



ECAP

Electronic Ceramic Atomization Professionals

SHENZHEN ECAP TECHNOLOGY CO.,LTD

CONTENTS

1. About ECAP Technology.....	2
2. Core Competitiveness.....	3
3. Our Production Environment.....	3
4. Core Patents and Related Testing Certificates.....	4
5. Ceramic Technologies.....	4
First Generation Ceramic Coil TECH.....	4
Second Generation Ceramic Coil (CCOIL TECH)	5
Upgrade version of second generation ceramic coil (KCOIL TECH)	5
Third generation metal film printing micro-pore ceramic coil (PREFILM TECH)	6
Etching Ceramic Coil.....	6
Full-ceramic Cartridge (CERALL TECH)	7
6. Products & Services.....	7
CL6/CL7/CL8 Cotton-free Full-ceramic Cartridge.....	7
PISCO PALM BATTERY.....	8
Oliver CBD Disposable vaporizer.....	9
EXEEK X E-liquid CBD & THC POD.....	9
EXEEK R E-Liquid Pod.....	10
Customized Services & Product Innovation.....	10
7. Quality Assurance.....	12
The ceramic coil tests.....	12
The product tests.....	13
Test Reports.....	14
8. The Future Planning.....	14

ABOUT ECAP TECHNOLOGY



ECAP's patented ceramic technology quietly lies at the heart of millions of vaporizers worldwide.

Our R&D team has over 15 years of expertise in the manufacturing of ceramic heating elements and coil atomizers used in the electronics, vaporizers and home appliance industries. Since ECAP's founding in 2014, our core ceramic technology has emerged at the forefront of vaporizer atomization performance and is trusted among the industry's largest brands for delivering consistent reliability and consumer safety. Products include full ceramic cart, all ceramic cart, cotton free, palm battery, disposable Cartridge...

ECAP's manufacturing facility in Dongguan, China covers 25,000 sq. meters **ISO-9001 and GMP certified**

ISO 9001



GMP



- > 50+ Million monthly ceramic atomizer capacity
- > 3+ Million monthly product capacity
- > 60 Closed System Kilns reaching over 650°C
- > 3 Open System Kilns reaching over 1,100 °C
- > 2 R&D Labs for ceramic and product development

Today, ECAP is dedicated to innovating the next generation of ceramic atomizers and vaporizer devices to meet the growing demand for new E-Liquid, CBD and other Cannabinoid based products.

Vision: To become a highly respected technology company in the electronic cigarette industry

Mission: Create value for customers and bring pleasure to consumers

Core Values: Innovation, Integrity and trustworthiness, Customers Success and Serving the Society

Core Competitiveness

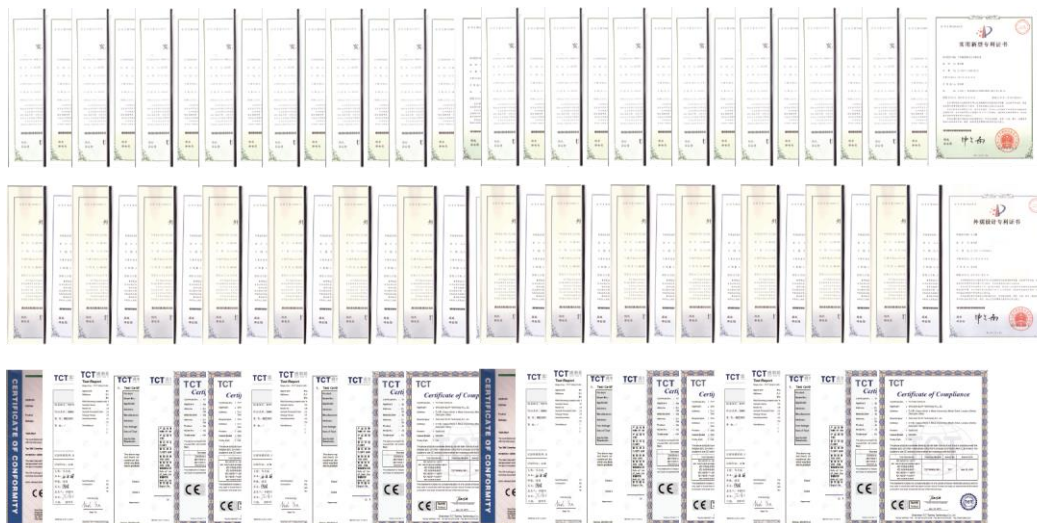
R&D Driving Force → **Market Oriented** → **Global Branding**

- ✓ Advanced ceramic atomization
- ✓ Core patents in ceramic
- ✓ Experienced R&D team
- ✓ Advanced production equipment
- ✓ High standard factory
- ✓ Customized solution
- ✓ End-to-end service
- ✓ Customer success

