



# **Electric Thermal Oil Heaters**

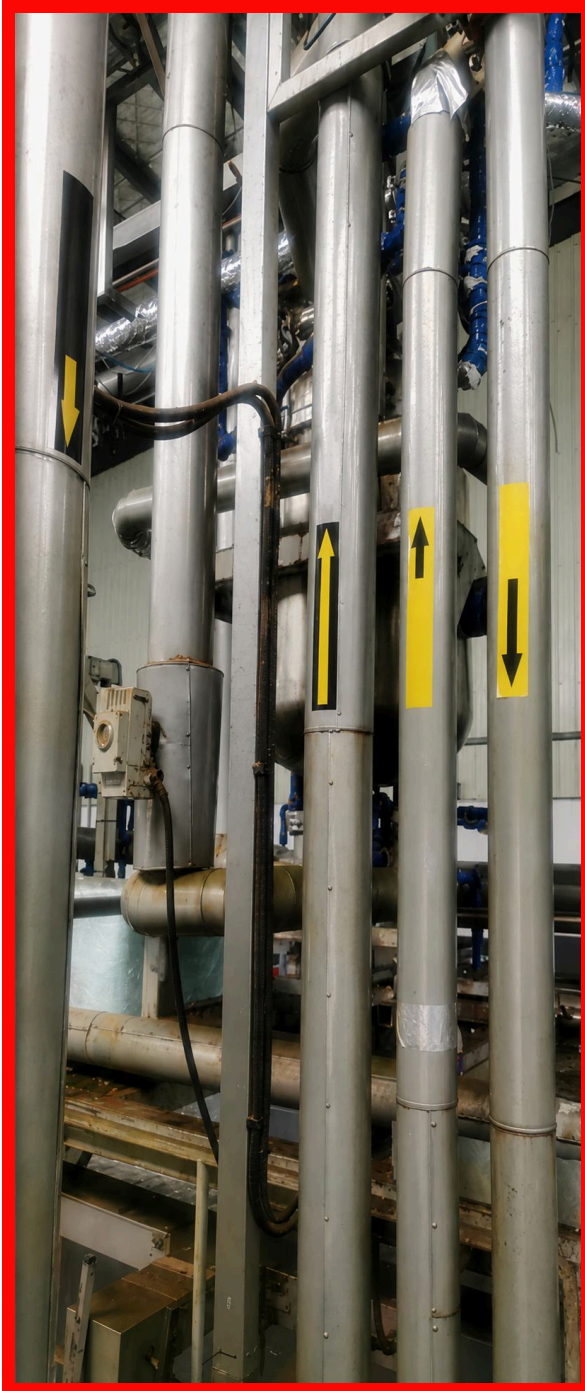
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## Electric Thermal Oil Heaters Description

The electric heating circulating heat transfer oil equipment is an efficient and stable heating device, which is widely applied in multiple fields. It mainly heats the heat transfer oil through electric energy to achieve circulating heat transfer.

This equipment is composed of an electric heater, a circulating pump, a heat transfer oil pipeline, and a control system, etc. Its working principle is to convert electric energy into heat energy to raise the temperature of the heat transfer oil, and then force the heat transfer oil to circulate in the system through the circulating pump, and transfer the heat to the equipment or objects that need to be heated.

