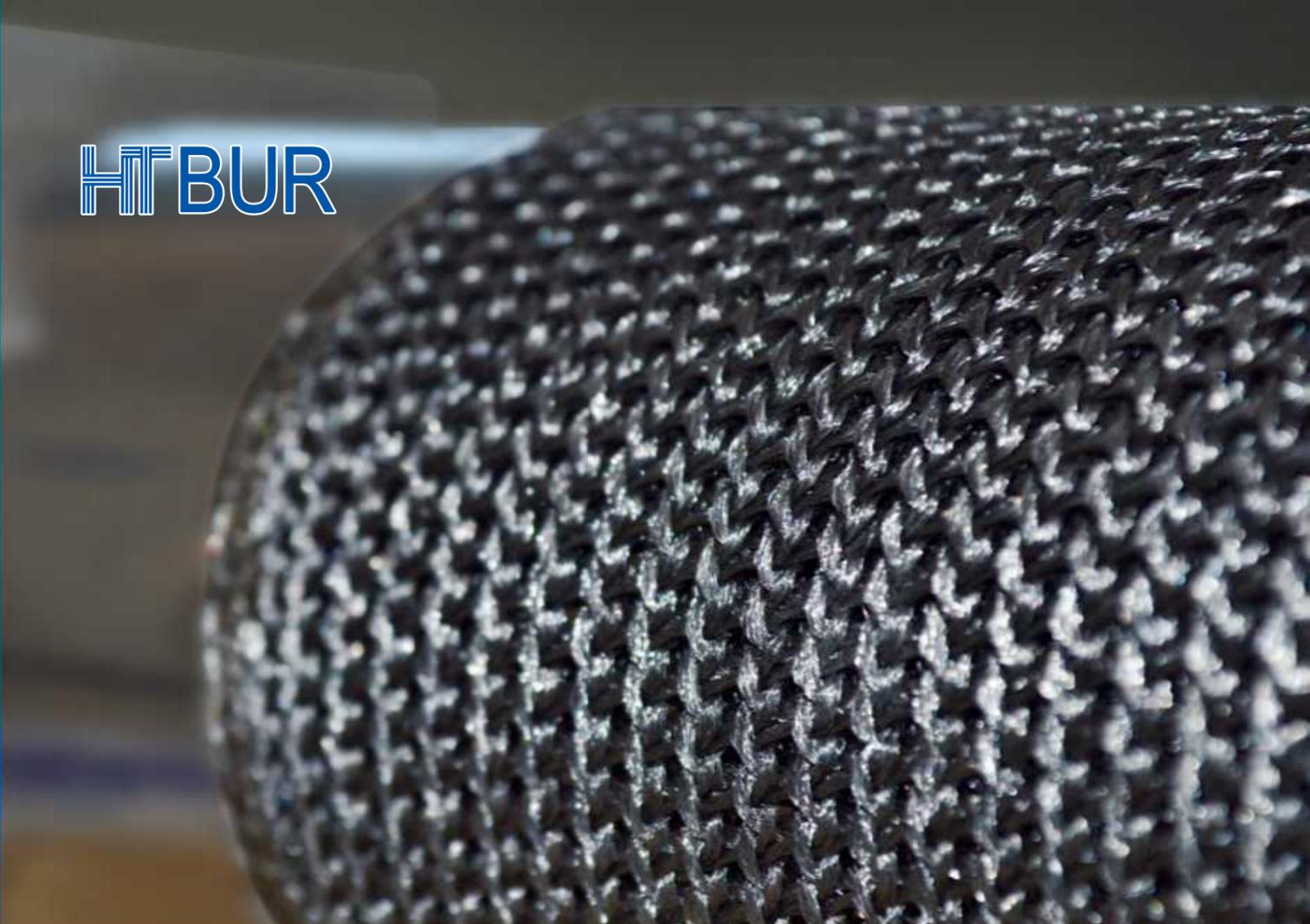


We provide premium products backed by expert technical support, empowering you to succeed in product development and implementation.



# METAL FIBER BURNER

In a Rapidly Evolving Global Arena

Huitong & Its Global Clients: Building Strategic Partnerships

Uniting Across Borders to Overcome Challenges and Build a Better Future



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No.20260321

HUNAN HUITONG ADVANCED MATERIALS CO.,LTD.

