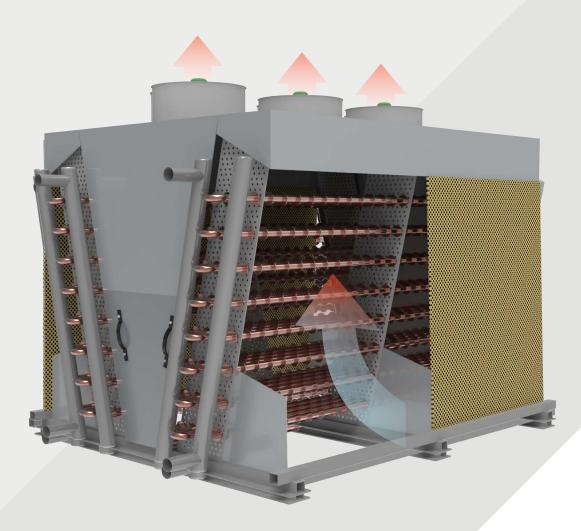


AIR COOLED HEAT EXCHANGERS

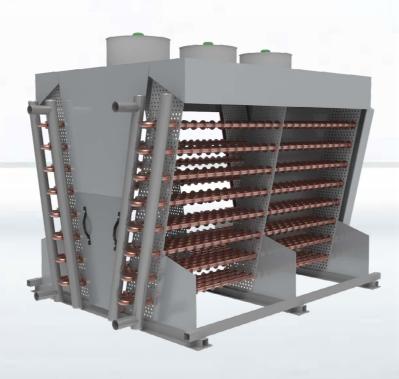


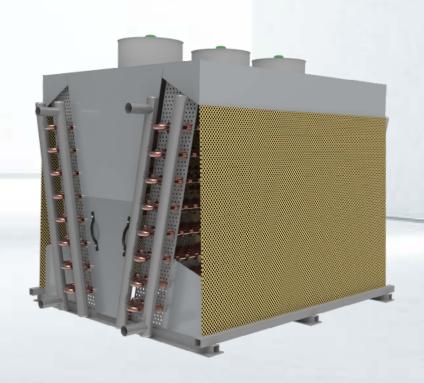
Air Cooled Heat Exchangers

Air cooled heat exchanger is a cooling device that takes ambient air as the cooling medium and uses a fan to induce or force the air to flow across the finned tubes for cooling, thereby cooling or condensing the high temperature process fluid in the tubes.

According to with or without a humidification system, air cooled heat exchangers are divided into dry type air cooler and adiabatic air cooler. Of which, dry type air cooled heat exchangers can be made into V-shaped air coolers and flat air coolers by shape.







- Dry type air cooled heat exchanger runs 100% dry.
 - ✓ Adiabatic air cooled heat exchanger significantly reduces water consumption.
 - ✓ No spray water is required, suitable for water scarce areas.
 - ✓ 100% dry running, free from fouling & scaling.

- ✓ Finned tubes serve as the heat exchanger and creates a large heat transfer area
- ✓ Integrated transportation, easy installation.
- Low maintenance.
- ✓ Low tower height, compact structure and small floor area.

Flat Dry Type Air Cooler

Flat dry type air cooler is a kind of flat heat exchanger that takes ambient air as the cooling medium and uses an axial fan to draw the air to flow across the finned tubes to undertake heat transfer with process fluid in the finned tubes, thereby cooling the hot process fluid in the finned tubes. The axial fan can be installed at the top or the bottom of the air cooled heat exchanger.



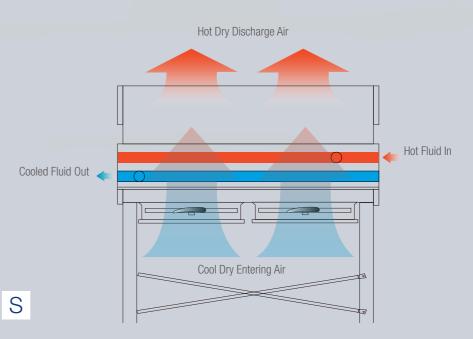
- ✓ Dry type air cooled heat exchanger runs 100% dry.
- Suitable for cooling projects with server water shortage or unaccessible water source.
- ✓ Save high water bills and waste water treatment costs.
- Low power consumption and power saving.
- Reduce electrolytic corrosion.
- Finned tubes serve as the heat exchanger and create a large heat dissipation area.
- ✓ Integrated transportation, easy installation.
- ✓ Low maintenance.
- ✓ Low tower height, compact structure and small floor area.

