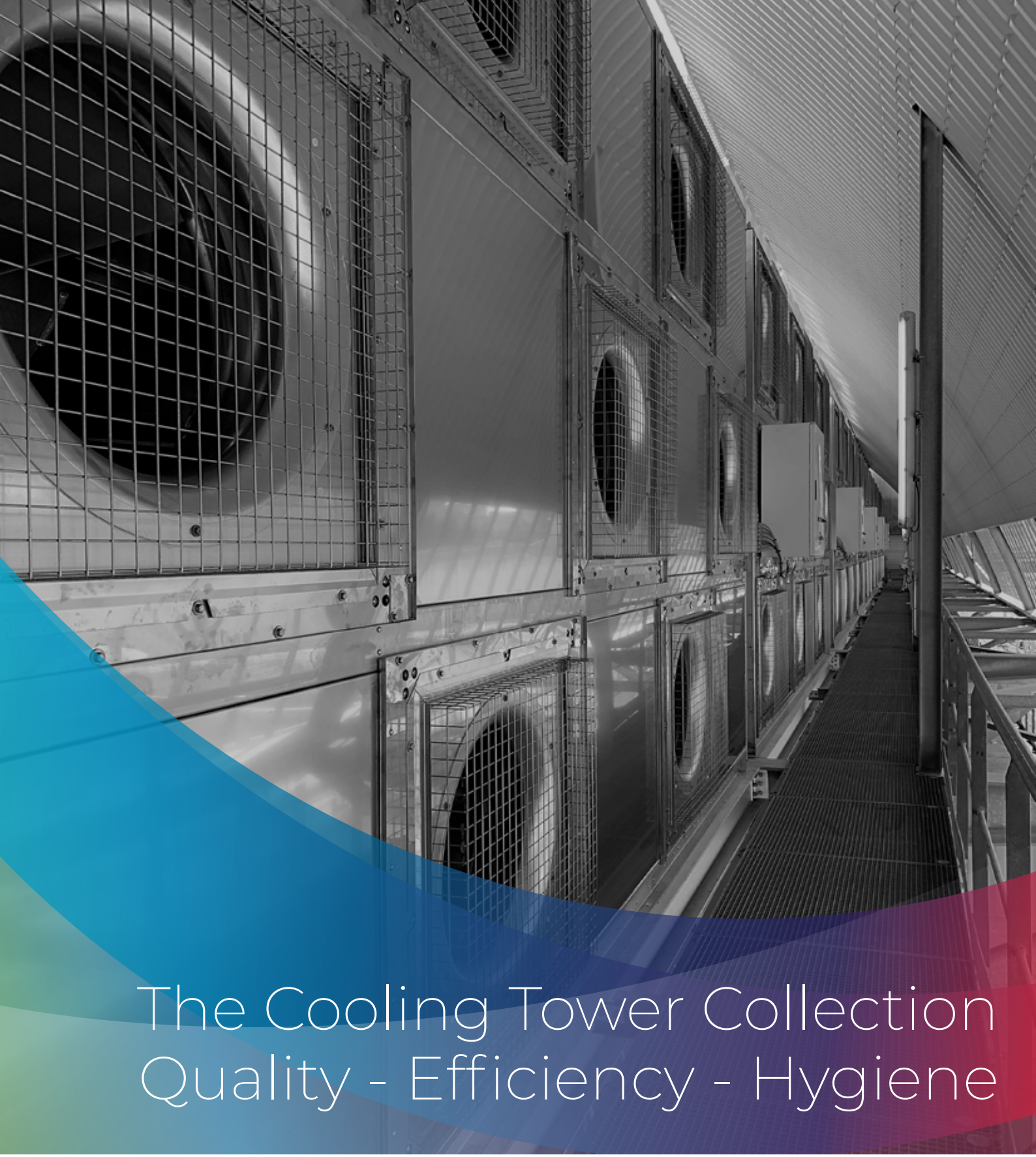


The Cooling Tower Collection
Quality - Efficiency - Hygiene

JACIR GOHL-KTK

Cooling for life

JACIR S.A.S.
GOHL-KTK GMBH

COFINAIR GROUP

QUALITY – EFFICIENCY – HYGIENE

For more than half a century, the brands JACIR, GOHL and KTK have been synonymous with innovative cooling tower technologies.

Under the umbrella of Cofinair Group, they bring together experience and expertise in the development and manufacturing of high quality cooling towers.


JACIR
JACIR

THE LARGEST EUROPEAN PRODUCT RANGE

DIVERSITY OF COOLING TOWER PROJECTS

But our extremely wide product line and decades of experience allow us to find the right solution for each of our customers. In fact, our systems are already used in nearly all fields of building climate control and industrial process cooling.

COMMITTED TO THE CUSTOMER BENEFIT

HYGIENE

All of our system-based solutions are designed and constructed to meet the highest statutory directives and requirements. We support you from the first consultative discussion and up to delivery of comprehensive services, so you get complete solutions from one dependable source.

QUALITY & ENVIRONMENT

Sustainability is one of the pillars of our corporate philosophy. We strive for quality and longevity in both our products and business relationships. Conservative, environmentally-friendly use of resources and energy plays a central role in the development of new technologies.

