



**冰轮环境**  
**MOON-TECH**

智慧 / 绿能 / 生态  
INTELLIGENT GREEN ENERGY ECOLOGY

## RED WATER CHILLER



**冰轮环境技术股份有限公司**  
MOON ENVIRONMENT TECHNOLOGY CO.,LTD.

With continuous technological and manage has promoted the continuous optimization of resource allocation and reconstruction of core competencies, Moon-TECH accelerated international expansion transformation. We have transformed from a traditional manufacturing enterprise to a modern service-oriented enterprise with strong competitiveness, large scale, wide coverage, complete business chain, and strong comprehensive research and development capabilities



Industrial Park in the US



Malaysian Industrial Park



Industrial Park in the UK



Vietnam Industrial Park



Baoding Industrial Park



Guxian Industrial Park



Laishan Industrial Park



Jinan Center

# MOON-TECH

(Stock Code of 000811)



Low-temperature refrigeration



Central air-conditioning



Environmentally friendly heating



Energy and chemical equipment



Precision Casting



Hydrogen Energy Development



Smart Services



Intelligent Packing Machinery and Warehouse Storage System

With devoting to improving the quality of human life as the enterprise mission, MOON-TECH continuously build and enhance competitive advantages in the field of comprehensive energy utilization and accelerate the process of globalization, taking the revitalization of national industry and achievement of customer value as its responsibility, continuously creates and improves its competitive advantage, striving to become an evergreen enterprise with core competitiveness, loved by employees and respected by industrial partners.

Founded in 1956, Moon Environment Technology Co., Ltd (Stock Code: 000811). is a diversified and international comprehensive equipment industrial enterprise. The main business covers low-temperature refrigeration, central air conditioning, environmental protection heating, energy and chemical equipment, precision castings, smart services, hydrogen energy development, etc. In recent years, MOON-TECH has successively won the titles of Top 30 Enterprises with Core Competitiveness in China's Machinery Industry, Top 100 Enterprises of National Machinery Industry, Meritorious Enterprise of Equipment in China, and Demonstration Enterprise for Ozone Layer Protection.

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With the synchronous development of refrigeration and heat treatment, and actively expanding energy-saving and environmental protection industry as developing strategy, MOON-TECH is engaged in the technical research and development of low-temperature environment, waste heat recovery, gas compression, industrial heat exchange, urban clean emission and other fields, as well as the production and sales of related complete sets of equipment, and specializes in food refrigeration, chemical process cooling, comfortable environment air conditioning, research temperature control, process gas compression, building aggregated cooling, comprehensive application of heat energy, permafrost drilling, waste treatment, tec. MOON-TECH has production bases, scientific research centers and marketing& service organizations in more than 40 countries around the world. With safe, environmentally friendly, energy-saving, intelligent and Butler-style system integration capabilities, MOON-TECH is providing products with entire product life cycle to users in more than 120 countries and regions around the world.

MOON-TECH has 6 national scientific and technological innovation platforms including the National-Recognized Enterprise Technology Center and 16 provincial scientific and technological innovation platforms including the Shandong Provincial Key Laboratory of Energy Saving and Environmental Protection of Refrigeration Equipment. MOON-TECH has been recognized as a key high-tech enterprise of the China Torch Program, with 326 national patented technologies, and has hosted and participated in the formulation of 25 national standards and 37 industry standards. MOON-TECH has won two national awards, the National Science & Technology Progress Award and the National Technology Invention Award, and has successively won 213 provincial and ministerial scientific and technological achievements awards such as the Special Prize for Scientific and Technological Progress of the Chinese Association of Refrigeration and the First Prize for Scientific and Technological Progress of Shandong Province.

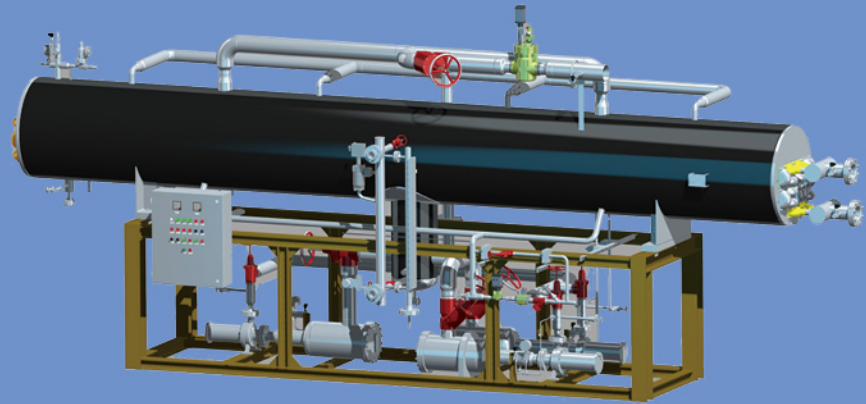
Following the requirements of the environmental policy of harmonious coexistence between human and nature, MOON-TECH is committed to the innovation of artificial environment control technology and comprehensive energy utilization technology to promote a simple, moderate, green and low-carbon mode of social production and operating system, actively building an interconnected and complementary system, including refrigeration, heating, water, gas, electricity, sewage, waste within the -271 °C -200 °C temperature and 0-90Mpa pressure range, aiming to achieve an energy ecological link between industrial parks and living spaces, and become an intelligent green energy system solution service provider. MOON-TECH also dedicates to develop the utilizations of NH3、CO2、HC、He、H2O and other environmentally friendly substances application technologies, striving to provide professional, high value-added intelligent energy comprehensive utilization solutions.

