

# HEAT TRANSFER TECHNOLOGY

#10

The latest news and views on heat exchanger technology from

**BOWMAN®**

100 YEARS OF HEAT TRANSFER TECHNOLOGY

## NEW COMPOSITE BODIED EC SWIMMING POOL HEAT EXCHANGERS

# The Future Starts Here!

A new range of composite bodied EC swimming pool heat exchangers is being introduced by Bowman. This radical change to a completely new design, offers many advantages for swimming pool applications, including:

**LIGHTWEIGHT** – the composite body is significantly lighter. For example, a titanium EC80 weighs just 1.2 kg, compared to 2.7 kg for the current model.

**PUSH FIT CONNECTORS** – two JG Speed fittings connect the boiler water circuit, making installation quick and easy.

**SPIN-ON END COVERS** – create an immensely strong, evenly distributed clamping force, ensuring a watertight seal.

**MODERN DESIGN** – styled to blend with other pool plantroom equipment.

**ENVIRONMENT** – the body is fully recyclable, whilst the lighter weight reduces shipping costs.

The new composite heat exchangers will be available in EC80, EC100 and EC120 sizes which are suitable for pools from 40 m<sup>3</sup> (8,800 gallon) to 130 m<sup>3</sup> (28,500 gallon) and offer from 20 kW to 80 kW of heat transfer when used with 82°C boiler water.

For further information contact the sales team on +44 (0)121 359 5401 or [sales@ej-bowman.com](mailto:sales@ej-bowman.com)



[www.ej-bowman.com](http://www.ej-bowman.com)

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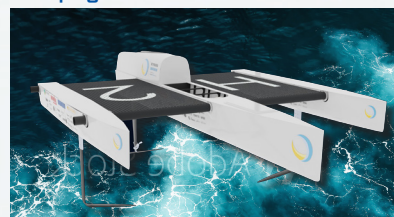
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# New Titanium range

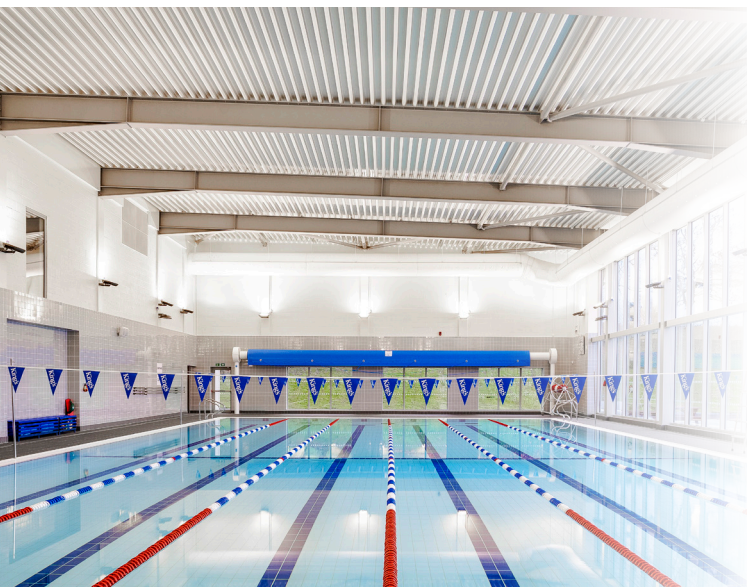
**A new range of titanium heat exchangers, offering a cost effective cooling solution for electric and hybrid marine systems, is now available from Bowman.:**

Suitable for applications ranging from the smallest pleasure craft, to large commercial ferries and work boats, the new range includes 15 different models, offering heat dissipation from 2kW to 65kW and has been designed to offer a highly efficient titanium heat exchanger, that is more commercially attractive than would be expected for such a high specification product.

Bowman are now the 'leading brand' for electric and hybrid marine propulsion cooling. For further information, visit [www.ej-bowman.com/products/electric-and-hybrid-coolers](http://www.ej-bowman.com/products/electric-and-hybrid-coolers)



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## **KINGS INDEPENDENT SCHOOL**

# Fit for a King

**This stunning competition-sized pool is the focal point of a new turnkey swimming facility built as part of the new campus for King's School, Macclesfield, a famous independent school whose history goes back more than five centuries.**

25m x 13m in size, with a depth that varies between 1m – 2m, the pool was created by Buckingham Pools, working in association with Vinci Construction and features a unique Spectile Agrob Buchtal Chroma pool tile.

Designed for training, competitions and galas, it is equipped with complete competition equipment and has a 'state-of-the-art' energy-saving heating system, which includes a Bowman GL140 heat exchanger for maximum energy efficiency.

