Jiangsu Xuyang Chemical Equipment Co.,LTD

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JIANGSU XUYANG CHEMICAL EQUIPMENT CO.,LTD

CATALOG

Company Profile 1

Candle filter 2

Reactor 8

Tube-and-shell heat Exchanger 10

Evaporator 14

Skid-mounted equipment 18

MVR 20

Tower 22

Anti-corrosion lining equipment 25

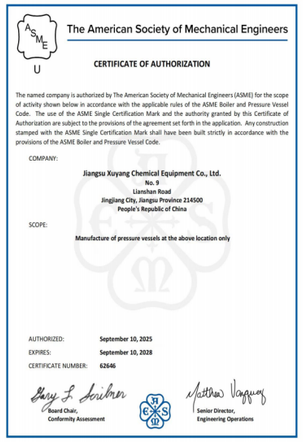
Water treating equipment 27

Cooperative Partner 28

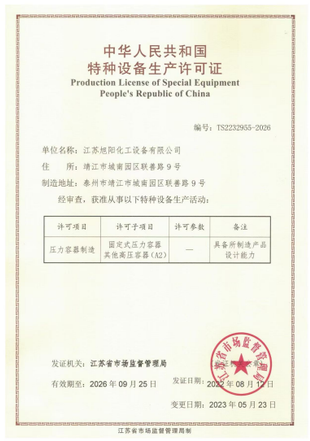
Specializing In Stainless Steel Pressure Vessels

Honor Qualificantion





ASME



Pressure Vessel Production Licence



High-Tech Enterprise Certificate



Jiangsu Xuyang Chemical Equipment Co., Ltd



QUALITY MANAGEMENT SYSTEM CERTIFICATION



ENVIRONMENTAL MANAGEMENT SYSTEMCERTIFICATIONIS



OCCUPATIONAL HEALTH AND SAFETYMANAGEMENT SYSTEMCERTIFICATION

20+ patents

ASME certifications

500+ collaborators

高新技术企业

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ASME International







Company Profile

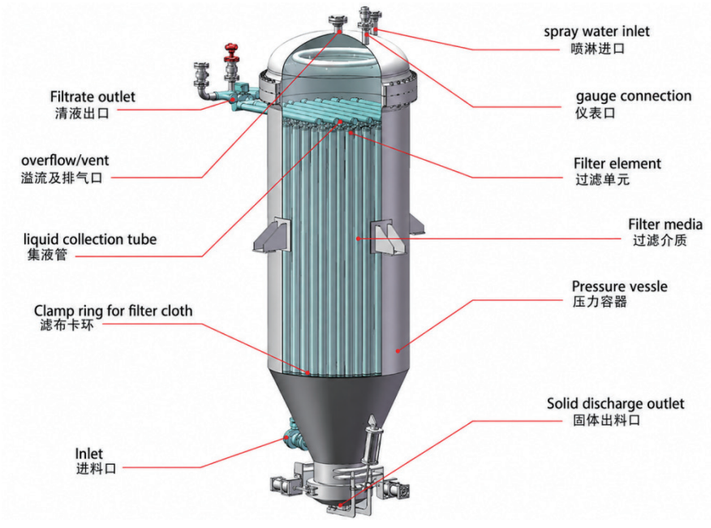
Jiangsu Xuyang Chemical Equipment Co., Ltd. is an enterprise integrating R&D, production, and import/export trade. Founded in 2009, the company specializes in the design and manufacturing of various chemical, environmental protection, pharmaceutical, fermentation, food, new materials, and lithium industry projects, as well as the production of pressure vessels. It is a high-tech enterprise integrating R&D, production, and import/export trade. Located in the Chengnan Industrial Park of Jingjiang Economic and Technological Development Zone, the company enjoys a superior geographical location and convenient transportation. Thanks to the enterprising spirit and hard work of all its employees, Jiangsu Xuyang Chemical Equipment Co., Ltd. has experienced strong growth and rapid expansion in recent years. It has been successively recognized as a Jiangsu Provincial High-tech Enterprise, a Jiangsu Provincial Specialized, Innovative, and Unique Small and Medium-sized Enterprise, and a 3A-level unit for honoring contracts and maintaining credit. It holds a national A2-level special equipment design and manufacturing license and has passed ISO 9001 quality management system certification, ISO 45001 occupational health and safety management system certification, and ISO 14001 environmental management system certification.

The company possesses a range of modern production equipment: advanced domestic semi-tube automatic welding equipment, a 30,000W beveling laser cutting machine, a 6,000W laser cutting machine, a laser tube cutting machine, robotic automatic hole drilling, a CNC four-roll plate rolling machine, a CNC machining center, automatic tube sheet welding machines, automatic tube sheet welding machines, and automatic pipe welding machines. It is also equipped with advanced testing and inspection equipment and a stirring dynamic balancing testing workshop to ensure that product quality and performance meet design requirements.

Candle filter

A candle filter is a filtration tool that effectively and precisely separates solid particles from liquids. The filter consists of several filter elements, often cylindrical and shaped like candles, which are housed in a vessel. The porous surfaces of these candle-shaped filter components let liquids flow through while capturing solid particles.

