

BUILDING EFFICIENCY

Make the intelligent choice with the YORK[®] YMC² chiller



A close-up, low-angle shot of a person's legs and feet on an elliptical machine. The person is wearing dark, pinstriped trousers and black, polished leather dress shoes. The machine's frame is white with blue accents on the pedals. The background is plain white.

Stay four steps ahead...

...with the latest chiller technology from YORK®

Facility owners and designers deal with an ever-changing world. And as the world has changed, Johnson Controls has kept you in the forefront with innovative YORK® chiller technology. When electricity prices climbed, we pioneered variable-speed drives and enhanced heat exchangers to keep energy consumption down.

When CFC and HCFC refrigerants were designated for phase-out, we introduced environmentally responsible alternatives to give your operation a sustainable future. And when you needed chiller control that was both powerful and intuitive, we created the first full-screen, full-colour, microprocessor control centre.

For today's challenges, Johnson Controls helps you take four giant steps forward with the new YORK® Magnetic Centrifugal Chiller (YMC²). This state-of-the-art design addresses the most pressing concerns of facility owners and designers – energy, sustainability, sound, and uptime – by integrating YORK® chiller innovations with the benefits of active magnetic-bearing technology. It's an advanced solution that will keep you a step ahead of the challenges of our changing world.



Our active magnetic-bearing technology has been proven in the toughest of environments on board naval submarines since 1999.

Our most advanced water-cooled chiller offers the following benefits:-

Enhanced efficiency

Achieved through application of active magnetic-bearing technology with variable speed drive.

Enhanced sustainability

Achieved by leak free refrigerant design, lower refrigerant charge and falling film evaporator.

Low sound levels

Advanced technology results in sound levels as low as 73dBA.

Superior reliability

Use of active magnetic bearing technology removes friction and the need for oil resulting in a quieter and more reliable chiller.



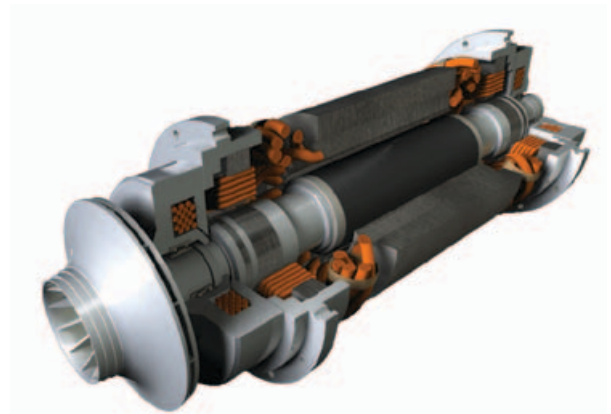
Reduce your consumption...

...by using superior efficiency technologies

We live in an energy-hungry world. So, an investment in chiller efficiency can reduce your energy consumption. With a little ingenuity, Johnson Controls discovered how to put our already efficient centrifugal chillers on a stricter diet. We began with the driveline. We utilised a permanent-magnet motor and active magnetic-bearing technology to eliminate mechanical-contact losses associated with oil-lubricated bearings.

As a result, the YMC² chiller offers 10% better efficiency than conventional, variable-speed centrifugal chillers.

Then we improved the efficiency of our OptiSpeed™ variable-speed drive and enhanced the efficiency of our evaporator with an advanced falling-film design. But we kept the features that always made YORK® chillers so efficient. Like an optimised centrifugal compressor that can take advantage of the low-temperature tower water to save energy. And our proprietary capacity-control logic, which continually analyses and adjusts the chiller's operations to ensure optimum performance. When you weigh your chiller options, you will find that the YMC² chiller offers the best real-world efficiency in the marketplace.



To eliminate mechanical-contact losses in the driveline, the YMC² chiller utilises a permanent-magnet motor and active magnetic-bearing technology.

