KONUK ISI®

KONUK ISI®

KONTHERM®

DRY COOLERS BROCHURE

www.konukisi.com

KONUK ISI®

Konuk ISI heat exchanger producsts are designed and manufactured in accordance with the main international directives for pressure vessels, like PED, ASME, TEMA et al. On request, Konuk ISI can provide its products qualified by the main international societies for naval classification (RINA, DNV-GL, ABS, BVM, LRS, etc.)
Konuk ISI plants are all certified according to EN ISO 9001:2008 and EN ISO 3834.
Konuk ISI has a modern and efficient laboratory, equipped for the execution of accurate thermal tests, and can claim important collaborations with research societies, professionists and universities.
The markets in which you and we together operate are among the most important in the world: energy, the oil and gas industry, the chemical industry, marine applications, food and beverages, climate and environment. We provide every single market segment with solutions of outstanding efficiency, safety, and sustainability.

YOUR MARKETSARE OUR MARKETS

KONUK ISI®

High-Performance Dry Coolers

Expertly engineered, reliable and efficient dry coolers for refrigeration, air conditioning, and process cooling applications. The machines offer easy installation, low maintenance costs, and long service life.

- High-performance finned tube heat exchangers with inner-grooved copper tubes
- Efficient fans driven by AC-/EC-motors optimized for low energy consumption
- Low-noise packages for quiet operation

Features and option

Kon-W series dry coolers available with plenty of options and accessories to meet customer's installation requirements, suit different environmental conditions and efficiency demands.

- DESIGNED FOR WATER, GLYCOLS, OILS AND SPECIAL FLUIDS
- EVAPORATIVE PRE-COOLING OR WATER SPRAY SYSTEMS
- INTELLIGENT FAN SPEED CONTROL
- EVAPORATING WATER RECIRCULATION, PUMPING, AND TOP-UP
- LEADING ENERGY EFFICIENCIES IN APPLICATIONS
- HEAT EXCHANGER COATINGS FOR CORROSION PROTECTION
- EXACT FLUID TEMPERATURE CONTROL
- ROBUST DESIGN FOR LONG SERVICE LIFE

KONUK ISI®

KONUK ISI®

KON-W

High-Performance Dry Coolers

Axial fans

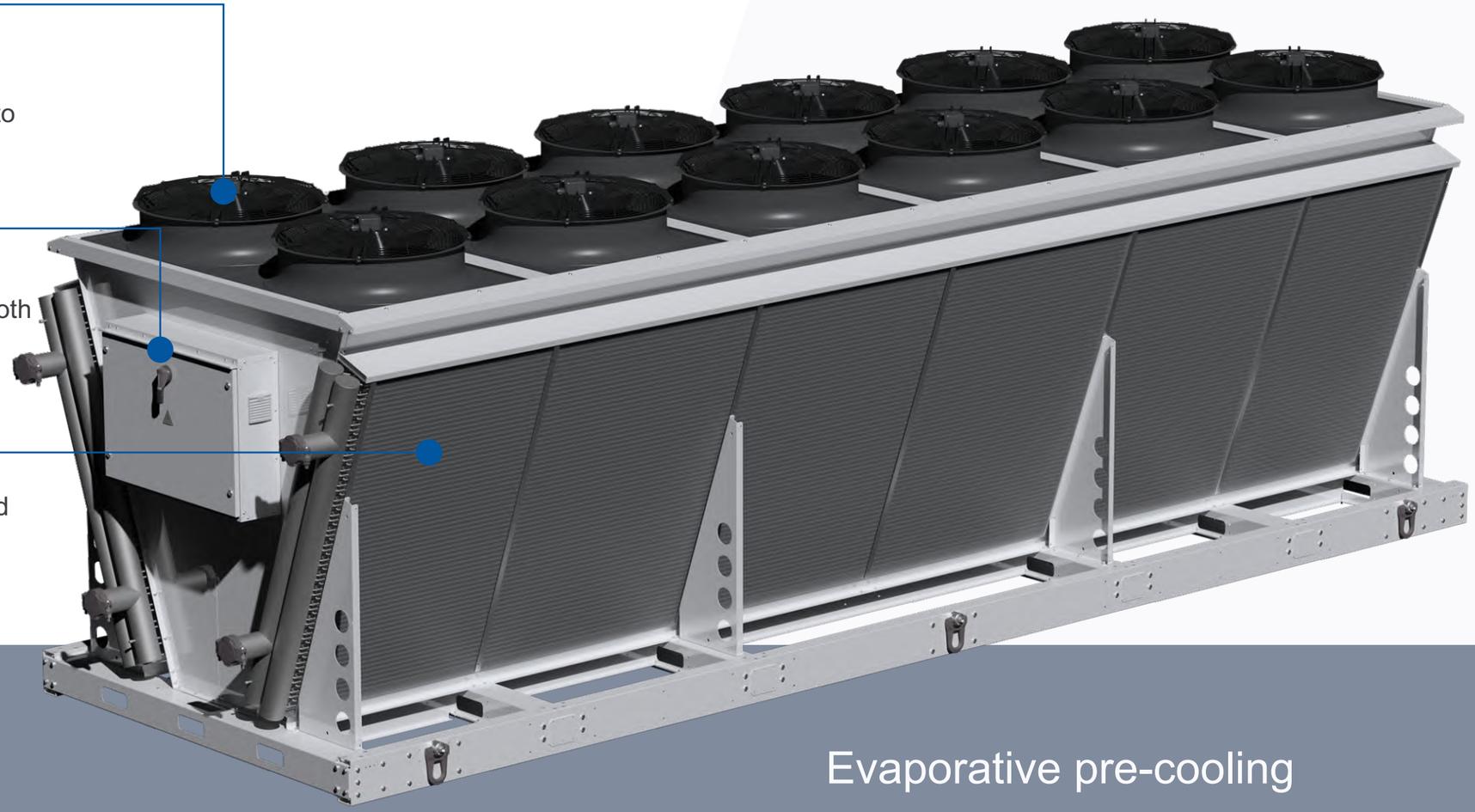
Available fans are axial AC-driven or EC-driven with Modbus control and optional diffusers to reduce noise emissions. Our intelligent fan system also contributes to the lowest energy consumption.