The liquid is forced to flow through the filter candles under pressure or vacuum, depending on the system setup. The solid particles are trapped either inside the porous structure of the candle elements or on their surface. Depending on the system design and the type of particles being filtered, the filter components may need to be cleaned or changed over time.



1.Filter Cartridge

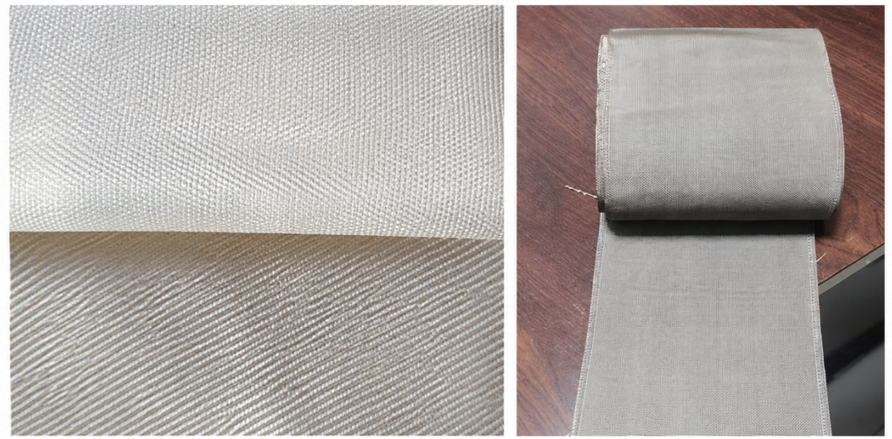
The filter element skeleton is designed with a six-petal plum blossom design, and the upper and lower ends are manufactured using molds. The filter cloth transitions smoothly on the skeleton, which is conducive to draining the liquid

inside the filter rod, increasing the filter element's pressure and load-bearing capacity, and facilitating automatic drying and cake removal. Its unique design further increases the consistency and reliability of filter element production, while also enhancing the adhesion and peeling performance of the filter cake during the cake removal period.



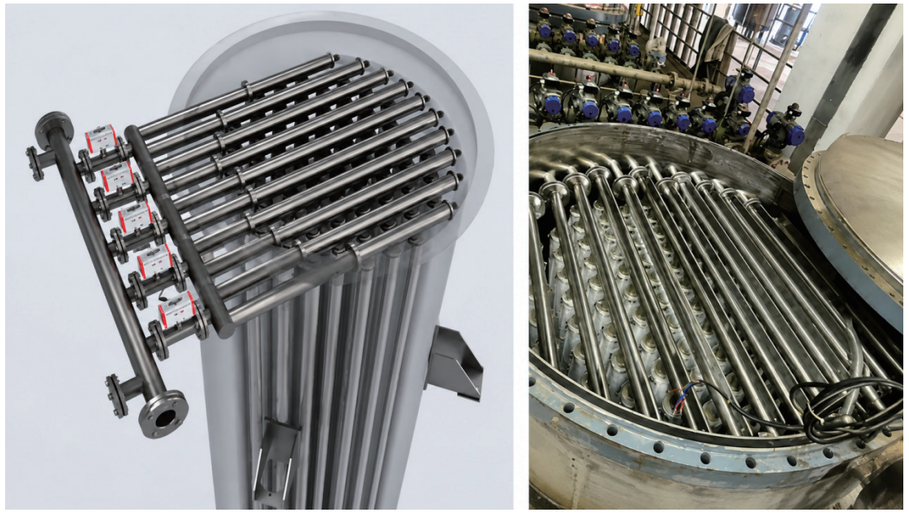
2.Filter Cloth

Candle filter cloth, also known as seamless filter cartridge, is made primarily from woven fabric fibers through a textile process. It can be categorized by material, including PP (polypropylene), PET (polyester), PPS (polyphenylene sulfide), PVDF (polyvinylidene fluoride), PTFE (polytetrafluoroethylene), PA (nylon), aramid (aramid fiber), and PEEK. By weave pattern, it can be plain weave (straight weave), twill weave, and satin weave. By filament type, it can be multifilament, monofilament, or single filament. Based on air permeability, it typically falls into six ranges: low permeability, very low permeability, small permeability, medium permeability, high permeability, and extra-high permeability.



3.Internal liquid collection tube assembly

Inside a filter are several identical liquid collection pipe assemblies, with several filter elements suspended on each collection pipe. The filtered liquid is collected through the collection pipe and flows out through the outlet pipeline outside the cylinder. When discharging solid slag, the branch lines backflushing slag in sequence prevent the slag discharge valve from bridging.



4.PLC control System

The control module includes a main control module, a digital expansion module, and an analog-to-digital converter module. The touchscreens are available in 7-inch and 10-inch sizes, and all electrical components are Schneider Electric. Communication is via RS485 Modbus RTU. It is equipped with a corresponding instrumentation control system and control box. The PLC has real-time communication capabilities with the client's DCS, with communication speeds meeting control-level requirements. The DCS can perform control and data acquisition via communication, providing logic diagrams and tables to assist the client in configuration. Three operating modes are available: automatic, semi-automatic, and manual. An explosion-proof mouse allows for equipment setup and operation without opening the cover.