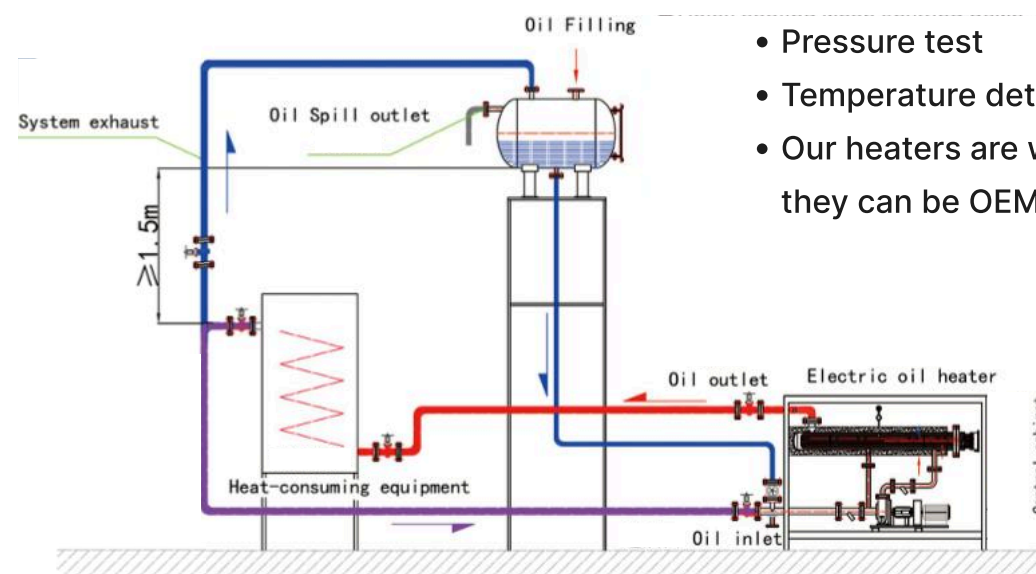
The electric heating circulating heat transfer oil equipment has many advantages. Its heating speed is fast, and it can precisely control the temperature to meet the needs of different processes. In addition, it is easy to install, has a small floor area, and is suitable for various sites. Moreover, this kind of equipment is pollution-free and has excellent environmental protection performance.

In terms of performance, it has efficient heat transfer capacity and can ensure the uniform transfer of heat energy. At the same time, it can also achieve automatic control, which is convenient to operate and safe and reliable.

This equipment has a wide range of application fields, including the chemical, plastic, rubber, food, pharmaceutical, and other industries. It is suitable for various processes such as heating, drying, and melting.



- The main frame is made of steel, bear strong weight;
- The heat preservation device is perfect and the thermal efficiency is improved;
- Oil outlet temperature display;
- Switching function of heating power and it can be customized;
- The temperature can be adjusted freely at RT-300 °C;
- Automatic exhaust when starting up;
- Delay cooling when shutting down, and it can be customized;
- Multipoint temperature control and it can be customized;



- Pressure test
- Temperature detection and alarm;
- Our heaters are with explosion-proof, they can be OEM.

