







Full-Automatic Capsule Filling Machine

Qualicaps Co. provides domestic and foreign users with high quality hard gelatin capsules, PEG capsules, and HPMC capsules.

Our high-speed fully-automatic capsule filling machine developed by Qualicaps has attained high reputation domestically and internationally, so we developed F-series for laboratory for study of drug formulation and manufacturing investigational new drugs.



Name of each partCapsule hopper

- ② Oil hopper
- ③ Operation switch panel
- ④ Rectifier roller
- ⑤ Pumping box
- ⑥ Cap disk
 - (insertion of cap bushing)
- ⑦ Body bushing
- ⑧ Filling nozzle
- 9 Joining
- 10 Production discharge chute
- ① Layer 1 filling unit (Liquid filling)

• This filling machine enables filling of drugs of every dosage form and multilayer filling.

It can fill all the samples for studying drug formulation such as powder, 3-layer granule, oil, pasty liquid, and tablet, and all the samples for clinical use. It can also fill combined formulations of incompatible drugs such as powder and granule 2-layer.

• This filler has realized easy cleaning and exchange of size.

Because all the drug contact portions of the unit can be overhauled and cleaned, excellent results of cleaning validation can be obtained. Use of the bushing system improved reproducibility/ease of assembly work markedly.

This filling machine enables high-precision filling even when only little quantity of raw materials is to be filled.

It can perform high-precision filling by dividing into 12 sections and intermittent driving, and can perform speed change easily.





Rectification and Transportation of Capsule

This filler is patented in 10 countries worldwide, and is adopted for all the equipment we developed and attains high reputation.

The filler consists of a Rectifier with excellent accuracy of division, cap bushing, and body bushing, and it can be disassembled/assembled easily and precisely with the positioning pin.



2 Separation of capsules

Each capsule body is seated in the body disc by a vacuum shoe equipped with an O-ring. This O-ring serves as a shock-absorber preventing cracking of the capsule shoulders as it is placed in the bottom of capsule disc by way of vaccum.



③ Feed and filling of Drug Substances

The filler can fill a wide variety of oily/liquid drug products including solid/semisolid drugs by setting the purpose-built unit. It can control the temperature of liquid drug products and the discharge rate with ease.



4 Powder filling (layer 1 filling section)

This filler adopts the die-compress method, a general filling method, which enables filling capsules with minute quantities of drugs. The pressure shaped slag powder on the weight control disk is filled in capsule bodies after pushing up the shaped slag powder from beneath, scraping excessive powder away, and controlling the weight.



6 Granule filling

The filler adopts the 2-layer filling unit as an individually controllable mechanism by incorporating a volume-controllable square between the upper and lower shutters.

It enables multi-layer filling of granule up to 3 layers. It has realized combination filling of a huge variety of granules, for example, slow-release formulation, drug products dissolving in the stomach (general products), enteric coating drug products, incompatible drugs, and segregated granules.



6 Tablet filling

The filler can count plural mini tablets and fill a hard capsule with them, and also can fill a capsule with a combination of tablets such as fast-dissolving tablets and slow-release tablets by setting the purpose-build unit.



Replacement of filling unit (layer 1 filling section)

The filling unit on two rails can be removed easily by loosening the fixing bolts and pulling the unit out. Changing of the size or overhaul cleaning can be performed more easily by moving the filling unit to a distant position.



O Joining

The filler pushes up a capsule body with the joining pusher and houses it in the joining block, and then pushes up the body and the block synchronously to connect a cap to the body.

Each cavity dimension is determined based on the know-how we have accumulated as a hard capsule manufacturer for past many years and the leadingedge processing technology. The harmonized combination of the knowledge and the technology allows prevention of connection failures such as peel and dent.

Specifications

- Dimension : 775 mm wide \times 685 mm deep \times 1,740 mm (excluding the hopper)
- Footprint : 5.5 m² (2,200 mm wide × 2,400 mm)
- Weight : 770 kg
- Production capacity: 1,000 capsules to 2,600 capsules/hour
- Target capsule sizes: Sizes 000, 00, 0, 1, 2, 3, 4, 5
- Utility: Power source 2φ phase, AC200 to 220 V, 50/60 Hz, 2.0 KVA Vacuum
 For transferring capsules and orientational control 1.0 Kpa, 1.5 m³/min For separating capsules 10.0 Kpa, 1.0 m³/min
 For a cleaner 1.0 Kpa, 1.0 m³/min
 - Compressed air 0.5 Mpa, 0.3 m³/min
- Related facilities: S-15 capsule sealing machine
 - AWC-L automatic weight controller (system with capsule joined length measuring device)
 - CWI-40 capsule/tablet weight inspection machine
 - CES-50 capsule inspection machine



GLOBAL NETWORK

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