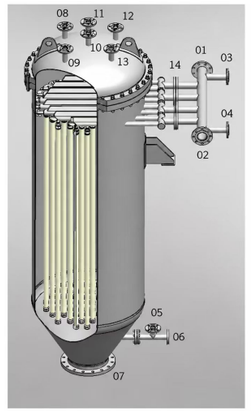
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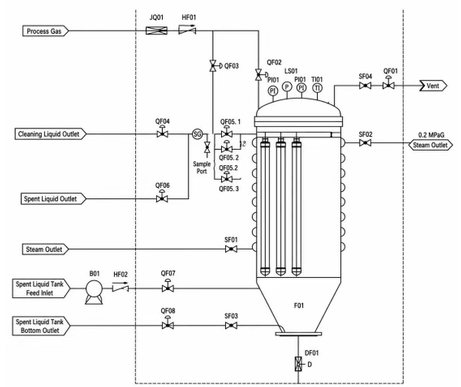
防爆 ExdⅡCT6

Principle:

The slurry enters the filter vessel under pressure and flows from the outside to the inside of the candle filter elements. Solid particles are retained on the filter surface, forming a filter cake, while the clarified liquid passes through the filter media and exits through the outlet. After filtration, the cake can be dried, backwashed, and discharged automatically



01. Liquid Outlet
02. Circulation Inlet
03. Gas Outlet
04. Vacuum Port
05. Drain Outlet
06. Inlet
07. Sludge Outlet
08. Pressure Gauge Port
09. Inlet Gas Port
10. Pressure Transmitter Port
11. Liquid Level Switch Port
12. Air Outlet
13. Spray Port
14. Collection Pipe



Candle Filter Types Comparison Chart:

Filter Type	Filtration Mechanism	Suitable For	Advantages	Typical Applications
Pleated Candle Filter	High surface area for fine filtration	High-efficiency filtration, large volumes	High capacity, efficient filtration	Chemical, pharmaceutical, water treatment
Strainer Candle Filter	Mesh or perforated material	Coarse filtration of large particles	Cost-effective, simple design	Oil & gas, pre-filtration stages
Cartridge Candle Filter	Fine filtration with replaceable cartridges	Fine particle removal in liquids	Compact, replaceable elements	Pharmaceutical, food & beverage
Pre-Coat Candle Filter	Filter aid layer for fine filtration	High-efficiency filtration for fine particles	Longer filter life, efficient for tough applications	Fine chemicals, oil refining
Vacuum Candle Filter	Vacuum draws liquid through the filter	Slurries or liquids with high solid content	Handles high solid content, efficient under low pressure	Mining, paper & pulp, wastewater
Pressure Candle Filter	Positive pressure forces liquid through the filter	High flow rate filtration with higher pressures	High flow rates, efficient for continuous filtration	Petrochemical, oil & gas, food processing

Key Considerations for Selecting Candle Filters

1.Filtration Requirements

The type of filtration required will dictate the type of candle filter to use. For coarse filtration, a strainer candle filter or cartridge filter may be sufficient. However, if fine or pre-coat filtration is necessary, more specialized filters like pre-coat or pleated candle filters will be more suitable.

2.Flow Rate

The flow rate at which you need to filter the liquid plays an important role in determining the right filter. Pleated and pressure candle filters are suitable for high flow rates, while strainer filters may be better suited for lower flow rates.

3.Particle Size

Consider the size of the particles you need to filter out. Fine particles require filters with smaller pore sizes, such as pleated candle filters or cartridge filters. For larger particles, a strainer filter or vacuum filter might be more appropriate.

4.Temperature and Chemical Compatibility

Make sure the filter material can withstand the chemicals and temperature of the liquid being filtered. Applications involving harsh chemicals or high temperatures frequently use stainless steel and other corrosion-resistant materials.

5.Maintenance Requirements

Think about the filter’ s maintenance needs. Pleated candle filters and cartridge filters generally require less maintenance, while pre-coat and vacuum candle filters may need more frequent cleaning and replacement of filter aids.

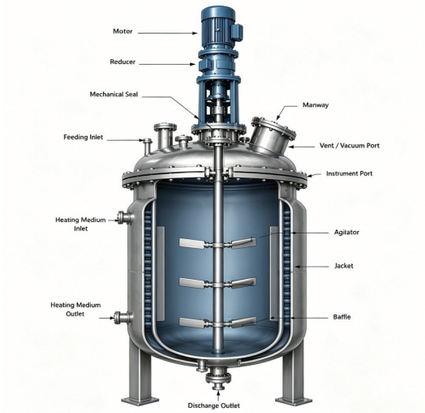
Reactor

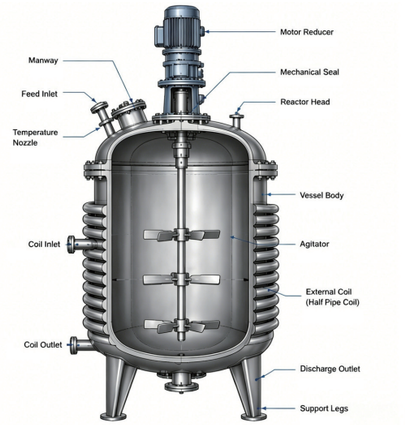
The reaction vessel is a core non-standard equipment in the chemical industry. It is a closed, pressurized container used for mixing, stirring, reacting, heating/cooling, emulsifying, polymerizing, neutralizing, crystallizing, and all other liquid-phase or liquid-solid chemical reactions. It offers full control over temperature, pressure, rotation speed, and time throughout the process.Widely used in chemical industry, pharmaceuticals, food, coatings, resins, adhesives, water treatment, personal care products, and the new energy sector.

