

YORK AIR-CONDITIONING PRODUCTS

Chillers & Air Handling Systems





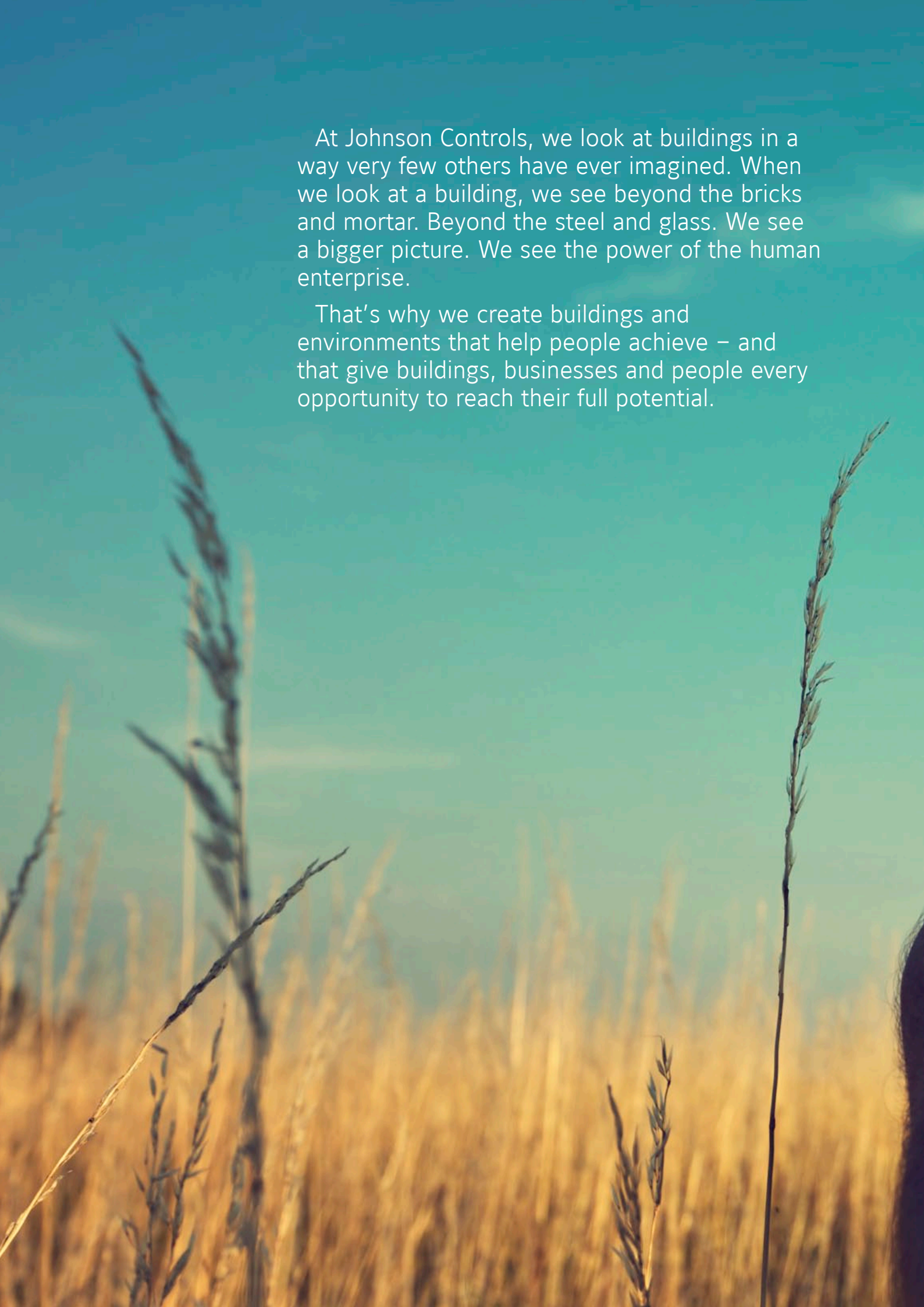
On the cover...

This shape's lines are taken from the ultra-modern building shape of the Montreal Biodome. Building Efficiency provides all heating and air conditioning controls to deliver safe and comfortable conditions for the facility's different inhabitants - ranging from Antarctic temperatures for the penguins to hot and humid conditions for the tropical plants.

YORK AIR-CONDITIONING PRODUCTS

A more comfortable,
safe and sustainable world



A photograph of a field of tall, golden-brown grasses under a clear, bright blue sky. The grasses are in the foreground, some in sharp focus and others blurred, creating a sense of depth. The sky is a uniform, vibrant blue, occupying the upper half of the frame. The overall mood is serene and natural.

At Johnson Controls, we look at buildings in a way very few others have ever imagined. When we look at a building, we see beyond the bricks and mortar. Beyond the steel and glass. We see a bigger picture. We see the power of the human enterprise.

That's why we create buildings and environments that help people achieve – and that give buildings, businesses and people every opportunity to reach their full potential.



Solutions for your success

Every building is unique in design and technical requirements.

Our customers always receive customised building solutions to meet their individual needs.

Johnson Controls can handle many challenges with its innovative and flexible solutions. From A to Z, from consulting to planning, installation, maintenance (service, inspection and repair) and modernisation – Johnson Controls supports customers throughout the entire life cycle of a building.



AIR CONDITIONING SOLUTIONS

- Chillers & fan coils
- Absorption chillers
- Cooling towers
- Dry coolers
- Air Handling Units



BUILDING AUTOMATION

- Monitoring, control and optimisation
- Standardised communication protocols



SECURITY SOLUTIONS

- Identity management
- Facility zoning
- Video surveillance systems
- Alarm systems



Our well thought-out solutions guarantee a high level of comfort and energy efficiency.

The majority of our products are already rated as Class A for Energy Efficiency, with high levels of compatibility and flexibility allowing for future additions to be carried out without difficulty.

External systems can be easily integrated using BACnet® or proprietary solutions.

Our service team is available to you 24 hours a day with one of the largest service networks in Europe.



AIR CONDITIONING SOLUTIONS

- Air systems
- VRF systems
- Roof-top air-conditioners
- Minisplits



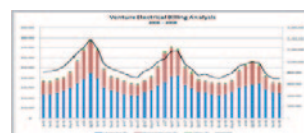
ROOM AUTOMATION

- Integration of HVAC controls with lighting and automatic blinds



SERVICE & SOLUTIONS

- Maintenance solutions
- Modernisation solutions
- Energy performance contract solutions
- Renewable energy solutions



ENERGY MANAGEMENT

- Energy monitoring
- Real time consumption Mgmt
- Continuous commissioning

Reference sites

Our commitment to sustainability and energy efficiency dates back to 1885, with Warren Johnson's invention of the first electric room thermostat. Since then our focus has always been to increase a building's efficiency and operational performance.

The following sites represent building solutions we have developed for our customers based on wide-ranging cross industrial experience in HVAC&R equipment, controls, fire and security systems, and services for commercial and industrial buildings.



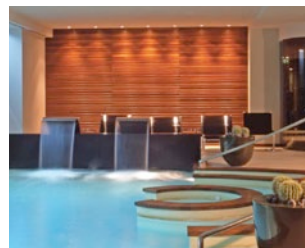
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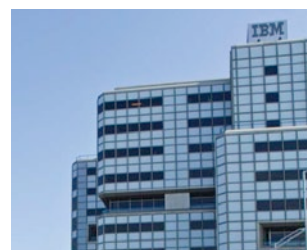
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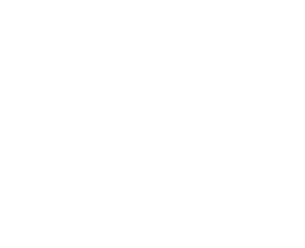
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4



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1
First building in Austria to be awarded a Green Building Certificate
Johnson Controls Metasys® Building Automation System helps UNIQA Towers in Vienna achieve a Green Building Certificate for energy efficiency.

2
Barclays global HQ
Helping Barclays create one of the best workplaces in the world.

3
BBC. Space management relocation
Smart workplace technologies drives nation-wide portfolio efficiencies.

4
Fiserv (Europe) Ltd
Utilising latest developments in chiller's technology delivers energy savings and ongoing cost reductions for Fiserv.

5
THI GROUP
Solutions for the hospitality industry.

6
British Embassy. Berlin
Full Lifecycle Solution for British Government's first Private Finance Initiative outside the UK.

7
IBM Headquarters
Adding value and conserving energy from the inside out.

8
Cologne Convention Center
The centrifugal chillers and the building automation system are indispensable in creating and managing an optimal indoor environment.

