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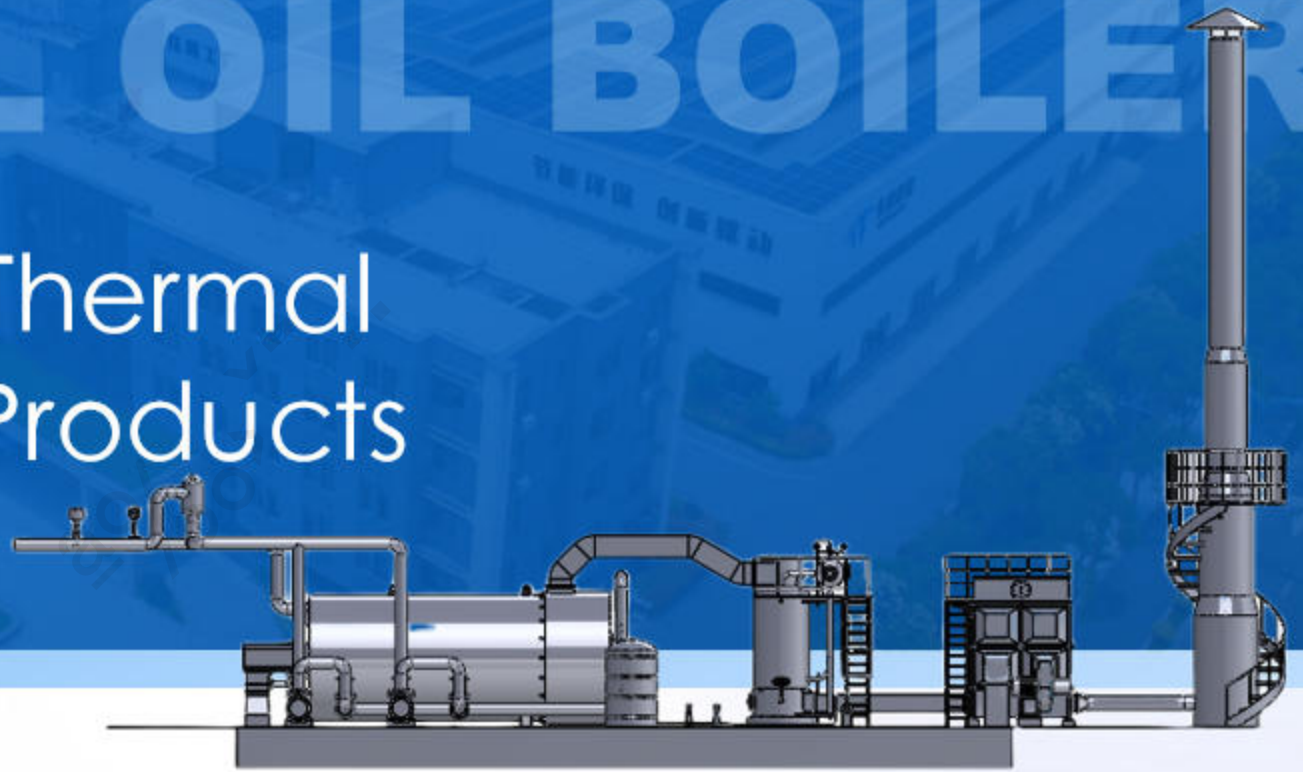
THERMAL OIL BOILER

Introduction to Thermal Oil Boiler Series Products



Professional Grade A Boiler Manufacturer

A professional manufacturer of automation industry in China

CONTENTS

Company Profile

We are Zhejiang Xianchuang Energy Technology Co., Ltd., a national high-tech enterprise founded in 2009, and listed on the National Equities Exchange and Quotations (NEEQ) .Holding a Class A boiler manufacturing license, and holding ASME "U""S""PP" stamps as well as CE "PED""MD" certifications, we integrate energy & environmental protection equipment design, manufacturing, and EPC (construction, electromechanical, environmental projects) plus operation-maintenance.