Our Production Environment



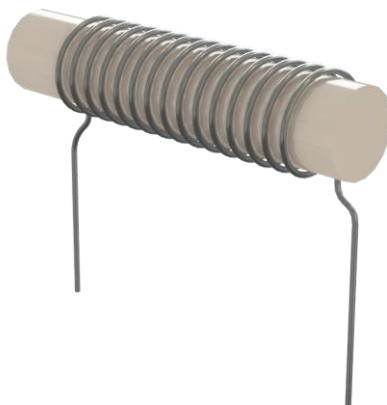
Core Patents and Related Testing Certificates



Since ECAP established, ECAP process 25 appearance patents, 39 utility model patents, 14 innovation patents. Moreover, the amount of patents is constantly growing.

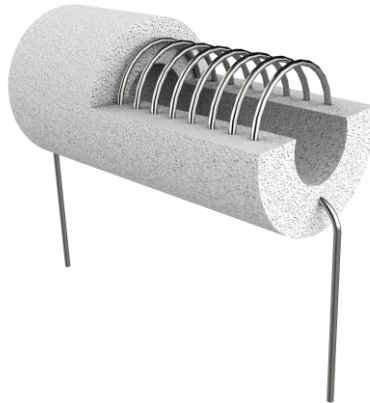
Ceramic Technology

First Generation Ceramic Coil TECH



It is ECAP first generation patented ceramic coil. Core technology of first generation ceramic coil: Achieve 0 shrinkage on the basis of stable atomized taste, it can avoid the expansion and shrink of ceramic element during sintering and dry burning caused by the breakpoint of the heating coil.

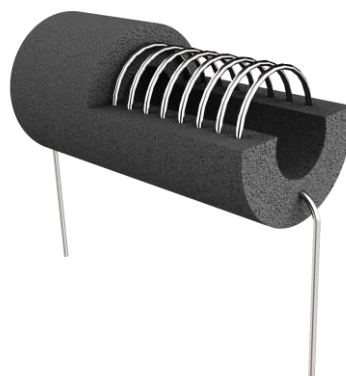
Second Generation Ceramic Coil (CCOIL TECH)



Sintering heating coil and ceramic together. Core technology of second generation ceramic coil:

1. The formula and raw materials are all developed and formulated by ECAP to ensure the stability and consistency of each batch;
2. In the sintering process, maintaining uniformity of coil pitch of heating coil. And avoiding dry heating caused by carbon deposition after repeated heating of the coil.
3. According to the characteristics of e-juice, customized formula is available for solving the problem of taste, carbon deposition and leaking.

Upgrade version of second generation ceramic coil (KCOIL TECH)



Black Gold Patented Ceramic Coil (K-coil) is formed by self-contained microporous material formula and sintered at 1200 degrees. Products has the character of uniform distribution micro-pore, high consistency of aperture, low thermal conductivity. Comparing to last version, the performance is increased by more than 20% at the same power. It has good consistency of vaping and the flavors are delicate and nature.

Third generation metal film printing micro-pore ceramic coil (PREFILM TECH)



ECAP is the first company applies for patents of surface vaping technology.

Structure Solution:

The ceramic element is made of self-contained microporous material and sintered at 1300 degree.

Printing semiconductor resistance on the surface of ceramic element, then sintering ceramic element and semiconductor resistance together at high temperature.

The advantage of structure:

Concentrated heat in the atomization zone. It can make large amount of smoke with low power. Resistance is adjustable through changing resistance stock. Ceramic element has high porosity and superior ability of oil lock. Moreover, it can remain high performance of vaporizing and no leaking. It is the best choice for cartridge and pod.

The advantage of performance:

Full uniform heating—avoiding partial carbonization, reducing the decay rate of taste

Evengrained atomization effect—the smoke is soft and smooth, flavors are nature and taste agreeable sweet

Etching Ceramic Coil



Aiming at the defects of the process of etching ceramic coil, Our company's etching ceramic coil has

following characteristics:

1. Patented barb structure makes heating element and ceramic element tightly combined. It can solve the problem of oil splashing and disconnection caused by the gap between heating coil and ceramic element during atomization process
2. This structure allows the heating coil to heat up uniformly, not easy to deposit carbon, and reduce the decay rate of taste
3. The etching ceramic coil is made of our exclusive patented formula. High temperature ceramic element makes flavors purer.

Full-ceramic Cartridge (CERALL TECH)



CERALL TECH: ECAP's unique kiln sintering integrated patent and we are the only one holding it globally. **We are the 1st & unique in the Market who is capable to build Cotton-Free Full-Ceramic Cartridges.**

Kiln sinter integrated tech: Fill the raw KCOIL ceramic coil into Ceramic center post, then sintering under 1100°C to merge 2 parts together.

