



# S3000E

## Open cooling towers



### Key benefits

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

#### S3000E characteristics

Cross flow, axial fan, induced draft

#### Capacity range

18 - 285 l/s

#### Water distribution

Gravity, with weir dams for variable flow

#### Maximum entering water temperature

55°C standard fill

60°C with alternative fill

#### Typical applications

- Medium to large HVAC and industrial applications
- Replacement of field erected towers



## Extreme low sound levels

- A choice of various fan types such as low noise axial fans and [Whisper Quiet fans](#) for **minimal surrounding noise**
- [BACross fill](#) smoothly guides the water all the way into the basin **without water splash noise**.
- Try our XES3000E line with smaller motors for extremely low noise levels.
- Factory designed, tested and rated [sound attenuation](#) is available on air inlet and discharge 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**
- [XES3000E](#) line with smaller motors to reduce electricity consumption for the same cooling capacity.

## Low maintenance and easy inspection

- The S3000E has a **spacious plenum** (internal area) and **easy access** to inspect and maintain safely the unit interior components. **Unrivalled comfort, while standing** inside.
- Upgrade the unit interior with **ladder and platform** for quick and safe access to all unit components.
- **Access via large hinged door to optional internal walkway:** no basin draining needed for unit interior or fill pack inspection.
- You can inspect and clean easily the core of the [BACross fill](#) **sheet by sheet without dismantling**. BACross design reduces fouling. Optional **telescopic supports** for easy replacement of the sheets.
- The fill includes integrated **drift eliminators** tested and certified by Eurovent.
- 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.
- 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.

## Unmatched hygiene control



- Easy-clean and easy-inspect S3000E 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 and 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.

## Year round reliable operation

- Top rated thermal performance - meets **any flow and temperature needs**.
- The thermal performance of S3000E cooling towers is tested and [certified by Eurovent](#).
- Patented [BACross](#) sheet fill with **maximum air and water contact** gives unbeatable heat transfer performance.
- Various **corrosion-resistant** materials, including the unique [Baltibond® hybrid coating](#) and FRP casing panels for guaranteed long service life.
- Optional [gear-drive system](#) for more efficiency and less maintenance.

**Want to use the S3000E cooling towers to cool your process water?** Contact your local BAC representative.

## Downloads

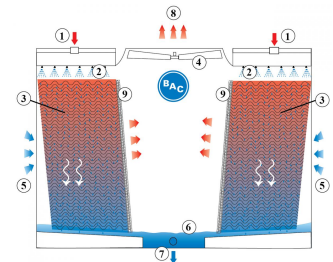
- [S3000E open cooling tower](#)
- [S3000E Open Cooling Tower - brochure](#)
- [Operating and Maintenance S3000E](#)
- [Rigging and installation S3000E](#)
- [Spare Parts for S3000E](#)
- [Retrofit Opportunities for S3000E](#)

# Principle of operation

## Open cooling towers

### Principle of operation

Warm process **water (1)** from the heat source enters the **water distribution system (2)** at the top of the cooling tower on both sides where it is distributed over the **fill** or heat transfer media (**3**). At the same time the **axial fan (4)**, located at the top of the unit, draws the **air (5)** from the sides of the unit over the fill. 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 (6)** or basin collects the cooled water after which it returns to the **heat source of the process (7)**. The warm saturated **air (8)** 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 S3000E cooling tower to cool your process water?** Contact your local [BAC representative](#).

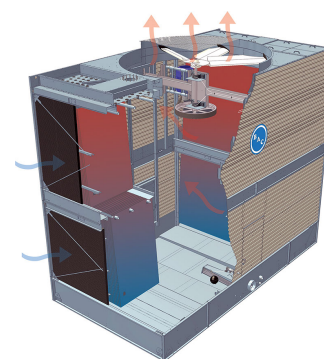
# Construction details

## 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](#).
- For casing panels we use UV resistant **fiberglass** reinforced polyester. 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 304L or 316L for extreme applications.
- Or the economical alternative: a **water-contact stainless steel cold (and hot) 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 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