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Chillers & Heat Pumps

SCROLL COMPRESSOR CHILLERS AND
HEAT PUMPS

SCREW COMPRESSOR CHILLERS
AIR-COOLED & WATER-COOLED

CENTRIFUGAL COMPRESSOR CHILLERS
WATER-COOLED

ABSORPTION CHILLERS WATER-COOLED

CENTRAL PLANT OPTIMISATION™ 10

YLCA / YLHA

Air-cooled scroll compressor chiller
Air-to-water scroll compressor heat pump

Cooling capacities from 12 kW to 151 kW



Features

The YORK YLCA/YLHA air-cooled chillers and heat pumps represents the right solution for any kind of installation.

With more than thousand of units installed all around Europe and Africa, used for different applications and in different climate conditions are one of the most flexible and reliable scroll type chillers in the market.

The standard product configuration and the different options and accessories selectable by the customer make these units ideal where a compact, and high performance unit is required

Options / Accessories

- Unit without pack (sizes 40 to 150)
- BMS Communication
- Remote control
- Remote terminal
- High pressure fans (sizes 12 to 27)
- External buffer tank (sizes 12 to 27)
- Tray cable heater (YLHA Plus sizes 12 to 27)
- Water filter (units without Hydro Pack)
- Flow switch (units without Hydro Pack)
- Low sound version (sizes 40 to 150)
- Dual pump version (sizes 50 to 150)
- Antivibration mountings
- Condenser protection grille
- Condenser Copper fins (for special applications)

Nominal capacity

Model		YLCA G1				YLHA PLUS G1			
		12 TC	15 TC	20 TC	27 TC	12 TC	15 TC	20 TC	27 TC
Cooling capacity	kW	12.4	14.5	19.5	25.6	12	13.8	19.4	25.8
EER		2.97	2.52	2.81	2.81	2,88	2,52	2,75	2,9
ESEER		3.20	2.91	3.24	3.17	3.08	2.91	3.17	3.25
Heating capacity	kW	-	-	-	-	12,4	16,1	20.9	27.5
COP		-	-	-	-	3.0	3,12	3,17	3,2
Heating capacity (1)	kW	-	-	-	-	12.6	16.4	20.5	26.8
COP (1)		-	-	-	-	3,86	4.0	3,79	3,8
Sound pressure at 10 m	dB(A)	43	43	44	48	43	43	44	48

Model		YLCA / YLHA						
		40 T-TP	50 T-TP	60 T-TP	80 T-TP	100 T-TP	120 T-TP	150 T-TP
Cooling capacity c/o units	kW	39.6	52.1	60.5	77.6	98	119	151
EER		3.0	2.9	3.1	2.9	2.9	2.9	2.8
ESEER		3.31	3.24	3.44	3.26	3.56	3.80	3.60
Cooling capacity h/p units	kW	37.8	52	60.5	72.2	96	114	145
Heating capacity h/p units	kW	38.6	52.5	59.6	74.7	104	119.6	150
EER / COP		2.8 / 3.0	3 / 2.9	3.1 / 3.0	2.7 / 2.8	2.7 / 2.8	2.6 / 3.0	2.8 / 2.8
ESEER		3.30	3.14	3.51	3.09	3.42	3.71	4.18
Sound pressure at 10 m STD / LN	dB(A)	54 / 48	56 / 50	57 / 51	60 / 54	57 / 54	58 / 54	59 / 55

YLCA: Cooling only units models. YLHA: Air to water heat pump models.

Nominal conditions: Cooling capacities in kW given for 7°C water leaving temperature Δt 5°C and 35°C ambient temperature

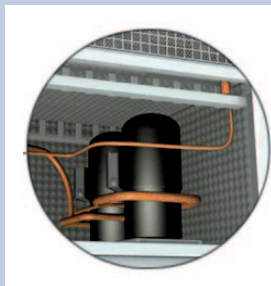
Heating capacities in kW given for 45°C water leaving temperature and 7°C ambient temperature

(1) net values at floor heating conditions: Heating capacities for 35°C water leaving temperature Δt 5°C and 7°C ambient temperature

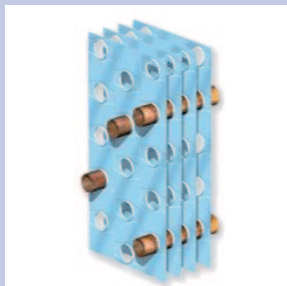
Technical data

Model			YLCA G1				YLHA PLUS G1			
			12 TC	15 TC	20 TC	27 TC	12 TC	15 TC	20 TC	27 TC
Dimensions	Height	mm	1 270							
	Width	mm	905		1430	1876	905		1430	1876
	Depth	mm	460		502		460		502	
Weight		kg	146	160	220	290	150	164	235	330

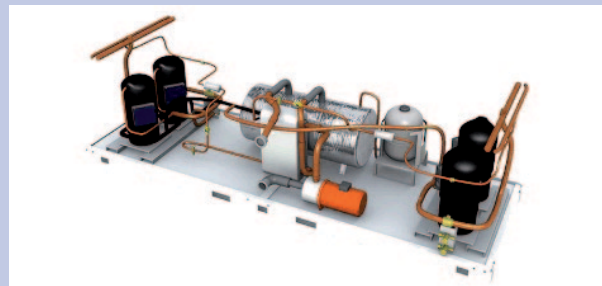
Model			YLCA / YLHA						
			40 T-TP	50 T-TP	60 T-TP	80 T-TP	100 T-TP	120 T-TP	150 T-TP
Dimensions	Height	mm	1573	1600		1600	2190		2263
	Width	mm	1500	1011		1118	1101		1101
	Depth	mm	822	2104		2944	3416		3770
Weight without pack / pack c/o	kg		340 / 380	524 / 580	555 / 611	715 / 785	1 124 / 1 220	1 190 / 1 286	1 415 / 1 503
Weight without pack / pack h/p	kg		337 / 397	537 / 593	568 / 624	735 / 805	1 154 / 1 250	1 220 / 1 316	1 615 / 1 703



Low Noise Versions, using special acoustic insulation in the compressor enclosure.



Condenser Blue Fin as standard, to avoid corrosion.



Integrated Hydro Kit, for compact and quick installations.

YLCD / YLHD

Air-cooled scroll compressor chiller
Air-to-water scroll compressor heat pump

Cooling capacities from 24 kW to 145 kW



Features

The new YORK YLCD/YLHD air-cooled chillers and heat pumps with powered fans are ideal solution for units to be installed in technical rooms or in louvered/hidden spaces on the roof.

Sharing the reliable and proven designed with YLCA/YLHA, these new units using R-410a aims to help the installer and the user to help to find solutions for special and difficult installations.

The bigger sizes (from 100 to 150 kW) utilize new EC Inverter radial fans, that will keep always the right performance for the unit at any outdoor condition.

Options / Accessories

- Vertical Discharge kit (sizes 25 to 70)
- Low Noise (sizes 100 to 150)
- Dual Water Pumps (sizes 100 to 150)
- Water Flow Switch
- Water Filter
- Antivibration mounting
- Remote control
- Remote terminal
- BMS communication

Nominal capacity

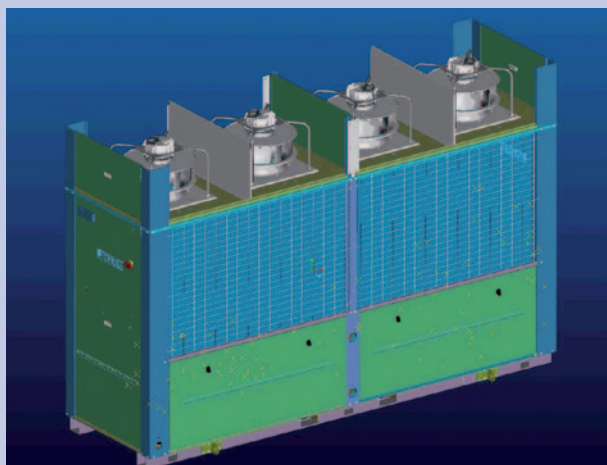
Model		YLCD / YLHD					
		25 TC	40 T-TP	70 T-TP	100 T-TP	120 T-TP	150 T-TP
Cooling capacity c/o units	kW	24	40	70	99	119	145
EER		2.9	2.6	2.6	2.5	2.5	2.4
Cooling capacity h/p units	kW	23	40	68	96	117	143
EER		2.9	2.6	2.6	2.5	2.5	2.4
Heating capacity	kW	24	43	72	104	119.6	159
COP		3.0	2.8	2.8	2.8	2.8	2.7
Sound power level	dB(A)	81	83	86	86	86	87

YLCD: Cooling only units models. YLHD: Air to water heat pump models.