## Product Features

| Model     | Power | Diameter of Cylinder | Import Diameter | Export Diameter | High-temperature Oil Pump |           |        | High-level Tank |
|-----------|-------|----------------------|-----------------|-----------------|---------------------------|-----------|--------|-----------------|
|           | kW    | mm                   |                 |                 | Power kW                  | Flow m³/h | Head m | mm              |
| B-YL-10   | 10    | DN150*800            | DN50            | DN32            | 1.5                       | 8         | 22     | 400*500         |
| B-YL-20   | 20    | DN150*800            | DN50            | DN32            | 1.5                       | 8         | 22     | 400*500         |
| B-YL-30   | 30    | DN150*800            | DN50            | DN32            | 3                         | 14        | 30     | 500*600         |
| B-YL-40   | 40    | DN150*800            | DN50            | DN32            | 3                         | 14        | 30     | 500*600         |
| B-YL-50   | 50    | 2-DN150*800          | DN65            | DN50            | 5.5                       | 18        | 40     | 500*600         |
| B-YL-60   | 60    | 2-DN150*800          | DN65            | DN50            | 5.5                       | 18        | 40     | 500*600         |
| B-YL-70   | 70    | 2-DN150*800          | DN65            | DN50            | 5.5                       | 18        | 40     | 500*600         |
| B-YL-80   | 80    | 2-DN150*800          | DN65            | DN50            | 5.5                       | 18        | 40     | 500*600         |
| B-YL-90   | 90    | 3-DN150*800          | DN80            | DN50            | 7.5                       | 40        | 40     | 600*700         |
| B-YL-96   | 96    | 3-DN150*800          | DN80            | DN50            | 7.5                       | 40        | 40     | 600*700         |
| B-YL-120  | 120   | 2-DN200*1500         | DN80            | DN80            | 7.5                       | 40        | 40     | 800*800         |
| B-YL-150  | 150   | 2-DN250*1500         | DN80            | DN80            | 7.5                       | 40        | 40     | 800*800         |
| B-YL-180  | 180   | 2-DN250*1500         | DN100           | DN80            | 11                        | 60        | 40     | 800*800         |
| B-YL-240  | 240   | 2-DN250*1500         | DN100           | DN80            | 15                        | 80        | 40     | 800*800         |
| B-YL-300  | 300   | 4-DN200*1500         | DN100           | DN100           | 15                        | 80        | 40     | 800*1000        |
| B-YL-360  | 360   | 2-DN300*1800         | DN100           | DN100           | 15                        | 80        | 40     | 800*1000        |
| B-YL-420  | 420   | 4-DN250*1600         | DN100           | DN100           | 15                        | 80        | 40     | 800*1000        |
| B-YL-480  | 480   | 4-DN250*1600         | DN100           | DN100           | 15                        | 80        | 40     | 800*1000        |
| B-YL-600  | 600   | 4-DN300*1800         | DN100           | DN100           | 15                        | 80        | 40     | 1000*1200       |
| B-YL-800  | 800   | 6-DN250*1800         | DN100           | DN100           | 15                        | 80        | 40     | 1000*1200       |
| B-YL-1000 | 1000  | 6-DN300*1800         | DN100           | DN100           | 22                        | 100       | 55     | 1000*1200       |



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The electric heating circulating heat transfer oil equipment has the following advantages:

1. Precise temperature control: It can achieve high-precision temperature control to meet strict process requirements.
2. Uniform heating: It can ensure that the entire system is heated uniformly to improve product quality.
3. Energy-saving and efficient: Compared with other heating methods, it has a higher energy utilization rate and reduces energy consumption.
4. Easy to install: It has a small floor area and does not require a complex installation foundation, saving space.
5. Simple to operate: It has a high degree of automation and is easy to operate and monitor.
6. Environmentally friendly and clean: It does not produce waste gas, waste residue and other pollutants, and is friendly to the environment.
7. Safe and reliable: It is equipped with multiple protection devices to reduce the risk of accidents.
8. Good stability: The operation is smooth and is not affected by external factors.
9. Convenient for maintenance: Daily maintenance is simple, and components are easy to replace.
10. Wide application range: It can meet the heating needs of different industries.



### **The performance of the electric heating circulating heat transfer oil equipment:**

1. Efficient heating: It can quickly raise the temperature of the heat transfer oil to meet the production needs.
2. Precise temperature control: It can precisely control the temperature to ensure the stability of the process.
3. Stable circulation: Ensure that the heat transfer oil flows uniformly in the system to achieve a good heat transfer effect.
4. Safe and reliable: It is equipped with multiple protection devices to reduce the risk of failure.
5. Energy saving and environmental protection: Effectively use electric energy to reduce energy waste and environmental pollution.
6. Strong durability: Long service life, reducing the cost of equipment replacement.
7. Easy to maintain: Simple maintenance, convenient for daily inspection and maintenance work.
8. Wide adaptability: It can be customized designed according to different production needs.
9. High degree of automation: It can achieve automatic control and improve production efficiency.
10. Strong anti-interference ability: It can resist the influence of external factors to a certain extent to ensure stable operation.

### **Selection factors of the electric heating circulating heat transfer oil equipment:**

1. Demand analysis: Understand the specific needs of customers, such as heating power, working temperature, heating medium, etc.
2. Process requirements: Clearly define the customer's process flow to determine the furnace type and function.