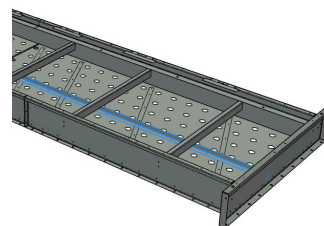
- S3000E **fan system** features two corrosion resistant sheaves, belt and motor. Together with the heavy duty fan shaft bearings and the BAC **Impervix** motor, this guarantees optimal and year-round operational efficiency.
- **Fan(s)** in corrosion resistant aluminum, encased in fan cylinder with removable fan guard. To reduce noise even further, choose for a low noise or [Whisper Quiet fan](#) 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 inside the unit.
  - optional **internal walkway** for easy access to the interior of the unit.



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

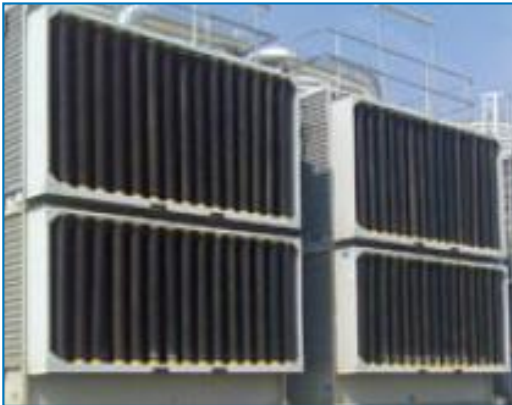


# Options and accessories

## Open cooling towers

### Options and accessories

Below is a listing of the main S3000E 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.



#### Whisper Quiet fan

Reduce fan noise even more with **very low sound factory-tested fans**.



## Gear drive system with close coupled motor

A close-coupled gear box for **more efficiency** and **less maintenance**.



## Gear drive system with externally mounted motor

A gear box with an external motor outside the air stream helps **improve efficiency** and **ease of maintenance**.



## Velocity recovery stacks

**To boost capacity in confined spaces**, select a velocity recovery stack on top of the fan cylinder.





### Telescopic fill support

Telescopic support facilitate **fill replacement** on-site.



### Internal service platform

An internal platform helping you **access the unit top inside** and safely inspect your cooling towers.



### Internal walkway

An internal walkway for **easy access to the unit water basin**.



### 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.



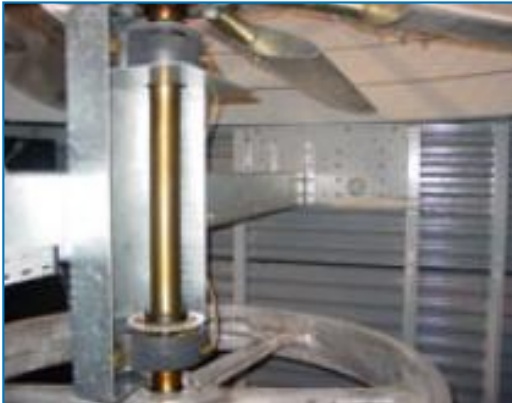
### Basin heater package

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.



### 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.



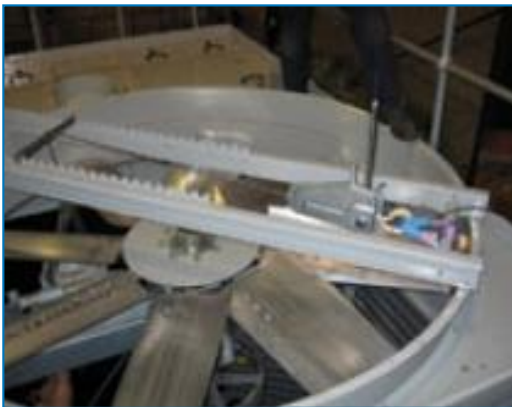
## Extended lubrication lines

Extended lubrication lines with easily accessible grease fittings can be used **to lubricate** fan shaft bearings.



## Electric water level control package

For **perfectly precise water level control**, replace the standard mechanical valve with our electrical water level controller.



## Mechanical equipment removal system

This **helps** you **remove or install** fan motors or gearboxes.



## Vibration cut out switch

When excessive vibration occurs, this switch shuts down the fan, ensuring your cooling equipment **operates safely**.