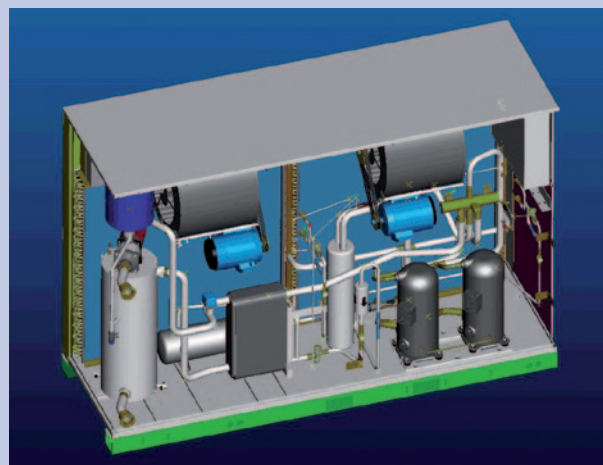
Nominal conditions: Cooling capacities in kW given for 7°C water leaving temperature Δt 5°C and 35°C ambient temperature
Heating capacities in kW given for 45°C water leaving temperature and 7°C ambient temperature

Technical data

Model			YLCD / YLHD					
			25 TC	40 T-TP	70 T-TP	100 T-TP	120 T-TP	150 T-TP
Dimensions	Height	mm	1 526	1 794		2 460		2 480
	Width	mm	1 740	2 659		3 466	3 416	3 768
	Depth	mm	785	897		1 101		
Weight without pack / pack c/o		kg	- / 390	730 / 770	740 / 780	1 264 / 1 360	1 264 / 1 360	1 680 / 1 776
Weight without pack / pack h/p		kg	- / 400	750 / 790	760 / 800	1 284 / 1 380	1 284 / 1 380	1 700 / 1 796



EC Radial Fans (sizes 100 to 150), using new high efficiency ventilation technology to improve the overall performance.



Integrated Hydrokit, shared with YLCA/YLHA product platform, for a compact and quick installation.

YLAA

Air-cooled scroll compressor chiller

Cooling capacities from 177 kW to 521 kW



Features

The **YORK YLAA TEMPO** air-cooled chiller is an environmental leader.

Utilising scroll type compressors and microchannel condenser coil technology the **YLAA** delivers premium efficiency for all air conditioning applications.

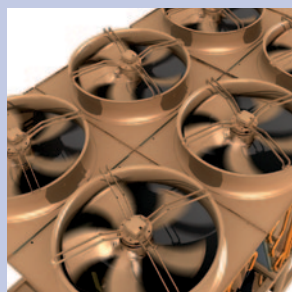
YLAA chillers are a self-contained cooling solution that is light-weight and compact for convenient installation on the ground or on building rooftops.

There are 4 versions COOLING ONLY

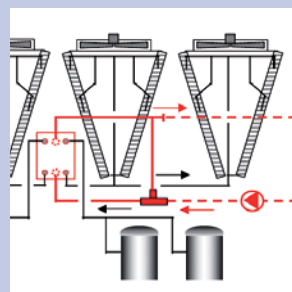
YLAA SE	Standard Efficiency
YLAA SE LS	Standard Efficiency, Low sound
YLAA HE	High Efficiency
YLAA HE LS	High Efficiency, Low sound



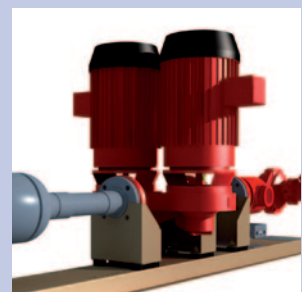
The TEMPO delivers energy efficiency levels that surpasses Eurovent A Class requirements. Aluminum microchannel condenser coil technology is one reason for this premium efficiencies.



Ultra quiet operation can be obtained through optional dual or low speed fans and a compressor accoustic enclosure. A single point power connection and optional, factory packaged water pumps, water filter and flow switch provide fast and easy installation.



An optional heat recovery feature can be added to provide hot water to 50°C; which is useful for facility heating or hot water preheating.



Supplies chilled liquid at temperatures between -1°C and 15°C. Operates in ambient temperatures from -18°C to 46°C fully loaded.

Nominal capacity

YLAA SE Standard	180	210	240	285	320	360	400	435	485
Cooling capacity (kW)	179	196	218	276	310	344	386	418	466
EER	2.84	2.41	2.69	2.71	2.56	2.66	2.55	2.69	2.57
ESEER	3.95	3.42	3.65	4.09	3.97	3.94	3.79	3.92	3.83
Sound pressure at 10 m (dBA)	57	58	59	61	62	62	62	64	64
YLAA SE LS Standard & Low sound	180	210	240	285	320	360	400	435	485
Cooling capacity (kW)	177	193	214	269	301	336	374	408	452
EER	2.75	2.30	2.63	2.59	2.42	2.54	2.41	2.57	2.43
ESEER	3.88	3.34	3.67	4.01	3.89	3.96	3.79	3.89	3.80
Sound pressure at 10 m (dBA) (1)	49	50	52	55	55	55	55	57	57
YLAA HE High Efficiency	195	260	300	350	390	440	455	515	
Cooling capacity (kW)	196	253	310	346	386	429	451	521	
EER	3.08	3.03	3.10	3.10	3.03	3.04	3.07	3.06	
ESEER	4.39	4.72	4.14	3.99	4.15	4.14	4.17	4.33	
Sound pressure at 10 m (dBA)	57	61	61	62	63	63	64	64	
YLAA HE LS High Efficiency & Low sound	195	260	300	350	390	440	455	515	
Cooling capacity (kW)	194	248	304	340	377	421	443	510	
EER	2.98	2.94	3.01	3.03	2.93	2.96	3.01	2.96	
ESEER	4.26	4.59	4.22	4.01	4.22	4.19	4.22	4.37	
Sound pressure at 10 m (dBA) (1)	49	55	54	55	56	56	57	57	

At leaving chilled water temperature of 7°C, and ambient temperature of 35°C.

(1) Low sound models with acoustically lined compressor enclosure, and fixed low speed fans.

Technical data

YLAA SE Standard			180	210	240	285	320	360	400	435	485
Dimensions	Length	mm	2911					3690			
	Width	mm	2242								
	Height	mm	2508								
Operating weight kg			1715	1749	1848	2367	2469	3254	3339	3108	3290
YLAA SE LS Standard & Low sound			180	210	240	285	320	360	400	435	485
Dimensions	Length	mm	2911					3690			
	Width	mm	2242								
	Height	mm	2508								
Operating weight kg			1871	1905	2004	2523	2625	3449	3534	3303	3485
YLAA HE High Efficiency			195	260	300	350	390	440	455	515	
Dimensions	Length	mm	2911		3690			4807			
	Width	mm	2242								
	Height	mm	2508								
Operating weight kg			2165	2328	3041	2805	3151	3833	3902	4192	
YLAA HE LS High Efficiency & Low sound			195	260	300	350	390	440	455	515	
Dimensions	Length	mm	2911		3690			4807			
	Width	mm	2242								
	Height	mm	2508								
Operating weight kg			2321	2484	3236	3000	3346	4028	4097	4387	

YLPA

Heat pump scroll compressor

Cooling capacities from 342 kW to 647 kW

Heating capacities from 351 kW to 666 kW

At Eurovent Standard Conditions most high efficiency models meet A Class energy efficiency levels.



Features

The **YLPA** heat pump delivers premium energy efficiency, it is easy to install, quiet to run, and it is supported by a knowledgeable service force.

Efficiency

Eurovent A-Class certified full load efficiency, high part load efficiency, improved defrost cycle, extended operating envelope. Maximize heating efficiency and renewable energy use with the **YLPA** heat pump.

Sound

Designed for quiet operation at full and part load conditions.

Sustainability

European Commission 2020 renewables targets compliant, specifically designed for HFC-410A.

Ease of installation

Quick and easy to install, compact design, Metasys® ready.

Reliability

The **YLPA** is our third generation of fully factory tested scroll heat pumps, and thanks to our extensive service solutions, support and minimal maintenance are assured.



