

CENTURY HENGYUAN · Qingdao Century Hengyuan Machinery Co., Ltd.

Empty Hard Capsules & Capsule-Making Machines

Product Catalogue 2026

Empty capsules
Gelatin, HPMC, pullulan, enteric; custom colours and printing sizes 000–5

Capsule-making machines
Automatic production lines, auxiliary machines and spares

EMPTY CAPSULES

Four Capsule Types

Choose the shell material by fill, market and regulations; sizes, colours and printing can be customised.



Hard Gelatin Capsules

Pharmaceutical grade · Printable · Clear / opaque

Made from pharmaceutical-grade gelatin. Cost-effective and runs reliably on filling machines — the most widely used hard capsule.

Material	Pharmaceutical gelatin (bovine hide and bone)
Sizes	000 – 5
For	Powders, granules, pellets



HPMC Vegetarian Capsules

Plant-based · Low moisture · Vegetarian

Made from hypromellose (HPMC). Animal-free with low moisture content — suited to hygroscopic fills and to vegetarian, halal and kosher markets.

Material	Hypromellose (HPMC) from wood pulp and cotton linters
Sizes	000 – 5
For	Supplements, herbal extracts, probiotics, moisture-sensitive APIs



Pullulan Capsules

Fermented · High clarity · Oxygen barrier

Made from pullulan, a polysaccharide produced by fermentation. Very clear with a strong oxygen barrier — popular for premium supplements and oxidation-sensitive fills.

Material	Pullulan
Sizes	000 – 5
For	Premium supplements, oxidation-sensitive ingredients



Enteric & Acid-Resistant Capsules

Acid-resistant · Delayed release

Acid resistance is built into the shell rather than added by coating the filled capsule. For ingredients that stomach acid degrades or that irritate the stomach.

Material	HPMC-based acid-resistant formulation
Sizes	000 – 5
For	Probiotics, enzymes, acid-labile or stomach-irritating ingredients

BEFORE YOU CHOOSE

Three Things to Check Before Buying

These affect drug registration, dissolution and export compliance — please confirm them with us before ordering.

HPMC Vegetarian Capsules

HPMC capsules come in two kinds — for a drug product, check which one you are buying. One adds a gelling agent such as carrageenan or gellan gum to help the film set; the other contains no gelling agent and sets by thermal gelation on heated pins. Capsules with a gelling agent can open more slowly than gelatin in acidic media or in dissolution media containing potassium ions; thermally gelled capsules are less affected by pH and ionic strength. If you are moving a marketed drug from gelatin to HPMC, run comparative dissolution on your own formulation and file the change as your registration requires. Our HPMC capsules are made by the cold-setting process and contain no titanium dioxide.

Enteric & Acid-Resistant Capsules

Enteric and acid-resistant are not the same — check which one you are buying. Enteric capsules must pass the pharmacopoeial enteric disintegration test; under the Chinese Pharmacopoeia, no cracking or opening after 2 hours in hydrochloric acid solution (9→1000, about 0.1 M), then complete disintegration within 1 hour in simulated intestinal fluid (check the current edition). Acid-resistant capsules only delay opening in the stomach, do not meet that test, and are mostly used in supplements. For a drug product, whether the shell can replace an enteric coating has to be shown by dissolution testing on your own formulation. We currently supply acid-resistant capsules, tested to our in-house standard and mainly used in supplements; enteric capsules for medicines can be sampled and verified on your formulation.

Titanium dioxide (E171)

Supplements for the EU need titanium dioxide-free capsules. Opaque and white capsules have traditionally used titanium dioxide as the opacifier. Since August 2022 the EU has banned it in food, food supplements included; medicines are outside that ban — check the current EU rules. When you ask for a quote, tell us where the product will be sold and whether it is a medicine or a supplement. Our HPMC capsules contain no titanium dioxide.

Capsule Size Reference

Fill ≈ capsule volume × bulk density of the fill. “Approx. fill” assumes 0.8 g/ml; the capsules page on our website has a calculator that suggests a size from your dose.

Size	Volume (ml)	Closed length (mm)	Cap OD (mm)	Body OD (mm)	Gelatin weight (mg)	Approx. fill*
000	1.37	26.1	9.91	9.55	158 ± 10	~1100 mg
00	0.90	23.4	8.56	8.23	123 ± 7	~720 mg
0	0.68	21.6	7.64	7.35	99 ± 6	~540 mg
1	0.48	19.4	6.96	6.63	78 ± 5	~380 mg
2	0.36	17.6	6.39	6.12	61 ± 4	~290 mg
3	0.27	15.7	5.85	5.60	48 ± 3	~220 mg
4	0.20	14.3	5.33	5.08	38 ± 3	~160 mg
5	0.13	11.1	4.91	4.68	28 ± 2	~100 mg

* Approx. fill assumes a powder density of 0.8 g/ml; actual fill depends on the formulation. Dimensions are industry reference values; length tolerance is typically ±0.3 mm (±0.4 mm for size 5). Our in-house specification follows this table; the full specification is available on request.