EFFICIENCY

Aside from performance, efficiency is one of the top factors in any investment decision. Low operating costs and very lower service expenses are deciding parameters.

GUARANTEED PERFORMANCE

The quality we deliver is based on many years of experience and verified by specific certifications. We've done the hard work already! Take advantage of our certifications from independent institutes.

EUROVENT AND CTI CERTIFICATION

JACIR participates in cooling towers performance ECC Program.
Thermal performance has been verified by thermodynamic calculations and independent tests on test stands performed by Eurovent-certified. test Quality Management System.

Label of DTC Line

CTI ▶ member + certification
EUROVENT ▶ association + certification

CERTIFIED PRODUCT LINES ARE:
DTC, VAP, ZENIT

CHECK ONGOING VALIDITY OF CERTIFICATES:
WWW.EUROVENT-CERTIFICATION.COM OR WWW.CTI.COM

CORROSION

The independent Institut für Korrosionsschutz Dresden GmbH has verified that the whirl sintering coating process meets the requirements of DIN EN ISO 12944 at the highest corrosion category C5-M.

ISO 9001

Quality Management System.

CONTENTS

MATERIALS

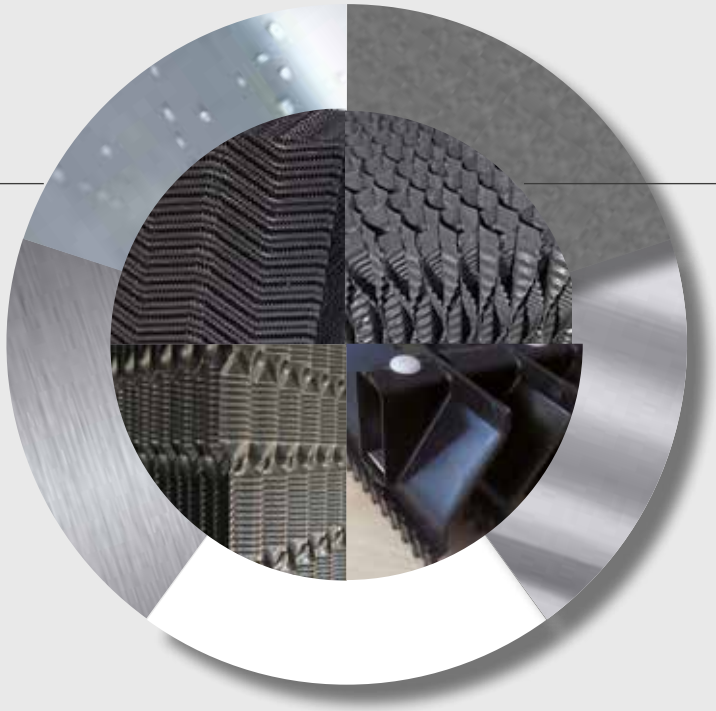
- Cooling towers are frequently subject to extreme weather conditions and must therefore be constructed of corrosion and weather-resistant materials. Whether you choose Stainless steel or Whirl-sintering, you can be confident in the durability of our towers.

CASING AND INFILLS

Range of cooling towers aesthetically designed for ease of maintenance : design and material selection ensures good performance, long life and safe, easy cleaning.

CASING options

Whirl-sintering
—
X-Steel
—
FRP
—
Silver Steel
—
Galvanized steel



INFILL options

X-Stream
400 ppm total suspended solids
—
Freefilm
—
Effi-Pack
—
X-Pack
—
PP 12mm
PP 19mm

SILVER-STEEL : manufactured on a classic hot dip galvanized steel production line, and the dipped into a fusion bath of specific chemical zinc composition which is enriched of aluminum and magnsium. 5 years non perforation warranty.

X-STEEL stainless steel characterised by mechanical and chemical resistance to corrosion higher than those of 316 L stainless steel, Its smooth surface slows bio film growth and avoids galvanisation 's loss which is a pollutant once diluted in the water (harmfull pollutant as soon as diluted in discharge water - zinc). 10 years non perforation warranty.

Whirl sintering is a 0,3mm termoplastic coating for cooling towers of brand GOHL which stands for extremely long operating cycle. It is C5-M certified, the highest corrosion category in accordance to coastal and offshore areas with high salt pollution (DIN 55633 und DIN EN ISO 12944).

Others available materials : Galvanized Steel - FRP - Concrete

OPEN CIRCUIT COOLING TOWERS

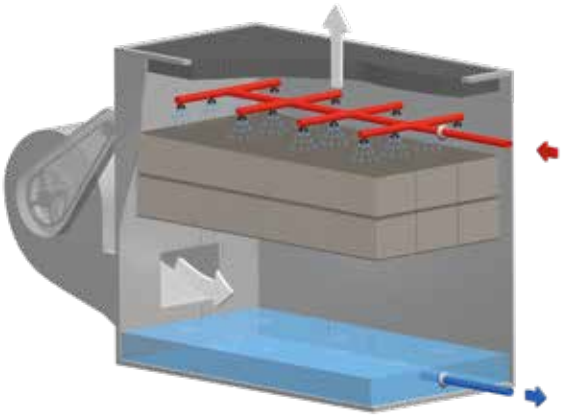
OPEN COOLING TOWERS HAVE THE HIGHEST POWER DENSITY

They are used wherever cooling machines require large volumes of water and/or when cooling water must be at a low temperature.
Open-circuit towers do not have special requirements for water quality.