## 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.



## 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.



## 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.



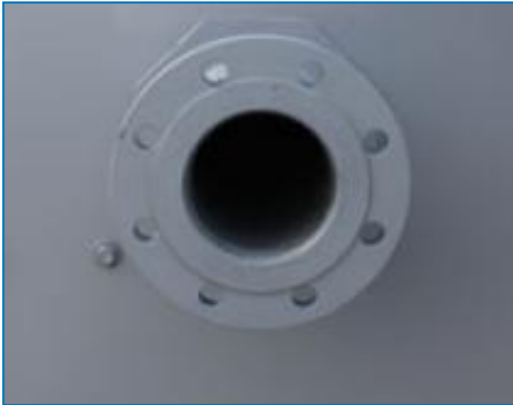
## Clean out port

Clean out port **makes it easy to eliminate silt and sludge** from the cooling tower basin when cleaning and flushing the sump.



## Distribution basin covers

Distribution basin covers on unit tops **prevent debris collecting** in unit water distribution basins.



## Flanges

Flanges facilitate **pipng connections** on-site.





# S3E 8518, 1020-1424

Open cooling towers

## Engineering data

**REMARK:** Do not use for construction. Refer to factory certified dimensions & weights. This page includes data current at time of publication, which should be reconfirmed at the time of purchase. In the interest of product improvement, specifications, weights and dimensions are subject to change without notice.

### General notes

1. Operating weight is for tower with the water level in the cold water basin at overflow. If a lower operating weight is needed to meet design requirements, your local BAC representative can provide additional assistance.
2. Heights are for units with gear drive, except for models with motors up to and including 18,5 kW which are only available with belt-drive.
3. Models with motors of 22 to 55 kW are shipped an optional gear drive and may have heights up to 190 mm lower than shown.
4. Models with optional Whisper Quiet fan may have heights up to 1000 mm greater than shown.
5. Models with an optional Velocity Recovery Stack can be up to 1500 mm higher
6. Intake attenuators are shipped installed for single cell units. For 2 or more cells, consult factory.
7. Models 1222-10 thru 1222-14 and 1424-12 thru 1424-14 ship in two sections per cell. Top section heights are for models 1222-10 thru 1222-13 and 1424-12 thru 1424-13, 2838 mm. For models 1222-14 and 1424-14, 3245 mm.

