### Product Specification

Automated Capsule Filling Machine

#### SF-120N/135N/150N

<table>
<thead>
<tr>
<th>Description</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SF-120N</td>
</tr>
<tr>
<td>Number of Hole (Hole)</td>
<td>16</td>
</tr>
<tr>
<td>Max. Output capsule (Caps/Hour) : Powder</td>
<td>120,000</td>
</tr>
<tr>
<td>Revolution of unit (unit/min)</td>
<td>125</td>
</tr>
<tr>
<td>Range of capsule size</td>
<td>#00˜#4 / #000, #5 (Option)</td>
</tr>
<tr>
<td>Main motor power (kW)</td>
<td>4</td>
</tr>
<tr>
<td>Dimension (mm)</td>
<td>D 2,050 (3,040) X W 1,850 (2,650) X H 2,380 (2,500)</td>
</tr>
<tr>
<td>Hopper Volume (ℓ)</td>
<td>Capsule Hopper</td>
</tr>
<tr>
<td></td>
<td>Powder Hopper</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>2,500</td>
</tr>
<tr>
<td>Power Supply Data</td>
<td>220 / 380 / 400 / 415 / 440 V, 50 / 60Hz, 3Phase</td>
</tr>
<tr>
<td>Compressed air</td>
<td>6kg / cfm, 1,000L / min</td>
</tr>
</tbody>
</table>

※ Production capacity and accuracy would be slightly different depending on the material and specification of powder, pellet and tablet.
※ The above specification is subject to change without prior notice for the technical development.
Quality Assurance

Sejong Pharmatech is confident in its own best quality. Sejong Pharmatech is the enterprise that certificated ISO 9001, QMS (Quality Management System), and ISO 14001, EMS (Environment Management System) from International Organization for Standardization. Sejong Pharmatech provides the products which are appropriate for GMP principle of each country. All production equipment of Sejong Pharmatech obtained CE mark and realized safety of products. Also, Sejong Pharmatech supplies the best products by various test and performance examination at the own Tech-Centre before all manufactured products are delivered to the customers.

The aims of this quality assurance system are cost reduction and improvement of productivity by providing the highest quality equipment for our customers to manufacture the best products at the same time. In addition, all manufacturing devices of Sejong Pharmatech are made by considering the most necessary part in pharmaceutical industry and engineering experts of Sejong Pharmatech satisfy customers’ needs with impeccable technical service.

Sejong Pharmatech has advanced technology for the development and production of a broad range of pharmaceutical machines to enable Sejong Pharmatech to serve the global pharmaceutical market.
All capsule-filling machines in Sejong Pharmatech are operated and controlled via a 15-inch large touch screen mounted on the operation panel. Also, it is designed to ensure all data on product manufacturing are stored, saved and printed. With an alarm function, you can promptly handle any malfunction or problem. As it is designed to fit to the eye level of the user, it makes it easier to operate the equipment. An alarm lamp on the front of the machine keeps users informed of any problems in key components and helps users to promptly respond to any machinery failure or problems.

By adopting an index and cam-drive method, it significantly reduces noise and vibration with excellent abrasion resistance. Through rotary motion delivered from a cam shaft, it transfers capsules to maintain each part's function.
Able to adjust the thickness of pellet blocks so that it allows accurate measuring of drug weight that is inserted into the capsule. Also, as it is designed in a simple structure for easy disassembly and assembly of the pellet blocks, it will significantly reduce the setting time.

Pellets and Tablet Device

Reduced Weight Variation in Powder Wiper

This device is designed to reduce weight variation of powder that is actually provided to capsules by blocking any powder leakage from a gap as the powder wiper is completely sealed with a dosing disk.

Powder Supply and Tamping

The powder hopper will automatically move up and down, which can be controlled on the touch screen. It is designed in a structure that allows operators to stop at any location necessary. In addition, as it adopts a multi-level compression method, it can carry out compression molding on filling powder in five stages before inserting them into a capsule. Thus, it can accurately control drug weight in the capsule. Reinforced dust-collecting function of the tamping part minimizes the likelihood of powder scattering in the machine.
We have strengthened a function to accurately discharge, filter and separately store any capsules with a cap and body that are not divided though the up and down movement of ejection pin and air block.

**Faulty Capsule Ejection**

**Capsule Orientation and Separation**

Designed to allow easy disassembly and assembly of change parts. You can easily check the remaining capsules with the naked eye. Also it is designed and developed to ensure easy collection.

If there is a problem in capsules provided to the feeder, i.e. stuck capsules, overlapping, etc., it is designed to solve the problem automatically by disassembled device (Option).

**Strengthened Filling Efficiency of Powder Duct**

As it minimizes the gap with a dosing disk, by prolonging the length of powder duct, it raises filling efficiency to significantly improve the collection rate of scattered powder. Also, with improved filling efficiency, it minimizes powder leaking into the machine during dosing disk rotation.
Using a low pressure vacuum pump, it is designed to have a comparatively small air consumption rather than a large intake volume and is able to assure the reliability of vacuum level in low and inconsistent pressure over 4 kilo. Also, as it is designed to ensure easy filter cleaning and replacement, it is excellent in maintenance.

Use of Low Pressure Vacuum Pump

Maximum Dosing Disk Thickness

<table>
<thead>
<tr>
<th>Capsule Size</th>
<th>#000</th>
<th>#00</th>
<th>#0el</th>
<th>#0</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Dosing Disk Thickness (mm)</td>
<td>25.3</td>
<td>23.8</td>
<td>23.8</td>
<td>21.8</td>
<td>20</td>
<td>17.5</td>
<td>16.5</td>
<td>14.5</td>
<td>10.6</td>
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</tbody>
</table>

Capsule Closing, Discharge, Cleaning

We have reinforced the dust-colleting function on the capsule closing, discharge, and cleaning part to minimize the powder scattering in the machine.
Various Filling & Combination in Capsules

This machine can fill various powder, pellet, tablets into capsules while filling various capsules such as pellet powder capsules, and tablet powder capsules. (Excluding SF-150N)

※ In case of tablet filling, reflected difference result in supply method by raw materials shape and filling quantity.
※ Please discuss with Sejong Pharmatech for before the tablet filling production.

Production capacity and accuracy would be slightly different depending on the material and specification of powder, pellet and tablet.
Automatic Capsule Filling Machine

Touch Screen

Operation
Operation screen enables you to configure all information on machine operation including RPM, production amount, the running of other option items, etc.

Dejamming
This screen serves to automatically solve the problem of failing to provide capsules to the feeder.

Production Management Function
This screen displays all necessary parameters and system environments for production and allows you to set up the name, manufacturer’s serial number and mode for products and to input, save and print out a manufacturing recipe for a product.

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

Reporting Function
Function to enable users to check various production data by different products, manufacture’s serial numbers, users, etc.

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