## Company Profile

Huitong, established in 2002, traces its heritage to the Metal Fiber Factory of the Changsha Mining and Metallurgy Research Institute. With a foundation built on over 40 years of expertise in metal fiber production and R&D, the company reached a major milestone by listing on the Beijing Stock Exchange in July 2023 (Stock Code: 920751).

Currently, Huitong employs more than 400 professionals across two production bases in Yiyang and Changsha. These facilities are strategically located in the Yiyang National High-Tech Industrial Development Zone and the Lugu National High-Tech Industrial Development Zone, each spanning over 66,667 m<sup>2</sup> to support large-scale manufacturing.

Our extensive portfolio features nearly 200 varieties of metal fibers and derivative products, exported to key global markets including the US, Mexico, Germany, France, Italy, Japan, Turkey, South Korea, and Southeast Asia.

Innovate, Develop, Cooperate for Win-Win





## Status

For over 40 years, Huitong has specialized in the R&D, production, and sales of metal fibers and derivative products. We maintain partnerships with many domestic universities and collaborate on cutting-edge project development with renowned global enterprises. Huitong holds fully independent intellectual property rights, with technical standards and product quality reaching world-class benchmarks. Our core technologies have achieved widespread market adoption across diverse industries.

- ✘ 2002: Successfully developed and launched mass production of stainless steel fiber flexible heating elements.
- ✘ 2009: Achieved mass production of metal fiber conductive plastic masterbatch.
- ✘ 2009: Initiated R&D and production of high-temperature resistant metal fiber fabrics specifically for burners.
- ✘ Scaled our annual production of metal fiber blended yarn to 700 tons.
- ✘ Established a partnership with a world-renowned manufacturer of automobile exhaust purification systems for the supply of our high-performance iron-chromium-aluminum (FeCrAl) fibers.