The most efficient method of cooling

COUNTER FLOW - OPEN CIRCUIT COOLING TOWERS
CENTRIFUGAL FORCED-DRAFT FANS
FOR CLEAN WATERS

Pressure-ventilated evaporative cooling towers with radial fans are highly flexible and have a relatively small footprint. Forward curving vanes on the fan impeller allow the fan to work at low speed.
The significant pressure reserves allow attachment of additional sound absorbers on the unit.



Series of centrifugal cooling towers **S / KS / ERD / WRD**

Forced-draft evaporative cooling towers for open-circuits, with side-mounted centrifugal fans, for indoor and outdoor installation.

BENEFITS

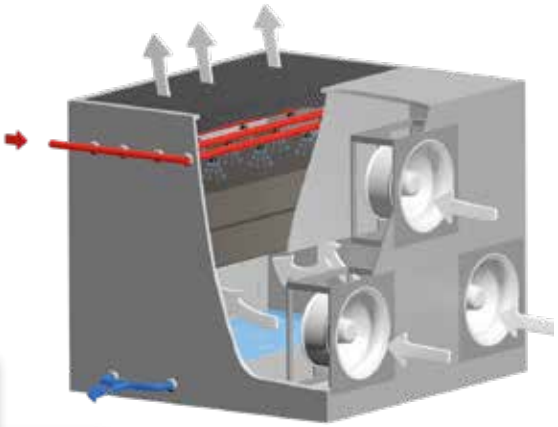
- Low noise values
- Robustness
- High efficiency
- Low investment
- Maintenance & Hygiene
- Compact for transport

HYGIENE & TECHNICAL FEATURES

- Waterbasin bottom inclined towards the drain
- Hygiene-optimized water inlets and outlets
- Variable height - higher cooling capacity with the same surface area

COUNTER FLOW - OPEN COOLING TOWERS MAINTENANCE-FREE EC FORCED-DRAFT FANS FOR CLEAN WATERS

The innovative, service-optimized design of DTC merges the benefits of indispensable wet cooling towers with economical operation and elevated requirements for hygiene.



Series of EC-Fans technology cooling towers **DTC**

Forced-draft evaporative cooling towers equipped with EC fans, easy maintenance oriented design, for indoor and outdoor installation.

BENEFITS

- 30% energy savings
- Very low noise
- Sustainably low operating costs
- Maintenance-free EC fans
- Large access opening for service and maintenance
- Best hygienic conditions

EASY MAINTENANCE

- „Walk-In" System
- Maintenance free EC-fans
- Reduction of components

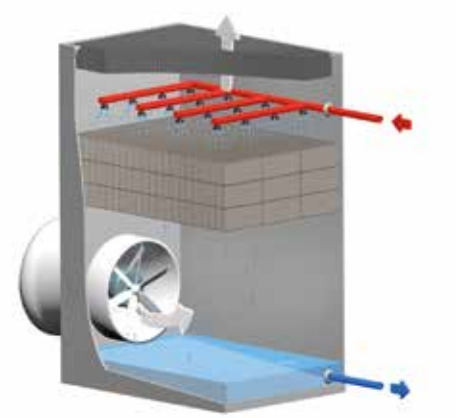
EUROVENT AND CTI CERTIFICATION

The wet cooling tower line DTC is based on the latest calculation methods in the thermodynamic power configuration. Energy consumption and cooling capacity are confirmed by EUROVENT and CTI.

COUNTER FLOW - OPEN COOLING TOWERS
AXIAL FORCED-DRAFT OR INDUCED-DRAFT FANS
FOR CLEAN WATERS

Series of axial forced-draft cooling towers **KH**

Induced-draft cooling tower with axial fans,
for outdoor installation.

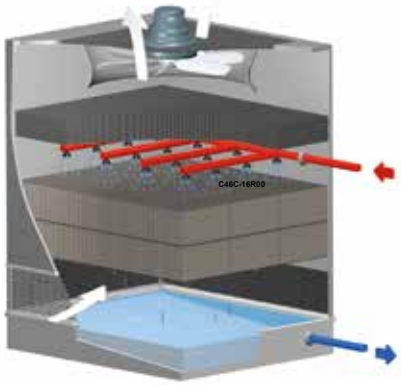


BENEFITS

- Low power consumption
- Motor fan outside the wet air flow
- Easy motor and fan access

Series of axial induced-draft **VAP**

Induced-draft cooling tower with axial fans
for outdoor installation.



Open-circuit axial induced-draft cooling towers have the highest power density. The straightforward design and small footprint, making it suitable for virtually all industrial cooling tasks. High-performance axial fans are characterized by very low power needs. This keeps power consumption and operating costs low.
Low-noise fans and additional impact dampers are available for applications with more stringent noise requirements.

