

Shanghai Huabao Biological Technology Co., Ltd.

Cigarette Capsules

1 Introduction

Cigarette capsules use wrapping materials (wall) to enwrap flavors and fragrances (core) in a sealed capsule, which is then implanted in the cigarette filter rods. During smoking, the core material is released to make a flavored experience when the capsule is cracked.

Cigarette capsules are a new technological approach for cigarette aromatization and moisturizing. It is an effective support for "perceivable" in category construction and a means to realize brand rejuvenation and individualization for cigarettes. Nowadays, the addition of capsules has become a new hot spot in Chinese cigarettes.



2 Applications

At present, there are two main types of application for cigarette rods with capsules: single-capsule and double-capsule rods.

The following are diagrams for the single-capsule rods:

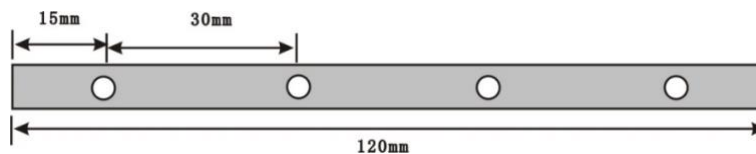


Figure 1. 120mm one-cut four-capsule filter rod



Figure 2. 120mm one-cut six-capsule filter rod

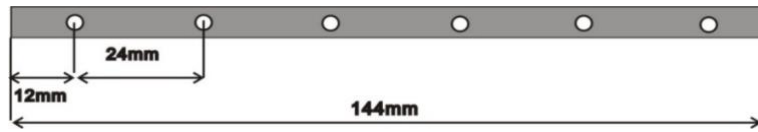


Figure 3. 144mm one-cut six-capsule filter rod

The following is a simplified diagram of the double-capsule and double-flavor composite cigarette rod:

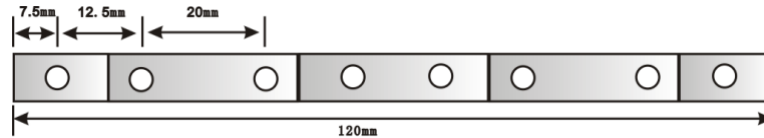


Figure 4. 120mm double-capsule double-flavor filter rod (double-capsule double-flavor four-in-one)

The biggest value of the double-capsule filter rod is that the tastes of the two capsules are different. During smoking, you can enjoy one taste while keeping both capsules intact. You can enjoy a second taste after cracking one capsule, and a third taste when the second capsule is cracked. After the two flavors meet and blend with each other, the fourth flavor will appear. If one of the capsules is for flavoring while the other is for moisturizing, then the functions of both flavoring and moisturizing are perfectly combined.

With the technological development of the special filter rods industry and the advent of new market demand, it is believed that more forms of capsule filter rods, such as three-capsule filter rods, will appear in the future.

3 Capsule Flavors

Huabao's capsule products currently come in 6 major aroma categories, including floral, fruity, wine, medicinal, tea, and signature aromas.

Floral	Fruity	Wine	Medicinal	Tea	Signature
Lavender	Sweet orange	Brandy	Ginseng	Tieguanyin	Fresh Sweet
Rose	Green lemon	Rum	Wolfberry	Oolong tea	Tobacco
White Orchids	Apple	Whiskey	Yam	Pu'er tea	Strong Mint
Peony	Pineapple	Wine	Saussurea involucrata	Green tea	Yogurt
Camellia	Date	Sorghum Wine	Dendrobium	Tea sweetness	Chestnut
Jasmine	Blue Berry	Wuliangye	Cinnamon	Longjing	Chocolate
Vanilla	Peach	Moutai	Chuanbei Pipa	Black tea	Coffee

Birchleaf Flower	Pear Grape	Yanghe	Dried tangerine peel	Dendrobium + Angelica	Red Bull
Chrysanthemum	Litchi	Fenjiu	Gynostemma Pentaphylla	Dendrobium + Astragalus	Tree Moss
Osmanthus	Durian	Xifeng	Royal Jelly	Wuyeshen	Coke
Corypha	Grapefruit	Louis XIII	Erberry		Glutinous Rice
	Papaya	Chhaang			Sandalwood

Note: Huabao's capsule products come in more than 100 kinds of flavor, not limited to the above listed.

