

PROJECT REPORT

S3000E Eurovent certified open cooling towers find their place within a trigeneration system and conditioning set up in the new Santa Chiara hospital in Cisanello, Italy

LOCATION

The hospital in Cisanello (Pisa, Italy) had to be expanded, resulting in an extention of the existing hospital with additional buildings and technological systems being installed. This will allow the transfer of Hospital Santa Chiara, located in the historic city centre, to an area of 450.000 m² between the river Arno and the village of Cisanello.

The new facility houses a surgical unit with 12 operating theatres, intensive care and burn units. The new Didactic centre has classrooms for 3300 students, with laboratory and research rooms alongside.

CUSTOMER REQUIREMENT, NEEDS & EXPECTATIONS

- 365) Year-round RELIABLE performance
- Unmatched ENERGY savings
- Easy MAINTENANCE and INSPECTION
 - Extreme low SOUND levels

BAC SELECTION

(4) S3E 1222-07Q/H and (8) S3E 1222-14R/VE open cooling towers

- With a year-round reliable operation as key factor in this process, BAC selected the S3000E open cooling tower, with a thermal performance certified by CTI-Eurovent.
- Less pump head is required for this gravity water distribution system. In periods of reduced load, weir dams close off the hot water basin partly, saving pump energy.
- The spacious plenum allows easy access to inspect and maintain the unit's interiors components comfortably.
- The low noise axial fans offer minimum surrounding noise and the BACross fill smoothly guides the water all the way into the basin without water splash noise.
- Support of the local BAC team throughout the whole process for the consultant, contractor and the customer.
- Options and accessories: Baltibond[®] hybrid coating, internal walkway, clean out port







Cisanello hospital, Pisa - Italy



TECHNICAL DETAILS

Consultant: Manes - Step - GDM di De Maria Contractor: C.M.B. Carpi Temperatures: 35°C / 29°C / 25°C Cooling Capacity: 52 MW



An efficient and high quality techical solution brings peace of mind for this newly build hospital, its staff and all its patients.

24/7 RELIABLE OPERATION

Thermal performance - The thermal performance of the S3000E is tested and certified by CTI-Eurovent. The patented BACross[®] sheet fill with maximum air and water contact gives unbeatable heat transfer performance.

BAC's Baltibond® hybrid coating guarantees long service life.

ENERGY SAVINGS

Unmatched energy savings - The gravity water distribution systems requires less pump head. In periods of reduced load, weir dams partly close off the hot water basin thus savings pump energy. The BACross[®] fill is factory-configured for maximum water/air contact and minimal air pressure drop for optimal cooling tower efficiency with limited energy consumption. High efficiency fan motors reduce electricity consumption for the same cooling capacity.

EFFORTLESS MAINTENANCE AND EASY INSPECTION

Easy accessibility - Via a large hinged access door you can enter the spacious plenum, where you can inspect and maintain with unrivalled comfort. The interior ladder and platform provide quick and easy access to all unit components.

The BACross[®] fill sheets reduce fouling and are telescopically supported, allowing complete inspection of the fill core without dismantling.

The self-cleaning cold water basin and fill above a sloped basin ensure any dirt and debris is flushed out. The water distribution section can be inspected with ease from outside, during operation.

ULTRA SILENT

Extremely low sound levels - The low noise axial fans offer minimal surrounding noise. The patented BACross[®] fill smoothly guides the water all the way into the basin without water splash noise.

The combinations add up - The year-round reliable operation, the minimal maintenance requirements and energy savings,... All these elements combined result in the Eurovent certified S3000E open cooling tower being an ultra silent and high-efficiency cooling tower with unrivalled ease of maintenance.

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BACross[®] fill guides the water down





Easy and safe access via the walkway, ladder and platform