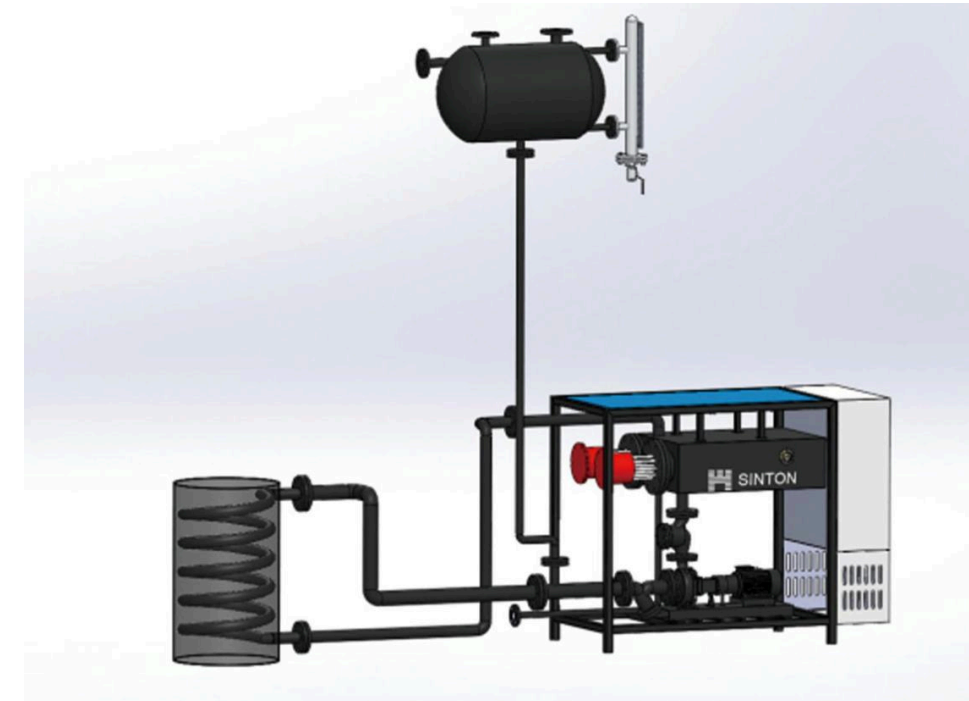
3. Site conditions: Consider the space size and power supply of the customer's installation site.
4. Energy efficiency considerations: Recommend products with higher energy efficiency to help customers reduce energy costs.
5. Safety performance: Emphasize the safety protection measures of the equipment, such as overload protection, temperature control, etc.
6. Quality assurance: Introduce the quality certification and warranty policy of the product.
7. Brand reputation: Provide products of well-known brands to increase the trust of customers.
8. Case sharing: Display successful cases of similar customers to let customers learn more about the actual application effect of the product.
9. After-sales service: Emphasize the importance of after-sales service, including installation, training, maintenance, etc.
10. Cost-benefit analysis: Help customers evaluate the return on investment of the equipment.
11. Customization options: Provide customized solutions to meet the special needs of customers.
12. Technical support: Provide professional technical consultation and support to answer customer questions.
13. Long-term cooperation: Establish a long-term cooperative relationship with customers for common development.
14. On-site inspection: Invite customers to conduct on-site inspections of the factory or the installed equipment.

## The Structure of Electric Thermal Oil Heater

1. Heating elements: Used to generate heat.
2. Thermal oil tank: Stores the thermal oil.
3. Pump: Enables the circulation of thermal oil.
4. Control system: Includes temperature controllers and pressure controllers to monitor and regulate the operation of the heater.
5. Pipelines and valves: For the transportation and control of thermal oil.
6. Heat exchanger: To transfer the heat to the equipment or medium that needs to be heated.
7. Safety accessories: Such as pressure relief valves and explosion-proof valves to ensure the safe operation of the heater.
8. Shell: Protects the internal components.