Our main products include: stainless steel (carbon steel) reactors, electrically heated stainless steel (carbon steel) reactors, high-pressure stainless steel (carbon steel) reactors, external coil reactors, internal coil reactors, rare metal (titanium, zirconium, Hastelloy) reactors, and intelligent reactors.

Reactor Technical Parameters					
Work Volume (L)	50	100	200	300	500
Structure Type	Open Style Connect Kettle Lid and Kettle Body by Bolts and Nuts on Flange				
Working Pressure	Negative pressure -0.1~20.0 (MPa)				
Working temperature	-98~425				
Motor power (W)	1.1	1.5	2.2	3	4
Heating power (KW)	9	15	18	18	36
Heating type	Direct Electric Heating Fumace, Electric Heater with Thermal Oil Bath, Jacket Circulation with Thermal oil/steam/melt salt Internal coilexternal half-coil heating/ far-infrared heating				
Discharging type	Discharging from bottom, sampling from kettle lid				
Mixing Shaft	Self-lubricating wear-resistant sleeve made of stainless steel, suitable for mixing various medium under high speed.				
Mixing Style	Impeller, Paddle, Anchor, Turbine, Self-suction, Frame, Screw, Belt, or as per customer's request. (customizable)				

Seal Type	Magnetic Seal / Mechanical Seal / Packing Seal						
Motor	Ordinary AC motor, or Explosion-Proof motor as per customer request.						
Reactor material	Tank inner contacting materials option: All kinds of stainless steel, such as SS304, SS316L,SS321,310S,S32205, and Titanium, Hastelloy,Zirconium,Nickel etc., as the reaction actual needed.						
Kettle lid open port	Gas port, Liquid port, Thermowell port, Solid feeding port, Pressure gauge, Burst disc(safety valve) port, Cooling waterinlet/outlet port(or Visual Glass Port and other port according to working pressure).						
Controller Device	Equipped with auto DCS or PLC controller,Display & control Mixing Speed and Heating Temperature, self-adjustment function,temperature control accuracy +1° C; Control other instruments, like flow meter, level meter, valves according to reaction process.						
Industrial Reactor Technical Parameters							
Work Volume (L)	1000	2000	3000	5000	8000	10000	20000
Structure Type	Close type (with man hole)						
Design Pressure (Mpa)	Negative 0.1-100	Negative 0.1-100	Negative 0.1-100	Negative 0.1-100	Negative 0.1-20	Negative 0.1-20	
Design temperature	-98~350 °C			-98~350 °C			
Mixing Speed	0~800 r/min			0~500 r/min			
Motor	Ordinary AC motor, or Explosion-Proof motor as per customer request.						
Motor Power	5.5 KW	11 KW	15 KW	22 KW	/		
Heating Power	48 KW	60 KW	75 KW	90 KW	/		
Heating Style	Far infrared electric heating, electric heater with thermal oil bath, jacket circulation with thermal oil/steam/melt salt Internal coilexternal half-coil heating/ far-infrared heating				Jacket circulation with thermal oil/ steam/melt salt		
Discharging Style	Discharging from bottom, or sampling from kettle lid						
Mixer Shaft	Self-lubricating wear-resistant sleeve made of stainless steel, suitable for mixing various medium under high speed.						
Mixing Style	Impeller, paddle, anchor, turbine, self-suction style, or as per customer's request. (customizable)						
Seal Type	Magnetic Seal / Mechanical Seal / Packing Seal						
Contact Material	Tank inner contacting materials option: All kinds of stainless steel, such as SS304, SS316L,SS321,310S,S32205, and Titanium, Hastelloy,Zirconium,Nickel etc., as the reaction actual needed.						
Kettle Lid Open Port	Gas port, Liquid port, Thermowell port, Solid feeding port, Pressure gauge, Burst disc (safety valve) port, Man hole (Hand hole), Cooling water inlet/outlet port(or Visual Glass Port and other port according to working pressure)						
Controller	Equipped with automatic PID or PLC controller, temperature control accuracy ±1°C; Can display & control Mixing Speed and Heating Temperature; Can adjust heating power for constant temperature, also has self-adjustment function.						
Other Accessories	If the user have other special requirements on kettle cover, kettle body openning, internal structure, high and low pressure, stirring paddle and other supporting device (such as refluxing unit, condenser, constant feeding tank, collector, etc) we can manufacture ODM reactors according to users' requests.						





Tube-and-shell heat Exchanger

The structure features a fixed tube sheet and tube box at one end, and a freely retractable floating head structure at the other end, which can automatically compensate for thermal stress caused by temperature differences and prevent equipment deformation. The tube bundle can be extracted as a whole, and both the tube side and shell side are easy to clean and maintain. It has good sealing performance and is suitable for large temperature differences.