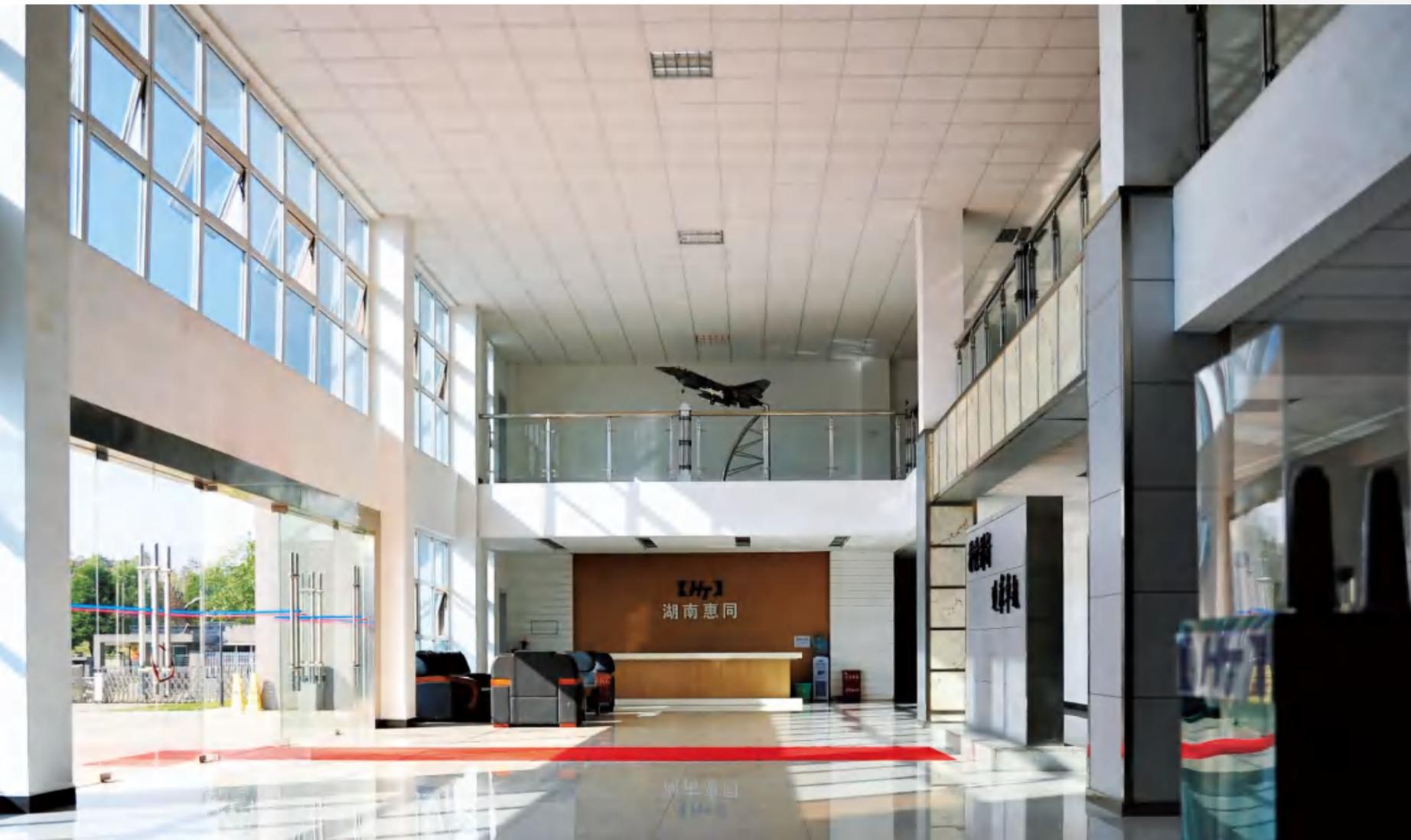
## Our Strengths

Huitong has mastered the entire production process—from primary raw materials and high-temperature resistant fabrics to finished burner heads—ensuring consistent product quality and reliable stability.

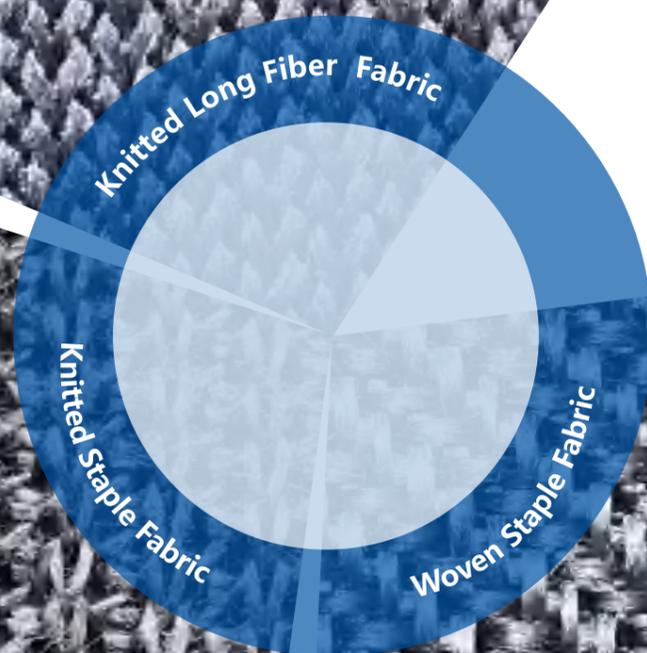
- ✘ Masters the core technology for producing raw materials with special properties.
- ✘ Possesses the patent for high-temperature resistant fabrics (patent No.CN201310063660.X)
- ✘ Our 3,000kW combustion test facility enables rapid customization for diverse power and technical requirements.
- ✘ With more than 10 years of hands-on experience, we provide robust technical support for product development.

Huitong is committed to excellence in quality, safety, and sustainability. We have earned the following international certifications:

- ✘ ISO 9001:2015 (Quality Management System)
- ✘ ISO 14001:2015 (Environmental Management System)
- ✘ ISO 45001:2018 (Occupational Health and Safety Management System)

