

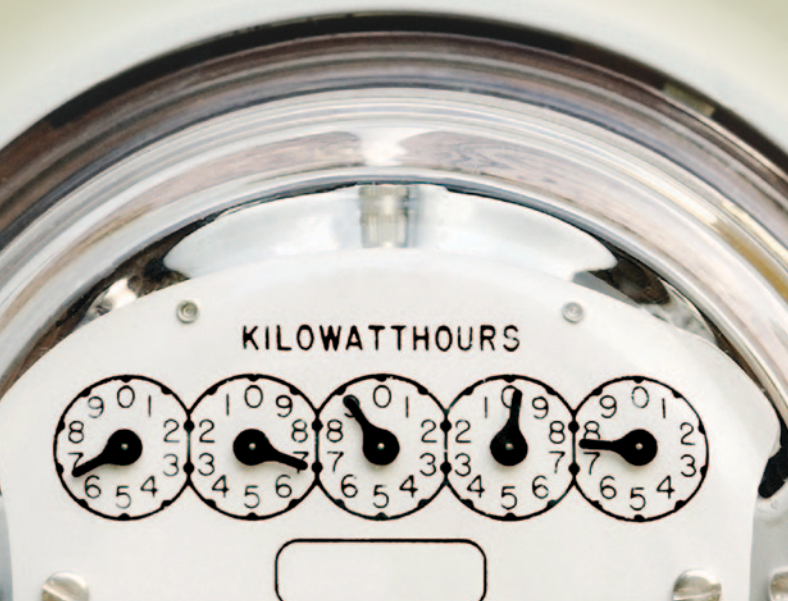
YORK® YVAA AIR-COOLED SCREW CHILLER

A chiller as unique
as your needs.



BY JOHNSON CONTROLS

Efficiency



Sustainability



Low Sound



Confidence



YORK® YVAA Air-Cooled VSD Screw Chillers

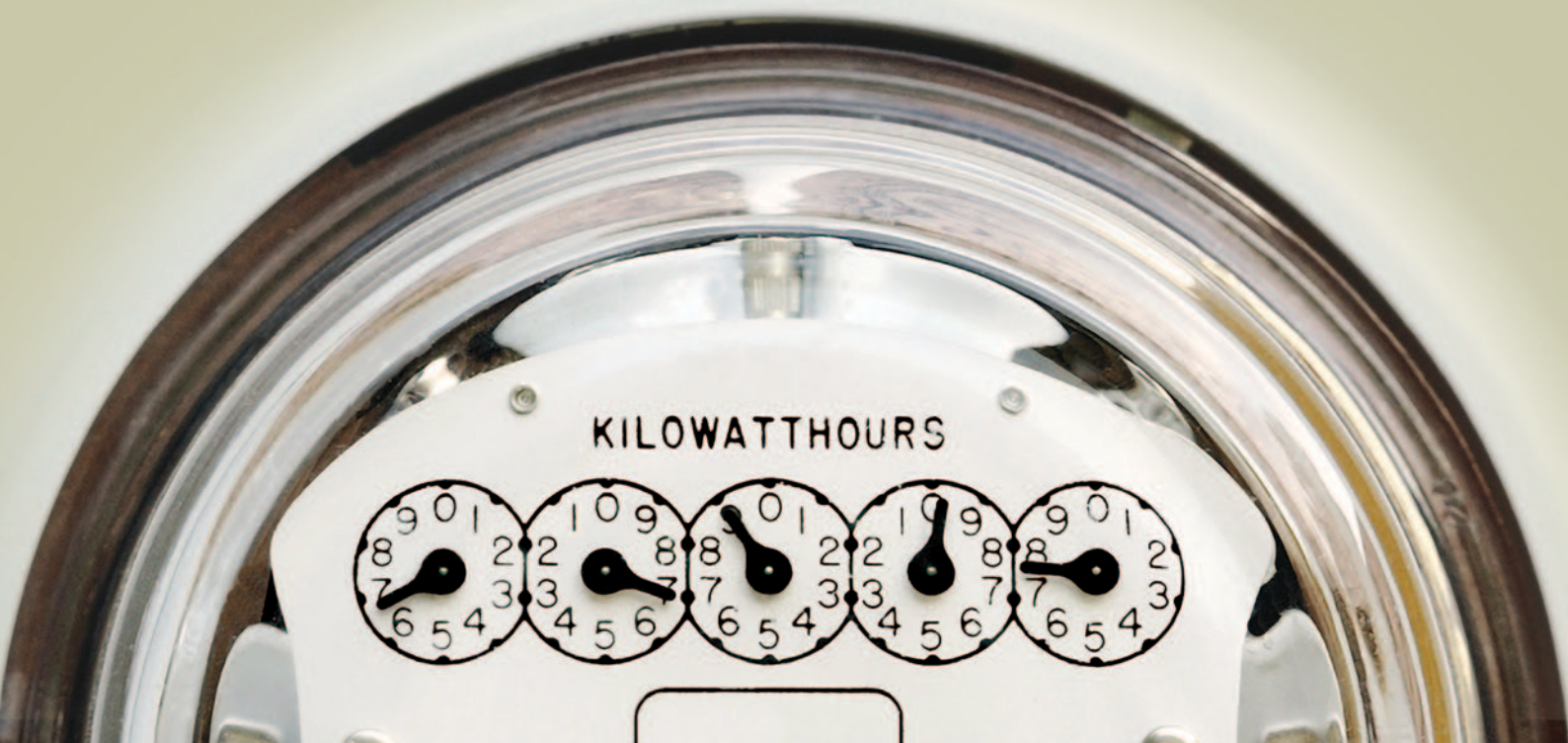
Smart, sustainable, silent and specified the world over.