Features

- One fixed end, one floating head for thermal expansion
- Removable tube bundle, easy cleaning for fouling media
- Suitable for large temperature difference & high viscosity fluid
- Reliable sealing, widely used in chemical, petrochemical, pharmaceutical industries





Fixed Tube Sheet Heat Exchanger

The tube sheets at both ends are fixedly connected to the shell, which is simple in structure, low in cost, has good pressure resistance, reliable sealing, and easy to clean the tube side; however, it has no heat compensation capability and the shell side is not easy to maintain. It is suitable for conventional heat exchange conditions with small temperature difference, clean medium, and high pressure, and is widely used in chemical, pharmaceutical and steam heat exchange systems.

Features

- Tube sheets rigidly fixed to the shell.
- Simple structure, fewer parts, compact size.
- High pressure resistance and reliable sealing.
- Low manufacturing cost, long service life.
- Easy to clean the tube side, hard to clean the shell side.
- No thermal expansion compensation.
- Suitable for clean medium and small temperature difference.
- Materials: carbon steel, stainless steel, titanium, Hastelloy, zirconium available

U-tube Heat Exchanger

The tube bundle is bent into a U-shape, with only one end in a tube sheet and the other end free, not fixed by the shell.

Features

- Naturally possesses strong thermal compensation; the tubes can freely expand and contract under heat, unaffected by large temperature differences or thermal stress, suitable for high-temperature and high-pressure conditions.
- The tube bundle is removable, facilitating shell-side cleaning.
- Two-way flow path in the tube side ensures high flow velocity and excellent heatexchange.
- Simple structure, few sealing points, and highest pressure resistance.

Technical parameter	
Product name	Shell and Tube Heat Exchanger
Product model	HLGLC-1/2//3.....-A
Unit heat exchanging area	1-4000m2
Maximum flowrate	1-5000m3/h
Shell material	Shell material 304,316L.2205,TAII,C275, Copper
Heat exchange tube material	Shell material 304,316L.2205,TAII,C275, Copper
Welding material	99.99Stainless Steel 304,316L.2205,TAII,C275, Copper
Thickness of Materials	4-60mm
Design pressure	-0.1MPa-100Mpa
Test pressure	-0.1MPa-100MPa
Design temperature	-20-425
Application scope	Petroleum and petrochemicals, pharmaceuticals, new energy lithium batteries, chemical pesticides



Spiral plate heat exchanger

It consists of two steel plates rolled and pressed into two concentric spiral channels, with the hot and cold fluids flowing in complete countercurrent. It can be divided into detachable spiral plate heat exchangers and non-detachable spiral plate heat exchangers.

Features

- Double helix flow channel, full counter-current flow, large heat transfer area, high heat exchange efficiency
- High flow velocity, self-cleaning, and good anti-clogging properties
- Small size, small footprint, and low metal consumption
- Suitable for high-viscosity, particulate, waste liquid, and viscous materials
- Pressure resistance generally ⩽ 1.0 ～ 1.6 MPa, temperature ⩽ 250°C
- Non-removable design with good sealing performance, suitable for heat exchange of highly toxic, flammable, explosive, or valuable fluids. Low price, but difficult to maintain and clean.



Evaporator

Falling Film Evaporator

A Falling Film Evaporator is a highly efficient evaporation system widely used in chemical, pharmaceutical, food, dairy, and wastewater treatment industries. It is especially suitable for heat-sensitive materials and low-viscosity liquids.

Working Principle

The liquid feed enters the top distributor of the evaporator and is evenly distributed into the heat transfer tubes. Under gravity, the liquid forms a thin film flowing downward along the inner wall of the tubes.
Meanwhile:
Heating steam transfers heat through the tube wall
The liquid rapidly evaporates during downward flow
Vapor and concentrated liquid are separated in the separator
Vapor enters the condenser system
Concentrated product is discharged from the bottom
Because of the short residence time and efficient heat transfer, the product quality can be effectively maintained.

Main Features

High heat transfer efficiency
Low energy consumption

Short residence time
Suitable for heat-sensitive materials
Continuous operation
Stable evaporation performance
Easy cleaning and maintenance

Thin Film Evaporator

A Thin Film Evaporator is a high-efficiency evaporation equipment widely used in chemical, pharmaceutical, food, petrochemical, and environmental protection industries. It is especially suitable for processing heat-sensitive, high-viscosity, and easily crystallized materials.

Working Principle

The material enters the evaporator through the feed inlet and is evenly distributed onto the heated inner wall by a rotating scraper or wiper system. Under vacuum conditions, the liquid forms a thin film and flows rapidly downward along the heating surface.
During this process:
Rapid heat transfer occurs
Solvent evaporates quickly
Vapor is discharged through the vapor outlet
Concentrated product is collected from the bottom outlet

The short residence time prevents thermal degradation of heat-sensitive products.

Main Features

High heat transfer efficiency
Short residence time
Suitable for vacuum operation

Ideal for heat-sensitive materials
Handles high-viscosity products
Continuous operation
Low energy consumption

Forced Circulation Evaporator

A Forced Circulation Evaporator is a high-efficiency evaporation system widely used in chemical, pharmaceutical, food processing, and wastewater treatment industries. It is specially designed for handling high-viscosity, high-concentration, scaling, and crystallizing liquids.