**Last update:** 01/07/2024

**S3E 8518, 1020-1424**





1. Water in; 2. Overflow ND80; 3. Make up; 4. Water out; 5. Drain ND50; 6. Access door.



| Model                  | Weights (kg)      |                  |                       | Dimensions (mm) |      |      | Air Flow (m³/s) | Fan Motor (kW) | Fluid Inlet ND (mm) | Fluid Outlet ND (mm) | Make Up ND (mm) |
|------------------------|-------------------|------------------|-----------------------|-----------------|------|------|-----------------|----------------|---------------------|----------------------|-----------------|
|                        | Oper. Weight (kg) | Ship. Weight(kg) | Heaviest Section (kg) | L               | W    | H    |                 |                |                     |                      |                 |
| S3E 8<br>518-05<br>L/H | 6878              | 3639             | 3639                  | 2585            | 5500 | 2840 | 36.5            | (1x)<br>11.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-05<br>M/H | 6905              | 3666             | 3666                  | 2585            | 5500 | 2840 | 39.9            | (1x)<br>15.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-06<br>L/H | 7271              | 3789             | 3789                  | 2585            | 5500 | 3247 | 39.7            | (1x)<br>11.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-06<br>M/H | 7280              | 3798             | 3798                  | 2585            | 5500 | 3247 | 43.3            | (1x)<br>15.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-06<br>N/H | 7293              | 3812             | 3812                  | 2585            | 5500 | 3247 | 46.4            | (1x)<br>18.5   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-06<br>O/H | 7316              | 3834             | 3834                  | 2585            | 5500 | 3437 | 48.4            | (1x)<br>22.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-07<br>M/H | 8312              | 3970             | 3970                  | 2585            | 5500 | 3653 | 45.8            | (1x)<br>15.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-07<br>N/H | 8326              | 3984             | 3984                  | 2585            | 5500 | 3653 | 49.0            | (1x)<br>18.5   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-07<br>O/H | 8348              | 4007             | 4007                  | 2585            | 5500 | 3653 | 51.7            | (1x)<br>22.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 8<br>518-07<br>P/H | 8421              | 4079             | 4079                  | 2585            | 5500 | 3653 | 56.4            | (1x)<br>30.0   | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| S3E 1<br>020-06<br>M/H | 8681              | 4327             | 4327                  | 2980            | 6110 | 3247 | 46.2            | (1x)<br>15.0   | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| S3E 1<br>020-06<br>N/H | 8745              | 4391             | 4391                  | 2980            | 6110 | 3247 | 49.4            | (1x)<br>18.5   | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| S3E 1<br>020-06<br>O/H | 8767              | 4413             | 4413                  | 2980            | 6110 | 3437 | 52.2            | (1x)<br>22.0   | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| S3E 1<br>020-07<br>M/H | 9152              | 4483             | 4483                  | 2980            | 6110 | 3653 | 49.8            | (1x)<br>15.0   | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| S3E 1<br>020-07<br>N/H | 9216              | 4547             | 4547                  | 2980            | 6110 | 3653 | 53.3            | (1x)<br>18.5   | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| S3E 1<br>020-07<br>O/H | 9239              | 4569             | 4569                  | 2980            | 6110 | 3843 | 56.3            | (1x)<br>22.0   | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| S3E 1<br>020-07<br>P/H | 9311              | 4642             | 4642                  | 2980            | 6110 | 3843 | 61.4            | (1x)<br>30.0   | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| S3E 1<br>222-06<br>M/H | 10730             | 5161             | 5161                  | 3600            | 6566 | 3437 | 53.1            | (1x)<br>15.0   | (2x)<br>200         | (1x)<br>250          | (1x) 40         |
| S3E 1                  | 10793             | 5224             | 5224                  | 3600            | 6566 | 3437 | 56.8            | (1x)           | (2x)                | (1x)                 | (1x) 40         |



|                        |       |      |      |      |      |      |       |              |             |             |         |
|------------------------|-------|------|------|------|------|------|-------|--------------|-------------|-------------|---------|
| 222-06<br>N/H          |       |      |      |      |      |      |       | 18.5         | 200         | 250         |         |
| S3E 1<br>222-06<br>O/H | 10816 | 5247 | 5247 | 3600 | 6566 | 3437 | 60.0  | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-07<br>N/H | 11404 | 5493 | 5493 | 3600 | 6566 | 3843 | 61.3  | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-07<br>O/H | 11426 | 5516 | 5516 | 3600 | 6566 | 3843 | 64.7  | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-07<br>P/H | 11499 | 5589 | 5589 | 3600 | 6566 | 3843 | 70.6  | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-07<br>Q/H | 11504 | 5593 | 5593 | 3600 | 6566 | 3843 | 75.4  | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-07<br>R/H | 11848 | 5938 | 5938 | 3600 | 6566 | 3843 | 79.7  | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| S3E 1<br>222-10<br>P/H | 15196 | 6953 | 4083 | 3600 | 6566 | 5110 | 84.9  | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-10<br>Q/H | 15268 | 7025 | 4156 | 3600 | 6566 | 5110 | 90.5  | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-10<br>R/H | 15273 | 7030 | 4161 | 3600 | 6566 | 5110 | 95.5  | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-10<br>S/H | 15708 | 7465 | 4596 | 3600 | 6566 | 5110 | 101.8 | (1x)<br>55.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-12<br>P/H | 16439 | 7373 | 4133 | 3600 | 6566 | 5923 | 90.1  | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-12<br>Q/H | 16467 | 7400 | 4161 | 3600 | 6566 | 5923 | 96.0  | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-12<br>R/H | 16562 | 7495 | 4256 | 3600 | 6566 | 5923 | 101.2 | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-12<br>S/H | 16997 | 7931 | 4691 | 3600 | 6566 | 5923 | 107.9 | (1x)<br>55.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-13<br>P/H | 16857 | 7583 | 4133 | 3600 | 6566 | 6330 | 92.6  | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-13<br>Q/H | 16885 | 7610 | 4161 | 3600 | 6566 | 6330 | 98.7  | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-13<br>R/H | 16980 | 7705 | 4256 | 3600 | 6566 | 6330 | 104.0 | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-13<br>S/H | 17016 | 7742 | 4292 | 3600 | 6566 | 6330 | 110.9 | (1x)<br>55.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-14<br>P/H | 17049 | 7775 | 4353 | 3600 | 6566 | 6737 | 95.8  | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-14        | 17077 | 7802 | 4380 | 3600 | 6566 | 6737 | 102.1 | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |



|                        |       |       |      |      |      |      |             |              |             |             |         |
|------------------------|-------|-------|------|------|------|------|-------------|--------------|-------------|-------------|---------|
| Q/H                    |       |       |      |      |      |      |             |              |             |             |         |
| S3E 1<br>222-14<br>R/H | 17149 | 7875  | 4452 | 3600 | 6566 | 6737 | 107.6       | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>222-14<br>S/H | 17186 | 7911  | 4489 | 3600 | 6566 | 6737 | 115.1       | (1x)<br>55.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>424-07<br>O/H | 15647 | 7466  | 7466 | 4245 | 7328 | 3845 | 72.6        | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>424-07<br>P/H | 15720 | 7538  | 7538 | 4245 | 7328 | 3845 | 79.2        | (1x)<br>30.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>424-07<br>Q/H | 15724 | 7543  | 7543 | 4245 | 7328 | 3845 | 84.6        | (1x)<br>37.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>424-07<br>R/H | 15729 | 7547  | 7547 | 4245 | 7328 | 3845 | 89.4        | (1x)<br>45.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| S3E 1<br>424-12<br>Q/H | 20173 | 9814  | 5395 | 4245 | 7328 | 5923 | 110.1       | (1x)<br>37.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-12<br>R/H | 20245 | 9887  | 5468 | 4245 | 7328 | 5923 | 115.9       | (1x)<br>45.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-12<br>S/H | 20268 | 9909  | 5490 | 4245 | 7328 | 5923 | 123.4       | (1x)<br>55.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-12<br>T/H | 21139 | 10780 | 5985 | 4245 | 7328 | 5923 | 135.30<br>6 | (1x)<br>75.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-13<br>Q/H | 20799 | 9991  | 5395 | 4245 | 7328 | 6330 | 113.5       | (1x)<br>37.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-13<br>R/H | 20871 | 10064 | 5468 | 4245 | 7328 | 6330 | 119.5       | (1x)<br>45.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-13<br>S/H | 20894 | 10086 | 5490 | 4245 | 7328 | 6330 | 127.2       | (1x)<br>55.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-13<br>T/H | 21765 | 10957 | 5985 | 4245 | 7328 | 6330 | 139.38<br>8 | (1x)<br>75.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-14<br>Q/H | 21517 | 10168 | 5735 | 4245 | 7328 | 6737 | 117.8       | (1x)<br>37.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-14<br>R/H | 21590 | 10240 | 5808 | 4245 | 7328 | 6737 | 124.0       | (1x)<br>45.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-14<br>S/H | 21612 | 10263 | 5831 | 4245 | 7328 | 6737 | 132.5       | (1x)<br>55.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| S3E 1<br>424-14<br>T/H | 22483 | 11134 | 6325 | 4245 | 7328 | 6737 | 144.59<br>2 | (1x)<br>75.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |





# XES3E 8518, 1020-1424

## Open cooling towers

### Engineering data

**REMARK:** Do not use for construction. Refer to factory certified dimensions & weights. This page includes data current at time of publication, which should be reconfirmed at the time of purchase. In the interest of product improvement, specifications, weights and dimensions are subject to change without notice.