- Reduce your annual energy costs by as much as 30%
- Reduce your sound by up to 16 dBA to meet tighter regulations
- Minimise your environmental impact dramatically
- Improve your peace of mind knowing we stand behind every chiller





30%
annual
energy costs



Intelligent cost reduction. With flexible energy consumption.

Saving thousands of dollars on energy bills is an easy business decision. So Johnson Controls has made your choice simple.

The new YORK® YVAA air-cooled screw chiller delivers intelligent cost reduction under all conditions – at design conditions during peak cooling hours, and at off-design conditions encountered during 99% of annual operating hours.

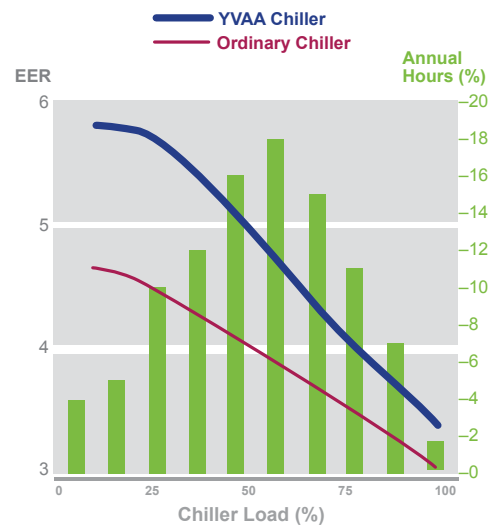
For new projects, YVAA energy savings surpass typical competitive performance by up to 17%. And on replacement projects, YVAA performance can exceed older chillers by as much as 30%!

The YVAA chiller also offers flexible energy consumption. **Design efficiencies are available up to 3.4 EER.** And YVAA chillers can be configured to deliver an astounding European Seasonal Energy Efficiency Ratio (ESEER) up to 4.8.

If state, municipal, or utility rebates are available, its performance **can be tailored and tuned to hit specific targets for rebates.** And thanks to standard variable-speed drive (VSD) and a high power factor, the YVAA chiller qualifies for rebates given for those features, too.