EUROVENT AND CTI CERTIFICATION

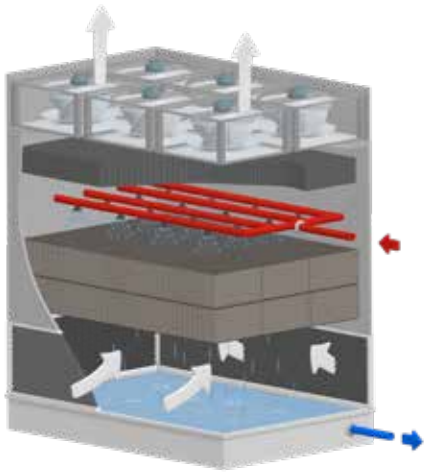
The wet cooling tower lines VAP and ZENIT are based on the latest calculation methods in the thermodynamic power configuration. Energy consumption and cooling capacity are confirmed by EUROVENT and CTI.

COUNTER FLOW - OPEN COOLING TOWERS
AXIAL INDUCED-DRAFT MAINTENANCE FREE EC-FANS FOR CLEAN WATERS

Series of EC fans induced-draft cooling towers **ZENIT**

Induced-draft cooling tower with EC-fans,
for outdoor installation.

C46G-22R00



BENEFITS

- Low power consumption
- Machanical reliability
- Easy maintenance and hygiene

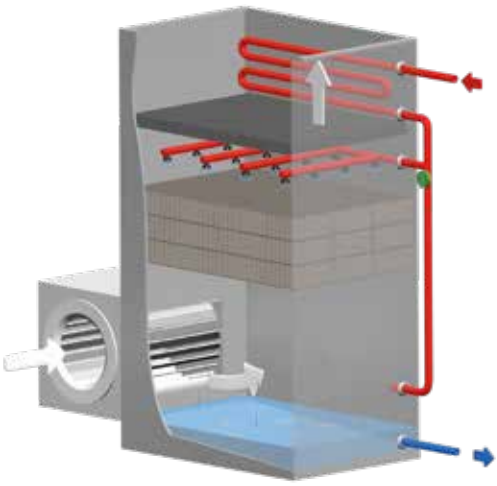
EC FANS TECHNOLOGY

- Ecodesign (EU) 327/2011 compliant technology for the application of Directive 2009/125/EC (ErP) for minimum efficiency thresholds after 202x.
- New compact quiet EC centrifugal motor-fans for more power and efficiency, whose EC motor is integrated directly into the wheel.
- Continuous control by electronic switching: efficiency significantly higher than the IE4 efficiency class, without any use of rare earth magnets.

COUNTER FLOW - OPEN HYBRID COOLING TOWERS CENTRIFUGAL OR AXIAL FORCED-DRAFT FANS FOR CLEAN WATERS

Series of Hybrid Coolers **SIM / KSIM / KHIM**

Forced-draft open Hybrid Coolers,
for outdoor installation



BENEFITS

- No plume, until 2°C ambient and 80% relative humidity,
- Water savings till 30 % over a year,
- Water treatment savings,
- Additional mechanical obstacle to drift : decrease of Legionella risk,
- The air drying reduces the drift propagation distance,
- High resistance to strong winter and maintenance conditions.

PLUMELESS COIL - HYBRID TECHNOLOGY

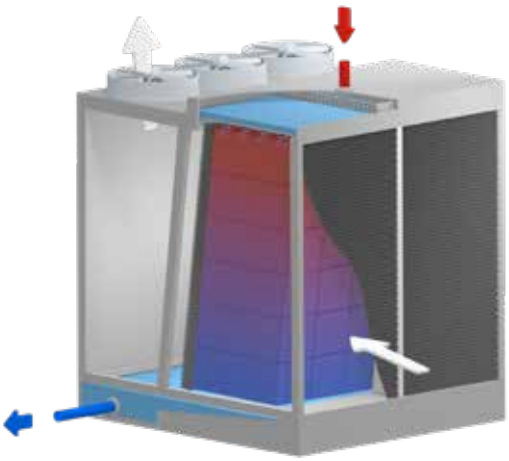
Patented

- Unique on the market, this technology prevents plume, even during low temperatures and reduces water consumption and its associated water treatment.
- Water distribution is regulated through a by-pass modulation valve
- Glycol free
- Warming and drying of the air, combined with reduced air moisture content from the packing, lead to complete plume suppression, even in severe weather conditions

CROSS FLOW - OPEN COOLING TOWERS
CENTRIFUGAL FORCED-DRAFT MAINTENANCE FREE EC-FANS FOR CLEAN WATERS

Series of EC Fans induced draft cooling towers **X-TAR**

Induced-draft evaporative cooling towers equipped with EC fans,
easy maintenance oriented design,
for indoor and outdoor installation.



BENEFITS

- X-PACK Infill providing highly efficient exchange surface
- State-of-the-art EC motor technology - Highly efficient, silent and with low-carbon footprint
- Designed for easy maintenance : total opening without threshold with a mechanical shutter and its safety sensor through a maintenance corridor
- The optional ladder and guardrail allow secure access to the water distribution rails protected by covers with handles for easy inspection and maintenance.