Fan Speed Control

For precise thermal management, KON-W dry coolers can be supplied with integrated fan speed control for both AC- and EC-driven fans, pre-wired and installed in a weatherproof enclosure.

Heat Exchangers

KON-W design incorporates optimized copper tube and aluminum fins heat exchangers with various protective coatings, including epoxy coating. Optionally, we offer heat exchangers with stainless steel tubes.



Quickspecs

CAPACITY @ DT 15 K	EG 35%	150 ÷ 2000 kW + More
UNIT LENGTH		< 12500 mm
HEAT EXCHANGERS		FINNED TUBE
TUBE MATERIAL		COPPER / STAINLESS STEEL
FIN MATERIAL		ALUMINUM / COPPER
FIN SPACING		2.1 / 2.4 / 3.6 mm
FAN DIAMETER		800 / 900 / 1000 mm
NUMBER OF FANS		4 ÷ 18
FAN MOTORS		AC / EC

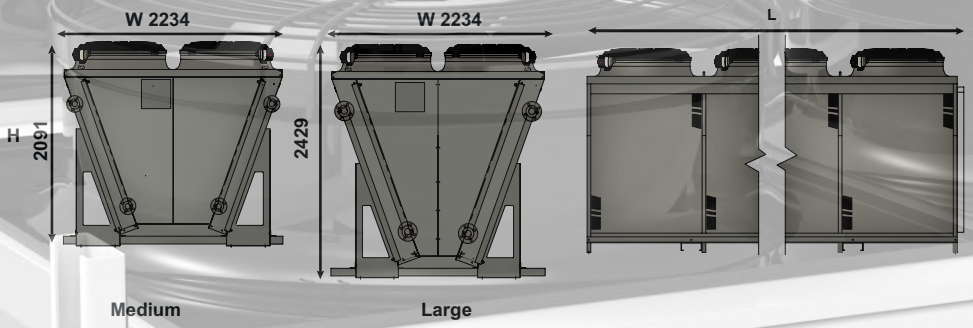
Evaporative pre-cooling

Evaporative pre-cooling system enables substantial energy savings for cooling units by lowering the temperature of the air delivered to heat exchangers.
Evaporative media used in the system made up of water retaining finned aluminum plates designed for maximum evaporation: the saturation efficiency reaches more than 90%.
KON-W units can be supplied with a water circulation system for minimized water consumption and ensured