Flat dry type air coolers are widely used in the following industries:

- Steel electrical arc furnace/induction furnace cooling
- Refinery & petrochemicals reactor column cooling
- Rubber roller cooling
- Polyfilm chill roll cooling
- Plastic injection molding machine cooling
- Textiles process vapour condensation
- Refrigeration / air conditioning condensers for air cooled chillers
- Power industry turbine lube oil cooler / turbine intercooler

How Does It Work?





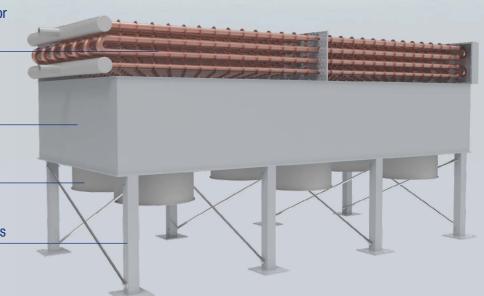
Hot process fluid enters the inlet of the finned tubes. At the same time, fan system is turned on, and the cold air flows across the finned tubes and conducts heat transfer with the process fluid in the finned tubes. The hot process fluid becomes cool and flow out of the outlet of the finned tubes. The cold air becomes hot and humid air and is dispatched to the atmosphere outside the unit.

Finned tubes, fins can be constructed of aluminum, stainless steel or copper; tubes can be made of copper, stainless steel or carbon steel.

Stainless steel 304 or DX51D+AZ120 aluminized zinc plate tower body

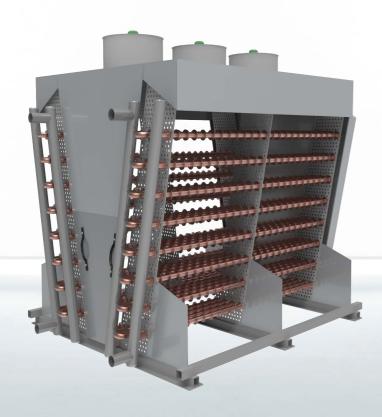
Induced-shaft axial fan

Structural steel legs



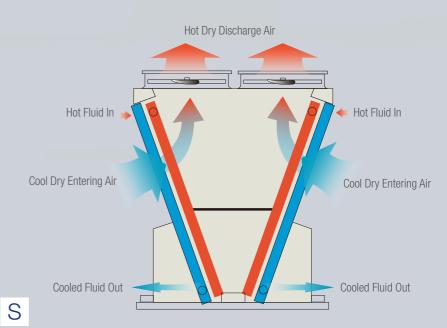
V-Shaped Dry Type Air Cooler

V-shaped dry type air cooler is a V-shaped heat exchanger that takes ambient air as the cooling medium and uses an induced-shaft axial fan to draw the air flow across the finned tubes to cool or condense the hot process fluid in the finned tubes.



How Does It Work?





Hot process fluid enters the inlet of the finned tubes. At the same time, fan system is turned on. The cold air drawn into the unit flows across the finned tubes and conducts heat transfer with the process fluid in the finned tubes. The hot process fluid becomes cool and flow out of the outlet of the finned tubes. The cold air becomes hot and humid air and is dispatched to the atmosphere outside the unit.

✓ Dry type air cooled heat exchanger runs 100% dry.

- Suitable for cooling projects with server water shortage or unaccessible water source.
- ✓ Save high water bills and waste water treatment costs.
- Low power consumption and power saving.
- Reduce electrolytic corrosion.
- Finned tubes serve as the heat exchanger and create a large heat dissipation area.
- ✓ Integrated transportation, easy installation.
- Reduced maintenance.
- ✓ Low tower height, compact structure and small floor area.