EC FANS TECHNOLOGY

- Ecodesign (EU) 327/2011 compliant technology for the application of Directive 2009/125/EC (ErP) for minimum efficiency thresholds after 202x.
- New compact quiet EC centrifugal motor-fans for more power and efficiency, whose EC motor is integrated directly into the wheel.
- Continuous control by electronic switching: efficiency significantly higher than the IE4 efficiency class, without any use of rare earth magnets.

HEAVY DUTY

EXTREM CONDITIONS

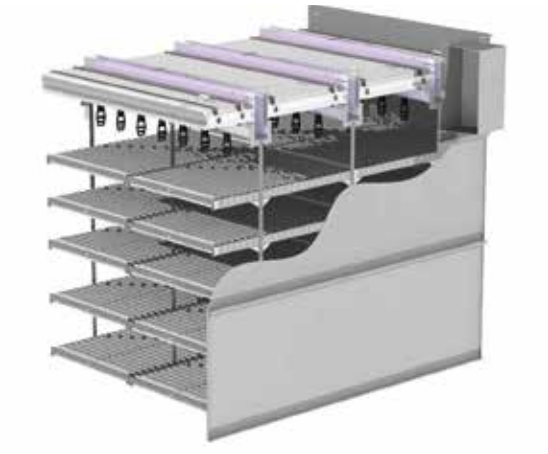
▶ Cooling towers designed for extreme conditions of air and water.

Highly polluted air and water with a high concentration of suspended particles are no longer a problem.

X-STREAM - COMPONENTS FOR EXTREME CONDITIONS OF AIR AND WATER

BENEFITS

- Very high resistance to clogging
- Very high mechanical resistance: 30 Kg/m²
- Highly simplified access for cleaning and maintenance
- For water up to 400 ppm suspended solids



INFILLS

Made of polypropylene vanes, they distribute the water along the fins, which then falls as drops onto the next lowest fin. The water cools and as it falls from one fin to another, so these drop formation bodies are extremely insensitive to clogging. They can be used for water with a solids content of up to 400 ppm. When using water with a high salt content, thermal expansion makes the **X-STREAM** drop formation bodies self-cleaning.

WATER DISTRIBUTION

Water is distributed using **X-steel** troughs that are equipped with polypropylene nozzles for optimal distribution across the entire air cross-section. These nozzles are designed with a large diameter to avoid clogging even with large amounts of suspended materials. Pressure losses are low (0 to 0.3 m WC) for low pump capacities and large drop formation keeps the water from escaping the tower. The distribution channels are designed to permit high performance even as the volume of water fluctuates greatly. The nozzles can be operated over a range of water volumes.

X-Stream Series for Axial-fans Forced-draft cooling towers **RH**

- high capacity & efficiency

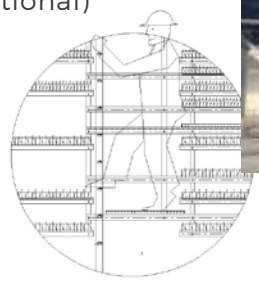
X-Stream Series for centrifugal fans forced-draft cooling towers **RC**

- low noise

EASY MAINTENANCE

CLEANING WITHOUT DISASSEMBLY

- internal ladders with walkways (optional)
- multiple and large access doors
- X-Tract (optional)



X-TRACT

Simplified installation and maintenance

Patented

X-Tract System has been specially designed to simplify installation and maintenance operations. In a single lift, exchange surface, water distribution and drift eliminators are integrally removed allowing then a complete cleaning of the internals and of the casing on the ground.

CLOSED CIRCUIT COOLING TOWERS

SAFE OPERATION

Closed cooling towers are preferred particularly in situations with high requirements for cooling water quality, such as machines with narrow cooling channels.

COUNTER FLOW - CLOSED CIRCUIT COOLING TOWERS CENTRIFUGAL OR AXIAL FORCED-DRAFT FANS FOR CLEAN WATERS

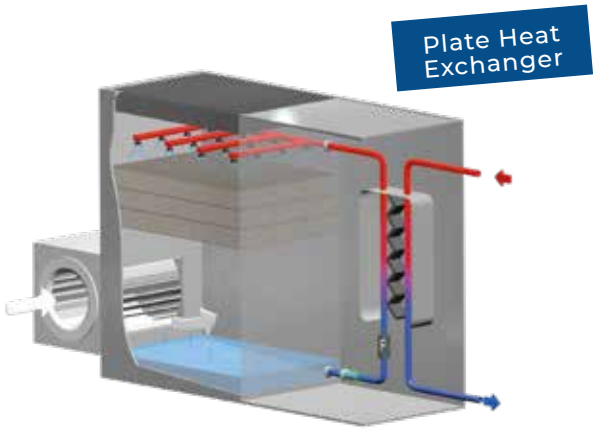
Water evaporative cooling tower, closed-type, is designed for a glycol-free operating during winter.
The closed cooling towers are is fully factory assembled on a single frame and composed of a dismountable and cleanable Plate Heat Exchanger, a pump and a filter with all technical accessories grouped together inside a closed room that is accessible through a large door for its maintenance.