#### General notes

1. Operating weight is for tower with the water level in the cold water basin at overflow. If a lower operating weight is needed to meet design requirements, your local BAC representative can provide additional assistance.
2. Heights are for units with gear drive, except for models with motors up to and including 18,5 kW which are only available with belt-drive.
3. Models with motors of 22 to 55 kW are shipped an optional gear drive and may have heights up to 190 mm lower than shown.
4. Models with optional Whisper Quiet fan may have heights up to 1000 mm greater than shown.
5. Models with an optional Velocity Recovery Stack can be up to 1500 mm higher
6. Intake attenuators are shipped installed for single cell units. For 2 or more cells, consult factory.
7. Models 1222-10 thru 1222-14 and 1424-12 thru 1424-14 ship in two sections per cell. Top section heights are for models 1222-10 thru 1222-13 and 1424-12 thru 1424-13, 2838 mm. For models 1222-14 and 1424-14, 3245 mm.

**Last update:** 01/07/2024

### XES3E 8518, 1020-1424





1. Water in; 2. Overflow ND80; 3. Make up; 4. Water out; 5. Drain ND50; 6. Access door.



| Model                   | Weights (kg)      |                  |                       | Dimensions (mm) |      |      | Air Flow (m³/s) | Fan Motor (kW) | Fluid Inlet ND (mm) | Fluid Outlet ND (mm) | Make Up ND (mm) |
|-------------------------|-------------------|------------------|-----------------------|-----------------|------|------|-----------------|----------------|---------------------|----------------------|-----------------|
|                         | Oper. Weight (kg) | Ship. Weight(kg) | Heaviest Section (kg) | L               | W    | H    |                 |                |                     |                      |                 |
| XES3E<br>8518-0<br>5J/H | 6706              | 3083             | 3083                  | 2585            | 5500 | 2840 | 28.8            | (1x)<br>5.5    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>5K/H | 6706              | 3083             | 3083                  | 2585            | 5500 | 2840 | 31.6            | (1x)<br>7.5    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>5G/H | 6830              | 3385             | 3385                  | 2585            | 5500 | 2840 | 21.7            | (1x)<br>2.2    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>5H/H | 6840              | 3390             | 3390                  | 2585            | 5500 | 2840 | 25.4            | (1x)<br>4.0    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>6J/H | 7151              | 3296             | 3296                  | 2585            | 5500 | 3247 | 31.5            | (1x)<br>5.5    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>6K/H | 7151              | 3296             | 3296                  | 2585            | 5500 | 3247 | 34.4            | (1x)<br>7.5    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>6G/H | 7195              | 3505             | 3505                  | 2585            | 5500 | 3247 | 23.7            | (1x)<br>2.2    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>8518-0<br>6H/H | 7205              | 3510             | 3510                  | 2585            | 5500 | 3247 | 27.7            | (1x)<br>4.0    | (2x)<br>150         | (1x)<br>200          | (1x) 25         |
| XES3E<br>1020-0<br>6J/H | 8435              | 3823             | 3823                  | 2980            | 6110 | 3247 | 33.5            | (1x)<br>5.5    | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| XES3E<br>1020-0<br>6K/H | 8435              | 3823             | 3823                  | 2980            | 6110 | 3247 | 36.6            | (1x)<br>7.5    | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| XES3E<br>1020-0<br>6L/H | 8435              | 3823             | 3823                  | 2980            | 6110 | 3247 | 41.5            | (1x)<br>11.0   | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| XES3E<br>1020-0<br>6G/H | 8490              | 4130             | 4130                  | 2980            | 6110 | 3247 | 25.3            | (1x)<br>2.2    | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| XES3E<br>1020-0<br>6H/H | 8495              | 4135             | 4135                  | 2980            | 6110 | 3247 | 29.6            | (1x)<br>4.0    | (2x)<br>150         | (1x)<br>200          | (1x) 40         |
| XES3E<br>1020-0<br>7K/H | 8844              | 3968             | 3968                  | 2980            | 6110 | 3653 | 39.6            | (1x)<br>7.5    | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| XES3E<br>1020-0<br>7L/H | 8844              | 3968             | 3968                  | 2980            | 6110 | 3653 | 44.8            | (1x)<br>11.0   | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| XES3E<br>1020-0<br>7G/H | 8925              | 4355             | 4355                  | 2980            | 6110 | 3653 | 27.3            | (1x)<br>2.2    | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| XES3E<br>1020-0<br>7H/H | 8930              | 4365             | 4365                  | 2980            | 6110 | 3653 | 32.0            | (1x)<br>4.0    | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| XES3E<br>1020-0<br>7J/H | 8985              | 4420             | 4420                  | 2980            | 6110 | 3653 | 36.3            | (1x)<br>5.5    | (2x)<br>150         | (1x)<br>250          | (1x) 40         |
| XES3E                   | 10160             | 4790             | 4790                  | 3600            | 6566 | 3247 | 33.9            | (1x)           | (2x)                | (1x)                 | (1x) 40         |