Multiple scroll design enables sound reduction during part load operation by simply turning off unnecessary compressors

Nominal capacity

YLPA SE Standard	340	415	495	560	610
Cooling capacity (kW)	342	424	513	568	636
Cooling EER	3.08	3.01	3.00	2.96	2.97
ESEER	4.0	4.1	4.1	3.9	3.9
Heating capacity (kW)	351	439	527	581	666
Heating EER	3.11	3.18	3.19	3.17	3.10
Sound pressure at 10 m (dBA)	54	55	56	55	56
YLPA HE High Efficiency	355	425	505	570	640
Cooling capacity (kW)	359	444	526	590	647
Cooling EER	3.26	3.24	3.23	3.11	3.02
ESEER	4.5	4.5	4.6	4.4	4.4
Heating capacity (kW)	369	460	554	600	666
Heating EER	3.27	3.22	3.20	3.24	3.23
Sound pressure at 10 m (dBA)	55	55	55	56	56

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

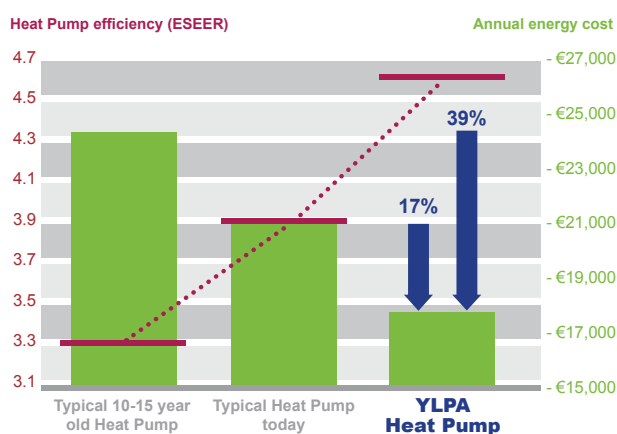
Heating Capacity at Eurovent Conditions, entering/leaving hot water temperature 40°C/45°C, ambient temperature 7°C

Sound Pressure according to Eurovent conditions. LS models

Technical data

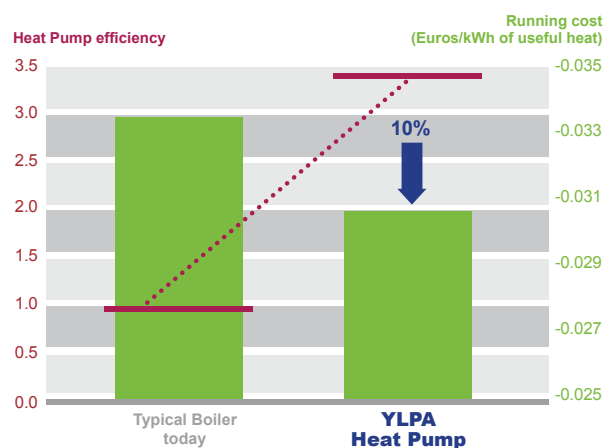
YLPA SE Standard	340	415	495	560	610
Dimensions	Length	mm	4937	5854	6971
	Width	mm	2246		
	Height	mm	2501		
Operating weight kg	4600	5000	5200	5695	6235
YLPA HE High Efficiency	355	425	505	570	640
Dimensions	Length	mm	4937	5854	6971
	Width	mm	2246		
	Height	mm	2501		
Operating weight kg	4750	5400	6100	6495	6695

High Efficiency Cooling Mode



500 kW unit, 3000 operating hours, energy rate = 0.1 EUR / kWh

Additional Energy Savings in Heating Mode



Energy Rate: Electricity 0.1 EUR / kWh; Gas 0.03 EUR / kWh

YVAA

Air-cooled VSD screw chiller

Cooling capacities from 525 kW to 1225 kW

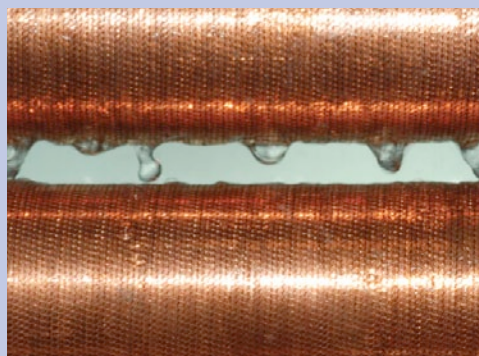
At Eurovent Standard Conditions this equipment meets A Class energy efficiency levels.



Features

- Reduce your annual energy costs by as much as 30%
- Reduce your sound levels by up to 16 dBA to meet tighter regulations
- Enhance your flexibility with a variety of chiller options to fit your needs
- Minimise your environmental impact dramatically
- Lower your part load energy and night time sound levels with inverter fans and compressors
- Deliver increased motor longevity and increased chiller reliability with low starting currents
- Cut your operational expenses with a high chiller power factor at all loads
- Improve your peace of mind knowing we stand behind every chiller

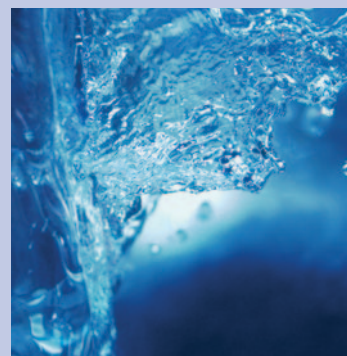
Photo courtesy of the LTCM lab of the Ecole Polytechnique Fédérale de Lausanne, Switzerland



Reduce refrigerant charges by up to 15% beyond traditional chiller designs with the YVAA's falling-film evaporator and microchannel condenser coil technology.



A more efficient chiller means less electricity generation, which reduces greenhouse gas emissions, water consumption – and your environmental footprint. The sustainability advantages of the YVAA chiller give you the opportunity to **earn points in the LEED® and BREEAM® building certification programs.**



Application flexibility

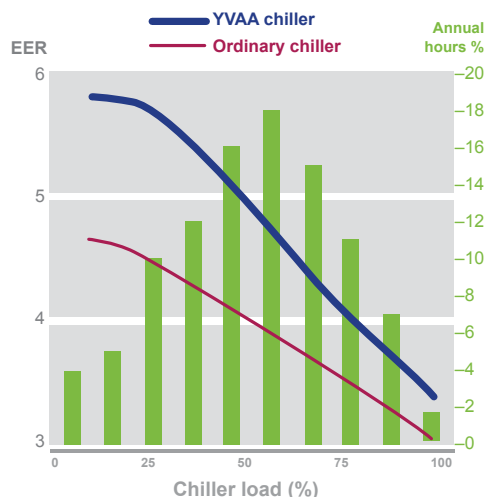
Unit	YVAA													
Cooling capacity (kW)	600	600 LN	700	700 LN	800	800 LN	900	900 LN	1000	1000 LN	1100	1100 LN	1200	1200 LN
Full Load Efficiency (EER)	3.2	2.9	3.2	2.9	3.2	3.2	3.2	3.0	3.2	3.0	3.2	2.9	3.1	3.1
Part Load Efficiency (ESEER)	4.5	4.1	4.6	4.2	4.6	4.2	4.6	4.4	4.7	4.5	4.7	4.3	4.5	4.3
Sound power level (dBA)	96	92	98	93	99	94	99	96	102	97	103	98	103	99

Cooling Capacity at Eurovent Conditions, entering/leaving chilled water temperature 12°C/7°C, ambient temperature 35°C
Sound Pressure according to Eurovent conditions.

Technical data

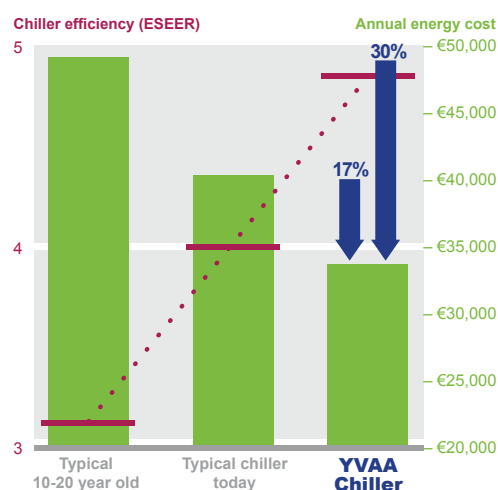
Unit			YVAA													
Dimensions	Length	mm	7397	7397	7397	7397	8514	8514	8514	8514	9631	9631	10748	9631	10748	11865
	Width	mm	2241													
	Height	mm	2401													
Operating weight kg			6554	6726	7668	7805	8102	8601	8653	8651	8698	9201	9043	9359	9201	9999

YVAA efficiency vs. ordinary chiller



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

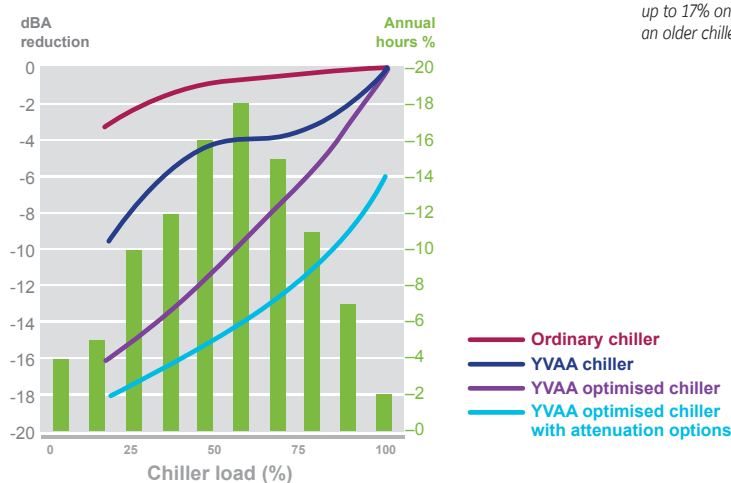
YVAA efficiency & annual energy cost



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.