Equipped with advanced facilities, a sound quality management system, and a internationwide sales & service network, we focus on research& development, production, installation, operation& maintenance, and project contracting. Our products cover 8 series (steam, hot-water, vacuum, electric, water-tube boilers; thermal oil heaters; biomass boilers), 22 types, and over 300 specifications, meeting diverse thermal energy needs.

80 Acres
Floor Area

20K Steam Tons
Boiler Production Capacity

220+
Employees Stuffs

THERMAL OIL BOILER

A thermal oil boiler is an industrial heating equipment that uses thermal oil (heat carrier) as the heat transfer medium. The heat energy transfers from burning fuels (such as natural gas, diesel oil, biomass, coal, etc.) or electric heating methods to the thermal oil. Then, the high-temperature oil circulation system transports the heat to the heat-using equipment to achieve indirect heating.

The thermal oil boilers produced by us (XC energy) are suitable for multiple industries such as chemical engineering, papermaking, printing and dyeing, metallurgy, and building materials. They have the advantages of high efficiency, energy conservation, safety, and environmental protection. The company's products are exported to many countries in Southeast Asia, Africa, the Middle East, Europe, etc., and are highly trusted by users.

YY (Q) L Vertical Thermal Oil Boiler

YY (Q) W Horizontal Thermal Oil Boiler

YLW Biomass Thermal Oil Boiler

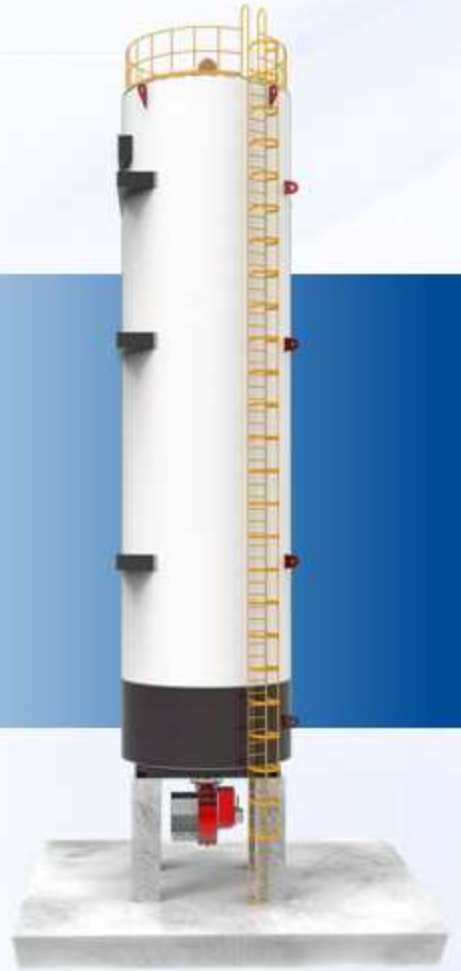
YY (Q) L Vertical Thermal Oil Boiler

High-Efficient, Smart-Heat-Transfer

Capacity: 1.4 - 56MW (120 - 4800×10⁴ Kcal)
Fuels: Gas, Fuel Oil
Applications: Petroleum, Chemical, Pharmaceutical, Textile
Dyeing and Printing, Building Materials, etc.

Single/Three - Coil Tube **Advanced Burner** **Three-Pass Circular Coil Tube Structure**

- Intelligent Flow Rate Design: The innovative variable flow rate technology makes the thermal oil flow more smoothly and reduces flow resistance.
- Maze - type Heat Exchange Structure: This three-pass circular coil tube structure doubles the heat exchange area and enables more sufficient heat absorption.
- Waste Heat Recovery: A waste heat absorption device maximize the utilization of residual heat in flue gas, reducing the exhaust gas temperature by more than 30℃.
- Convenient Maintenance Design: Quick-opening door and inspection manhole structure let the internal inspection and maintenance easily.
- Super Insulation Set: Using refractory and insulation materials, lower heat loss with a surface temperature ≤ 40℃ thus can be touched by hands.
- Green Combustion Technology: Utilizing the flue gas recirculation (FGR) technology to achieve high combustion efficiency as well as enable NO_x emissions to meet the environmental emission requirements.