## **CATERPILLAR MARINE ENGINE COOLING**

# Cooling for CAT's

**Caterpillar (CAT) is one of the worlds most successful engine manufacturers, so it's no surprise that they are extremely popular in the marine industry.**

Whilst CAT offer a range of marine diesel engines – many of which feature Bowman heat exchangers and oil coolers as standard, dealers often convert standard engines for marine use, to satisfy key customer requirements in local markets.

For example, in the Netherlands, a leading shipyard now specifies Bowman oil coolers on CAT engines supplied for their high performance patrol boats.

In the USA, a dredger manufacturer has replaced poorly performing intercoolers on their CAT engines with Bowman charge air coolers, as they offer superior performance and longer life.

And CAT engine driven power packs are playing a major role in the erection of wind turbines for China's Power Gen needs. Built in Europe, the engines feature Bowman jacket water, charge air and fuel coolers, whilst their hydraulic oil is cooled by a Bowman PK600.

Bowman is proud to support CAT engines throughout the world, both as an OE and aftermarket equipment provider.





**SOUTHERN PATAGONIA, CHILE**

# 'Off-grid' energy

**A new CAT powered CHP system is providing heat and power for a large luxury hotel in Villa Serrano, Torre del Paine, in the southern Patagonia region of Chile.**

Based around a CAT G3406TA LPG fuelled engine and generator, Caterpillar Chile called on local service specialists IMTB to recommend a solution to both cool the engine and recover waste heat, which would be used to supplement the hotels existing heating and hot water systems.

After consulting with Bowman's technical team, IMTB proposed an Bowman GH400 header tank heat exchanger, to keep the CAT engine operating at its optimum temperature as well as providing heat energy for the hotel.

IMTB undertook the installation and commissioning of the CHP system and the Bowman cooled CAT generator is now providing all the hotels power requirements.

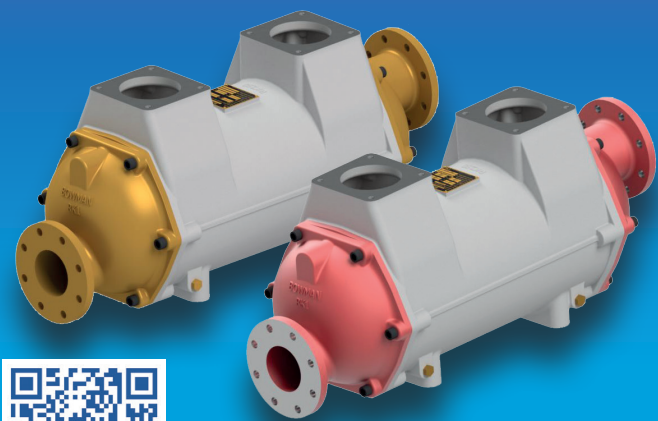
## NEW RK250 CHARGE AIR COOLER

# Size IS Important

**The Bowman water cooled intercooler range has been further developed, and one of the range highlights is the introduction of the new RK250 - the largest charge air cooler ever manufactured by the company!**

The RK250 represents a significant step up in size, being developed for engines producing up to 850kW typical power. Designed for a charge air flow of up to 60 kg/min, it can remove around 146kW of heat from the induction air stream, reducing air inlet temperatures of 180°C down to the required outlet temperature.

Versions are available for both marine and freshwater cooling applications and features a fully floating, removable tube stack, for easier servicing and maintenance. For more information, visit [www.ej-bowman.com/products/charge-air-cooler](http://www.ej-bowman.com/products/charge-air-cooler)



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## YORK COMMUNITY STADIUM LEISURE COMPLEX

# Buckingham choose Bowman for York!

**Three Bowman heat exchangers are at the heart of a stunning new swimming pool suite at the York Community Stadium Leisure Complex.**

Designed and built by Buckingham Pools, it includes a 25 metre competition standard 6 lane main pool, heated by via Bowman GL140; an 0.9 meter constant depth training pool, heated via a Bowman EC120 and an interactive water play pool, where children up to 8 years old can enjoy a fun filled, water play space – heated via a Bowman EC100!

The swimming pools at York Community Stadium Leisure Complex combine excellence in design and detailed delivery, providing an end product that is focused on improving water confidence, encouraging swimming activities and having fun, in a versatile and flexible pool suite.