V-shaped dry type air coolers are widely used in the following industries:

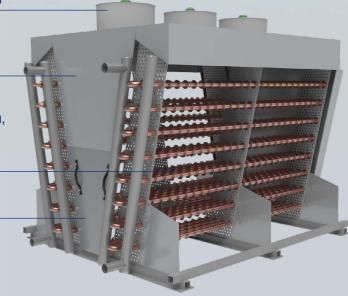
- Steel electrical arc furnace/induction furnace cooling
- Refinery & petrochemicals reactor column cooling
- Rubber roller cooling
- Polyfilm chill roll cooling
- Plastic injection molding machine cooling
- Textiles process vapour condensation
- Refrigeration / air conditioning condensers for air cooled chillers
- Power industry turbine lube oil cooler / turbine intercooler

Induced-shaft axial fan

Stainless steel 304 or DX51D+AZ120 aluminized zinc plate tower body

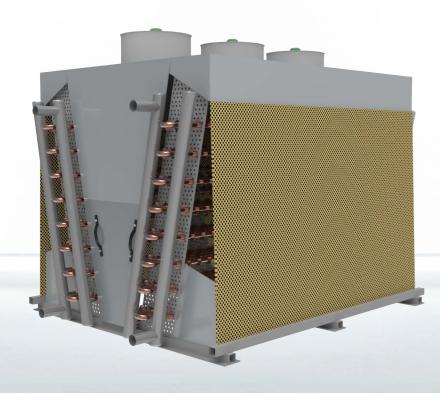
Finned tubes, fins can be constructed of aluminum, stainless steel or copper; tubes can be made of copper, stainless steel or carbon steel.

Easy-to-remove access door



V-Shaped Adiabatic Type Air Cooler

V-shaped adiabatic type air cooler is a V-shaped heat exchanger that takes ambient air as the cooling medium and uses an induced-shaft axial fan to draw the air flow across the adiabatic humidification system and then finned tubes to cool or condense the hot process fluid in the finned tubes.



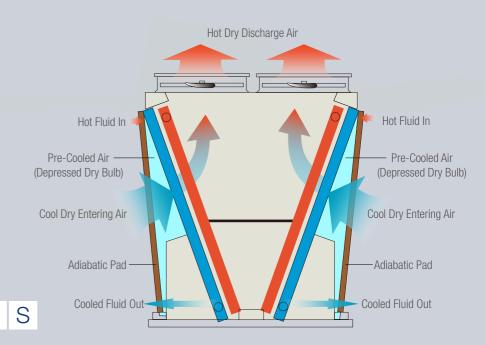
- Adiabatic air cooled heat exchanger significantly reduces water consumption.
- Finned tubes serve as the heat exchanger and create a large heat dissipation area.
- ✓ Integrated transportation, easy installation.
- Reduced maintenance.
- ✓ Low tower height, compact structure and small floor area.

V-shaped adiabatic type air coolers are widely used in the following industries:

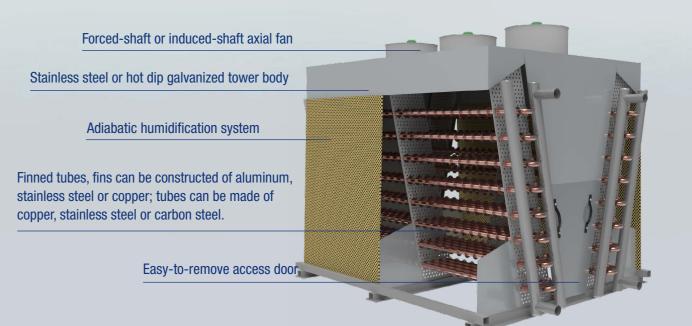
- Steel electrical arc furnace/induction furnace cooling
- Refinery & petrochemicals reactor column cooling
- Rubber roller cooling
- Polyfilm chill roll cooling
- Plastic injection molding machine cooling
- Textiles process vapour condensation
- Refrigeration / air conditioning condensers for air cooled chillers
- Power industry turbine lube oil cooler / turbine intercooler

How Does It Work?





Hot process fluid enters the inlet of the finned tubes. The heat of the process fluid dissipates through the surface of finned tubes and transfers to the fins. The adiabatic system contains a fully wetting fibrous pad located in front of the finned tubes. Ambient air is drawn into the unit through the adiabatic pad by the fan on top of the unit. The air is humidified 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. The pre-cooled air is then drawn through the tube and fin surface, offering a significantly increased heat rejection capacity. The heat of the process fluid transfers to the air and is dispatched to the atmosphere. The cooled process fluid flows out of the unit through the outlet of the finned tubes.





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