The full-ceramic cartridge is bringing great taste and extraordinary vaping experience to e-cigarette enthusiasts, and authentic smoking feel for adult smokers.

Products & Services

CL6/CL7/CL8 Cotton-free Full-ceramic Cartridge



We are the 1st & Only One Manufacturer in the Market to manufacture and supply Cotton-Free Full-Ceramic Cartridges.

Elegant Design With Elegant Atomize Experience

1. Kiln-Sinter Integration Tech (Patent)
2. Cotton-Free
3. Heavy Metal Free
4. Lab Tested in CA US
5. Humanized design, compact & portable; Mouthpieces for ergonomic design
6. New generation leak-proof technology
7. Nano ceramic atomization Core technology, good taste keeps going
8. Vertical ceramic structure, smoother air flow
7. Bottom air intake, full combustion, better taste
10. Both thin oil or heavy oil are compatible

PISCO PALM BATTERY



Pre-heating Mode I Short-circuit Protection I Low Voltage Alert

Universally Compatible with 510 Cartridges (O.D <=11.5mm)

- * 510 Magnetic Adapter: CL6(0.5ml) / CL7(0.8ml) /CL8(1.0ml)
- * Battery: 650mAh
- * Button-controlled
- * Oil Level Window
- * Zinc Alloy Die Cast Housing
- * Power Switch Mode: 2.6V /3.0V /3.4V /3.8V
- * Power Supply Display
- * Type-C USB

Oliver CBD Disposable vaporizer



Disposable cartridge electronic cigarette

- 1) Heating tech and low resistance: Support with a wide range of oil, thick oil/ thin oil, offer you pure taste and big vapor
- 2) Lockable structure: Special lockable mouthpiece, prevent from refill
- 3) No lead material: Eco-friendly material, passed heavy metal testing
- 4) Color/ light/ shape of window can be customized according to your design, highlight brand characteristics
- 5) Rechargeable battery port, 100% make sure finishing all oil

EXEEK X e-liquid CBD & THC POD



Patented Black Ceramic Formulation

Achieve the highest porosity& rigidity and the lowest thermal expansion across the market.

X Series Features:

Magnetic connection / Automatic Draw / Bottom Airflow

- 1) Heating tech and low resistance: Support with a wide range of oil, thick oil/ thin oil, offer you pure taste and big

vapor

- 2) Lockable structure: Special lockable mouthpiece, prevent from refill
- 3) No lead material: Eco-friendly material, passed heavy metal testing
- 4) Color/ light/ shape of window can be customized according to your design, highlight brand characteristics
- 5) Rechargeable battery port

EXEEK R E-Liquid Pod



E-liquid Vape Features

- >Magnetic connection
- >Automatic Draw
- >Bottom Airflow
- >Patented printed-film tech
- >Uniform penetration & thermal
- >Microporus structure
- >Consistent temperature

ECAP's PREFILM Technology is designed for maximum vapor production, reliability and coil durability. PREFILM atomizers use a powdered-printed filament that creates a uniform heat distribution across the ceramic body. PREFILM is compatible with E-Liquid vaporizers and pod devices seeking big puff and strong flavors.

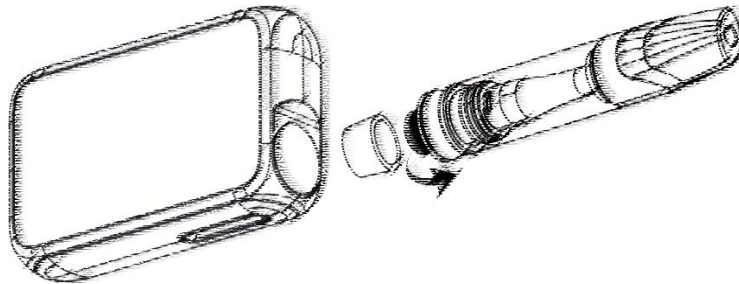
Customized Services & Product Innovation

We have a professional R&D team. We can customize the ceramic core according to your oil. According to customers' needs, we can do ODM&OEM for customers. We supply the brand logo design, brand plan, package design, industry design, structure design, ceramic coil head design, product testing, ceramic coil head testing and so on.

ODM (Original Design Manufacturer)

We supply the production method in which to provide all services from R&D, design to production and post-maintenance, and customer is responsible for sales. The purchaser usually also

authorizes its brand, allowing the manufacturer to produce products with that brand. After a manufacturer designs a product, or slightly modifying some designs (such as button positions) To produce. The biggest advantage of this is that other manufacturers reduce their own development time.