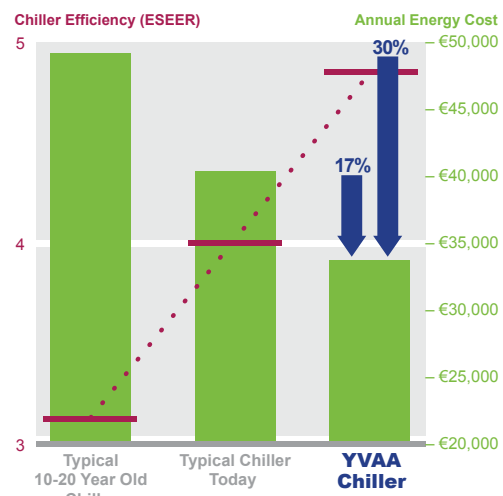
100% of our energy goes into conserving yours. That's why you can count on a YVAA chiller to save energy and cash to provide a faster payback on your project.

YVAA Efficiency vs. Ordinary Chiller



The YVAA chiller features the industry's highest EER at both design and off-design conditions.

YVAA Efficiency & Annual Energy Cost



Note: 3500 operating hours, Energy rate = 0.10 EUR/kWh, Cooling Capacity = 850kW

The YVAA chiller exceeds typical chiller ESEER in the market today by up to 17% on a new construction project or up to 30% when replacing an older chiller.



sustainability
from every angle



Take a giant step forward. And leave a smaller footprint.

Designed to be the world's most environmentally friendly, air-cooled screw chiller, the YVAA chiller makes your facility more sustainable in two ways: directly, by limiting the amount of refrigerant emitted into the atmosphere, and indirectly, by minimizing power plant CO₂ emissions – which are responsible for 98% of the Global Warming Potential associated with chillers.

To reduce the direct effect, **the YVAA chiller uses HFC-134a refrigerant, which has no ozone-depletion potential and no phase-out date. We also eliminated many joints and other potential leak points to keep refrigerant inside the system.** Furthermore, our proprietary **falling-film evaporator and an advanced microchannel condenser coil enable the refrigerant charge to be reduced as much as 15%** compared to conventional designs. Less refrigerant inside means less environmental impact outside.

Water is also handled responsibly by the YVAA chiller. There are no losses of cooling-tower water. And because power generation is a major water consumer, the efficiency of the YVAA chiller conserves water.

Finally, the sustainability advantages of the YVAA chiller give you the opportunity to **earn points in the LEED® and BREEAM® building certification programs.**

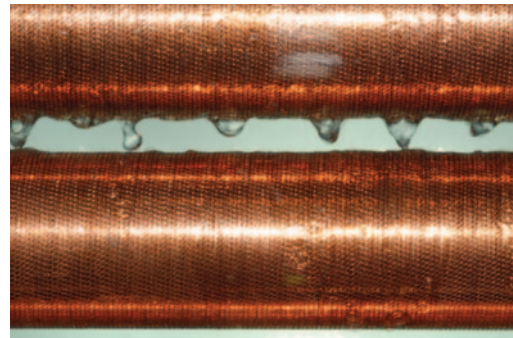


Photo courtesy of the LTCM lab of the Ecole Polytechnique Fédérale de Lausanne, Switzerland.

Reduce direct emissions with the YVAA's falling-film evaporator, which reduces the refrigerant charge by up to 15%.



A more efficient chiller means less electricity generation, which reduces greenhouse gas emissions, water consumption – and your environmental footprint.



16 dBA
noise reduction

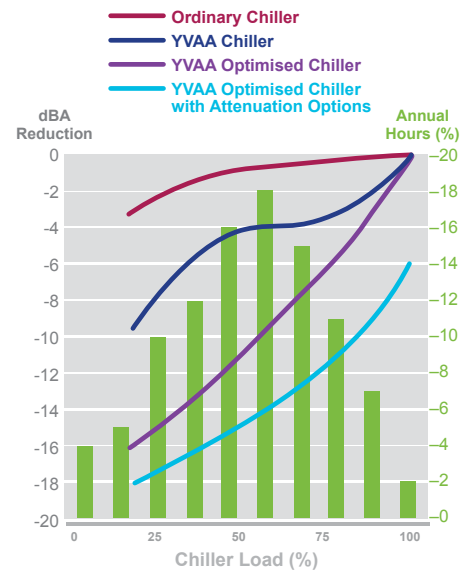
Lower the volume. Increase goodwill.