Working Principle

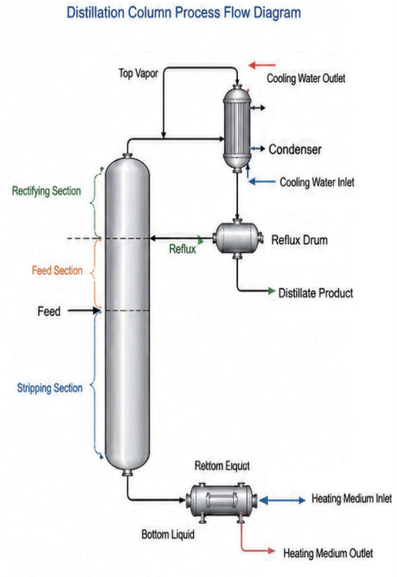
The liquid is continuously circulated through the heat exchanger by a circulation pump at high flow velocity. The heating medium transfers heat to the liquid, causing partial evaporation under vacuum or normal pressure conditions.
The vapor-liquid mixture then enters the separator:
Vapor is separated and discharged to the condenser.
Concentrated liquid is recirculated back to the heat exchanger.
This continuous circulation process reduces scaling and improves heat transfer efficiency.

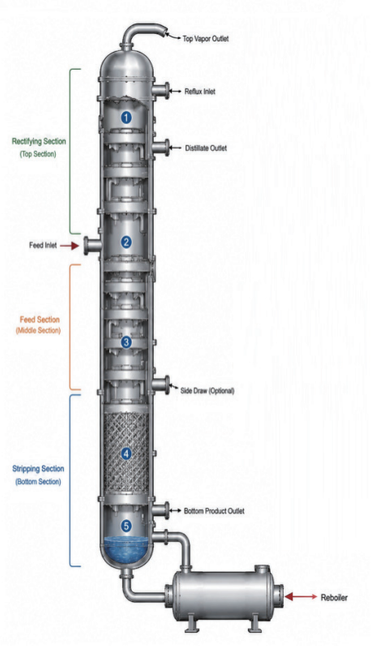
Main Features

High heat transfer efficiency
Suitable for high-viscosity materials
Excellent anti-scaling performance
Stable continuous operation
Suitable for crystallization processes
Low maintenance cost

Model	XY-600	XY-800	XY-1000	XY-1200	XY-1600
Moisture evaporation(Kg/h)	600	800	1000	1200	1600
Current density %	11.5~12				

Discharge density %	45~48				
Steam Pressure MPa	0.3				
Evaporation energy(Kg/h)	420	560	700	840	1100
Steam temperature	60 DEGREE				
Design evaporation temperature according to customer requirements					
Heating temperature	70				
Sterilization temperature	84~94				
Water cost(t/h)	30	40	45	55	75
Equipment size (L×W×H) m	3.9×2.3×6.5	3.9×2.3×7	3.9×2.4×7.5	3.9×2.4×8	3.9×2.4×8.5





Skid-mounted equipment

Overview

All units, pipes, valves, instruments and electric control are pre-assembled on one base in factory. Compact, easy installation, fast commissioning, movable and safe. Widely used in chemical, pharmaceutical, water treatment and heat exchange systems.

We specialize in the customization of skid mounted process equipment as per our client’ s requirements. We are capable of providing detailed manufacturing designs from drawings provided by customers, ensuring that our solutions are tailored to their specific needs.

Modular skid mounted process equipment is highly flexible and adaptable, allowing for easy installation, transportation, and customization. They are built on a modular framework, which makes them easy to assemble and disassemble, reducing installation time and cost.

We manufacture a wide range of skid mounted process equipment, including chemical injection skids, gas dehydration skids, filtration skids, metering skids, and more.

We use only the highest quality materials and advanced technology to manufacture modular skid mounted process equipment, ensuring that our products are durable, long-lasting, and of the highest quality. Our solutions are designed to meet the unique needs of each client, and we work closely with them to ensure that they receive a product that meets their specific requirements and exceeds their expectations.
We are committed to providing our clients with exceptional service and quality products. With XuYang, clients can be confident in the quality, efficiency, and

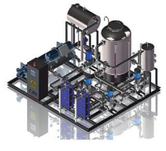
reliability of Modular skid mounted process equipment.

Features

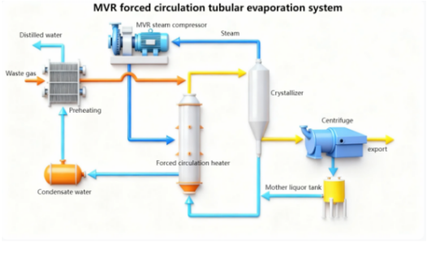
- **Integrated System:** The main unit, pump, pipelines, valves, instruments, and electrical controls are all pre-installed on a steel base, forming a complete integrated system.
- **Extremely Simple Installation, Ready to Use Immediately:** Only power and piping connections are required on-site; no piecemeal installation or welding is needed, resulting in a short construction period.
- **Factory Prefabrication and Factory Commissioning:** Assembly, pressure testing, and commissioning are completed in the factory, ensuring high stability and a low failure rate.
- **Compact Structure and Small Footprint:** Optimized layout and modular design result in a small size, saving space.
- **Movable and Relocatable:** The entire unit can be hoisted and transported, suitable for temporary projects and renovation/expansion projects.
- **High Degree of Automation and High Safety:** Equipped with instruments, interlocks, explosion-proof features, and automatic control, ensuring simple operation and safe operation.
- **Fast Delivery and Convenient Maintenance:** Standardized production ensures short delivery times; clear piping layout facilitates maintenance.

