



S1500E

Open cooling towers



Key benefits

- Extreme low sound levels matching centrifugal fan units with attenuation.
- Unmatched energy savings with less than 2 years payback.
- Low maintenance and easy inspection, 25% reduction in annual maintenance costs.



S1500E characteristics

Cross flow, Axial fan, induced draft

Capacity range

8 - 215 l/s

40% more capacity

Water distribution

Gravity with **variable flow**

Maximum entering water temperature

55°C standard fill

60°C with alternative fill

Typical applications

- Medium HVAC and industrial applications
- Counterflow and crossflow unit replacements
- Tight enclosures
- Installations requiring a single air inlet



Extreme low sound levels

- A choice of various fan types such as low noise axial fans and [Wisper Quiet fans](#) for minimal surrounding noise.
- [BACross fill](#) smoothly guides the water all the way into the basin **without water splash noise**.
- Single-side air inlet, and a **quieter tower rear** for more noise-sensitive areas.
- Try our **XES1500E line** with smaller motors for **extremely low noise** levels.
- Factory designed, tested and rated [sound attenuation](#) is available on air inlet to cut operation noise even further.

Unmatched energy savings

- **Evaporative cooling** for system-wide energy saving at lower operating temperatures.
- **Axial fan uses half the energy** of similar centrifugal fan units.
- **Save pump kW!** Less pump head for this gravity water distribution system. In periods of reduced load, **weir dams** close off partly the hot water basin **saving pump energy**.
- [BACross fill](#) – factory-configured for maximum water/air contact and low air pressure drop for optimal cooling tower efficiency with limited energy consumption.
- **High efficiency fan motors**
- **Multiple fan motor system** covers independent fan motor and drive assembly per fan. In case of fan failure, the other fan(s) can still operate.
- **XES1500E line** with smaller motors to reduce electricity consumption for the same cooling capacity.

Low maintenance and easy inspection

- Unrivalled safe and **comfortable access**. Inspect and maintain the tower **while standing** and without crawling.
- The S1500E has a **spacious plenum** (internal area) and **easy inspection/maintenance access**.
- Access via **large hinged** door. With optional [internal walkway](#): no basin draining needed for unit interior or fill pack inspection.
- Inspection of **water distribution system** (hot water basin and nozzles) possible outside the unit, during **operation**.
- Optional [distribution basin covers](#) prevent debris collecting in the unit.
- You can inspect and clean easily the core of the [BACross fill](#) **sheet by sheet without dismantling**. BACross design reduces fouling. Optional [telescopic fill supports](#) for easy replacement of the sheets.
- The fill includes integrated **drift eliminators** tested and certified by Eurovent.
- Self-cleaning cold water basin and fill above **sloped basin** to flush out dirt and debris.
- **Fans** are easily accessible from the in- and outside
- Optional [clean out port](#) **helps remove** silt and sludge from the cooling tower basin.
- Removable **suction strainer** anti-vortex hood.
- Optional [sump sweeper piping](#) prevents sediment collecting in the cold water basin.
- Various corrosion-resistant materials, including the unique [Baltibond hybrid coating](#) for guaranteed long service life.



- Optional [motor removal davit](#) for easy motor replacement.

Superb hygiene control

- Proper hygiene inspection **without unit shut-down**.
- Easy-clean and easy-inspect S1500E towers **reduce hygiene risks** from bacteria (eg Legionella) or biofilm inside.
- Self-cleaning cold water basin and fill above **sloped basin** to flush out dirt and debris.
- [BACross fill](#) for reduced fouling and easy sheet by sheet cleaning without dismantling.
- The fill includes integrated **drift eliminators** tested certified by Eurovent.
- **Combined inlet shields** block sunlight to prevent biological growth in the tower, filter the air and stop water splashing outside.
- Optional [distribution basin covers](#) prevent debris collecting in the unit.
- Optional [clean out port](#) helps remove silt and sludge from the cooling tower basin.
- Optional [sump sweeper piping](#) prevents sediment collecting in the cold water basin.

Ideal replacement unit

- **Single side air inlet and discharge**, fits in most enclosures.
- S1500E are **ideal replacement units**. Small fan motors and low spray pressure allow **re-use of existing electrical cabinet**.
- S1500E cooling towers are factory-built and shipped in 1 or 2 sections to reduce the overall size and weight, allowing **easy on-site section assembly** with smaller crane.

