

Eco-friendly Energy company

World Energy a global small but strong company
Thinking about future energy and environment



About us

WORLD ENERGY ABSORPTION CHILLERS AND HEAT PUMPS

With expertise in absorption refrigeration technology, World Energy provides energy saving environmentally friendly absorption chillers and absorption heat pumps to global customers, including multinational corporations or a government agencies, buildings or production facilities, cruise ships or offshore plants.



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Lear more: <http://worldenergy.co.kr/en>

Find "World Energy Absorption Chiller" on Youtube

WORLD ENERGY BENEFITS

EFFICIENCY	FLEXIBILITY
• Highest COP • Lowest power consumption rate • Stable Part Load Operation • Smart Power Management System saving energy cost of instruments • Compact size, small footprint	• Support all kinds of heat source • Low leaving chilled water temperature down to -7°C allowing diverse application area • Wide range of products lines • Less limit on installation environment, from hazardous area to an offshore plant • Customizable material, dimensions, and software
RELIABILITY	CONVENIENCE
• Developed the technical standard of absorption chillers for district cooling in Korea • Repeat customers from government agencies and multinational corporations. • International quality/safety standards including IECEx, ATEX, DNV-GL, CE, UL, PED, GAR. ISO etc.,	• Hermetically sealing safe automatic purge system • Automatic tube cleaning system • Remote Monitoring System



Product line-up

Absorption Chiller

HOT WATER DRIVEN TYPE		
HOT WATER (80~120°C)	Single Effect Hot Water Absorption Chiller Model: HWAR-L Capacity: 100~7,033 kW / 30~2,000 TR Application: Combined heat and power (cogeneration), commercial cooling, industrial cooling Utilize energy of hot water to 70°C	
	Single Effect Double Lift Hot Water Absorption Chiller Model: 2AB Capacity: 105~7,033 kW / 30~2,000 TR Application: District Cooling, Combined heat and power(cogeneration), commercial cooling, industrial cooling. Utilize energy of hot water to 55°C	
LOW TEMPERATURE HOT WATER (70~80°C)	Double Lift Low Temperature Hot Water Absorption Chiller Model: 2AA Capacity: 105~7,033 kW / 30~2,000 TR Application: Industrial cooling	
STEAM DRIVEN TYPE		
LOW PRESSURE STEAM (0~2barG)	Single Effect Steam Absorption Chiller Model: S Capacity: 176~7,033 kW / 50~2,000 TR Application: District Cooling, commercial cooling, industrial cooling	
MEDIUM PRESSURE STEAM (4~8barG)	Single Effect Steam Absorption Chiller Model: SW Capacity: 176~7,033 kW / 50~2,000 TR Application: District Cooling, commercial cooling, industrial cooling	

Product line-up

DIRECT FIRED TYPE		
GAS OR OIL	Double Effect Direct Fired Absorption Chiller-Heater Model: DW Capacity: 176~7,033 kW / 50~2,000 TR Application: Commercial cooling	
EXHAUST GAS DRIVEN TYPE		
EXHAUST GAS	Double Effect Exhaust Gas Absorption Chiller-Heater Model: CHP Capacity: 176~7,033 kW / 50~2,000 TR Application: Combined heat and power(cogeneration), industrial cooling	
EXHAUST GAS AND HOT WATER	Hybrid Absorption Chiller Model: CHPL Capacity: 176~7,033 kW / 50~2,000 TR Application: Combined heat and power(cogeneration), industrial cooling	

Special Application

MARINE, OFFSHORE	Marine Absorption Chiller Model: Applicable to any model Capacity: 176~7,033 kW / 50~2,000 TR Feature: Sea/freshwater-cooled, DNV-GL certified	
FOOD INDUSTRY CHEMICAL INDUSTRY, COLD STORAGE,	Single Effect Brine Absorption Chiller Model: Applicable to any model Capacity: 176~7,033 kW / 50~2,000 TR Feature: Low leaving chilled water temperature (secondary refrigerant) down to 0°C	0°C