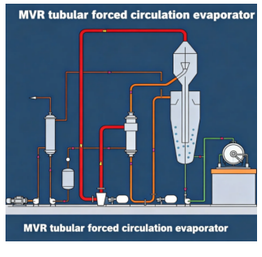












MVR

Description

Mechanical Vapor Recompression + Multi-Effect Evaporation is a high-efficiency and energy-saving evaporation system that combines MVR heat pump technology with multi-effect evaporation. It is used for the concentration, crystallization, and dehydration of industrial wastewater and chemical liquids. It saves more steam than traditional multi-effect evaporators and is more suitable for high-concentration/high-boiling-point conditions than pure MVR.

MVR Works Principle

1. Feed Liquid Enters the Evaporator

The liquid material enters the evaporator system and is heated under vacuum conditions.

2. Liquid Evaporation

After heating, Part of the liquid evaporates, Secondary vapor is generated. In traditional evaporators, this vapor is usually condensed and discharged.

3. Vapor Compression

In an MVR system, The secondary vapor enters the MVR compressor or blower. The compressor increases Vapor pressure and Vapor temperature. This process is called: Mechanical Vapor Recompression

4. Vapor Reuse

The compressed high-temperature vapor returns to the heat exchanger as the heating source. This means, Very little fresh steam is needed and Most heat energy is recycled inside the system

5. Continuous Evaporation

The system continuously: Evaporates liquid, Compresses vapor, Reuses thermal energy and forming a highly efficient closed-loop energy cycle.

Features:

Energy Saving: MVR can save 80–90% steam consumption and Large operating costs

Environmental Protection: Reduced emissions and Lower cooling water consumption

Automation: Fully automatic control and Continuous stable operation

High Efficiency: Excellent heat transfer efficiency and Suitable for large-scale production

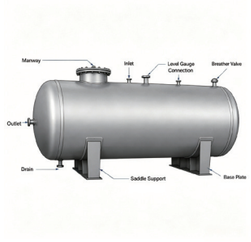
Storage Tank

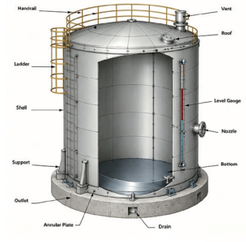
Overview

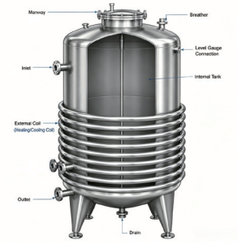
Storage tanks made from stainless steel/carbon steel, featuring a fully enclosed structure(with heating or cooling jackets added according to process requirements). They are suitable for storing various corrosive media solutions, such as acids, alkalis, and salts, in industries including petroleum, chemical, dye, food (dairy), beverage, and pharmaceutical.

Features:

- Diverse Structures:Vertical/Horizontal, Atmospheric/Pressure, Head/Conical Bottom, Jacket/Insulated, Customization Available.
- Rich Material Options: Carbon Steel, 304, 316L, Titanium, Fiberglass; Acid and Alkali Resistant, Corrosion Resistant.
- Excellent Sealing Performance: Anti-evaporation, Anti-leakage, Anti-contamination; Suitable for solvent and hazardous chemical storage.
- Wide Application Range: Suitable for storing liquids, gases, slurries, acids and alkalis, oils, intermediates, wastewater, and raw materials.
- **Easy Installation:** Moderate footprint; supports on-site fabrication, pressure testing, and complete assembly delivery; long service life.







Tank capacity	Manhole diameter	Oil discharge	Dimension Length*Diameter(mm)
5 CBM	400mm	DN65	2700*1600
10 CBM	400mm	DN65	3400*2000
20 CBM	600mm	DN65	5600*2200
30 CBM	600mm	DN65	6000*2600
40 CBM	600mm	DN65	6800*2800
50 CBM	600mm	DN65	8400*2800

Tower

Overview

Tower equipment is one of the most important process units in modern industries, widely used for gas-liquid and liquid-liquid mass transfer, heat transfer, separation, purification, and concentration applications. These systems play a critical role in petroleum, petrochemical, chemical, pharmaceutical, environmental protection, and new material industries.

Our tower equipment includes Scrubbing Towers, Distillation Columns, Degassing Towers, and Packed Towers, designed for high efficiency, stable operation, corrosion resistance, and long service life. We provide customized engineering solutions according to different process requirements, working conditions, and material specifications.