The combination of these components allows the Electric Thermal Oil Heater to achieve the heating function. It has the advantages of precise temperature control, high thermal efficiency, and ease of use. In practical applications, the selection and design should be based on specific requirements and working conditions.

Schematic Diagram Installation Form



## The Application of The Electric Hot Oil Circulation Heating Equipment

**New materials, factory building temperature increase, press plate machine temperature increase.**

In the use of the industry of the electric hot oil circulation heater, it is mainly used for the heating of crude oil, natural gas, and the processing, storage, and transportation of mineral oils. The refinery uses heat transfer oil to preheat cold materials, and has been successfully used in the heating of the solvent and extractant evaporation device in the lubricant manufacturing process. Due to the fact that the use of heat transfer oil for heating has the advantages of uniform heating, simple operation, safe and environmental protection, energy saving, high temperature control accuracy, and low operating pressure compared with the use of steam for heating, it has been widely used as a heat transfer medium in modern industrial production.

In the chemical industry, it is mainly used for distillation, evaporation, polymerization, condensation/demulsification, esterification, drying, melting, dehydrogenation, forced heat preservation, and the heating of the pesticide, intermediate, antioxidant, surfactant, perfume, and other synthesis devices.

In the fat and paint industry, it is mainly used for the heating of the autoclave, dryer, distillation tank, evaporation equipment, paint drying, baking, drying, and high-temperature hardening.

In the synthetic fiber industry, it is mainly used for the polymerization, melting, spinning, thermosetting, fiber finishing, extension, and drying equipment heating.

In the paper industry, it is mainly used for the heating of the glue coating roller, drying roller, drying room, drying cabinet, thermoplastic machine, wax melting pot, and corrugated paper processing.

In the plastic and rubber industry, it is mainly used for the heating and insulation of the hot pressing, hot extension, extrusion, kneading, close mixing, vulcanization molding, injection molding machine, glue slurry mixer, conveyor dryer, screw extruder, and mold.

In the air conditioning and electrical equipment industry, it is mainly used for the central or decentralized heating of factories, offices, hospitals, civil buildings, and hotels; the heating of the polishing machine in the electrical equipment manufacturing industry, rolling mill, vacuum machine, dryer, drying room, vacuum chamber.

In the fat and paint industry, it is mainly used for the heating of the high-pressure kettle, dryer, distillation pot, evaporation equipment, paint drying, baking, drying, and high-temperature hardening.

In the wood industry, it is mainly used for the heating of the fiber board, particle board, laminate, plywood, veneer, and the hot pressing forming of the wood drying equipment, drying equipment, coating equipment, and gluing machine. In the building materials industry, it is mainly used for the drying of gypsum boards, the solidification protection of concrete components, prefabricated production, tile die pressing, decorative material drying, and asphalt production line heating.

In the road construction engineering, it is mainly used for the heating of asphalt, dissolution, asphalt storage tanks, asphalt concrete, and emulsified asphalt heating and insulation.



In the metallurgical, mechanical processing, and casting industries, the electric hot oil circulation heater is mainly used for the metal degreasing pool, Dewar flask, pickling tank, cleaning tank, electroplating tank, Lv Yang plate oxidation tank, electrode manufacturing, shower heat treatment device, phosphate treatment equipment, baking room, sand core drying, varnish spraying and drying, assembly processing device heating.

In the food industry, it is mainly used for the heating of the bread baking device, biscuit food baking device, candy production device, grain drying device, edible oil pressing and refining device, distillation pot, high-pressure kettle, conveyor belt dryer.

In the textile and printing and dyeing industry, it is mainly used for the drying and shaping device, hot melt dyeing device, dyeing and printing device, dryer, dryer, calender, flattening machine, washing machine, rolling machine, ironing machine, hot air drawing, and other heating.

In the coking industry, it is mainly used for the heating and insulation of the gas storage tank, mixing station, distribution station.