|                         |       |      |      |      |      |      |      |              |             |             |         |
|-------------------------|-------|------|------|------|------|------|------|--------------|-------------|-------------|---------|
| 1222-0<br>6H/H          |       |      |      |      |      |      |      | 4.0          | 200         | 250         |         |
| XES3E<br>1222-0<br>6J/H | 10215 | 4845 | 4845 | 3600 | 6566 | 3247 | 38.5 | (1x)<br>5.5  | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>6K/H | 10483 | 4626 | 4626 | 3600 | 6566 | 3247 | 42.0 | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>6L/H | 10483 | 4626 | 4626 | 3600 | 6566 | 3247 | 47.6 | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>7J/H | 11300 | 5110 | 5110 | 3600 | 6566 | 3653 | 41.6 | (1x)<br>5.5  | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>7K/H | 11305 | 5110 | 5110 | 3600 | 6566 | 3653 | 45.5 | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>7L/H | 11663 | 4903 | 4903 | 3600 | 6566 | 3653 | 51.5 | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-0<br>7M/H | 11663 | 4903 | 4903 | 3600 | 6566 | 3653 | 56.2 | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>250 | (1x) 40 |
| XES3E<br>1222-1<br>0K/H | 13795 | 6420 | 3680 | 3600 | 6566 | 4920 | 55.5 | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>0L/H | 13840 | 6470 | 3730 | 3600 | 6566 | 4920 | 62.6 | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>0M/H | 13840 | 6470 | 3730 | 3600 | 6566 | 4920 | 68.2 | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>0N/H | 14555 | 6251 | 3959 | 3600 | 6566 | 4920 | 72.8 | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>0O/H | 14555 | 6251 | 3959 | 3600 | 6566 | 5110 | 76.7 | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>2K/H | 15175 | 6855 | 3775 | 3600 | 6566 | 5733 | 59.1 | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>2L/H | 15225 | 6905 | 3825 | 3600 | 6566 | 5733 | 66.6 | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>2M/H | 15225 | 6905 | 3825 | 3600 | 6566 | 5733 | 72.5 | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>2N/H | 15225 | 6905 | 3825 | 3600 | 6566 | 5733 | 77.3 | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>2O/H | 15904 | 6583 | 3995 | 3600 | 6566 | 5923 | 81.5 | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>3K/H | 15750 | 6960 | 3685 | 3600 | 6566 | 6370 | 60.8 | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>3L/H | 15780 | 6990 | 3720 | 3600 | 6566 | 6370 | 68.6 | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1         | 15790 | 7000 | 3725 | 3600 | 6566 | 6370 | 74.6 | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |



|                         |       |      |      |      |      |      |       |              |             |             |         |
|-------------------------|-------|------|------|------|------|------|-------|--------------|-------------|-------------|---------|
| 3M/H                    |       |      |      |      |      |      |       |              |             |             |         |
| XES3E<br>1222-1<br>3N/H | 15855 | 7065 | 3790 | 3600 | 6566 | 6370 | 79.6  | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>3O/H | 15875 | 7085 | 3815 | 3600 | 6566 | 6560 | 83.9  | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>4L/H | 16315 | 7175 | 3925 | 3600 | 6566 | 6547 | 71.0  | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>4M/H | 16315 | 7175 | 3925 | 3600 | 6566 | 6547 | 77.2  | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>4N/H | 16315 | 7175 | 3925 | 3600 | 6566 | 6547 | 82.4  | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1222-1<br>4O/H | 16315 | 7175 | 3925 | 3600 | 6566 | 6737 | 86.8  | (1x)<br>22.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-0<br>7M/H | 13756 | 5480 | 5480 | 4245 | 7328 | 3655 | 63.1  | (1x)<br>15.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-0<br>7N/H | 13756 | 5480 | 5480 | 4245 | 7328 | 3655 | 67.5  | (1x)<br>18.5 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-0<br>7J/H | 14865 | 7035 | 7035 | 4245 | 7328 | 3655 | 46.7  | (1x)<br>5.5  | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-0<br>7K/H | 14870 | 7040 | 7040 | 4245 | 7328 | 3655 | 51.1  | (1x)<br>7.5  | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-0<br>7L/H | 14920 | 7090 | 7090 | 4245 | 7328 | 3655 | 57.8  | (1x)<br>11.0 | (2x)<br>200 | (1x)<br>300 | (1x) 40 |
| XES3E<br>1424-1<br>2P/H | 18746 | 7540 | 4644 | 4245 | 7328 | 5923 | 101.7 | (1x)<br>30.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>2L/H | 19265 | 9165 | 4895 | 4245 | 7328 | 5733 | 76.8  | (1x)<br>11.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>2M/H | 19265 | 9165 | 4895 | 4245 | 7328 | 5733 | 83.5  | (1x)<br>15.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>2N/H | 19265 | 9165 | 4895 | 4245 | 7328 | 5733 | 89.0  | (1x)<br>18.5 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>2O/H | 19265 | 9165 | 4895 | 4245 | 7328 | 5923 | 93.7  | (1x)<br>22.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>3L/H | 19885 | 9335 | 4910 | 4245 | 7328 | 6370 | 79.4  | (1x)<br>11.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>3M/H | 19895 | 9345 | 4915 | 4245 | 7328 | 6370 | 86.2  | (1x)<br>15.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>3N/H | 19960 | 9405 | 4980 | 4245 | 7328 | 6370 | 91.9  | (1x)<br>18.5 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |
| XES3E<br>1424-1<br>3O/H | 19980 | 9430 | 5005 | 4245 | 7328 | 6560 | 96.7  | (1x)<br>22.0 | (2x)<br>250 | (1x)<br>350 | (1x) 50 |





|                                  |              |             |             |             |             |             |              |                      |                     |                     |                |
|----------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|----------------------|---------------------|---------------------|----------------|
| <b>XES3E<br/>1424-1<br/>3P/H</b> | <b>20045</b> | <b>9495</b> | <b>5065</b> | <b>4245</b> | <b>7328</b> | <b>6560</b> | <b>104.9</b> | <b>(1x)<br/>30.0</b> | <b>(2x)<br/>250</b> | <b>(1x)<br/>350</b> | <b>(1x) 50</b> |
| <b>XES3E<br/>1424-1<br/>4M/H</b> | <b>20485</b> | <b>9485</b> | <b>5225</b> | <b>4245</b> | <b>7328</b> | <b>6547</b> | <b>89.6</b>  | <b>(1x)<br/>15.0</b> | <b>(2x)<br/>250</b> | <b>(1x)<br/>350</b> | <b>(1x) 50</b> |
| <b>XES3E<br/>1424-1<br/>4N/H</b> | <b>20485</b> | <b>9485</b> | <b>5225</b> | <b>4245</b> | <b>7328</b> | <b>6547</b> | <b>95.4</b>  | <b>(1x)<br/>18.5</b> | <b>(2x)<br/>250</b> | <b>(1x)<br/>350</b> | <b>(1x) 50</b> |
| <b>XES3E<br/>1424-1<br/>4O/H</b> | <b>20485</b> | <b>9485</b> | <b>5225</b> | <b>4245</b> | <b>7328</b> | <b>6737</b> | <b>100.5</b> | <b>(1x)<br/>22.0</b> | <b>(2x)<br/>250</b> | <b>(1x)<br/>350</b> | <b>(1x) 50</b> |
| <b>XES3E<br/>1424-1<br/>4P/H</b> | <b>20640</b> | <b>9640</b> | <b>5375</b> | <b>4245</b> | <b>7328</b> | <b>6737</b> | <b>109.0</b> | <b>(1x)<br/>30.0</b> | <b>(2x)<br/>250</b> | <b>(1x)<br/>350</b> | <b>(1x) 50</b> |