A close-up, angled shot of a blue calculator keypad. The top of the image shows a green LCD display with the letters 'YMCE' in a stylized font. Below the display, a 'PRINT ON OFF' toggle switch is visible. To the right, a 'M*' button is partially shown. The rest of the keypad, including buttons for '9', '8', and '7', is blurred in the background. The overall lighting is a cool blue tone.

YMCE

Improve your
environmental equation...

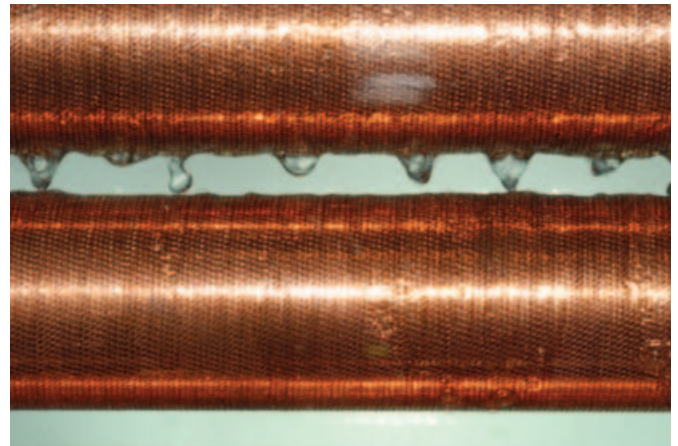
...by specifying superior sustainability

When you calculate the way your chiller affects the environment, you realise it has a significant impact. The ozone-depletion potential (ODP), plus the direct and indirect global-warming potential (GWP), are three of the factors in your environmental equation. You can improve your equation by specifying the YORK® YMC² chiller.

You'll get the benefit of refrigerant HFC-134a, which has zero ODP. And the 10% efficiency improvement dramatically reduces the indirect GWP (which is 98% of the total impact) caused by greenhouse-gas emissions produced by your utility to power the chiller. To reduce the 2% direct GWP impact, refrigerant-piping connections have been reduced 57%, so the GWP of leaking refrigerant is virtually non-existent.

Our falling-film technology offers superior heat transfer reducing refrigerant charge by 30%, giving a more compact yet energy efficient design.

Plus, we eliminated the lubrication system to avoid the environmental issues of handling and disposing of refrigerant-saturated oil. Add it all up, and you'll see why you can count on the YMC² chiller to yield a positive environmental result.



A falling-film evaporator is more efficient because refrigerant is sprayed over the tubes, offering improved heat transfer and reducing refrigerant charge by 30%.



No need to shout...

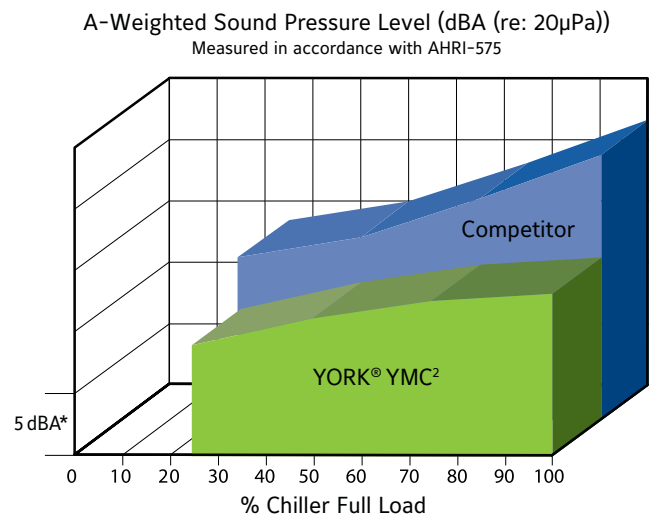
...anymore with superior noise reduction

If you have to shout to be heard above your chiller, it's time for a quiet conversation. When discussing mechanical-room noise, you won't have to raise your voice if your chiller's sound level never exceeds 73 dBA at AHRI-575 full-load standard conditions – the volume of a typical telephone ringtone. That's why we're happy to talk to you about the sound performance of our YMC² chiller.