Bowman are proud to have been part of this solution. For more information, visit: [www.ej-bowman.com/news/buckingham-pools-choose-bowman-for-york/](http://www.ej-bowman.com/news/buckingham-pools-choose-bowman-for-york/)



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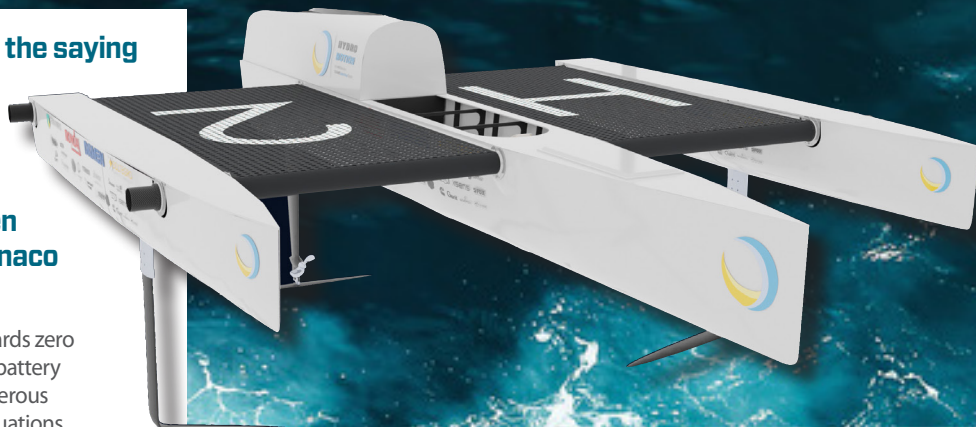


# Racing towards a sustainable future

**'Competition improves the breed' as the saying goes and a team of students from Delft University of Technology in The Netherlands are putting that to the test with 'the worlds first flying hydrogen boat', which has been developed to compete in the 8th Monaco Energy Boat Challenge.**

Known as 'Hydro Motion', the project is a step towards zero emissions for the marine industry, because whilst battery power has a major role in marine propulsion, numerous applications exist where it isn't suitable. In such situations, hydrogen fuel cells could be the key to a more sustainable future.

One of the many challenges facing the team is cooling - the fuel cell which transforms chemical energy into electricity, generates significant amounts of heat. However, Bowman was able to propose a highly efficient heat exchanger to cool the fuel cell, whilst keeping weight to a minimum. Bowman also supplied a second heat exchanger which will be used to cool the motor, motor controller and DCDC converter. For more information, visit [www.ej-bowman.com/products/electric-and-hybrid-coolers/](http://www.ej-bowman.com/products/electric-and-hybrid-coolers/)



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## NEW LITERATURE

## Engine & Transmission Oil Coolers

Bowman offer a wide range of water cooled shell and tube oil coolers for torque converters, automatic transmission and engine oils for off-and on-highway vehicles, plus construction plant and equipment, which are now listed in our new Engine & Transmission Oil Coolers brochure.

Download a copy from [www.ej-bowman.com/downloads/](http://www.ej-bowman.com/downloads/)



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**LinkedIn**

The address is <https://www.linkedin.com/company/e-j-bowman-birmingham-ltd-/about/>

Or just scan the QR code and link up with us NOW!



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## See us at:

### PoweEx Live, London

6th October 2021

A specialist conference and exhibition covering power generation and co-generation applications

<https://www.powerexlive.co.uk/>

### Piscina & Wellness, Barcelona

23rd November to 2nd December 2021

See us on stand E60 at one of Europe's leading swimming pool exhibitions

<http://www.piscinawellness.com/>

### Electric & Hybrid Marine Expo Europe

21st to 23rd June 2022

See us at Europe's leading specialist event for electric and hybrid marine propulsion

<https://www.electricandhybridmarineworldexpo.com/en/>

Visit our website for more information:

[www.ej-bowman.com/news-and-events/](http://www.ej-bowman.com/news-and-events/)

## For More Information

If you would like more information on any of the articles contained in this newsletter, or for technical data on any of our heat exchanger ranges, please contact us directly;

**CALL: +44 (0) 121 359 5401**

**FAX: +44 (0) 121 359 7495**

**EMAIL: [info@ej-bowman.com](mailto:info@ej-bowman.com)**

**VISIT: [www.ej-bowman.com](http://www.ej-bowman.com)**

**BOWMAN®**

100 YEARS OF HEAT TRANSFER TECHNOLOGY

EJ Bowman (Birmingham) Ltd

Chester Street, Birmingham B6 4AP, UK

Tel: +44 (0) 121 359 5401 Fax: +44 (0) 121 359 7495

Email: [info@ej-bowman.com](mailto:info@ej-bowman.com) [www.ej-bowman.com](http://www.ej-bowman.com)