Description

A distillation tower, also known as a distillation column, is a key separation device widely used in chemical, petrochemical, pharmaceutical, food processing, and environmental industries. It is designed to separate liquid mixtures into different components according to their boiling points through continuous vaporization and condensation processes. During operation, the feed mixture enters the tower where heat supplied by the reboiler causes lighter components with lower boiling points to vaporize and rise upward, while heavier components remain in liquid form and flow downward. Inside the tower, trays or packing materials provide a large contact surface for efficient heat and mass transfer between vapor and liquid phases, improving separation efficiency and product purity.

The tower system usually consists of a tower body, trays or packing, condenser, reboiler, distributors, demisters, and automatic control instruments for temperature and pressure regulation.

Distillation towers are widely applied in crude oil refining, solvent recovery, alcohol purification, chemical separation, fine chemical production, and heat-sensitive material processing. They offer advantages such as high separation efficiency, stable continuous operation, large processing capacity, energy-saving performance, and customizable design according to customer process requirements.

Product name	Distillation equipment					
tower volume (L)	640	1220	1450	2300	2500	3200
tower height (mm)	6000	7000	7000	7500	8000	10000
high-level tank (L)	300	400	650	800	1000	1500
condensation area (m^2)	5	9	11	22	25	40
cooling area (m^2)	1	1.5	2.2	6	8	15
heat transfer area (m^2)	4	6	12	18	25	32
recycling capacity (kg/h)	45-50	90-100	150-160	280-300	420-440	600-620

Working principle

The mixed liquid enters the distillation tower through the feed inlet and is heated in the reboiler at the bottom of the tower. As the temperature increases, components with lower boiling points vaporize first and rise upward through the trays or packing inside the tower.

During the upward movement:

Light components continue rising to the top of the tower.

Heavy components condense and flow downward.

Inside the tower, vapor and liquid continuously contact each other, allowing repeated heat and mass transfer. This process improves the separation efficiency.

At the top of the tower

Vapor enters the condenser.

The vapor is cooled and condensed into liquid.

Part of the liquid returns to the tower as reflux.

The remaining liquid is collected as the top product.

At the bottom of the tower:

Heavy components are discharged as bottom product.









Anti-corrosion lining equipment

Overview

Corrosion-resistant lined equipment is a composite industrial equipment in which a layer of corrosion-resistant non-metallic material (lining layer) is attached or laminated to the inner wall of a metal substrate (such as carbon steel or stainless steel) to physically protect the substrate from corrosion.

Mainstream Types (by Lining Material)

Rubber Lined Equipment (Rubber-lined Equipment)
Materials: Natural rubber, butyl rubber, neoprene, fluororubber
Features: Good elasticity, wear resistance, impact resistance, vacuum resistance
Applications: Hydrochloric acid, sulfuric acid, sewage, media containing solid particles

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Plastic/Steel Lined Equipment

- **Materials:** PE, PP, PVC, PO, F4 (PTFE), PVDF, ECTFE
- **Processes:** Rotational molding, compression molding, winding, thermoforming
- **Features:** Strong corrosion resistance, wide temperature range, no weld leakage
- **Applications:** Hydrofluoric acid, concentrated acids and alkalis, strong oxidants, high-purity media

Enameled Glass Equipment

- **Process:** High-temperature sintering (around 900°C)
- **Features:** Corrosion resistant, smooth, insulating, moderately resistant to rapid temperature changes
- **Applications:** Medium and low temperature, clean environments, corrosive reactions/storage

Fiberglass lining

Materials: Epoxy resin + glass flakes, FRP
Features: Impermeable, temperature resistant, aging resistant, flexible construction
Applications: Storage tanks, floors, flues, desulfurization units

Core Advantages:

High cost-effectiveness: Carbon steel substrate + inexpensive lining, an alternative to stainless steel/titanium alloy
Wide corrosion resistance: Compatible with almost all corrosive media
Long service life and low maintenance: One lining can last 5–15 years
Flexible structure: Can line complex shapes and large sizes

Water treating equipment

Overview

A complete set of equipment for purifying, treating, reusing, and discharging water in compliance with standards is mainly divided into several categories according to its purpose: water supply treatment, sewage treatment, pure water/ultrapure water, greywater reuse, and zero discharge.

Quick Reference Guide to Core Process Equipment:

Filtration: Sand Filter, Carbon Filter, Precision Filter, Ultrafiltration
Desalination: Reverse Osmosis (RO), EDI, Ion Exchange
Biochemical Processes: AO, A^2O, MBR Integrated Equipment
Deep Concentration: DTRO, STRO, Multi-Effect Evaporation, MVR
Solid-Liquid Separation: Air Flotation Machine, Screw Press, Filter Press

Cooperative Partner

For many years, we have continuously optimized our supply chain and manufacturing costs. With strong capabilities and excellent service, the company has become the designated supplier for numerous well-known brands.

They all chose Xuyang

KEORH 科净
鄂尔多斯 ERDOS
华明高纳
南京工业大学 NANJING TECH UNIVERSITY
TISCO 太原钢铁(集团)有限公司
紫金矿业 ZIJIN MINING
CSPC 石药集团
瓮福集团 WENGFU GROUP
兴发集团 XINGFA GROUP
天士力 TASLY
中国矿业大学 CHINA UNIVERSITY OF MINING AND TECHNOLOGY
正大天晴 CHIATAI TIANQING
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CHINALCO 中铝集团
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