[It is quieter than any water-cooled centrifugal or screw chiller on the market.](#)

In fact, when compared to competitive magnetic-bearing chillers, the human ear perceives the YMC² chiller as about half as loud.

Our permanent-magnet motor with active magnetic-bearing technology eliminates driveline sound. And our OptiSound™ feature reduces noise at off-design conditions. Acquire the YORK® YMC² chiller and you will win quiet admiration in any application where sound levels are a concern.



The YMC² chiller is so much quieter than competitive magnetic-bearing chillers, it sounds about half as loud.
*Note: each segment on the Y axis = 5 dBA.



Increase your productivity...

...by demanding superior reliability

Time is money – so improved chiller uptime translates into saved money. That’s why we employed the most advanced drive available – an active magnetic-bearing drive – to levitate the driveshaft in mid-air.

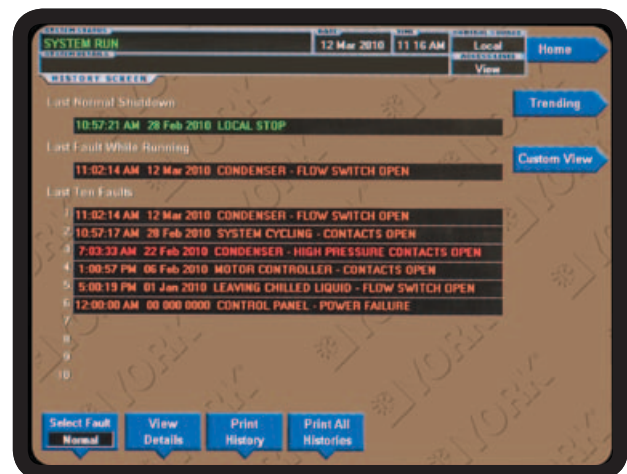
The result is fewer moving parts subject to breakdown and no mechanical-contact losses, which is why we’ve used magnetic drives in our military-grade chillers since 1999.

In addition, our design is field-serviceable; there is no need to purchase a back-up driveline.

With our OptiView control centre, you get unsurpassed monitoring and control capabilities. Plus, complete diagnostics avoid troublesome conditions and boost uptime.

If service is ever required, Johnson Controls has the industry’s largest service force: 5,000 technicians worldwide in 169 local service branch offices.

We’ve put time into our technology and our organisation, so you don’t waste valuable hours because of excessive downtime.



The OptiView control centre provides complete diagnostics to speed troubleshooting.

Reducing energy consumption with exceptional efficiency. Improving the environment with sustainable design. Minimising noise with advanced acoustic capabilities. Increasing uptime with industry-leading technology and organisation. No wonder the YORK® YMC² chiller from Johnson Controls gives you the advantages you need to make an intelligent choice.

To learn more about what the YMC² chiller can do for you, visit www.johnsoncontrols.co.uk to contact your nearest Johnson Controls branch office.



For smartphone.

Energy solutions / [Large tonnage chillers](#) / Small tonnage chillers
 Fire & security solutions / Industrial refrigeration solutions
 Residential & commercial HVAC solutions / Building Management Systems
 HVAC control products / Global WorkPlace Solutions
 HVAC service, parts & retrofit solutions

Typical performance data

	Cooling Capacity [kW]*	EER 100%	ESEER	Shipping Weight [kg]	Refrigerant charge [kg]	Length [mm]	Width [mm]	Height [mm]
YMC ² -S0900AA	900	6.39	8.3225	5340	255	4267	1651	2362
YMC ² -S1000AA	1000	6.44	8.8354	5800	280	4267	1651	2362
YMC ² -S1100AA	1100	6.42	9.1525	5810	280	4267	1651	2362
YMC ² -S1200AA	1200	6.33	9.4017	5810	390	4267	1651	2362
YMC ² -S1300AA	1300	5.94	9.3451	6800	390	4267	1651	2362

*Typical performance data at Eurovent conditions