Product line-up

FOOD INDUSTRY, CHEMICAL INDUSTRY, COLD STORAGE	Double Lift Brine Absorption Chiller Model: Applicable to any model Capacity: 176~7,033 kW / 50~2,000 TR Feature: Low leaving chilled water temperature (secondary refrigerant) down to -7°C	-7°C
HAZARDOUS AREA	Explosion Proof Absorption Chiller Mode: Applicable to any model Feature: IECEx or ATEX certified	

Absorption Heat Pumps

HOT WATER DRIVEN TYPE		
HOT WATER	Hot Water Absorption Heat Pump Model: HPL Capacity: 176~7,033 kW Feature: Recover waste heat by using energy of hot water	
STEAM	Steam Absorption Heat Pump Model: HPS Capacity: 176~7,033 kW Feature: Recover waste heat by using steam energy	
DIRECT FIRED	Direct Fired Absorption Heat Pump Model: HPD Capacity: 176~4,686 kW Feature: Recover waste heat with fuel combustion	

Product detail

HPL, HPS, HPD Absorption Heat Pumps



Feature

■ High COP

Achieved COP 1.8

■ Reliable Technology

Equipped with every technical feature and certificate of World Energy absorption chillers

HPD is certified with GAR

■ Flexible application with variable heat source

Recover waste heat by using steam, hot water, or fuel combustion

Even the very low temperature heat source such as sewage of 10~15°C can be utilized

■ Flexible Tube Design

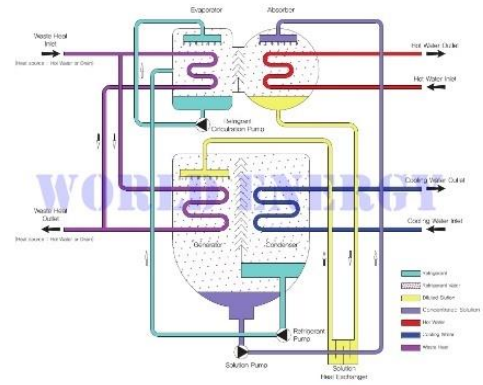
Various material and design can be applied to the heat transfer tubes

Reference

Italy ASL Rimini

Product detail

AHT Absorption Heat Transformer



Steam Generating Absorption Heat pump, also referred to as Absorption Heat Transformer or 2nd type heat pump, supplies high temperature hot water or steam as high as 100 °C by recovering Middle-temperature waste heat, below 90 °C

Feature

- Transforms heat from waste energy to usable energy
Raise the temperature of hot water or steam higher than 100°C by using waste steam or water as driving heat source
- Highest COP 0.5
Can get about 50% valuable energy through adopting 100% waste energy.
- Installation of 7,000kW (steam generation 10ton/hr)

Reference

Korea Kumho Petrochemical

Product detail

Smart Power Management System

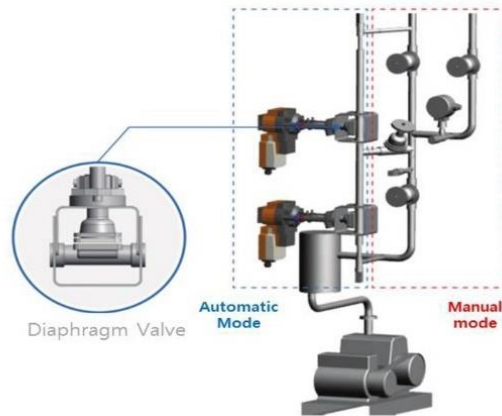


Feature

- Development of refrigeration system for controllable precise flow of cooling and chilled water
Maintain the maximum temperature difference between the inlet and outlet of the cooling and chilled water under partial load.
- Electricity cost of cooling and chilled water pump have reduced by 70%
Researching for 1.6 year, selected as a demonstration complex (Pan-gyo Startup Campus), the electricity cost has reduced 70% than previous year by cooling and chilled water pump control technology of World Energy.
- Upgrade its safety by installing the pipe assembly for low flow detection as self-development.
Protection device for water outage to detect cooling and chilled water flow under low condition of 20% cooling and chilled water flow
- Consistent reduced operating costs through initial low installation cost (inverter).
Initial installation cost can be recovered within a year or two (It may be partially different depending on the site condition)

Product detail

Automatic Purge System



Makes zero leak potential

■ Hermetical diaphragm valve

Custom-designed for thickness and material to fit automatic purge system. As a result of long-term research, it has been developed an optimal closing condition and succeeded in realizing 0% leak potential when the valve was closed.