KONUK ISI®

KONUK ISI®

DIMENSIONS



	4 Fans	6 Fans	8 Fans	10 Fans	12 Fans	14 Fans	16 Fans	18 Fans	20 Fans
A	2403	3603	4803	6003	7203	8403	9603	10803	12003
B	2883	4323	5763	7203	8643	-	-	-	-
C	3603	5403	7203	9003	-	-	-	-	-

FANS

◁ AC Normal	Ø 800 mm	◁ Min IP 54
◁ AC High power	Ø 900 mm	◁ 6, 8, 12 Pole and EC
◁ EC Standard	Ø 910 mm	◁ 3 phase
◁ EC High power		◁ 50/60 Hz
◁ EC Low power		◁ 1 - 20 fans

HEAT EXCHANGE

- ◁ **Fin Type:** L, T, K
- ◁ **Standard Fin spacing: [in mm]**
  L = 2.1 | T = 2.3 | K = 2.3
- ◁ **Fin material:** Cu, Al, Av, Am, Mb, Bg, Et
- ◁ **Tube Diameter: [in mm]**
  L = 9.5 | T = 12 | K = 15.9
- ◁ **Tube material:** Cu, St

CONTROLS OPTIONS

OPTION	DESCRIPTION
Unwired	Installer wires directly to fan terminal boxes.
Junction Box	Single or twin according to unit model.
Staged Control	motor switchgear with or without controller.
Speed Control	EC, inverter or triac

VARIANTS & ACCESSORIES

- ◁ **Control Box & Isolators**
- ◁ **Sub cooling/Multi sections**
- ◁ **Alternative Fin Material**
- ◁ **Special Paint**
- ◁ **Adiabatic System**
- ◁ **Mounted Receivers**
- ◁ **Mountingframes & Customised Housing**

OPERATING ENVIRONMENT GUIDANCE

APPLICATION ATMOSPHERE	TUBE MATERIAL	FIN MATERIAL	TUBE PLATE
Commercial Application	Cu, or St/St	Al, AV, AlMg, Cu, Bg	Al/Cu
Industrial Application	Cu or St/St	Al, AV, AlMg, Cu, Bg	Al/Cu
Within 20 miles of the Sea	Cu	Cu, Bg, AlMg	Al/Cu
Waste Disposal	Cu	Al, AV, AlMg, Cu, Bg	Al/Cu