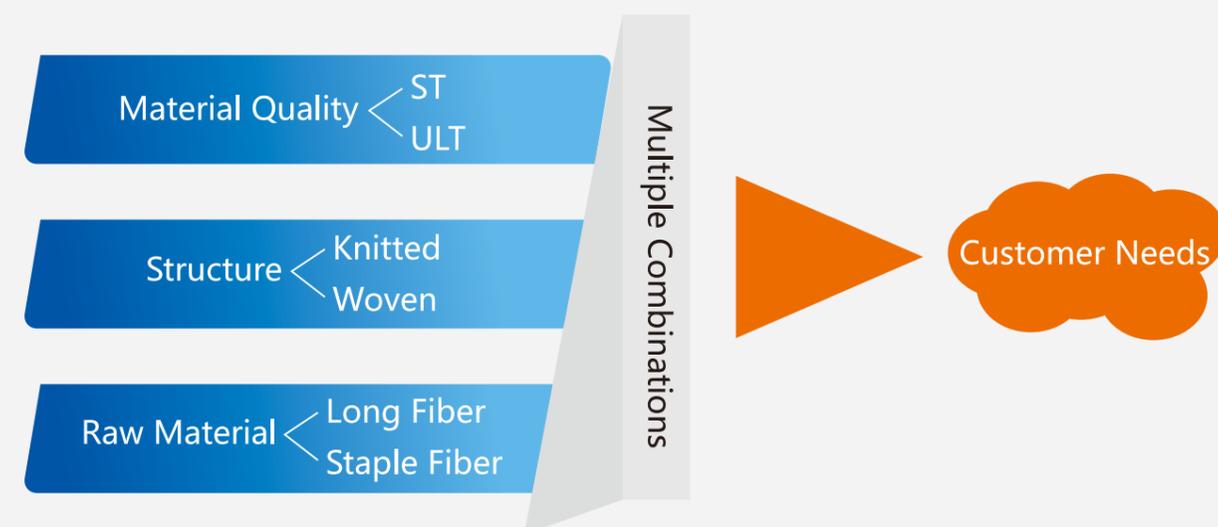


High-temperature Resistant Metal Fiber Fabrics

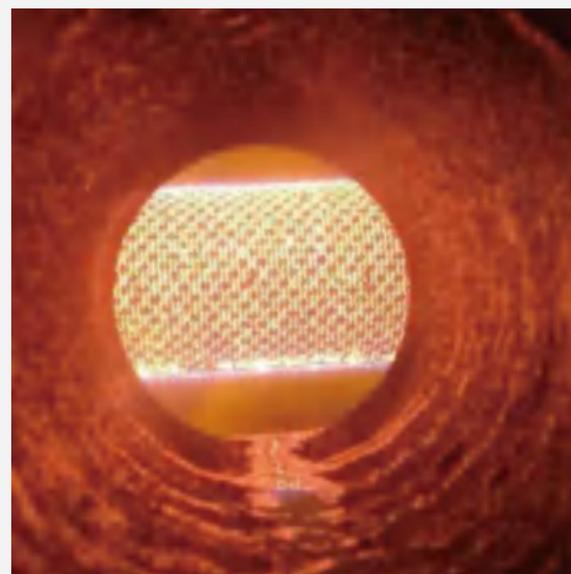


## High-Temperature Resistant Alloy Fabric

Huitong has already mastered a range of production and processing technologies for high-temperature resistant alloy fabrics.



### ULT Series

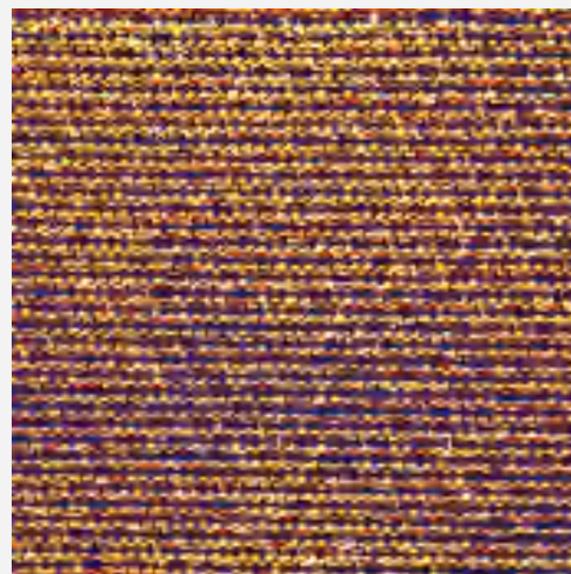


Specialized alloy formulation (Y: 0.03–0.10, Hf: 0.03–0.10, Zr: 0.03–0.07) delivers outstanding performance in high-temperature environments and ensures long-term operational stability within the infrared region.

### Woven Series

High processing efficiency and cost-effective, suitable for specialized applications.

### Knitted Series



The advanced 3D knitted structure provides a reliable shielding rate and creates a significant temperature gradient between the fabric's inner and outer layers, which substantially enhances combustion safety. Furthermore, its multi-layer design offers superior flame stabilization, effectively ensuring a consistent and stable combustion process.

