NEXT

NEXT COOLING | IWC | ASCTI

Engineered Cooling Solutions for Global Markets

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Excellence in Cooling Solutions

The NEXT Group is a global leader in cutting edge cooling technologies. The group consisting of NEXT Cooling, IWC and ASCTI, operate under one brand to deliver cooling towers and air-cooled condensers through specialised clusters.

We offer cooling solutions to the following industries

- / **Power Generation**
- / **Oil & Gas**
- / **Petrochemical**
- / **Chemical/Fertiliser**
- / **WTE / Biomass**
- / **Mining**
- / **Steel & Aluminium**
- / **Food & Beverage**
- / **HVAC and Refrigeration**

NEXT Cooling is a Nooter/Eriksen company forming part of the CIC Group, an employee-owned company with subsidiaries specialising in construction, manufacturing and engineering services (since 1896).

NEXT Cooling recently acquired Industrial Water Cooling (IWC) and its affiliate AS Cooling Technologies India (ASCTI).

Together, NEXT COOLING, IWC and ASCTI are united by a shared vision of excellence, growth, and a commitment to delivering the most advanced cooling solutions to industry including power generation, oil and gas, mining and minerals processing and other general industries.

Our combined capabilities provide a competitive edge by capitalising on a diverse portfolio of world-class projects, and open new opportunities to market our field erected cooling towers, air cooled condensers, bulk air coolers and solution/slurry cooling towers in key global markets.

With a well-established presence in Switzerland, India, South Africa and Australia, the group brings decades of expertise and a strong reputation for delivering advanced, reliable industrial cooling solutions.

At the heart of NEXT's success is its remarkable team of professionals, including dedicated R&D experts who work closely with Stellenbosch University. Their skills and knowledge will further enhance our extensive range of cooling towers, bulk air coolers and air cooled condensers.

By combining NEXT COOLING's engineering excellence, IWC's and ASCTI's proven expertise and regional leadership, with Nooter/Eriksen's century old pedigree, the NEXT Group is now poised to set a new global standard of innovation and performance in the cooling industry.

At a glance...

Certified

ISO9001:2015, ISO45001:2018 and ISO14001:2015

Relentless Innovation

Ongoing R&D keeps us at the cutting edge, with strong ties to Stellenbosch University

Advanced Engineering

Proprietary thermal design & selection tools to calculate cooling tower and ACC performance

Unmatched Talent

Highly skilled team with over 100 years of combined experience

NEXT Group

A powerhouse brand with a legacy dating back to 1896

Strategic Global Presence

Offices in Switzerland, South Africa, Australia, India

Proven EPC Capability

A global record of successful turnkey projects

Capabilities

We provide the following expertise:

Design and engineer to all internationally recognized standards, specifications and codes

Manufacture

Installation

Maintenance

Engineering and Project Management Services:

- Detailed project engineering and project management
- Thermal design of cooling towers and air-cooled condensers
- Mechanical design
- Electrical & Control
- Civil & Structural
- Hydraulic flow calculations and flow simulations/modelling
- Finite Element Analysis
- Stress Analysis (Piping)
- 3D modelling & detailing of plants, equipment and piping isometrics
- EPC Projects