Series of Closed circuit cooling towers **SF / KSF / KHF**

Centrifugal or axial Forced-draft fans - closed cooling towers

BENEFITS

- No freezing wihout gylcol
- Low noise
- Easy maintenance

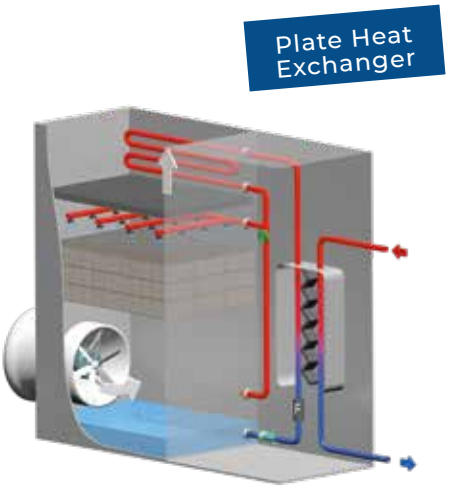


Series of Closed circuit Hybrid Coolers **SFIM / KSFIM / KHFIM**

Centrifugal or axial Forced-draft fans Closed-Hybrid Coolers

BENEFITS

- Glycol free
- Safe
- Easy maintenance



COUNTER FLOW - CLOSED CIRCUIT COOLING TOWERS
AXIAL INDUCED-DRAFT FANS
FOR CLEAN WATERS

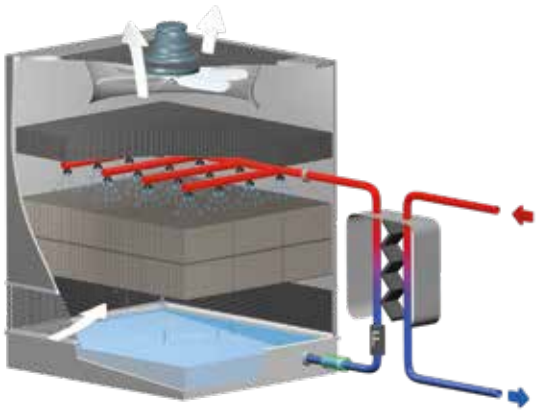
Series of Closed circuit cooling towers **VAPF**

Axial Induced-draft fan - closed cooling towersf, or outdoor installation.

BENEFITS

- No freezing wihout gylcol
- Full cleaning on primary & secondary circuits

Plate Heat Exchanger



patented

FRC centrifugal filter

In addition to the natural fouling resistance of the exchanger (high water velocity), this equipment is designed to retain and then remove suspended solids in the water that may offer nourishment for bacteriological growth. Automatic cleaning is realised during the blow-down by induction cycle or by timer, 100% filtering of the water flow at 60 µm efficiency.