## High-temperature Resistant FeCrAl Alloy Fabric

### Knitted Long Fiber Fabric



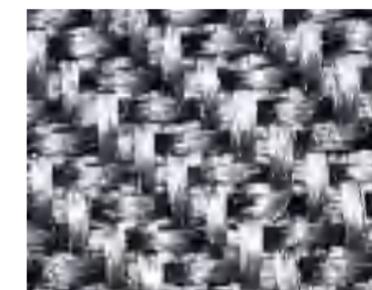
As a Huitong patented fabric, the F-ULT type offers exceptional resistance to high-temperature oxidation, flashback, and thermal shock. Its stable and uniform structure ensures consistent performance, making it highly versatile for a wide range of industrial applications.

### Knitted Staple Fiber Fabric



The K-ULT type is a general-purpose, short-fiber fabric engineered for reliable high-temperature oxidation resistance and anti-resonance properties. Its unique short-fiber structure facilitates infrared radiation, allowing it to adapt seamlessly to most demanding working conditions.

### Woven Staple Fiber Fabric

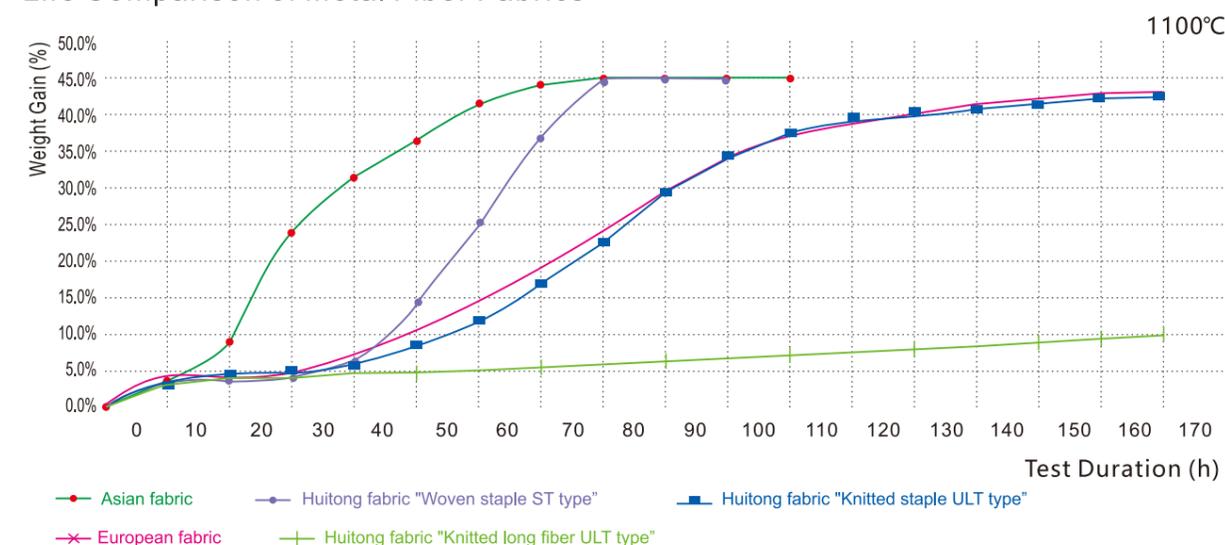


The W-ST type is our economical solution, designed for high processing efficiency.

Technical parameters \ Type	F1400/290-ULT	K1400/290-ULT	W1500/240-ST	
Material	FeCrAl-ULT (RE)	FeCrAl-ULT (RE)	FeCrAl	
Weight(kg/m <sup>2</sup> )	≥1.3	≥1.35	≥1.4	
Mean Permeability (L/m <sup>2</sup> *s) (127Pa)	2900±300	2900±300	2400±350	Customization Available
Width(mm)	1000	1000	1200/1500	Maximum Width: 1200 mm
Thickness(mm)	≥1.6	≥1.7	≥1.5	Measured via YG(B)141D Digital Fabric Thickness Gauge
Service Temperature (°C)	Max. 1100°C (Continuous), 1250°C (Peak)			

Remark(s): The above data is for selection reference only; actual product specifications are subject to the final technical agreement.

### Life Comparison of Metal Fiber Fabrics



Metal Fiber Burner



## Products

### Metal Fiber Burner

Huitong began developing high-temperature resistant metal fiber fabrics and burner heads in 2008. By 2010, we finalized our next-generation high-temperature resistant fabric line and progressively launched a diverse range of burners catering to various application fields. Today, Huitong burners are in full-scale mass production and are widely utilized in both domestic and international markets.