Table 1 Specific aromas of various categories

4 Capsule Specifications

For Regular Cigarettes

- Grain Diameter (Ø): 3.5~3.8mm
- Weight (mg/capsule): 25±1.5mg
- Flavor (mL/capsule): 23±1.5mg
- Amount of Capsules/kg: circa 40000

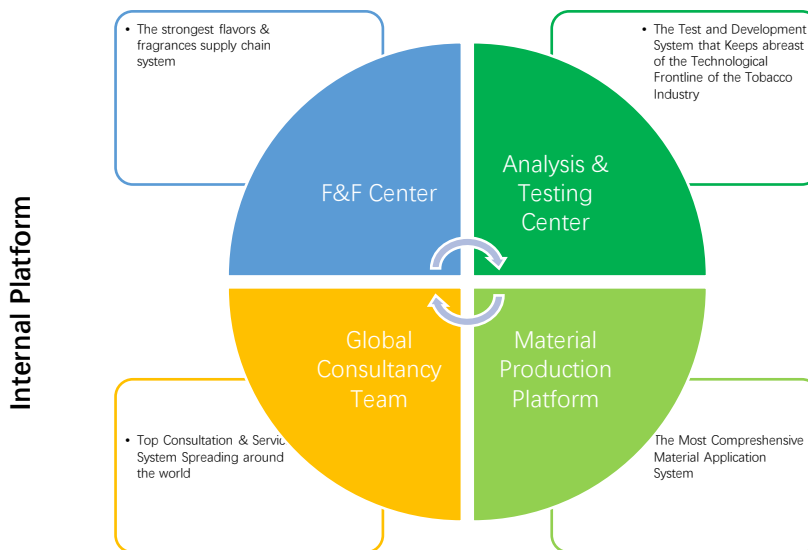
For Slim Cigarettes

- Grain Diameter (Ø): 2.6~2.9mm
- Weight (mg/capsule): 11±1.0mg
- Flavor (mL/capsule): 10±1.5mg
- Amount of Capsules/kg: circa 80000

For Other Cigarettes

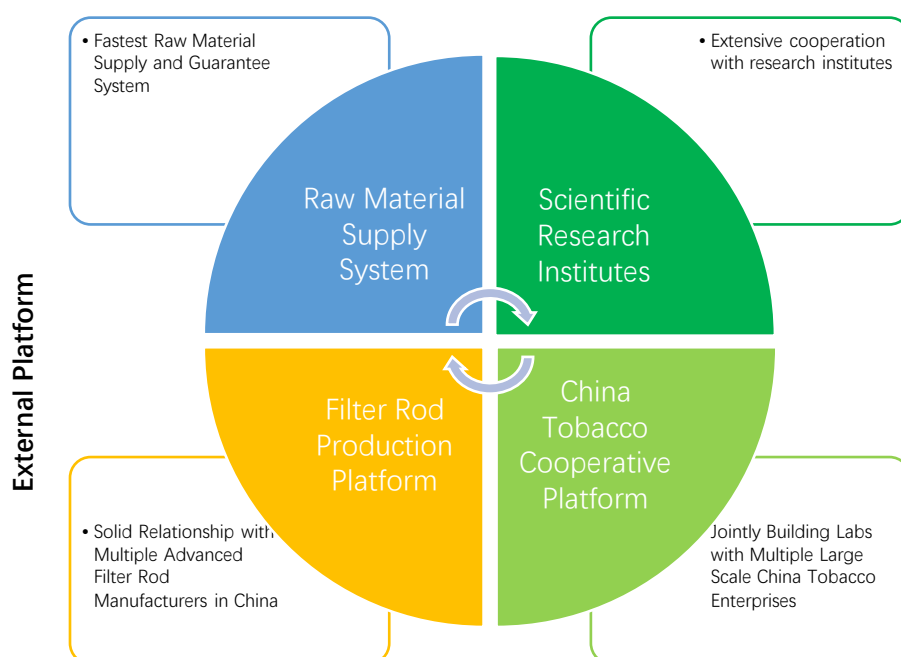
- Grain Diameter (Ø): To be customized according to requirements
- Weight (mg/capsule): To be customized according to requirements
- Flavor (mL/capsule): To be customized according to requirements
- Amount of Capsules/kg: To be calculated for specific kinds

5 Technical Support and Guarantee System



The New Materials Division of Huabao Group focuses on the R&D and production of new cigarette materials in the industry, integrating resources such as Huabao International Flavor and Fragrance Technology Center, Analysis and Testing Center and international expert consulting team. With a full range of technological innovation capabilities, resource integration capabilities and value creation capabilities, it is the most innovative research and application platform for cigarette materials in China.

Huabao's cigarette capsules involve multi-faceted cooperation, first-class technology, and advanced equipment, suiting a wide range of core fluids.



After years of intensive operations in and around the industry, the New Materials Division has established a complete raw material supply system, has cooperated with many domestic research institutes on all R&D projects, and has also established good cooperative relationships with many filter rod manufacturers and China Tobacco enterprises.

6 Production Guarantee System

In recent years, Huabao Group has established various cigarette capsule production platforms in China, made large-scale resource investments in the field of cigarette capsules, introduced a full set of Japanese six-unit capsule dripping equipment and associated production technology and management model, and built a Class 100,000 clean workshop with constant temperature and humidity. The quality of the seamless capsules for cigarettes that has been produced is leading domestically and world-wide.



Figure 5 Capsule dripping and drying equipment

At present, Huabao's own cigarette capsule production line has a production capacity of more than 360t/year.