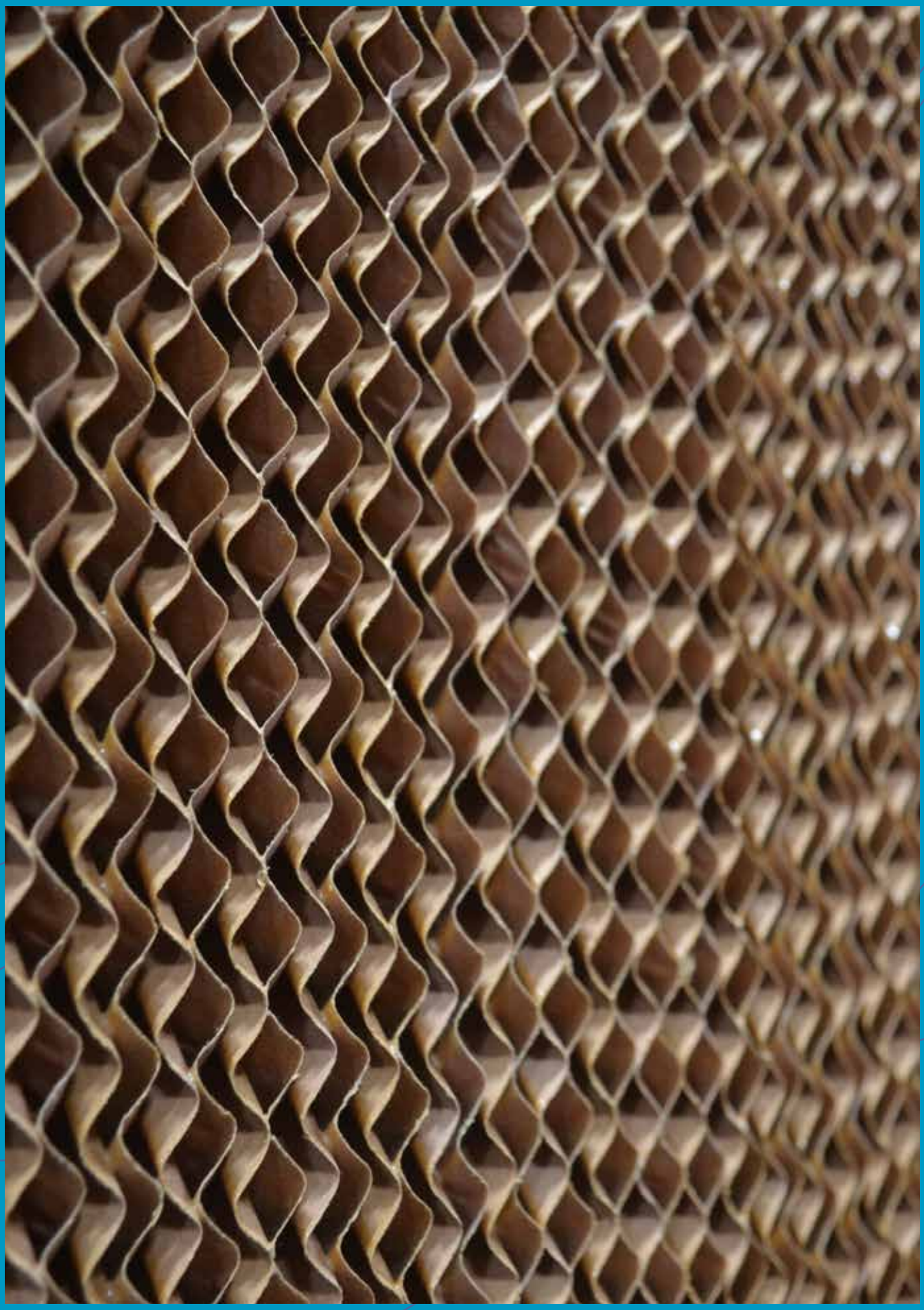
ADIABATIC COOLERS & CONDENSERS

No Aerosols

ADIABATIC LINES ARE UNITS WHERE THE HEAT EXCHANGER REMAINS DRY.

- These coolers are characterized by spatial separation of adiabatic evaporation of water into the intake air from the downstream dry cooler.

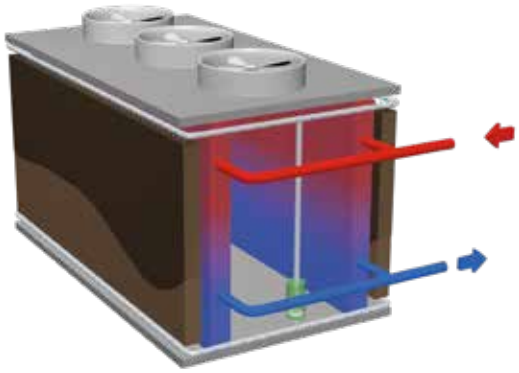
The process of adiabatic evaporation is time-limited and cools the intake air as needed. This reduces the air temperature as needed when the ambient temperature is higher. The downstream dry cooler dissipates the process heat.



ADIABATIC COOLERS MAINTENANCE FREE EC-FANS FOR CLEAN WATERS

Series of adiabatic coolers **TOPAZ®**

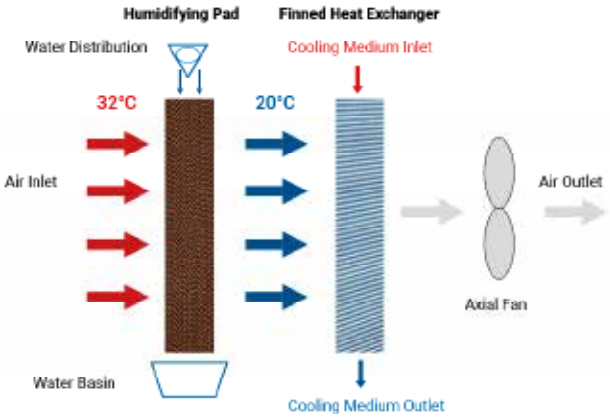
EC fans induced-draft dry coolers - for indoor or outdoor installation.



BENEFITS

- Thermal performance certified coils
- Very low operating costs
- No water treatment necessary
- No spraying of water into the air flow
- No aerosols - legionella free
- Very high switch-over point from wet to dry operation at approx. 23°C
- Full access to interior spaces makes servicing easy

The adiabatic cooler TOPAZ® is a combination of a dry cooler and an adiabatic cooling track before the air inlet. Adiabatic pre-cooling is activated when the water outlet temperature is higher than needed. The cooling medium is cooled to below the ambient air temperature completely abacterial and without water treatment.(wet to dry switch-over point about 23°C)



EC-Technology

MAINTENANCE-FREE AND LOW-NOISE EC AXIAL FANS

The perfect interaction of technically mature components produces the highest possible system efficiency. Optimized flow paths maximize efficiency and minimize noise emissions.

OPTIONAL:

- Plug-and-play functionality
- opportunity for winter operation without glycol (drainage function)
- Master-slave regulation for serial installations

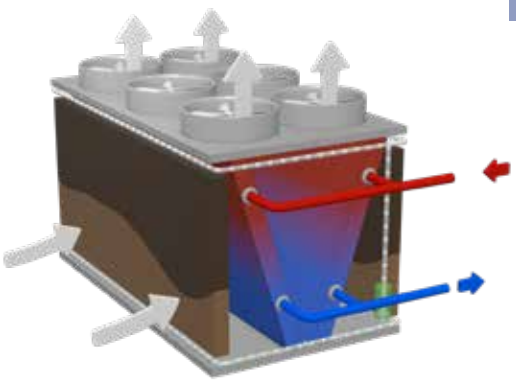
EASY MAINTENANCE:

- Access through complete opening
- Maintenance free EC-Fans

EC-FANS MAINTENANCE FREE ADIABATIC COOLERS

Series of adiabatic coolers **ZYRCO**

EC-fans induced-draft adiabatic dry coolers for indoor or outdoor installation.