With over a decade of market presence, Huitong has accumulated extensive industry expertise. Beyond delivering high-performance products, we specialize in providing tailor-made solutions engineered to meet the specific needs of our customers.

### Characteristics

- ※ Low Pollutant Emissions
- ※ Low Combustion Noise
- ※ High Shape Adaptability
- ※ Thermal Shock Resistance
- ※ Enhanced Safety
- ※ Wide Turndown Ratio
- ※ Long Service Life
- ※ Anti-Clogging

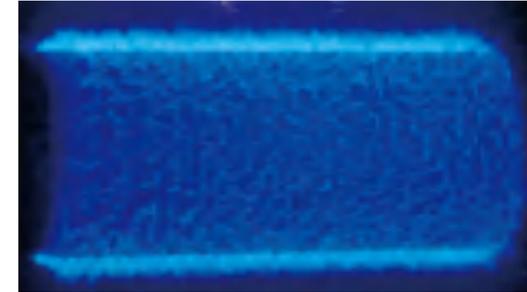
### Main Applications

- ※ Hot-Water & Steam Boiler
- ※ Wall-Mounted Boilers / Water Heaters
- ※ Drying Equipment
- ※ Industrial Furnaces
- ※ Commercial Heating Systems
- ※ Industrial Thermal Systems



### Huitong Provides:

- ※ Metal fiber burners designed for even flame distribution and maximum stability.



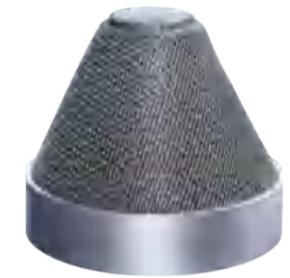
- ※ Wide range of high-temperature resistant alloys and tailor-made dimensions to fit your needs.



Cylindrical Burner

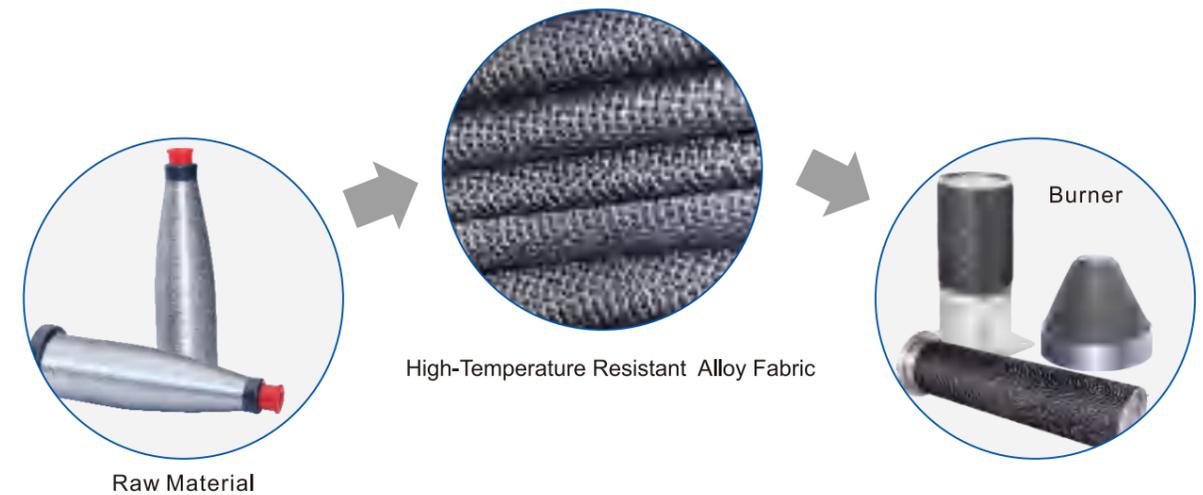


Flat Burner



Conical Burner

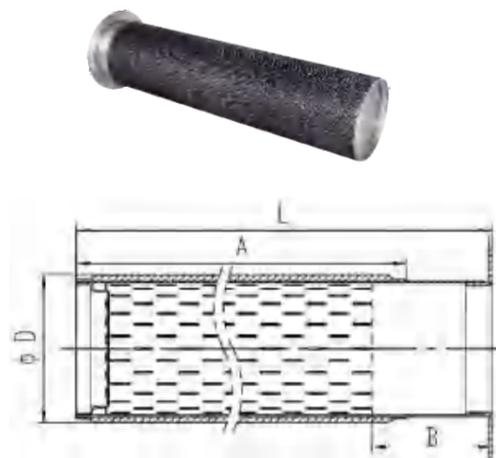
- ※ Rigorous full-process control ensuring the reliability of every single unit.