Products and Services

Products

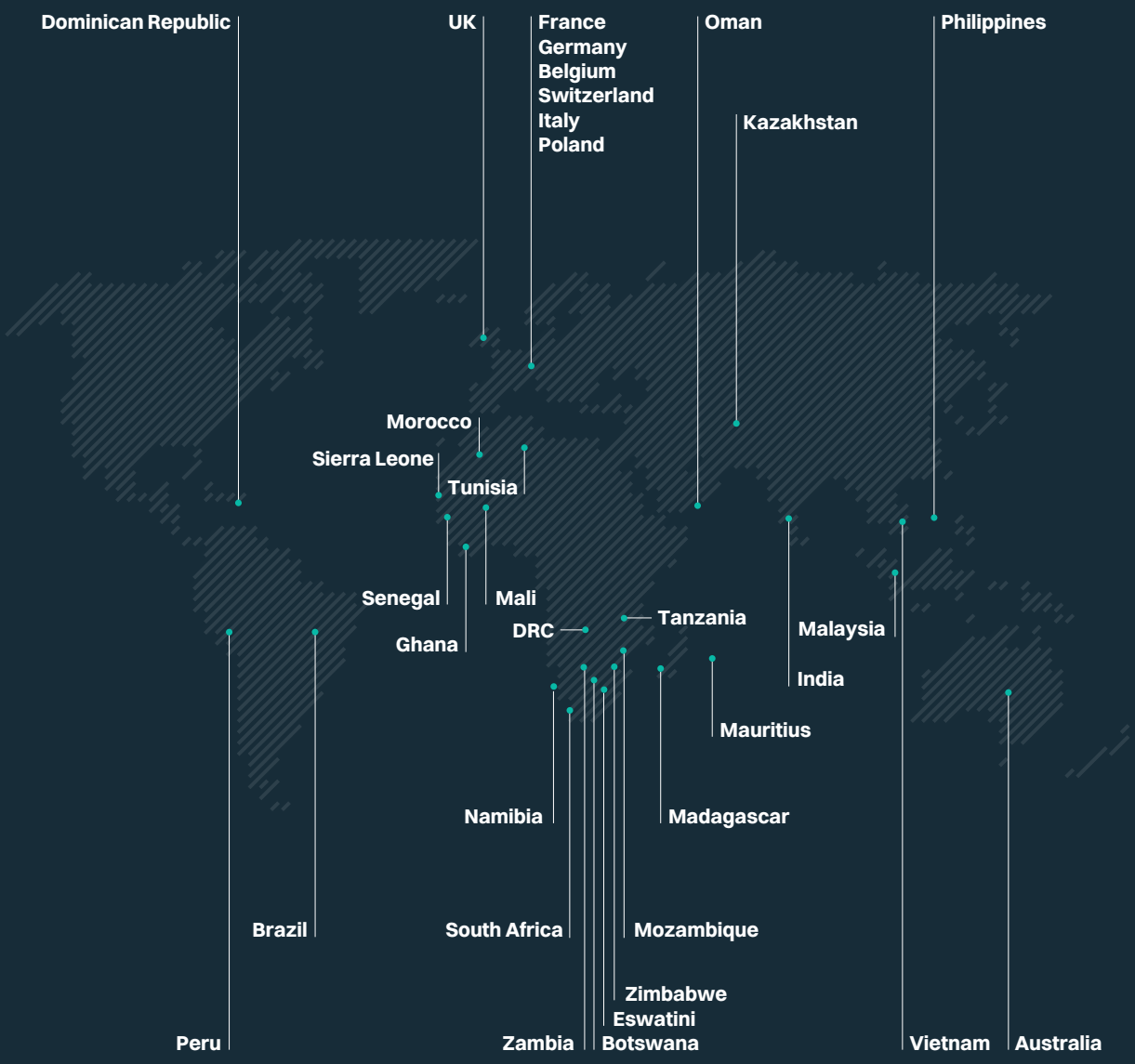
- Large field erected mechanical draught cooling towers of all types and materials of construction
- Air Cooled Condensers (Induced & Forced Draft)
- Bulk Air Coolers
- Aftermarket service including spares for cooling towers and ACC

Services

- Construction management and supervision
- Erection of plant and equipment
- Refurbishment and upgrading of cooling towers and cooling systems
- Commissioning and acceptance testing
- Testing and thermal evaluations (Cooling Towers) and ACC's
- Complete demolition and installation services
- Access and maintenance platforms to suit local standards and specifications.

Geographic Regions

The NEXT Group have delivered projects located in the following regions:



Air-Cooled Condensers

Air cooled condensers are commonly found in power plants and transfer heat from the steam that exits a steam turbine into the surrounding air without consuming water. This is achieved by passing air over finned tube bundles arranged in either an A-frame or V-frame configuration, also known as forced draft and induced draft respectively.

