Proven reliability in the most critical application—naval vessels



(Crédit photo DCNS)

YORK® Navy Systems has supplied chillers with magnetic-bearing technology for over 115 critical naval applications, with many of them being nuclear submarines.

YORK® Navy Systems of Johnson Controls is dedicated to providing superior HVAC&R systems for warships and support ships of multiple fleets. Because you can't just open a window in these vessels, one of the biggest concerns for naval HVAC applications is reliability. Crews and their sensitive electronic equipment need first-class air-conditioning to stay cool in close quarters.

In 1998, YORK Navy Systems pioneered an innovative, magnetic-bearing technology for the centrifugal chillers used in onboard cooling plants. By offering this technology, YORK Navy Systems was able to provide quiet, safe, and reliable cooling for one of the most difficult environments on earth. Now we are introducing this technology for commercial chillers.

Johnson Controls

The magnetic-bearing technology used by YORK Navy Systems has now been applied to the new YORK Magnetic Centrifugal Chiller (YMC²), manufactured by Johnson Controls. A single moving assembly, suspended by a magnetic field, eliminates mechanical contact and delivers reliable operation. The elimination of mechanical contact results in the removal of traditional lubrication systems, further reducing parasitic losses and maintenance associated with lube systems. Chiller life is maximized by minimizing the number of moving parts.

The YMC² chiller delivers improved efficiency at all operating points when compared to traditional induction motor and mechanical bearing technology typically used in hermetic chillers. This results from higher motor efficiency and lower parastitic losses. The YMC² chiller utilizes the OptiSpeed™ variable-speed drive, which slows down the motor when the chiller is operating at off-design conditions. The variable-speed drive also improves reliability during startup by insuring that inrush current never exceeds 100% of full load amps. And finally, due to almost undetectable vibration, noise is greatly minimized.

Our magnetic-bearing technology has been installed and tested in over 115 critical naval applications, including many nuclear submarines. This proven technology is featured on our new YMC² chiller and available to discriminating commercial and industrial customers. By selecting the YMC² chiller, you can access the same technology that delivers quiet, safe, and reliable operation demanded by navies around the world.

To learn more about the YMC² chiller, visit johnsoncontrols.com/ymc2 – or contact your nearest Johnson Controls branch office.



The proven permanent-magnet motor and active magnetic-bearing technology used in the YORK Navy Systems magnetic centrifugal chiller is also featured in the YMC² chiller.



By selecting the YMC² chiller, you can access the same technology that delivers quiet, safe, and reliable operation demanded by navies around the world.

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