Year round reliable operation

- Optimal unit condition thanks to **inspection during operation**.
- Proven **freeze free** winter operation.
- The thermal performance of S1500E is tested and [certified by Eurovent](#).
- **Multiple fan motor system** covers independent fan motor and drive assembly per fan. In case of fan failure, the other fan(s) can still operate.
- Various **corrosion-resistant** materials, including the unique [Baltibond hybrid coating](#) for guaranteed long service life.

Interested in the S1500E cooling tower for cooling your process water? Contact your local [BAC representative](#).

Downloads

- [S1500E compilation pdf \(EN\)](#)
- [S - S1500E \(EN\)](#)



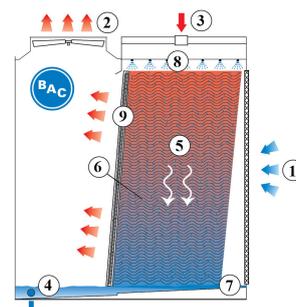
- [M - S1500E \(EN\)](#)
- [R - S1500E \(EN\)](#)
- [R - ACC S1500E \(EN\)](#)

S1500E

Open cooling towers

Principle of operation

Warm process **water (3)** from the heat source enters the **water distribution system (8)** at the top of the cooling tower where it is distributed over the **fill** or heat transfer media **(6)**. At the same time **axial fans**, located at the top of the unit, draw the **air (1)** from the side of the unit over the fill. **Combined inlet shields** protect the tower from debris being drawn into the unit. While the warm process water contacts the cold air the latter heats up and part of the process water is evaporated which removes the heat from the remaining water. The **sloping sump (7)** or basin collects the cooled water after which it returns to the **heat source of the process (4)**. The warm saturated **air (2)** first passes through the **drift eliminators (9)**, which remove water droplets from the air, and then exits the tower at the top.



You want to use the S1500E cooling tower to cool your process water? Contact your local [BAC representative](#) for more information.

S1500E

Open cooling towers

Construction details

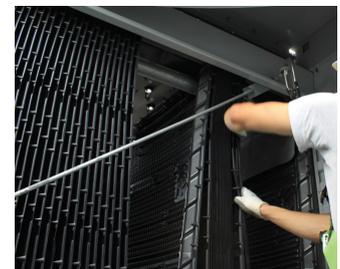
1. Material options

- Heavy-gauge hot-dip galvanized steel is used for external unit steel panels and structural elements featuring [Baltiplus Corrosion Protection](#).
- The unique [Baltibond hybrid coating](#) is an optional extra. A hybrid polymer coating for longer service life, applied pre-assembly to all hot-dip galvanized steel components of the unit.
- [Optional stainless steel](#) panels and structural elements of type 304 or 316 for extreme applications.
- Or the economical alternative: a **water-contact stainless steel cold water basin**. Its key components and the basin itself are stainless steel. The rest is protected with the Baltibond hybrid coating.



2. Heat transfer media

- Our heat transfer media is factory-tested and patented [BACross fill](#) with integrated **drift eliminators** certified by Eurovent. Its thermal performance is proven during comprehensive [lab thermal performance tests](#), and it offers you unrivalled system efficiency.
- Patented BACross fill **eliminates water splash-out** and allows freeze free winter operation. The fill pack includes individual **sheets**. Sheets are easy to inspect and clean inside the tower without dismantling, eliminating the need for frequent fill replacement. Optional telescopic support for easy fill replacement.
- In self-extinguishing **plastic**, which will not rot, decay or decompose.
- For operation above 55°C, try our **optional high temperature fill**, usable with intake water up to 60°C.



3. Air movement system

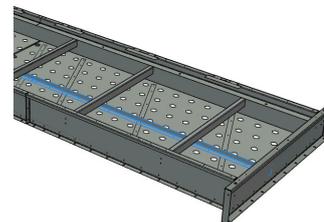
- S1500E's feature a **multiple fan system** covering independent fan motor and drive assembly per fan for independent fan operation for **extra capacity control** or **stand-by fan** in case of fan failure. Together with the heavy duty fan shaft bearings and the BAC **Impervix** motor, this guarantees optimal and year-round operational efficiency.
- The smaller diameter fans on the 2.4m wide units are **direct driven**. The larger fans on the rest of the product line are equipped with a **belt drive system**.
- **Fan(s)** in corrosion resistant aluminum, encased in fan cylinder with removable fan guard. To reduce noise even further, choose for a low noise or [Whisper Quiet fan](#) reducing the noise even further with minimal impact on thermal performance.
- Easy removable UV-resistant plastic **combined inlet shields** at air inlet. Sunlight block to prevent biological growth in tower, air filter and water splash-out stop.