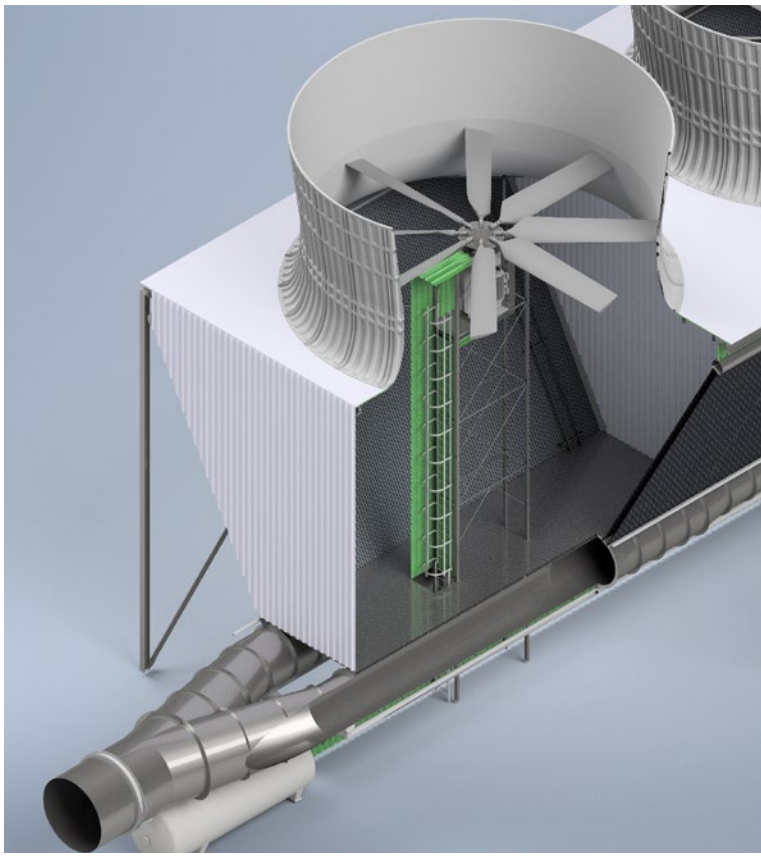
As a market leader in cooling technologies, NEXT supplies a competitive range of Air-Cooled Condensers around the globe. Our range of ACC's are designed to have a lower environmental impact by targeting a reduction in water usage, energy usage and carbon emissions.

Our engineers review each condenser application to ensure that the components selected will work together as an integrated system, ensuring efficient performance and a long, reliable operational life.

Induced Draft Air Cooled Condenser

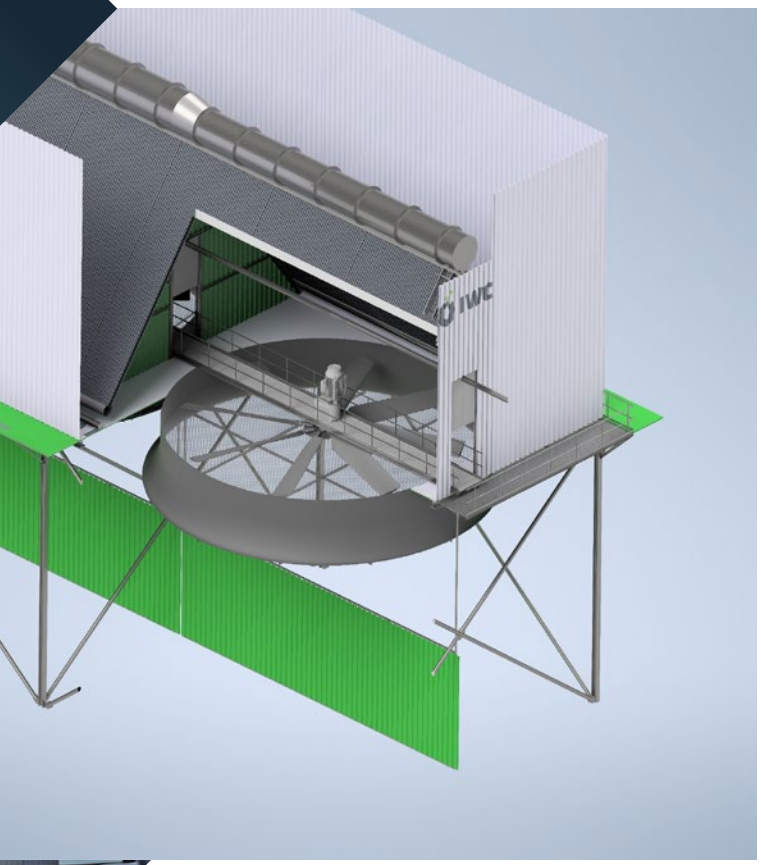
The Induced Draft Air Cooled Condenser uses a combination of forced air and natural draft to remove heat from the system, allowing for efficient cooling without the need for water or other cooling fluids.

Movement of the cooling air across the finned tubes is achieved by electrically driven axial flow fans that are installed above the tube bundles in the warm outlet air.