KONUK ISI®

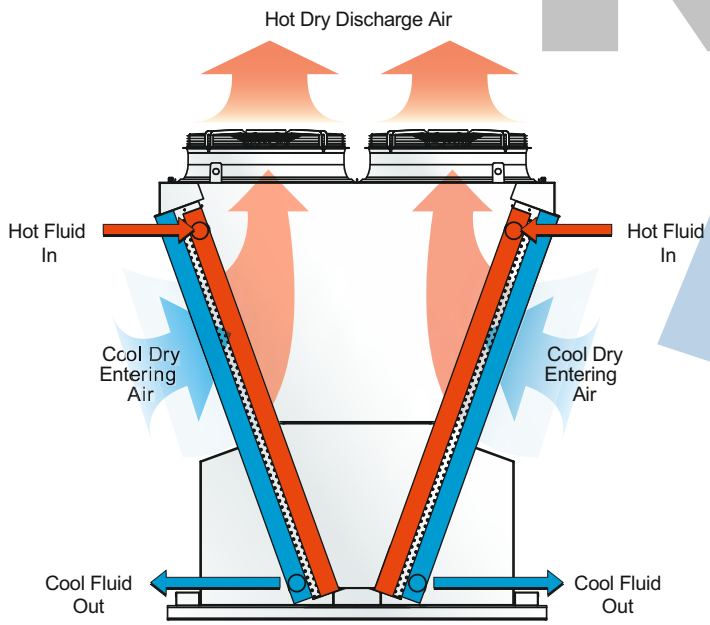
KONUK ISI®

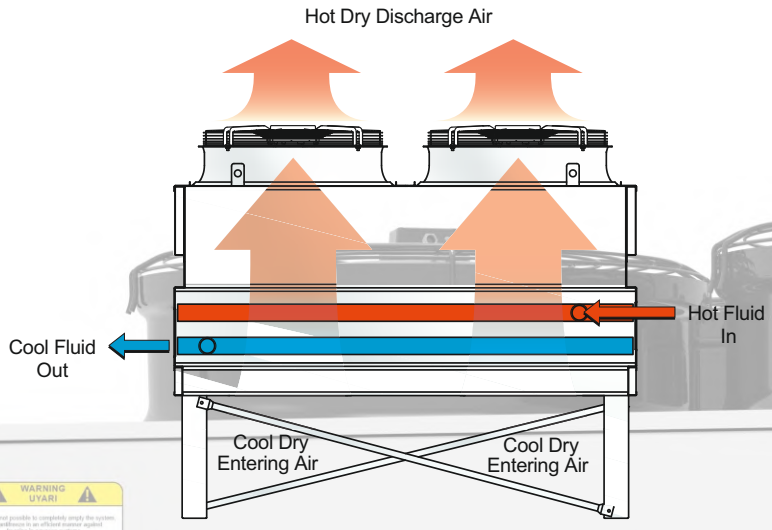
www.konukisi.com

KONUK ISI®

DRY COOLERS

Hot Process fluid enters the inlet header connection, shown in red. Heat from the fluid dissipates through the coil tubes surface and out to the fins. Ambient air is drawn in over the coil surface by the fan located at the top of the unit. Heat from the process fluid transfers to the air and discharges to the atmosphere. Cool process fluid exits the unit through the connections shown in blue.

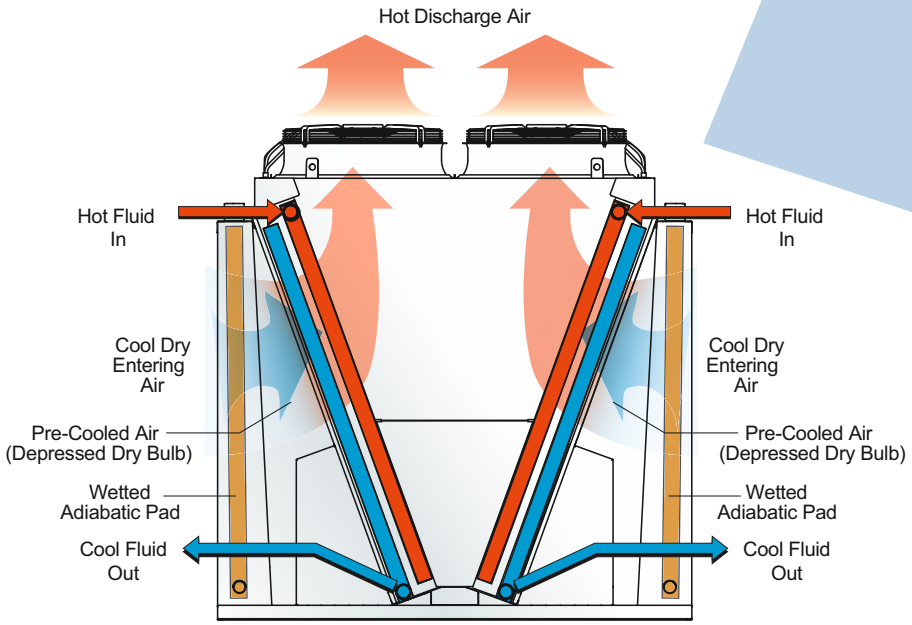




KONUK ISI®

ADIABATIC COOLERS

Hot process fluid enters the inlet header connection, shown in red. Heat from the process fluid dissipates through the coil tubes surface and out to the fins. The adiabatic system involves fully wetting a fibrous pad located in front of the coil. Ambient air is drawn through the adiabatic pre-cooling pad by the fans located on top of the unit. The air is saturated as it passes through the adiabatic pad, decreasing the dry bulb temperature within a few degrees of the wet bulb temperature. This new air temperature is referred to as the depressed dry bulb. This pre-cooled air is then drawn through the tube and fin surface, offering a substantial increase in heat rejection capability. Heat from the process fluid transfers to the air and discharged to the atmosphere. Cool process fluid exits the unit through the connections shown in blue.



KONUK ISI®

ADIABATIC COOLERS

KONUK ISI®

ADIABATIC COOLERS