YVAA sound values vs. ordinary chiller



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

YMWA / YMRA

Water-cooled cooling only, remote condenser and heat pump scroll compressor chiller

Cooling capacities from 20 kW to 190 kW



Features

- Scroll compressors (single or tandem)
- Higher EER and COP
- 2 different frames / configurations:
 - 1 compressor / 1 circuit up to 45 kW
 - 2 compressors / 1 circuit from 50 to 190 kW
- Reduced refrigerant charge
- Condensing pressure control
- "Plug and Play" units

Same cabinet w/o or with factory mounted hydrokit (one or two pumps). More compact and slim.

Available versions

14 available YMWA sizes in three versions:

- 1) **YMWA-CO** : Cooling only
- 2) **YMRA** : Remote condenser
- 3) **YMWA-HP** : Heat pump

Nominal capacity and technical data

YMWA-CO	20	25	30	35	40	45	50	60	75	90	120	150	170	190
Cooling Capacity (kW)	21.3	26.4	31.3	35.1	39.5	46.9	51.1	61.3	77.6	91.4	118.8	147.5	170.5	193.3
EER	4.58	4.54	4.46	4.53	4.48	4.57	4.29	4.48	4.48	4.38	4.46	4.46	4.50	4.51
Length / Width / Height (mm)	821 / 455 / 1350						1210 / 850 / 1500							
Operating weight (kg)	156	176	174	179	185	203	440	491	540	591	837	966	1041	1145
YMRA	20	25	30	35	40	45	50	60	75	90	120	150	170	190
Cooling Capacity (kW)	20.9	26.0	31.3	34.8	39.3	46.2	51.2	61.7	77.8	91.4	118.7	147.6	169.4	193.2
Length / Width / Height (mm)	821 / 455 / 1350						1210 / 850 / 1500							
Operating weight (kg)	144	164	166	166	172	172	376	404	439	466	678	762	813	874
YMWA-HP	20	25	30	35	40	45	50	60	75	90	120	150	170	190
Cooling Capacity (kW)	20.9	26.1	30.3	34.2	38.4	45.8	50.2	59.2	76.4	89.0	115.3	144.8	166.3	186.1
Heating Capacity (kW)	23.5	28.6	33.4	38.2	42.6	50.6	57.2	67.5	85.5	101.2	130.7	162.8	188.3	210.3
EER / COP	4.45/4.03	4.47/4.00	4.28/3.93	4.35/3.96	4.34/3.95	4.39/4.00	4.18/4.03	4.27/3.98	4.38/4.09	4.22/4.06	4.28/4.08	4.35/4.13	4.36/4.11	4.29/4.10
Length / Width / Height (mm)	821 / 455 / 1350						1210 / 850 / 1500							
Operating weight (kg)	159	181	179	184	190	208	448	499	551	602	850	983	1058	1162

YMWA-CO: Standard Eurovent LCP/W/AC conditions in cooling mode: evaporator EWT/LWT 12°C/7°C, condenser EWT/LWT 30°C/35°C

YMRA: Evaporator EWT/LWT 12°C/7°C, condensing temperature 40°C

YMWA-HP: Standard Eurovent LCP/W/AC conditions in cooling mode: evaporator EWT/LWT 12°C/7°C, condenser EWT/LWT 30°C/35°C

YMWA-HP: Standard Eurovent LCP/W/AC conditions in heating mode: evaporator EWT/LWT 10°C, condenser EWT/LWT 40°C/45°C

YCSE

Water-cooled or remote air-cooled screw compressor chiller

Cooling capacities from 134 kW to 320 kW



Features

Efficient screw compressors

Highly efficient the **YCSE** offers the highest standard of reliability and economical operation utilising twin-screw rotor technology and fully modulating compressor slide valve unloading, together with low inrush current star delta starters. To further improve the operating efficiency the leaving liquid temperature can be remotely reset.

Quiet operation

The compressor has been designed so that there is minimal external gas pulsations and integral oil separators resulting in very low sound and vibration levels.

Small footprint and robust design

The compact design is ideally suited for reduced base area locations. Both single and twin circuit designs require a single liquid inlet and outlet connection. The unit frame is manufactured from heavy gauge galvanised steel coated with baked-on powder paint.

Options / Accessories

- Remote control switch unit.
- BMS interface.
- Compressor circuit breakers.
- Evaporator heater.
- Flow switch.
- Differential pressure switches.
- Suction pressure relief valves.
- Anti-vibration rubber mounts.
- Water connection flanges.
- Discharge and/or suction stop valves.
- High condenser water temperature and glycol options.

Nominal capacity and technical data

YCSE-SB Model	40	50	60	80	100
Cooling Capacity (kW)	134	160	194	232	320
EER	4.00	4.00	3.95	4.26	4.00
Sound pressure at 1 m (dBA)	68	69	71	71	72
Length / Width / Height (m)	0.85 / 1.1 / 1.5				1.5 / 1.1 / 1.7
Operating weight (kg)	780	800	875	1000	1655

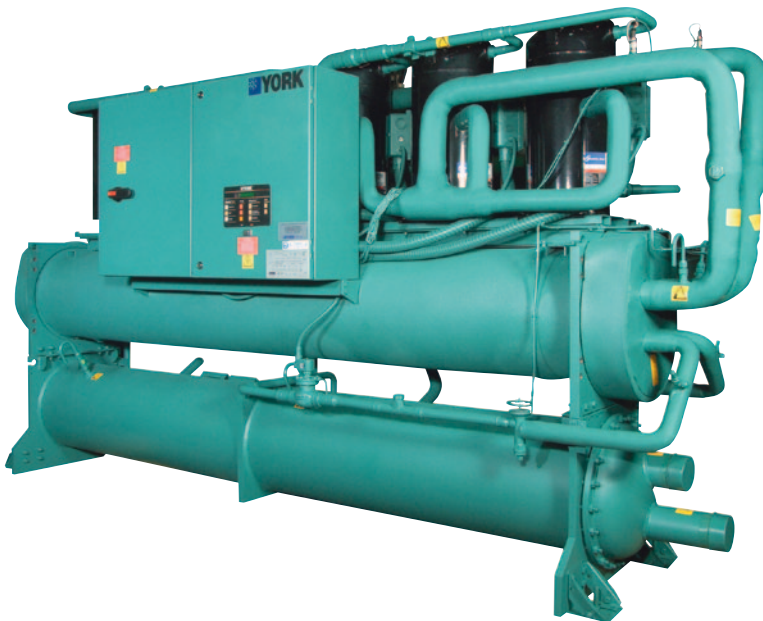
At 7°C leaving chilled water and 35°C leaving condenser water.

YCWL

Water-cooled or remote air-cooled scroll compressor chiller

Cooling capacities from 188 kW to 580 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.



Features

The **YCWL** series was designed to produce the greatest cooling capacity with the lowest sound levels. The use of scroll compressors provides optimum efficiency at part load, up to an ESEER of 6.92. Its dimensions have been optimized to pass through a doorway 2 m high by 90 cm wide.

The **YCWL** is designed for all air conditioning applications. It is equipped with two independent cooling circuits and regulated by a micro-processor that optimizes chiller performance.

The **YCWL** is designed for indoor installation and each **YCWL** is fully tested before leaving our factories.

Options

- Compressor acoustic blankets
- Flow switch or pressure differential switch
- Soft starters
- Neoprene pads or spring isolators
- Dual relief valves kit
- Electronic regulators
- P.A.C operation water/water up to 50°C
- Vibration isolators

Nominal capacity

YCWL-SE	240	291	346	395
Cooling capacity (kW) ¹	227	290	331	369
EER	4.70	4.80	4.77	4.78
Energy class	B	B	B	B
ESEER	6.49	6.15	6.20	6.50
Sound Pressure (dB(A)) ²	67	67	70	71

YCWL-HE	200	230	260	301	346	385	425	446	531	610
Cooling capacity (kW) ¹	188	220	248	248	352	377	410	410	520	580
EER	5.06	5.05	5.17	5.03	5.13	5.17	5.17	5.17	4.98	4.93
Energy class	A	A	A	B	A	A	A	B	B	B
ESEER	6.17	6.31	6.87	6.38	6.46	6.89	6.92	6.26	6.28	6.60
Sound Pressure (dB(A)) ²	64	65	67	67	70	68	71	69	71	73

1: Cooling capacity at Eurovent conditions, evaporator entering/leaving temperature 12°C/7°C, condenser entering/leaving temperature 30°C/35°C.

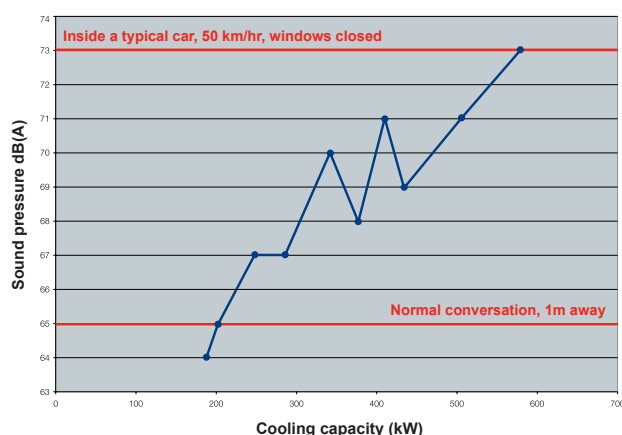
2: EN 292-1991 Sound pressure is measured 1 meter away from the control panel and 1.5 meters above the floor. Compressor acoustic blankets fitted.