Advantages of Induced Draft unit over Forced Draft

- Improved constructability and shorter erection period.
- Reduced negative performance impact due to wind.
- Improved condensate and air extraction pipe routing.
- Mechanicals have own support structure on foundation plinths.
- Less structural steel.
- Improved air extraction.



Forced Draft Air Cooled Condenser

A Forced Draft Air Cooled Condenser is a type of heat exchanger used in various industrial applications to remove heat from a process fluid by transferring it to the surrounding air.

Movement of the cooling air across the finned tubes is achieved by electrically driven axial flow fans that are installed in the cooler inlet air, below the finned tubes.

Advantages of Forced Draft unit over Induced Draft

- Easy access to fan mechanicals for maintenance and repairs.
- No auxiliary cooling required for motors and gearboxes.
- Condensate tanks can be at higher elevations for improved pump NPSH.

Field Erected Cooling Towers

We specialise in providing state-of-the-art wet cooling solutions, from Mechanical Draft Cooling Towers to Natural Draft Cooling Towers. Our engineers select from a number of possible cooling tower component combinations that result in economical selections, capable of the performance required. We offer concrete and pultruded cooling towers as well as wooden and steel towers where required.

Mechanical Draft Cooling Towers

Our mechanical draft field-erected cooling towers are engineered to efficiently cool hot water across a wide range of industries, including power generation, oil and gas, chemical plants, steel mills and food processing plants.

Mechanical Draft Cooling Towers can be defined as either induced or forced draft cooling towers according to the position of the fan, or as counterflow or crossflow systems according to the layout of the filling material.

Mechanical draft GRP towers are built from pultruded fiberglass profiles and are the best possible solution for long term use in corrosive environments. Our pultruded GRP cooling towers are designed according to specific project specifications and conform to CTI STD-137 & CTI STD-152 standards. Due to Glass Reinforced Polyester (GRP) unique properties, pultruded GRP is becoming the industry norm for the construction of large field erected cooling towers and owners and operators can benefit from long service life of cooling towers constructed from pultruded GRP.

Designed to operate in extreme environmental conditions, including extreme heat or cold, our cooling towers can handle any water condition while guaranteeing the required thermal exchange in a cost-effective manner.

Natural Draft Cooling Towers

We design and supply natural draft cooling towers for operation in very large thermal and nuclear power plants where large volumes of hot water have to be cooled down.

Due to their hyperbolic shape, water is cooled by the natural rise of cool air up from the base without the use of mechanical fans, resulting in a significant reduction in operational expenditure. In case of layout constraints, the performance of natural draft cooling towers can be boosted by adding fans.

Concrete is a natural material which is ideally suited for long service life in the harshest environment and defies the detrimental effects of heat and ultraviolet light. We have an impressive installed base of cast in situ concrete cooling towers, across a number of different industries and countries.

We also offer wooden, galvanised and stainless steel towers, that have been the de facto standard material for cooling towers for many years but GRP towers are now favoured. The “traditional” galvanized metal cooling towers are somewhat notorious for being maintenance intensive and requiring frequent replacement due to pH problems, corrosion, leakage, high maintenance costs, and sporadic

Bulk Air Cooling Towers

The biggest challenge of deep level mining is providing a safe environment for miners. In this extreme environment, virgin rock temperatures often exceed 60°C, requiring sophisticated cooling methods and equipment to reduce temperatures to safe levels for miners to work in.

Due to the extreme environment, underground mining operations make use of some of the largest ventilation and cooling systems in the world, incorporating more than one type of cooling technology, such as evaporative condensers, mechanical refrigeration plants, pre-cooling towers and bulk air coolers, in order to ensure a safe mine temperature.

As a collective, we have been at the forefront of developing ventilation and cooling system technology in the mining industry for over 30 years. Recent projects include manufacturing and installing these systems into the world's biggest mining corporations, including Roxgold Platinum Mine in Burkina Faso.