YY (Q) W Horizontal Thermal Oil Boiler

High-Efficient, Smart-Heat-Transfer

Capacity: 1.4 - 24.5MW (120 - 2100×10⁴ Kcal)
Fuels: Gas, Fuel Oil
Applications: Petroleum, Chemical, Pharmaceutical, Textile Dyeing and Printing, Building Materials, etc.

Single/Three - Coil Tube **Advanced Burner** **Three-Pass Circular Coil Tube Structure**

- Intelligent Flow Rate Design: The innovative variable flow rate technology makes the thermal oil flow more smoothly and reduces flow resistance.
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A National First Creation Single-Coil Furnace Coil

With the improvement of domestic production capacity, the demand for the single-unit specifications of heat energy supply stations in various production lines is constantly growing. However, the regulations on land transportation limiting size restrict the equipment transportation(with a maximum not exceeding 5 meters). To break through this bottleneck, Zheng Xiangyang, a senior engineer and the director of Design Center from XC ernergy, spent two years (2018-2019) developing the single-coil thermal oil boiler. At present, products of various specifications such as 16 million, 21 million, and 45 million Kcal have been successfully put into use.

Performance Advantages of Single Coil

Single Coil - Radiation Section

- Low flow resistance: The heat-transfer fluid in the single-coil boiler has a shorter flow path than in the traditional three-coil type. As a result, at the same flow rate, it features lower flow resistance and less circulating pump power consumption. The latter typically has a resistance > 0.25MPa, while ours is < 0.15MPa.
- Small transportation size: The single-coil design meets capacity expansion needs while breaking through land transportation size restrictions.
- Small oil volume: With the same surface area, a smaller cylinder diameter results in a smaller volume and lower heat-transfer oil procurement costs.

Single Coil - Convection Section

- The convection section uses a snake-like coil structure. This makes the fluid flow path more twisted, which effectively boosts the turbulence effect and improves the heat transfer rate. Also, spiral finned tubes are used as the heating surface. This greatly increases the heat exchange area and heat absorption efficiency, enabling more efficient heat transfer. It further enhances the boiler's overall thermal efficiency and operational stability.

Performance Advantages Of The Three - coil Tube

Low flow resistance	Small pressure difference between the inlet and outlet , Save costs.
Small temperature difference	The outlet temperature is basically stable, with a temperature difference of ±1° C.
Counter - current heat exchange	High thermal efficiency, Exhaust gas temperature lower than the oil outlet temperature and slightly higher than the inlet temperature.

Three pass flue gas

Series connection of heat medium

Low oil film temperature

Variable flow rate design

Inline Variable Flow Velocity And Countercurrent Heat Exchange Technology

Efficient And Flexible Heat Transfer Technology

- structural innovation
- high thermal efficiency
- consumption reduction

The "Inline variable flow velocity and countercurrent heat exchange " technology independently developed by our company has been successfully applied to gas-fired heat-conducting oil boilers, featuring remarkable energy-saving and efficiency-increasing advantages.

This product has passed the review by the authoritative institutions in Zhejiang Province and was awarded the "2024 Annual Energy-Saving (Equipment) Product" certification in Zhejiang Province, fully demonstrating the company's technical breakthroughs and innovative strength in the design of heat-conducting oil boiler products and heat exchange efficiency improvement.

YLW Biomass Fired Thermal Oil Boiler

Flexible Green，Transport Easily

Volumn：1.4-56MW (1.2 to 48 million kilocalories)
Fuel applied：Biomass, coal ,solid fuel
Industry：Chemical engineering, textile printing and dyeing, food, wood processing, papermaking, and building materials.