Technical data

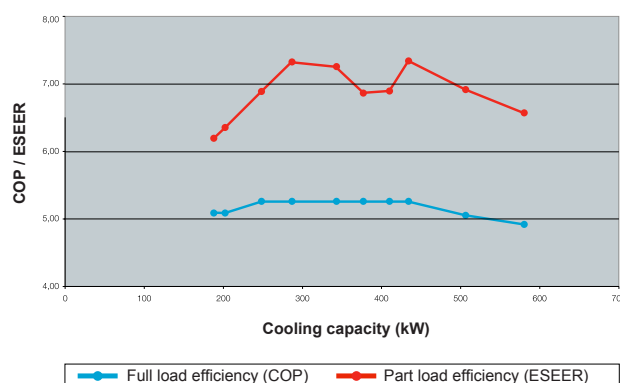
YCWL-SE	240	291	346	395
Dimensions	Length mm 3191	3200	3153	3165
	Width mm 860			
	Height mm 1749		1822	1819
Operating weight	kg 1759	2101	2098	2130

YCWL-HE	200	230	260	301	346	385	425	446	531	610
Dimensions	Length mm 3200	3134	3153	3159	3670	3146	3670			
	Width mm 860				911	860	911			
	Height mm 1638	1895	1826	1943	1972	1892	1969			
Operating weight	kg 1771	1948	1954	2051	2410	2707	2204	3066	3030	2993

Low sound operation



High full and part load efficiencies



YLCS

Water-cooled or remote air-cooled screw compressor chiller Heat pump application

Cooling capacities from 342 kW to 1099 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.



Features

One chiller, many applications

Designed to operate with leaving liquid temperatures from -10°C to $+15^{\circ}\text{C}$.

Efficient compressors

YLCS is a dual circuit chiller with industrial type semi-hermetic screw compressors. Star delta compressor starters are incorporated to reduce the inrush current.

Outstanding chiller control

An advanced microprocessor controller with, a 40 character plain language display, controls and monitors temperatures, pressures, operating hours, number of starts and start stop/holiday times.

Fast and easy installation

Evaporator water connections can be provided in a vertical or horizontal plain. Electrical power supplies enter from the top for easy drop down wiring.

Options / Accessories

- Compressor suction shut-off valves.
- Companion flange kits.
- Multi-point power supply.
- Remote leaving liquid temperature offset.
- Pressure gauges.
- Closed transition star delta starters.
- Power factor correction capacitors.
- Heat pump control.
- 90/10 cupro/nickel condenser.

Nominal capacity

YLCS SA	350	415	480	530	575	620
Cooling capacity (kW)	342	411	480	518	556	604
EER	4.2	4.3	4.3	4.3	4.3	4.3
ESEER	5.14	5.22	5.25	5.25	5.26	5.26
Sound pressure at 1 m (dBA)	74	74	74	77	76	76
YLCS SA	670	750	860	980	1120	
Cooling capacity (kW)	645	743	849	966	1099	
EER	4.8	4.8	4.9	5.0	5.0	
ESEER	5.58	5.52	5.72	5.83	5.79	
Sound pressure at 1 m (dBA)	76	76	82	82	82	

At 7°C leaving chilled water and 35°C leaving condenser water.

Technical data

YLCS SA			350	415	480	530	575	620
Dimensions	Length	mm	3225	3244	3274		3544	3600
	Width	mm	900					
	Height	mm	2100					
Operating weight kg			3420	4030	4170	4270	4370	4540
YLCS SA			670	750	860	980	1120	
Dimensions	Length	mm	3565	3645	3830	3830	3830	
	Width	mm	1290					
	Height	mm	2148					
Operating weight kg			4510	5010	5620	6090	6610	

YN

Water-cooled screw chiller

Dry cooler application – Heat recovery application

Heat pump application

Cooling capacities from 570 kW to 1300 kW

At Eurovent Standard Conditions this equipment meets A Class energy efficiency levels.



Features

High Efficiency Screw Compressor

The open drive twin rotary screw compressor has been engineered and constructed to meet the exact requirements of the industrial refrigeration market. It utilises state-of-the-art technology to provide the most reliable compressor, with high energy efficiency at all operating conditions.

Heat Exchangers

Shells – The flooded type evaporator and condenser shells are fabricated from rolled carbon steel plates with fusion welded seams. Carbon steel tube sheets, drilled and reamed to accommodate the tubes, are welded to the end of each shell. Intermediate tube supports are fabricated from 12 mm carbon steel plates.

Tubes – The copper alloy heat exchanger tubes are externally and internally enhanced to provide optimum performance.

Smooth and accurate capacity control

Capacity control is achieved by use of a slide valve which provides fully modulating control from 100% to 10% of full load, depending upon the unit selection. The slide valve is actuated by oil pressure controlled by external solenoid valves via the OptiView control centre.

Equipped with the optional Solid State Starter, the YN screw chiller starts "softly," putting less stress on the motor and compressor, extending their life. In addition, the Solid State Starter includes an impressive array of safety controls that protect the chiller against: phase loss, phase reversal, phase imbalance, under-voltage, overvoltage, and over-current

Nominal capacity

YN Model	RB RB S2	RB RD S2	RD RB S2	RD RD S2	RB RB S3	RB RD S3	RD RB S3	RD RD S3	RB RB S4	RB RD S4	RD RB S4
Cooling Capacity kW	576	576	585	585	750	751	769	770	970	971	999
EER	5.65	5.72	5.75	5.81	5.42	5.51	5.56	5.66	5.29	5.43	5.46
ESEER	5.88	5.94	5.98	6.03	5.68	5.75	5.82	5.89	5.72	5.82	5.89
Class EER	A	A	A	A	A	A	A	A	A	A	A

YN Model	RD RD S4	SA SA S4	SA SD S4	SD SA S4	SD SD S4	RD RB S5	RD RD S5	SA SA S5	SA SD S5	SD SA S5	SD SD S5
Cooling Capacity kW (1)	1001	1036	1037	1054	1055	1231	1235	1285	1286	1316	1318
EER	5.6	5.9	6.07	6.01	6.19	5.22	5.39	5.74	5.97	5.89	6.13
ESEER	5.99	6.26	6.39	6.37	6.51	5.67	5.82	6.1	6.28	6.23	6.42
Class EER	A	A	A	A	A	A	A	A	A	A	A

At 7°C leaving chilled water and 32°C leaving condenser water.

Technical data

YN Model	RB RB S2	RB RD S2	RD RB S2	RD RD S2	RB RB S3	RB RD S3	RD RB S3	RD RD S3	RB RB S4	RB RD S4	RD RB S4
Dimensions	Length	mm	3580								
	Width	mm	1549								
	Height	mm	2400								
Operating weight kg	5017	5127	5157	5267	5097	5207	5237	5347	5476	5586	5616

YN Model	RD RD S4	SA SA S4	SA SD S4	SD SA S4	SD SD S4	RD RB S5	RD RD S5	SA SA S5	SA SD S5	SD SA S5	SD SD S5
Dimensions	Length	mm	3580	4211		3580	4211				
	Width	mm	1549	1676		1585	1700				
	Height	mm	2400	2500		2410	2500				
Operating weight kg	5726	6919	7408	7160	7649	5787	5897	7090	7579	7331	7820

YR

Water-cooled screw compressor chiller

Cooling capacities from 730 kW to 1320 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.



Features

- The **YORK YR** chiller has been designed to match the exact building load and lift requirements, which means it will always operate at peak efficiency when operating at Real World operating conditions.
- Equipped with the optional Solid State Starter, the **YR** screw chiller starts "softly," putting less stress on the motor and compressor, extending motor life.
- The semi-hermetic **YR** chiller is designed for all air conditioning applications
- The twin rotary screw compressor driven **YORK YR** chiller is completely factory mounted , including: evaporator, condenser, subcooler, oil separator, compressor, motor, lubrication system, control panel, as well as all interconnecting piping and wiring.
- Flooded type evaporator and condenser shells are fabricated from rolled carbon steel plates with fusion welded seams.

Nominal capacity

YR compressor code	Shell codes		Leaving chilled water °C	Leaving cooling water °C	Cooling capacity kW
	Evaporator	Condenser			
T0	TA - TD, VB - VD	TA - TD, VB - VD	6	30	730
					770
T1	TA - TD, VB - VD, WA - WD	TA - TD, VB - VD, WA - WD	6	30	859
					905
					920
T2	WA - WD, XB - XD	WA - WD, XB - XD	6	30	1070
					1110
T3	WA - WD, XB - XD	WA - WD, XB - XD	6	30	1280
					1320



OptiView Panel

YNWS/RS

Water-cooled or remote air-cooled screw compressor chiller

Cooling capacities from 470 kW to 1790 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.