BENEFITS

- Thermal performance certified coils
- Very low operating costs
- Inside access
- No water treatment necessary
- No spraying of water into the air flow
- No aerosols - legionella free
- Very high switch-over point from wet to dry operation at approx. 23°C

The adiabatic cooler ZYRCO is a combination of a dry cooler and an adiabatic cooling track before the air inlet. Adiabatic pre-cooling is activated when the water outlet temperature is higher than needed. The cooling medium is cooled to below the ambient air temperature completely abacterial and without water treatment.(wet to dry switch-over point about 23°C).

EC-Technology

MAINTENANCE-FREE AND LOW-NOISE EC AXIAL FANS

The perfect interaction of technically mature components produces the highest possible system efficiency. Optimized flow paths maximize efficiency and minimize noise emissions.

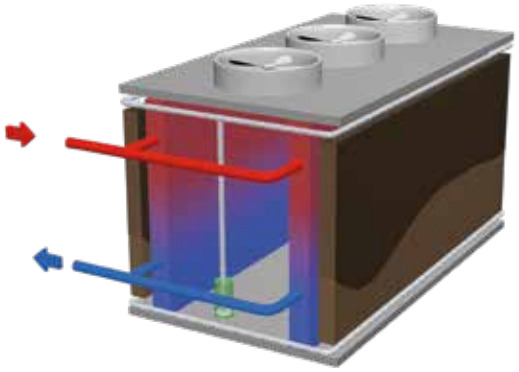
OPTIONAL:

- Plug-and-play functionality
- Master-slave regulation for serial installations

EC-FANS MAINTENANCE FREE ADIABATIC CONDENSERS

Series of adiabatic Condensers ONYX for amonia NH3

EC-fans Induced-draft adiabatic condensers,
for indoor or outdoor installation.



The ONYX range combines latest technologies to achieve the expected and safe performance from an environmentally focused heat rejection system

- Condensing at lower temperature than ambient air
- No water spray in the airflow
- Optimized water consumption – no water treatment required
- Easy maintenance: full internal access to all components
- Highly efficient EC technology motors
- ErP 202x compliant

ONYX SAFE®

Refrigerant containment and protection device

Safety Frame®
Building containment sleeve for better condenser refrigerant management

Safety Pulse®
Refrigerant abatement system in case of leak detection

Safety Drain®
safe recovery and evacuation network

Safety Side
Complete equipement dedicated to maintenance are located on a single side of the unit

SERVICES DEPARTMENT

Beyond the design and manufacture of our products, we are constantly listening to operators. Our Services activity revolves around strong values that have built our DNA:

REACTIVITY – KNOW-HOW – INNOVATION – CUSTOMER SATISFACTION

Our technicians, qualified in chemical risks, legionella risk, have multiple technical skills that can respond to the assembly of towers on site, to the commissioning or even to the renovation of equipment.

- original spare parts
- performance increase
- maintenance
- hygiene expertise
- upgrade
- performance audit
- revamping
- taylor made solutions
- standardisation

RENTAL DEPARTMENT

Need a temporary increase in production, or an optimization of your industrial cooling process: leasing is an economical and quick solution.


JACIR
www.jacir.fr
JACIR

REFERENCES

As one of the leading experts of evaporative cooling, JACIR and GOHL-KTK are recognised as a global leader in the design and manufacture in France and Germany of an extensive range of cooling towers, adiabatic coolers and condensers.

Our products comply with local environmental regulations, meet stringent sound requirements and are built with a variety of fan combinations, materials and exchange surfaces choice. They are designed for applications including HVAC, food, dairy, chemical, pulp and paper...

More than 38.000 colling towers projects realised worldwilde to over 100 coutnries are clear proof our our capability.

We are committed to offering clients the best solutions to maintain reliability and optimise the performance of their cooling equipment.

A CONVINCING PERFORMANCE

ENERGY
EON - RWE - Siemens - Philipps - Thyssen Krupp - Lech Stahlwerke - Alstom Power - Total - Engie...

MEDIA & STORES
Springer - Bundesdruckerei - SWR - Burda Medien - Bayrischer Rundfunk - WDR - IKEA - Louis Vuitton...

PUBLIC INSTITUTION
Airports Hamburg, Frankfurt - Aéroports de Paris - Messe München, Hamburg...

INDUSTRY
O-I Manufacturing - Arcelor - Fibre Excelence - Saint Gobain...

FINANCE
Credit Suisse - Bank of America - Zürcher Kantonalbank - Commerzbank...

CHEMICALS AND PHARMACEUTICAL INDUSTRY
BASF - Grünenthal - Degussa - Bayer - Takeda - GlaxoSmithKline - Air Liquide...

AUTOMOTIVE INDUSTRY
Opel - Audi - BMW - VW - Porsche- Airbus - Mercedes - Ford - Michelin - Toyota - PSA - Dacia...

FOOD INDUSTRY
Danone - Nestlé - Lactalis - Tereos...

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kuehlturm@kuehlturm.de

COFINAIR GROUP

Cooling for life