Multi-loop coil design **Wide fuel adaptability** **Over 85% Thermal Efficiency**

- Efficient heat transfer:The multi-loop coil design features a large heat transfer area and high efficiency.
- Flexible green： The boiler tail can be equipped with optional dust removal, desulphurisation, and denitrification equipment to meet local environmental protection standards.
- Waste heat reuse: Equipped with waste heat boilers, economizers, etc., the exhaust gas temperature can be as low as below 150°C.
- Diverse fuels: Suitable for a variety of fuels.
- Efficient combustion: The grate structure, etc. can be customized according to the fuel, with full combustion and stable operation.
- Convenient transportation: Split transportation design, rapid on - site assembly, easily coping with height and width restriction.

Configuration plan

Combination of boiler auxiliary equipment

Xianchuang has been deeply engaged in the field of boiler equipment manufacturing and has the full - process ability to undertake large - scale system projects. With strong technical strength and rich project experience, the company has successfully implemented a number of EPC and BOT projects, providing customers with customized and integrated energy solutions.

Project Cases

Zhejiang Zhixiang New Materials Co., Ltd.

Project of 3 Gas-fired Heat-conducting Oil Boilers with 15 Million Kcal and Supporting Equipment

Application Scenario:
This project provides a stable high-temperature heat source for the production line of Zhixiang New Materials, supporting the large-scale production of functional polymer materials.

Boiler Configuration:
Adopt an intelligent control system, and equipped with an efficient heat-conducting oil circulation device. The system has high thermal efficiency and precise temperature control.

Geely Group

3 sets of 8-million-yuan gas-fired heat-conducting oil boiler project

Application scenarios:
This project provides high-temperature heat sources for multiple process sections such as the painting line and pre-treatment line in Geely Automobile's related manufacturing bases, ensuring the efficient and stable operation of the vehicle manufacturing process.

Boiler configuration:
The system is equipped with an advanced condensing energy saver, featuring high combustion efficiency and compliant emissions.

Fuhai (Shandong) Packaging Materials Co., Ltd.

24-million-kcal gas-fired heat-conducting oil boiler project

Application scenarios:
This project provides a continuous high-temperature heat source for the packaging and coating production line of Fuhai New Materials, ensuring the thermal energy requirements for key processes such as plastic weaving coating and hot pressing molding.

Boiler configuration:
Adopt condensing waste heat recovery technology, support high-temperature oil pump units, oil storage tanks, and a remote control platform to balance energy efficiency and intelligence levels."

Project Cases

Zhejiang Jianxin Jiaren New Material Co., Ltd.

33 Gas-Fired Thermal Oil Boilers and Auxiliary Equipment Project

Application Scenarios:
This project provides stable high-temperature heat for Jianxin Jiaren's production lines, enhancing efficiency in producing functional films and eco-friendly packaging materials.

Boiler Configuration:
Equipped with a thermal oil circulation pump set, expansion tank, oil storage tank and intelligent control system, featuring high thermal efficiency and flexible start and stop.

Longyan Zhuoyue Co., Ltd. (Meishan Biology)

8 million + 9 million + 12 million kcal oil and gas fired thermal oil boiler project

Application scenarios:
Provide high - temperature heat energy to meet the heat source requirements of multiple key process segments such as natural plant extraction, concentration, and drying.

Boiler configuration:
Configure 3 oil - gas dual - fuel thermal oil boilers with different capacities, featuring flexible switching and strong fuel compatibility.

Zhejiang Litai Textile Co., Ltd.

18 million kcal biomass heat-conducting oil boiler project

Application scenarios:
This project provides heat source support for the production line, covering high-temperature processes such as shaping, drying, and hot melting, and realizes the transformation to green clean energy.

Boiler configuration:
Supports a variety of agricultural and forestry waste fuels, is equipped with a high-efficiency combustion system and a heat-conducting oil circulation system, and is equipped with flue gas dust removal, taking into account both environmental protection and energy conservation.

Looking forward to working with you!

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Economical & Green | Innovation-driven | XIANCHUANG —— Manufacturer of Premium Boilers

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