Features

- The **YNWS** chiller is designed for all air conditioning applications.
- Both the water cooled **YNWS** and the remote air cooled **YNRS** models are designed for chilled water and process applications.
- Both models are designed for indoor mechanical room installation.
- The **YNRS** requires a cooling tower or an air-water condensing unit for heat dissipation.
- The screw compressor driven **YNWS/RS** chiller is completely factory mounted, including: direct expansion (DX) evaporator, condenser, subcooler, oil separator, compressor, motor, lubrication system, control panel, as well as all interconnecting piping and wiring.
- R717 Refrigerant

Nominal capacity and technical data

YNWS Model	DC FC S0	DC GC S0	EC FC S0	EC GC S0	DC FC S1	DC GC S1	EC FC S1	EC GC S1	EC GC S2	EC HC S2	EC JC S2
Cooling Capacity (kW)	482	485	511	515	575	579	631	636	809	814	848
Length /Width / Height (m)	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9	3.7/1.4/1.9
Operating weight (kg)	4114	4114	4114	4974	4150	4540	4540	5010	5449	5449	5449
YNWS Model	FC JC S2	EC HC S3	EC JC S3	EC KC S3	FC HC S3	FC JC S3	FC KC S3	FC KC S4	FC LC S4	FC MC S4	FC NC S4
Cooling Capacity (kW)	856	1012	1015	1019	1084	1088	1093	1347	1352	1354	1395
Length /Width / Height (m)	3.7/1.451.9	3.7/1.4/2.0	3.7/1.4/2.0	3.7/1.4/2.0	3.7/1.4/2.0	3.7/1.4/2.0	3.8/1.5/2.3	3.9/1.6/2.3	3.9/1.6/2.3	3.9/1.6/2.3	3.9/1.6/2.3
Operating weight (kg)	6669	6010	6010	6010	6010	6010	7335	8412	8412	8412	8412
YNWS Model	GC KC S4	GC LC S4	GC MC S4	GC NC S4	FC LC S5	FC MC S5	FC NC S5	GC LC S5	GC MC S5	GC NC S5	
Cooling Capacity (kW)	1475	1481	1484	1488	1623	1625	1630	1780	1784	1790	
Length /Width / Height (m)	3.9/1.6/2.3	3.9/1.6/2.3	3.9/1.6/2.3	3.9/1.8/2.5	3.9/1.7/2.3	3.9/1.7/2.3	3.9/1.7/2.3	3.9/1.7/2.3	3.9/1.7/2.3	3.9/1.8/2.5	
Operating weight (kg)	8412	8412	8412	10142	9635	9635	10950	10950	10950	10950	

At 6°C leaving chilled water and 32°C leaving condenser water.

YNWH

Water-cooled screw chiller

Cooling capacities from 300 kW to 1200 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.



Features

- The **YNWH** chiller is ideally suited for air conditioning, brine, and industrial applications.
- The water cooled **YNWH** is designed for brine based applications.
- This chiller is designed for indoor mechanical room installation.
- The **YNWH** requires a cooling tower or an air-water condensing unit for heat dissipation.
- The screw compressor driven **YNWH** chiller is completely factory mounted, including: direct expansion (DX) evaporator, condenser, subcooler, oil separator, compressor, motor, lubrication system, control panel, as well as all interconnecting piping and wiring.
- R507 refrigerant

Nominal capacity and technical data

YNWH Model	16 12 S0	16 12 S1	20 20 S2	20 20 S3	28 24 S4	28 24 S5
Cooling Capacity (kW)	315	380	533	683	962	1169
Length / Width / Height (m)	3.7/1.5/1.7	3.7/1.5/1.7	3.9/1.6/2.0	3.9/1.6/2.0	4.3/2.0/2.3	4.4/2.0/2.3
Operating weight (kg)	3700	3900	6000	6300	9000	9800

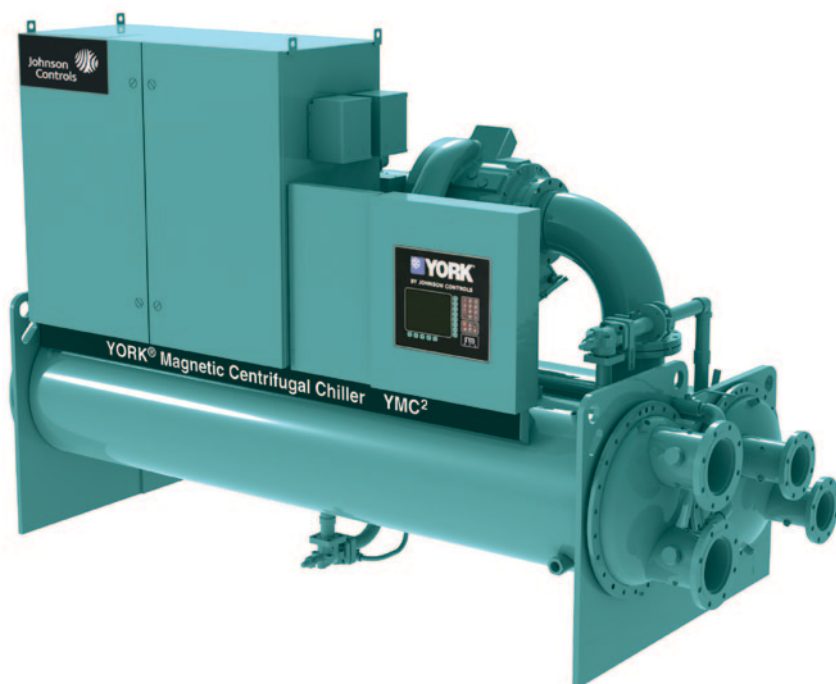
Cooling capacity at -2°/-6°C brine application and 32°C condenser leaving water temperature

YMC²

Water-cooled magnetic centrifugal chiller

Cooling capacities from 755 kW to 1340 kW

At Eurovent Standard Conditions this equipment meets A Class energy efficiency levels.



Features

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.

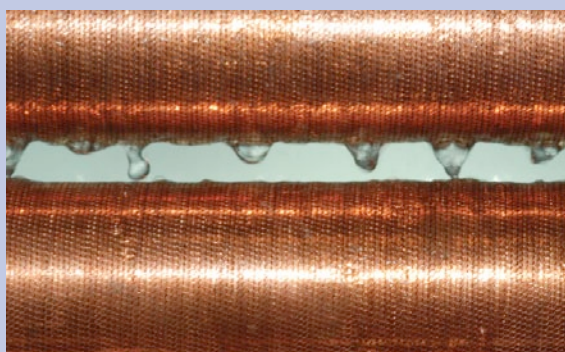
Low sound levels

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

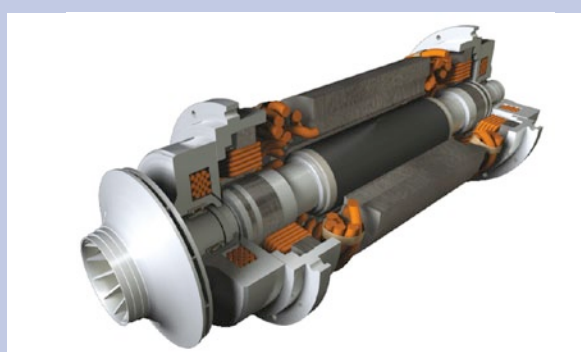
Superior reliability

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

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



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



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

Nominal capacity

YMC ²	S0900AA	S1000AA	S1100AA	S1200AA	S1300AA
Cooling capacity (kW)	900	1000	1100	1200	1300
EER	6.39	6.44	6.42	6.33	5.94
ESEER	8.32	8.83	9.15	9.40	9.34
Sound pressure at 1 m (dBA)	73	73	73	73	73

Cooling Capacity at Eurovent Conditions, entering/leaving chilled water temperature 12°C/7°C, entering/leaving condenser water temperature 30°C/35°C

Technical data

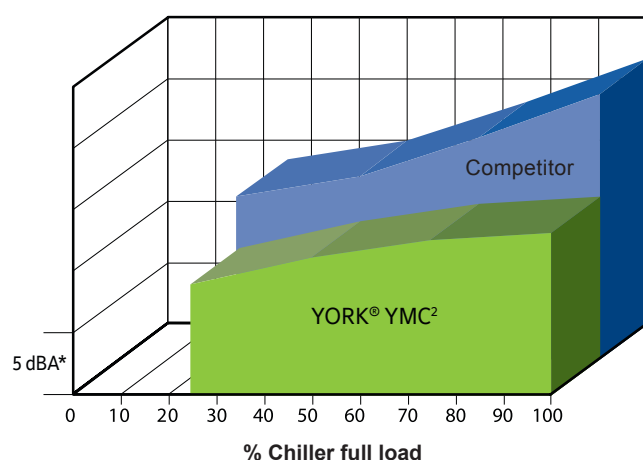
YMC ²	S0900AA	S1000AA	S1100AA	S1200AA	S1300AA
Dimensions	Length	mm	4267		
	Width	mm	1651		
	Height	mm	2362		
Shipping weight (kg)	5340	5800	5810	5810	6800
Refrigerant charge (kg)	255	280	280	390	390

NOTES:

1. All dimensions are approximate. Certified dimensions are available on request.
2. Refrigerant charge quantity and shipping weights will vary based on tube count.
3. Shipping weights are based on fully assembled and charged units.
4. Refer to product drawings for detailed weight information.