Colours & Printing

Cap and body colours are chosen separately — clear, translucent or opaque — and can be matched to Pantone references or samples. Axial or radial printing of brand names, logos or codes.

Clear · White · Yellow · Orange · Red

Green · Blue · Purple · Black · Two-tone

Swatches are indicative; final colours are approved on physical samples. Minimum order 5,000,000 capsules, in any colour with any logo.



ORDERING

MOQ, Lead Time & Packing

The formal quotation applies.

Minimum order

Standard capsules	5,000,000 capsules
Custom colour / print	5,000,000 capsules (any colour, any logo)

Lead time

In stock	within 10 days of payment
Custom orders	within 30 days of the deposit

Free samples

Standard sizes & colours	Free, up to 1,000 capsules; sent within 3 days of confirmation
Shipping	paid by the buyer

Packing

Packing	Double medical PE bags in a 5-ply carton
Capsules per carton	e.g. about 100,000 per carton for size 0; other sizes on the quotation

Storage & documents

Storage	Sealed, 10–25 °C and 35–65% RH (Chinese Pharmacopoeia storage condition for gelatin hard capsules); do not refrigerate. Our specification: same as the pharmacopoeia condition
Shelf life	3 years, unopened original packing stored as above
With each batch	Certificate of analysis (CoA) (with every batch)

Payment & shipping

Payment	T/T, 30% deposit, balance before shipment
Price terms	EXW, FOB Qingdao, CIF

Quality Documents & Certifications

Available on request with your quote.

GMP
Good Manufacturing Practice
Certificate copy

ISO 9001
Quality management system
Certificate copy

Halal
Halal certification: gelatin, HPMC and enteric capsules
Certificate copy

NSF GMP
NSF/ANSI 173 GMP registration
Certificate copy

US DMF
Type IV Drug Master File (excipients)
DMF no. and Letter of Authorization

Kosher
Kosher certification
Certificate copy

CE
EU CE marking for our capsule-making machines
EU Declaration of Conformity

Fully Automatic Hard Capsule Production Line



Capsule sizes	00–5 (change pin bars to change size)
Output	1.5–3.3 million a day, by model
Materials	Gelatin / HPMC
Line dimensions	about 18.3 × 2 × 2.65 m (length can be customised)
Total power	40–55 kW, 380 V three-phase
Control	Motion controller with full servo drive, touch-screen HMI, remote monitoring
Operators	2–3 per shift

Process

1. Gel preparation
Dissolve gelatin or HPMC, add colourants and opacifier, de-aerate

2. Pin dipping
Stainless pins dip into the gel; caps and bodies form separately

3. Spinning & setting
Pins rotate for an even wall while the film sets (gelatin by cooling; HPMC depending on the process)

4. Drying
Drying chambers (upper and lower kilns) with controlled temperature and humidity

5. Stripping & cutting
Caps and bodies stripped off and trimmed to length

6. Joining
Caps and bodies pre-locked into complete capsules

7. Inspection & printing
Defects rejected; printing if required

8. Packing
Counted, packed, sampled and released

Auxiliary Machines

Gel Melting System
Melting tanks, vacuum de-aeration and heated holding to feed the line.

Mould Pins & Pin Bars
Stainless steel pins and bars for each capsule size, sold as spares.

Capsule Printing Machine
Prints brand names or codes, axial or radial.

Capsule Inspection & Sorting
Vision inspection rejects broken, dented or off-colour capsules.

Drying & HVAC Units
Stable temperature, humidity and airflow for the drying chambers.

Spares & Upgrades
Wear parts, size change parts and retrofits for existing lines.

MACHINE TERMS

Delivery, Acceptance, Installation & Warranty

The formal quotation and contract apply.

Delivery time

Complete line	3–4 months from contract to shipment
Auxiliary machines / spares	4–6 weeks

Factory acceptance

Before shipment	Factory acceptance test (FAT) (done for every line before shipment)
Attend in person	Yes — book two weeks ahead

Installation & training

Installation	On-site installation and commissioning by our engineers (included in the quotation)
Training	Process and operator training (on-site operation and process training, typically 7–10 days)
Travel & lodging	paid by the buyer

Warranty & after-sales

Warranty	12 months
Spares & remote support	one year of wear parts supplied with the line; diagnosis by video or remote monitoring

Payment & pricing

Payment terms	30% on contract, 60% before shipment, 10% after acceptance
Price terms	EXW, FOB Qingdao, CIF

Power & certification

Voltage / frequency	380 V / 50 Hz three-phase as standard; built to your local supply on request
CE marking	EU Declaration of Conformity available

CONTACT

Quotes, Samples, Line Proposals, Factory Visits

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