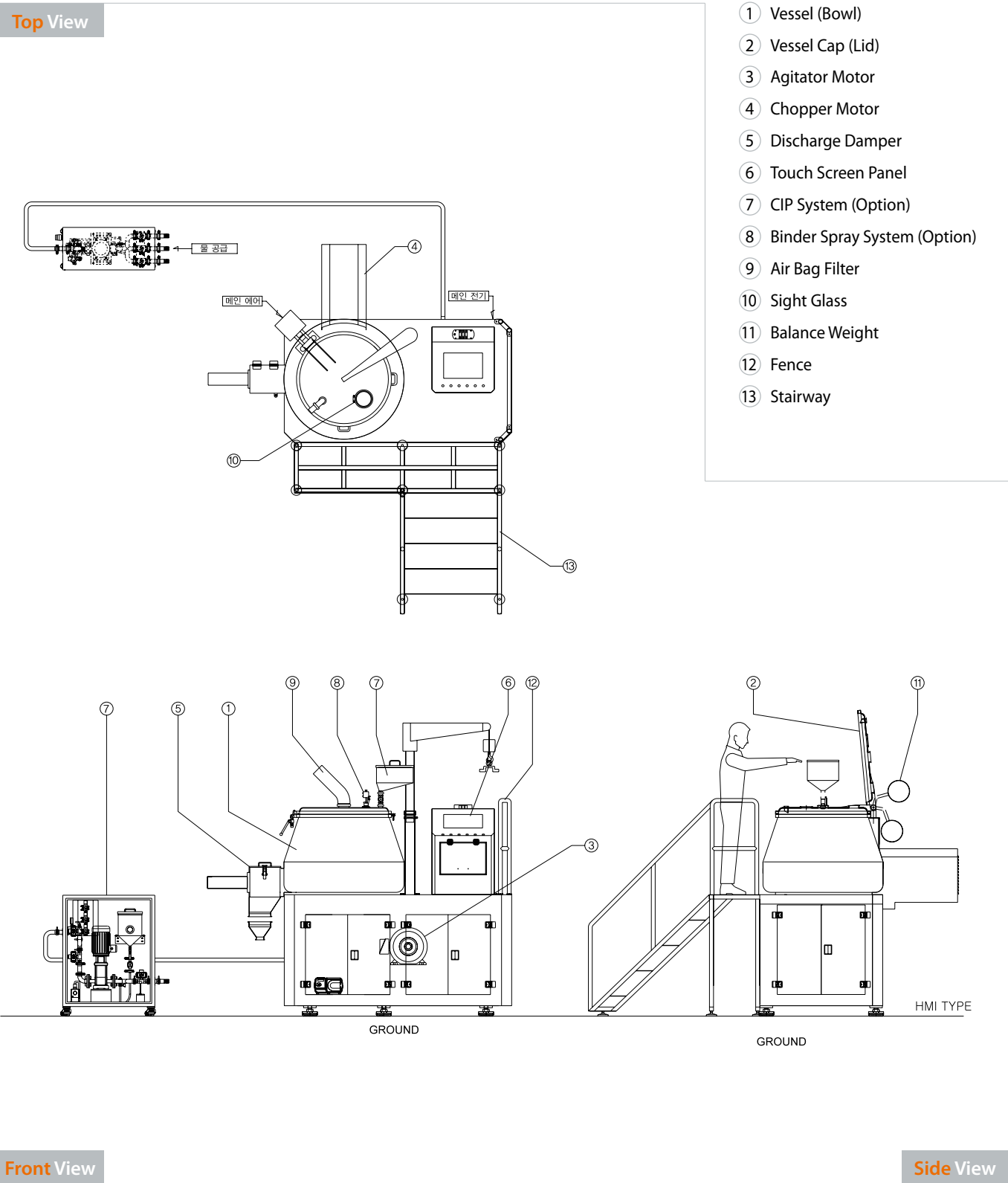
Dimensions with Layout

Standard Type SM-200



Dimensions with Layout

HMI Type SM-300



Machine Details



- Standard

○ Option

— Not Applicable

SM Series					
SM-100	SM-200	SM-300	SM-400	SM-500	SM-600
●	●	●	●	●	●
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
1					
○	○	○	○	○	○
○	○	○	○	○	○
●	●	●	●	●	●
○	○	○	○	○	○
○	○	●	●	●	●
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
○	○	○	○	○	○
2,650	2,860	3,000	3,148	3,119	3,580
1,458	1,651	1,956	2,119	2,222	1,614
2,632	2,762	2,898	2,979	2,985	3,053
2,200	2,750	3,195	3,720	4,350	4,900

200 / 220 / 380 / 400 / 415 / 440 / 480 V, 50 / 60 Hz, 3Phase

※ The above specification is subject to change without prior notice for the technical development.
※ Option : Impeller Float Type (Excluding SM-5C ~ SM-50)