In the automotive manufacturing industry, it is mainly used for the heating of the tunneltype drying room, degreasing bath, phosphoric acid treatment equipment.

In the national defense scientific research, it is mainly used for the heating of the national defense scientific research new technology, new materials, and new products required for the development of high-temperature heat sources.

In the carbon industry, it is mainly used for the graphite electrode, carbon product, asphalt melting, mixing pot heating, extrusion molding heating.

In the shipping industry, it is mainly used for the heating of the heavy oil tank, asphalt tank, sulfur tank on the ship, and the heating of the container that needs to be heated and insulated.

In addition to the above industries, the electric hot oil circulation heater can be used for the warm water generator, hot water generator, steam generator, radiator, and the heating of the soap and detergent industry, tar processing industry, and washing machine.



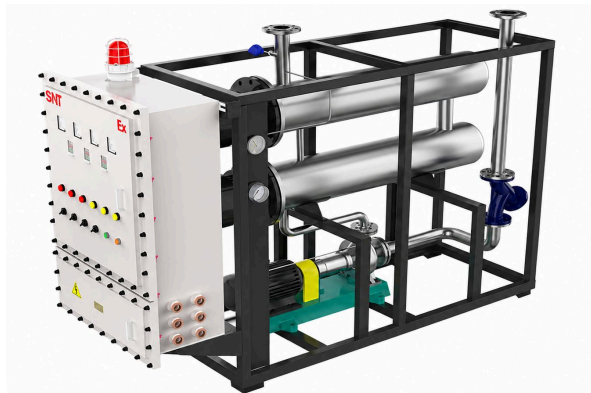
## Explosion-proof Electric Heating Thermal Oil Heater

Explosion-proof Electric Heating Thermal Oil Heater is a type of heating system that uses electric heating elements to heat a thermal oil. This thermal oil is circulated through a closed-loop system to provide heat to various industrial processes and applications.

The explosion-proof aspect of this type of heater refers to its ability to operate in hazardous environments that contain flammable gases, vapors, or dust. These heaters are designed with specialized features that prevent any sparks or flames from igniting these substances, thus reducing the risk of an explosion.

Explosion-proof electric heating thermal oil heaters are commonly used in the oil and gas industry, chemical processing plants, and other industrial settings where hazardous materials are present. They offer several advantages over other heating systems, including high efficiency, precise temperature control, and low maintenance requirements. Additionally, they are considered to be more environmentally friendly than fossil fuel-based

heating systems, as they produce no emissions and do not require on-site fuel storage.



## Why is The Explosion-proof Thermal Oil Heater More Environmentally Friendly Than The Traditional Heater?

1. The control accuracy can reach  $\pm 0.1^{\circ}\text{C}$ , and the temperature range can be accurately controlled. The main heating power is controlled by the thyristor. -Unlimited frequency conversion output, suitable for frequent switching.
2. Due to its small size, low transportation cost, and small installation area, it can be installed at a short distance from the heating device, the installation cost and energy consumption of pipeline heat dissipation, and the additional cost of pipeline heat transfer oil. Can be saved.
3. The safety system only bears the pump pressure, so the heat transfer oil heating system is safe and there is no danger of explosion.
4. Electrically heated heat-conducting oil furnace uses electricity as energy source, does not have the environmental protection problems of traditional boilers, and is not subject to environmental protection laws and regulations.
5. Energy saving, front and back recycling and energy consumption are only part of the equipment absorption, no water treatment equipment is required, and there is no heat loss, such as the operation, release, dripping or leakage of the steam boiler. The heat utilization rate is very high. Compared with the steam boiler, the energy saving is about 50%. Thermal oil electric heater is high temperature setting, sheet heating, rubber, drying, printing, dyeing, chemical industry, plywood manufacturing, waterproof membrane manufacturing, asphalt heating, non-woven hot rolling mill, FRP hot pressing machine, mold, drying It is widely used in rooms, ovens and other industries that require a lot of heat.



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