This is good news worth hearing: **the YVAA chiller can be easily tailored and tuned to meet the sound requirements of your project's neighbourhood.** On mornings, evenings, and mild days, when the neighbours are outdoors and want peace and quiet, the VSD YVAA chiller provides superior sound reduction. **It operates more quietly when the building loads and/or outdoor temperatures are lower.**

Plus, you can employ **a variety of sound-attenuation options if sound reduction at design conditions is necessary.**

For further sound control, the YVAA SilentNight™ feature works with a BAS (or programmable control) to **load-limit the chiller when noise reduction is a priority.** It allows you to comply automatically with neighbourhood sound regulations at specific times of day.

YVAA Sound Values vs. Ordinary Chiller



An optimised YVAA chiller can reduce ambient noise by as much as 16 dBA.



7 million kW
installed worldwide



Confidence-driven. Performance-proven.

You can be sure you are making the right choice when you select the YVAA chiller. Our experience is unsurpassed. **Johnson Controls invented the electronic VSD for water chillers in 1979**, so we have decades of experience varying compressor speeds.

We also introduced the industry's first air-cooled VSD screw chiller, back in 2004. By 2010, our installed base spanned 7,000,000 kW in over 100 countries. With all units combined, we have more than 18,000 years of field experience. If we can handle the extreme outdoor conditions of the Middle East and the stringent sound requirements of urban Europe, we can handle your job.

We also offer the proven support of the world's largest service organisation. Johnson Controls employs over 15,000 technicians in over 150 countries, bringing decades of VSD chiller experience to your door.

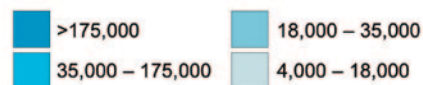
Nobody can supply, tailor, and tune an air-cooled VSD screw chiller to match your unique requirements better than Johnson Controls.

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



Our 15,000+ service technicians in 150 countries provide unmatched field experience with VSD screw chillers.

YORK VSD Air-Cooled Screw Chillers
in use worldwide, by capacity (kW)





Technical Data

The YVAA chiller can be tailored and tuned by selecting from a large number of heat exchanger sizes and compressor sizes and speeds.

This extreme flexibility allows the YVAA to be configured to meet exact capacity points and efficiency and sound targets.

The following table shows a sample of typical YVAA chillers at standard capacity points to serve as a quick reference guide.

Cooling Capacity [kW] ¹	Full Load Efficiency [EER] ²	Part Load Efficiency [ESEER] ³	Sound Power [dBA]	Length [mm]	Width [mm]	Height [mm]	Operating Weight [kg]	Refrigerant Charge [kg]
600	3.2	4.5	96	7397	2241	2401	6554	164
600 LN	2.9	4.1	92	7397	2241	2401	6726	160
700	3.2	4.6	98	7397	2241	2401	7668	204
700 LN	2.9	4.2	93	7397	2241	2401	7805	204
800	3.2	4.6	99	8514	2241	2401	8102	216
800 LN	3.2	4.2	94	8514	2241	2401	8601	242
900	3.2	4.6	99	8514	2241	2401	8653	242
900 LN	3.0	4.4	96	8514	2241	2401	8651	242
1000	3.2	4.7	102	9631	2241	2401	8698	261
1000 LN	3.0	4.5	97	9631	2241	2401	9201	261
1100	3.2	4.7	103	10748	2241	2401	9043	268
1100 LN	2.9	4.3	98	9631	2241	2401	9359	268
1200	3.1	4.5	103	10748	2241	2401	9201	282
1200 LN	3.1	4.3	99	11865	2241	2401	9999	286

1. Cooling Capacity at Eurovent Conditions, entering/leaving chilled water temperature 12°C/7°C, ambient temperature 35°C

2. Energy Efficiency Ratio

3. European Seasonal Energy Efficiency Ratio

* LN: Low Noise