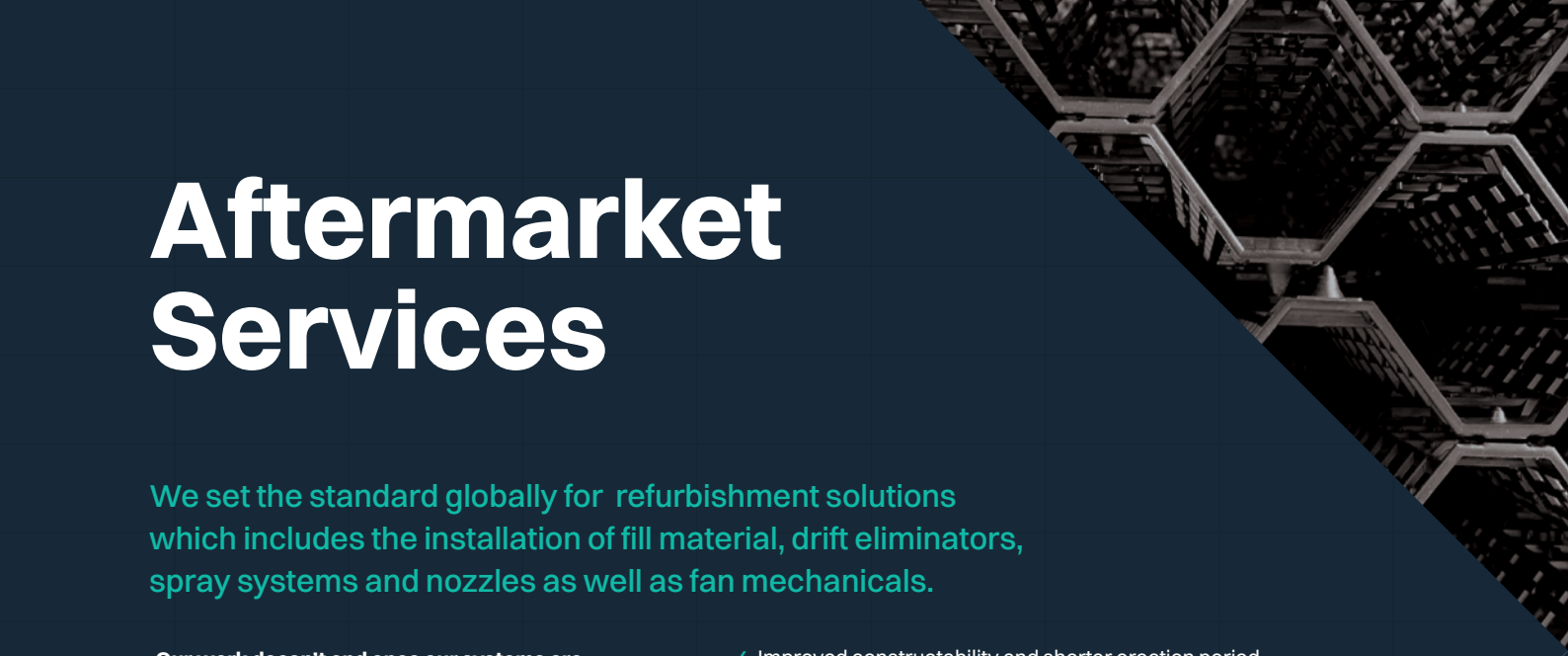
Slurry & Solution Cooling Towers

Our engineers have developed a field erected cooling tower specifically designed to handle slurries as well as highly abrasive and/or corrosive solutions.

These slurry cooling towers are designed with ease of maintenance in mind, and have forced draught fans, removable spray lances (accessible from an external walkway) and are fill-less, making them ideally suited for applications where fouling of the internals would normally be a major operational concern.

Drift eliminators are assembled into easily removable pads and can be provided with an automatic CIP (Cleaning in Place) system. Drift losses have been minimized, and drift losses can be reduced to as low as 0,002% of the re-circulating solution flow rate. The cooling tower is typically octagonal in shape and consists of a number of field-assembled, dual composite GRP panels, complete with an integral basin which is designed to be non-clogging. The structural panels have integral polypropylene liners with the structural laminate produced from a high-quality vinyl ester resin. A conductive carbon tissue is included as a corrosion barrier, as well as to allow for spark testing of the internal polypropylene panel seal welds.

Aftermarket Services



We set the standard globally for refurbishment solutions which includes the installation of fill material, drift eliminators, spray systems and nozzles as well as fan mechanicals.

Our work doesn't end once our systems are successfully installed - we continue to support our clients with spare parts, adjustments, and ongoing services..

To ensure optimal after-sales support, we develop a tailored maintenance strategy and leverage real-time remote monitoring of mechanical components and system processes. We also offer a Long-Term Service Agreement (LTSA) for the full outsourcing of maintenance and service activities, along with our advanced Remote Inspection System.