In recent years, MOON-TECH actively actualized the green and low-carbon developing concept, accelerating the transformation of traditional industries around the dual-carbon goal and energy revolution, promoting the upgrading of the industrial structure to a low-carbon and high-quality level, and set six goals of "low-carbon industry, low-carbon technology, low-carbon manufacturing, low-carbon chain, low-carbon services, low-carbon culture", so as to ultimately realize the industrial structure of high-end, low-carbon consumption of energy, utilization of resources recycling, cleanliness of the production process, and to contribute to the realization of dual-carbon target.



## Overview of Red Water Chiller

The device is a perfect combination of pre-cooling technology and refrigeration for poultry slaughtering. It uses a high-efficiency falling film evaporator with pump for liquid supply and high-performance automatic control device, which has high heat exchange efficiency, anti-icing and fouling, and significantly reduces system energy consumption.



- Automatic control valves, manual valves, differential pressure level gauges, pumps are from well-known brands.
- The heat exchange tube (waterway) is made of food grade 304 stainless steel.

## Applicable Fields

Applicable to immersion cooling processes such as livestock and poultry processing cooling, aquatic product processing cooling, fruit and vegetable pre-cooling, etc.



## Features

- Integrated, compact structure, suitable for highly restricted space.
- Reduce the amount of working medium charge and improve the safety.
- The internal special falling liquid structure realizes falling film evaporation, and the heat exchange efficiency is significantly improved.

- Liquid level controls valve to achieve accurate and stable level control.
- The high performance automatic control device ensures the constant 0.25°C outlet water temperature.
- The differential pressure sensor can effectively monitor the abnormal conditions such as ice blockage to ensure the safe operation of the system.

Optimized  
Structure

01

High Performance  
Control Valve

02

03

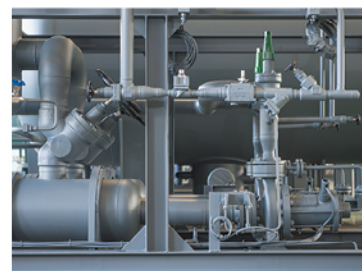
Humanized  
Design

04

New Circulating  
Pump


- The removable end cap is easy to inspect the abnormal conditions in the tube.
- The smooth transition structure reduces local resistance.
- Professional heat exchanger tube diameter design.

- Special customized circulation pump with small cavitation allowance, large flow range, stable liquid supply.
- The circulation rate is greatly increased, and the heat transfer efficiency of the system is effectively improved by multiple circulations.





## Project Cases

Liaoning Tasty Chicken	
	●13500 只 /h, APC450+ APC450
	●8000 只 /h, APC300+ APC450



Fengxiang Food	
	●13500 只 /h, APC750+APC450+APC300
	●13500 只 /h, APC750+APC450+APC300



- Fengxiang Food
- Shandong Ronghua Food
- Liaoning Tasty Chicken
- Jining Hongrun Food
- Henan Huimin Food Industry
- Shandong Qianxi Food
- Henan Muyuan Food
- Former Shandong Hutianyikang Food
- Shandong Xingxiang Food
- Liaoning Rentai Food
- Yingkou Yunken Livestock Farming
- Shandong Yike Food
- Jilin Dexiang Group
- Sen Sheng Food
- Shandong Yanggu Xinyuan Food
- .....



## Technical Data Sheet

Model		APC300 (A/F)	APC450 (A/F)	APC600 (A/F)	APC750 (A/F)	APC900 (A/F)	APC1200 (A/F)
Refrigerant		R717/R507A					
System Refrigerating Load	kW	300	450	600	750	900	1200
Water Flow Rate	m <sup>3</sup> /h	50	100	100	145	145	200
Inlet and Outlet of Water DN	mm	80	125	125	150	150	200
Suction Port DN	mm	100	125	150	150	150	200
Liquid Supply Port DN	mm	25/50	25/65	32/65	32/80	32/80	50/100
Safety Valve Port DN	mm	20	20	20	20	20	20
Oil Return Port DN	mm	20	20	20	20	20	20
Dimensions (L*W*H)	mm	5050X1650X2950	6750X1700X3000	8250X1950X3300	8250X1950X3400	8250X2000X3500	10000X2100X3700
Single Pump Power	kW	1.5 (One Use and One Standby)	1.5 (One Use and One Standby)	1.5 (Two Use and One Standby)	1.5 (Two Use and One Standby)	1.5 (Three Use and One Standby)	1.5 (Three Use and One Standby)
Electrical System		380V/50HZ/3P					
Charging Volume (R717/R507A)	kg	220/400	260/470	390/700	450/840	530/950	570/1020
Unit Weight	kg	2700	3500	5500	7000	7800	8700
Operating Weight	kg	3720/3900	4660/4870	7090/7400	8750/9140	9830/10250	11070/11520

Note: The water flow in the sheet is calculated according to the temperature difference of 5°C , the actual equipment is equipped based on the process flow.



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