OEM (Original Equipment Manufacturer)

Customers are responsible for designing and developing new products using our key core technologies. Customers can directly affix their own brand trademarks. Customers can save a lot of time and r&d costs



Package Design

We can customize the packaging according to customers' needs and brand style.



Quality Assurance

The highest quality products to customers is our most demanding. Before leaving the factory, every batch of products need to get through the following test below:

The ceramic coil tests

No.	Program	Related Test Instrument	Note
1	Shrinkage	Callipers /2.5 Dimension	Finished product Size/ Material size before sintering
2	Porosity	Porosity test instrument	Test the porosity of micropore ceramic element
3	Permeability	Permeability test instrument	Test the delivery ability of micro-pore ceramic element
4	Intension	Electric pressure gage	Test the intension of micro-pore ceramic element
5	Heating rate	Temperature curve tester	Test the heating rate of ceramic coil
6	Pore size	Mercury Injection Apparatus/ Third-party test	Test the pore size of micropore ceramic element
7	ROHS	ROHS Tester	Test the product for harmful substances
8	Heating coil parameters	Callipers / Micrometer	Resistance/Wire diameter/ Length/ Number of turns/ Height of turns/ Coil Pitch
9	Fracture resistance of lead after sintering	Tongs	Number of fracture resistance after sintering
10	Resistance	Resistance test instrument	Resistance Range
11	Metal Film	Balance/ Height Master	Thickness of Metal Film
12	Combination of Metal film and ceramic elements	Electron microscope	Test if there is a gap in the combination
13	Wiring aging test	Aging tester	Test the number of aging of thick metal film at high temperature
14	Wiring aging test when vaping	Suction Machine	Test the number of aging of atomizer
15	TCR of heating coil	oil bath pan	Test temperature coefficient of resistance of heating coil
16	Tension of lead	tensile machine	Test the bonding force between lead and element

The product tests

No.	Program	Related Test Instrument	Note
1	high-altitude low-pressure test	E-Cigarette high-altitude low-pressure environment simulation test chamber	Test the reliability of product
2	High-low temperature	E-Cigarette constant temperature humidity chamber	
3	Low temperature storage test		
4	High temperature storage test		
5	High-low temperature cycle test		
6	High- low temperature impact test		
7	Drop test		
8	Vibration Test	Automobile Transport Simulation vibrostand	
9	Puff Counting Test	E-Cigarette comprehensive test instrument	Test the number of puff of product
10	Atomizer Draw Resistance Test	E-Cigarette Draw Resistance Test instrument	Test the draw resistance of atomizer
11	Finished product Draw Resistance Test		Test the draw resistance of finished product
12	Ceramic Core Draw Resistance Test		Test the leakproofness of ceramic core
13	Capacity Test	Precision syringe	Test the capacity of oil tank
14	Atomizer lifetime test	E-Cigarette comprehensive test instrument	Test the lifetime of atomizer
15	Resistance Test	Resistance Test Instrument	Test the range of resistance
16	Porosity Test	Porosity Test Instrument	Test the porosity of microporous element
17	Aging Test	Aging Test Instrument	Test the aging life of ceramic core
18	Intensity Test	Electric pressure gage	Test the intensity of ceramic core
19	Water Absorption Test	Porosity Test Instrument	Test the rate of water absorption of ceramic core
20	Battery Capacity Test	Battery capacity test instrument	Test battery capacity
21	Battery Delivery Voltage Test	Multimeter	Test the voltage of supplied battery
22	Power Test		Test output power
23	Torsion Test	Torsion Tester	Test the torsion of screw top cartridge
24	Flexural Test	Intension Test Instrument	Test flexural strength of ceramic element
25	Standing Test		Test leakproofness of atomizer
26	Atomization Quantity Test	Suction machine	Test atomization quantity of atomizer

Test Reports



The Future Planning

ECAP will adhere to the general principle of always providing customers with the best-performing products, focus on the future, take “technology leading, customer-centric” as the strategy, soldier on innovating, strive to continue to maintain the technology leadership in the industry, delight the customer, and service the society.

We will continuously improve the third-generation ceramic coil products with our existing advanced technology, and strive to improve the technology to develop the fourth-generation ceramic coil products. ECAP will continuously improve the application of ceramic coil in CBD and THC products, including second-generation products and second-generation derivatives which cover the middle and low-end markets, to boost ECAP's standing of supply capacity in the industry.

In the future, based on super R&D capability and core technology, ECAP will provide professional ceramic products and application technology for brands and manufacturers through taking advantage of our world-leading ceramic production technology and printing film heating technology. And ECAP strive to be the main supplier of ceramic coil in the e-cigarette industry.

We hope that through our hard work, we can create the best products for our customers and help our customers succeed.

ECAP

TECHNOLOGY



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