We provide tailor-made metal fiber burners and integrated solutions designed to meet your specific application requirements.

### Cylindrical Type

A classic structure engineered to maximize heat release and optimize combustion efficiency.



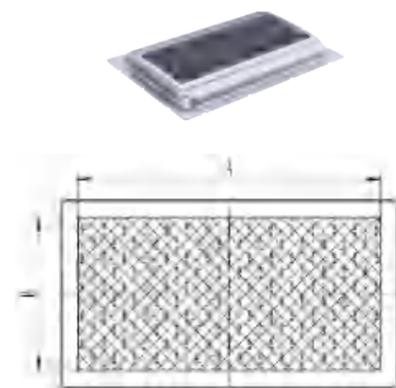
B. Non combustion zone  
A. Combustion zone

Diameter(mm)	Length(mm)	Input Power (kW)
39	30-280	10-30
54	30-380	30-50
65.2	30-460	50-120
71	30-500	60-200
85.6	30-600	100-350
102	50-700	200-500
144	50-1200	350-1400
204	50-1500	700-2800
249	50-1800	700-3500
304	-	-
404	-	-

※ Conventional parameter for type selection

### Flat Type

Compact structure, easy installation, significantly minimizes combustion space requirements.



A. Length  $\leq 1000\text{mm}$   
B. Width  $\leq 1000\text{mm}$   
Power Range: 1-14000kW

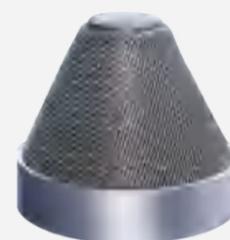


D. Diameter  $\leq 1000\text{mm}$   
Power Range: 1-14000kW

## Customized Burner Heads

### Our Solutions

**1 Surface Media Optimization**  
Adjusting key parameters or combining multiple fiber layers to specifically enhance overall burner performance.



**2 Distribution Plate Engineering**  
Optimizing the primary air distribution plate's hole patterns to eliminate issues such as uneven flame distribution, clogging, combustion resonance, and ignition failure.



**3 Structural Design Customization**  
Tailoring burner geometries to solve compatibility challenges between traditional cylindrical or flat burner heads and specialized heat exchange systems.

**4 Hybrid Configuration**  
Overlaying and combining different fiber types to reinforce operational stability and significantly reduce the incidence of abnormal working conditions.

### 5 Stainless Steel Perforated Burner Heads



## Huitong Integrated Supply Chain Excellence

### Your Preferred Partner for High-Performance Components

Driven by independent R&D and manufacturing, Huitong provides more than just superior products and solutions. We implement rigorous quality control throughout the entire industrial chain—from core raw material R&D and component synchronization to final delivery and extended technical support.

We are dedicated to building an industrial value network centered on environmental protection and energy-saving technologies. By collaborating with global partners, we accelerate the worldwide application of advanced green materials and high-efficiency energy technologies.

Focusing on metal fiber technical textiles and high-efficiency gas energy applications, we offer proven, high-quality integrated solutions including:

[Technical Textiles](#) [Heat Exchangers](#) [Low-NOx Burners & Condensing Boiler Components](#) [And more...](#)



## Testing Equipment



- ✘ Fabric Accelerated Life Testing
- ✘ Fabric Permeability Testing
- ✘ Fabric Thickness Testing
- ✘ Raw Material Composition Analysis
- ✘ Mechanical Property Testing of Raw Materials
- ✘ Burner Operational Condition Testing
- ✘ Burner Accelerated Life Testing
- ✘ ICP Analysis
- ✘ Burner Performance Evaluation  
(Uniformity, Reliability, and Cold-state Permeability)



Applications



Infrared Heating Equipment



Steam Generators



Gas Drying Ovens



Wall-Hung Boilers



Ultra-low NOx Copper Boilers



Fully Premixed Aluminum Condensing Boilers



Innovate, Develop, Cooperate for Win-Win