■ Manual / automatic purge can be selected depending on the situation

It is possible to be manual / automatic mode depending on the situation, secure the administrator's convenience with simple control.

■ Automatic closing function in case of blackout

The valve controller has a spring return function that automatically closes the valve in case of blackout, so emergency power is not required.

■ High safety with using welded-joint type diaphragm valve

Not a screwed-joint solenoid valve with high risk of leakage, but a welded-joint type diaphragm valve with excellent airtightness to secure reliability.

■ Accurately controllable actuator

Provide durability and safety using world-class actuator, accurately controllable actuator.

Convenient evacuation of non-condensable gas

■ Purge pump and automatic valve on/off

When the purge pump reaches the setting pressure, it automatically discharges non-condensable gas to operate the chiller in optimum conditions.

■ Alarm function for the purge Pump abnormal operation

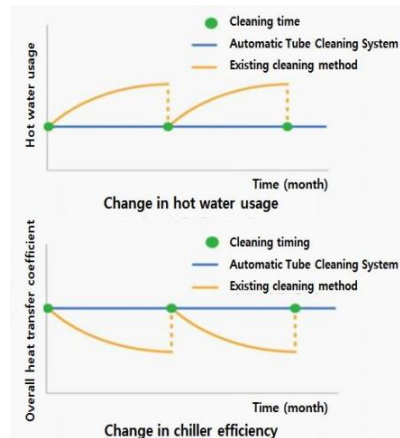
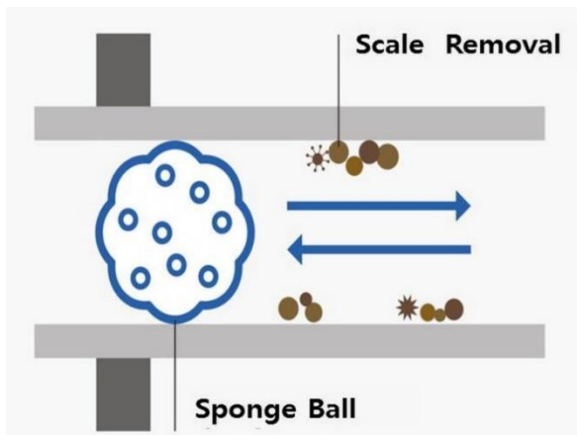
When the purge pump is operating abnormally, the operator is provided malfunction information promptly to take quick action.

■ Alarm function for automatic leak detection.

When the chiller is leaking, the operator is provided the leakage information to take initial prevention, it helps extend the chiller's life-time and operate it optimally.

Product detail

Automatic Tube Cleaning System



The heat-transfer tubes are managed with regular automatic cleaning for operating in the best condition

The scale and contaminants attached to the inner wall of the heat-transfer tubes of the cooling water side hinder the heat exchanging, fall the chiller performance, and become narrow tube inside not to pass the flow rate well. If you do not clean heat-transfer tubes, a lot of efficiency is wasted, the lifetime of the chiller is reduced for this reason regular internal tube cleaning is required. (Recommended once / year) World Energy's automatic tube cleaning system manages heat-transfer tubes with regular automatic cleaning; so that the chiller can be operated in optimal condition, resulting in reduced electric energy due to the increased efficiency. Eventually it can save the operating costs, also increase economic feasibility by reducing cleaning cost and management point.

Benefits

- No necessary maintenance as the all-in-one composition
- Reduced regular cleaning cost and management point
- Reduced energy consumption and cost due to the increased efficiency (about 10% energy saving)
- Extension of chiller replacement period by extending the lifetime of the chiller
- Environmental pollution prevention
- Shut-down prevention
- Keep the chiller efficiency constantly

Tube cleaning method in the past required heat-transfer tube cleaning because heat efficiency reduced due to the contamination of heat-transfer tubes as time passes. However, this automatic tube cleaning system maintains the efficiency of the chiller constantly through regular automatic cleaning.

Contact

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