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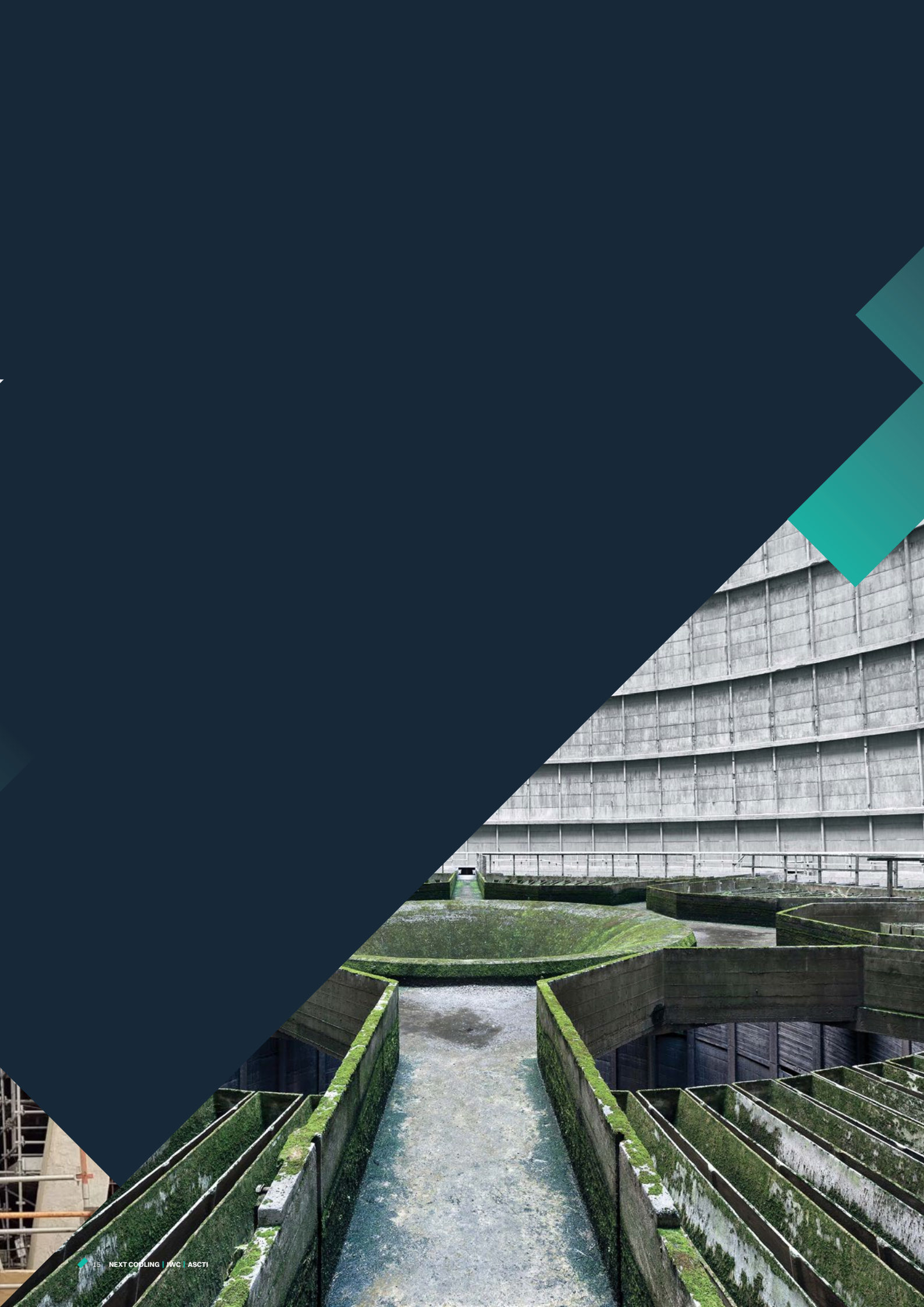

Switzerland
Via Penate, 4
6850 Mendrisio
T +41 91 261 3166

South Africa
55 Lake road
Longmeadow
Business Estate North,
Edenvale, 1609
T +27 (0) 11 466 0699

India
Kochar Bliss, 4th floor, A8 & A9
Thiru Vi Ka Industrial Estate
Guindy, Chennai - 600 032
TamilNadu
T +91 44 6162 6106

B-322 & B-323
Ansal Chambers 1
Bhikaji Cama Place
New Delhi - 110066
T +91 11 4263 1412

Australia
Unit 2
28 Baile Road
Canning Vale
Perth
T +61 8 9455 4343