4. Water distribution system

These consist of:

- **Low pump gravity water distribution basin** with wide non-clog plastic nozzles for uniform water distribution. You can easily clean and flush both nozzles and basin.
- **Weir dams** in the hot water basin for variable flow. These close off partly the hot water basin in periods of reduced load, resulting in **up to 50% power savings** on process pump and ensuring **freeze free operation**.
- A **sloped cold water basin** with:
 - large hinged and inward swinging **access** door
 - anti-vortexing **strainers** and **make up** both easily accessible from air inlet side.
- Optional internal walkway for easy access to the interior of the unit.



Need more information? Contact your local [BAC representative](#).

S1500E

Open cooling towers

Options and accessories

Below is a listing of the main S1500E options and accessories. If your required option or accessory is not listed, look no further than your [local BAC representative](#).



Sound attenuation

Reducing noise at air **intake and discharge points** brings us closer to silent cooling equipment. [Read more](#)



Whisper Quiet fan

Reduce noise even further with **ultra low-noise factory-tested fans**. [Read more](#)



Removable fill

Telescopic fill support facilitates **fill replacement** on-site. [Read more](#)



Basin heater package

Thanks to our factory-installed heaters, the water stays at 4°C and **never freezes**, even during equipments downtime and however cold it gets outside. [Read more](#)



Distribution basin covers

Distribution basin covers on unit tops **prevent debris collecting in unit** water distribution basins. [Read more](#)



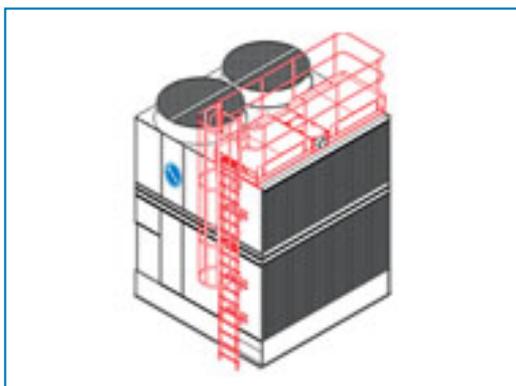
Internal walkway

An internal walkway for **easy access to the unit water basin**. [Read more](#)



Internal service platform

An internal platform helping you **access the unit top inside** and safely inspect your cooling towers. [Read more](#)



Ladder, safety cage and handrail

A ladder, safety cage and handrails **all facilitate access to the top of the unit** and safe inspection of your cooling tower. [Read more](#)



Motor removal davit

For **easy removal or lifting** of the side motor. [Read more](#)



Extended lubrication lines

Extended lubrication lines with easily accessible grease fittings can be used **to lubricate** fan shaft bearings. [Read more.](#)



Electric water level control package

For **perfectly precise water level control**, replace the standard mechanical valve with our electrical water level controller. [Read more](#)



Vibration cut out switch

When excessive vibration occurs, this switch shuts down the fan, ensuring your cooling equipment **operates safely**. [Read more](#)



Water treatment equipment

Devices to control water treatment are needed to ensure proper **cooling tower water care**. Not only does this help protect the components and fill pack, controlling corrosion, scaling and fouling, it also avoids the proliferation of harmful bacteria, including **legionella**, in the recirculating water. [Read more](#)



Filter

Separators and media filters efficiently **remove suspended solids** in the recirculating water, reducing system cleaning costs and optimizing water treatment results. Filtration helps you keep the recirculating water clean. [Read more](#)



Sump sweeper piping

Sump sweeper piping **prevents sediment collecting in the cold water basin** of the unit. A complete piping system, including nozzles, is installed in the basin of the tower **for connection to side stream filtration** equipment. [Read more](#)



Clean out port

Clean out port **makes it easy to eliminate silt and sludge** from the cooling tower basin when cleaning and flushing the sump. [Read more](#)



Remote sump connection

The best way to **prevent a sump freezing** is to use the auxiliary remote variety within a heated area. Shutting off the circulating pump allows all the water in the water distribution, as well as that in suspension and the sump to drain freely to the auxiliary sump. [Read more](#)



Flanges

Flanges facilitate **pipng connections** on-site. [Read more](#)