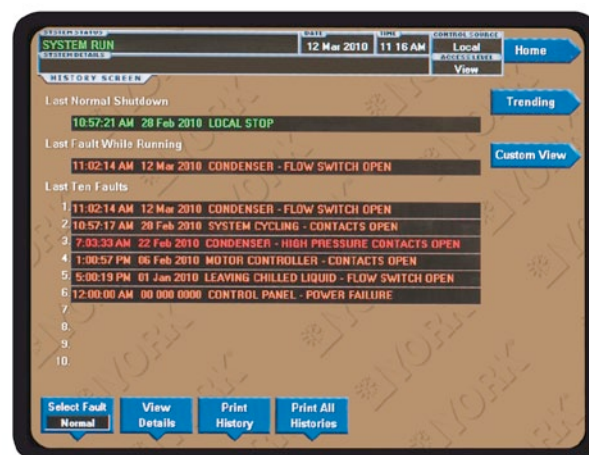
Superior sound reduction

A-Weighted sound pressure level (dBA (re: 20μPa))
Measured in accordance with AHRI-575



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.

OptiView control centre



The OptiView control centre provides complete diagnostics to speed troubleshooting.

YK

Water-cooled centrifugal chiller

Cooling capacities from 800 kW to 11250 kW

Available configurations that meet A Class energy efficiency levels at Eurovent Standard Conditions.

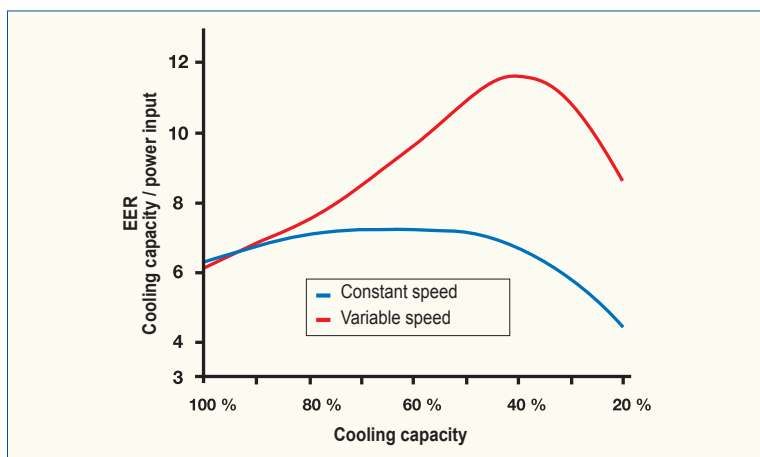


Features

- The **YORK YK** chiller is designed for air conditioning and process applications.
- The high efficiency single-stage centrifugal compressor is powered by an open-drive motor. This provides flexibility to operate the chiller with electricity, steam, or gas depending on utility rates.
- The **YK** utilizes a falling film evaporator to increase chiller efficiency and reduce refrigerant charges, which makes it ideal for LEED® building applications.
- This chiller is designed for indoor mechanical room installation and it requires a cooling tower for heat dissipation
- The inherent design flexibility of this chiller allows it to be precisely selected for any building load profile.



OptiView panel



Speed comparison

Nominal capacity

Model	Code	Cooling capacity kW
YK	Q3 - Q7	800 - 2100
	P7 - P9	1750 - 2800
	H9	2400 - 3800
	K1 - K7	3200 - 9850
YK-EP	K7 & Q3	8800 - 11250

Cooling capacities at 7°C leaving chilled water and 30 °C entering condensed water.

Heat Recovery

The YK Heat Recovery option can be used for domestic hot water preheat, process heat, facility air reheat, and humidity control. Heat recovery delivers operational savings, CO2 reductions, and reduced water consumption.



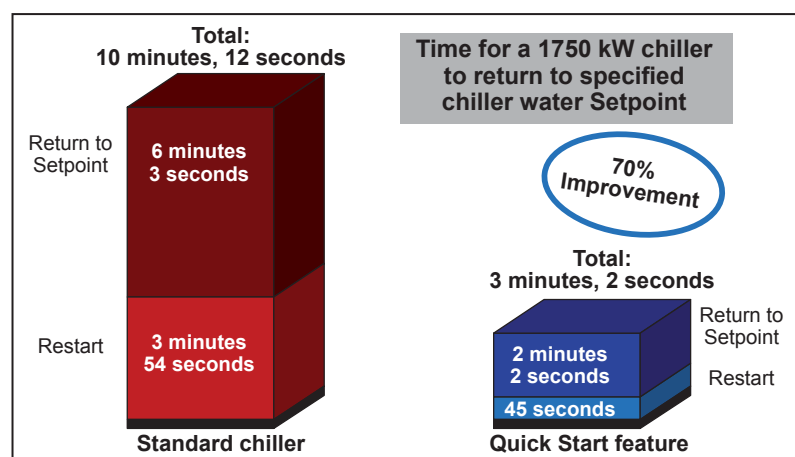
Medium Voltage Variable Speed Drive

YORK has a full line of unit mounted and floor mounted Variable Speed Drives, from 380V to 11,000V, to maximize operational savings at off design conditions; which typically occur 99% of the time!



Quick Start (only available for VSD units)

Utilize Quick Start technology to improve chiller starting times and get back to setpoint up to 70% faster than standard chiller designs!



YVWA

Water-cooled variable speed screw chiller

Cooling capacities from 703 kW to 1055 kW

At Eurovent Standard Conditions this equipment meets A Class energy efficiency levels.



Features

Our newest water-cooled chiller offers the following benefits:

Premium efficiency

The YVWA reduces operating expenses with the application of a standard variable speed drive.

Application flexibility

Tailor and tune flexibility makes the YVWA ideal for any application from thermal storage to heat pump duty.

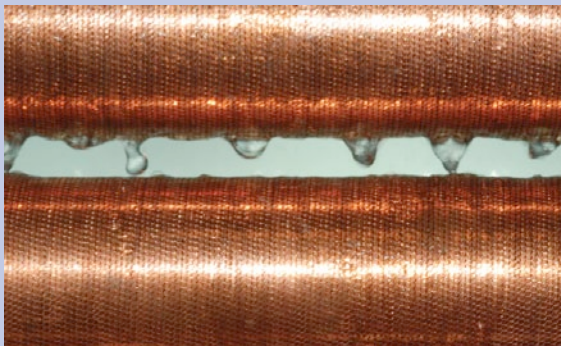
Enhanced sustainability

Achieved through high efficiency operation and low refrigerant charges.

Product confidence

Improve your peace of mind knowing our experience stands behind every chiller.

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



Reduce refrigerant charges by up to 15% beyond traditional chiller designs with the YVWA's falling film evaporator design.



The YVWA chiller can efficiently handle the high condenser pressure required for dry cooling.

Photo courtesy of Baltimore Air Coil

Nominal capacity

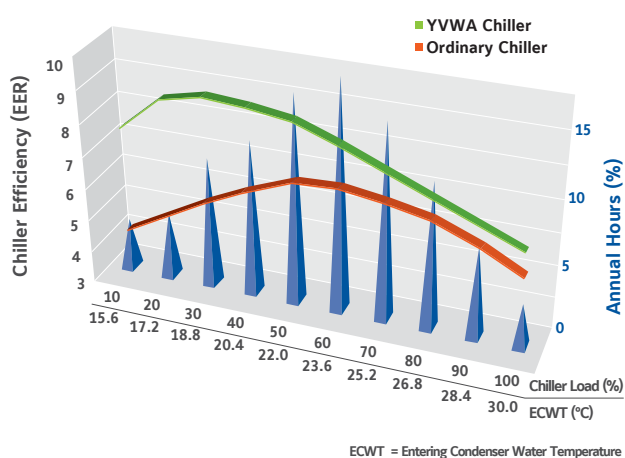
Unit	YVWA			
Cooling capacity (kW)	700	800	900	1 000
EER 100%	5.39	5.81	5.70	5.46
ESEER	7.64	8.28	8.39	7.90
Sound power level (dBA)	98	97	100	97

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

Technical data

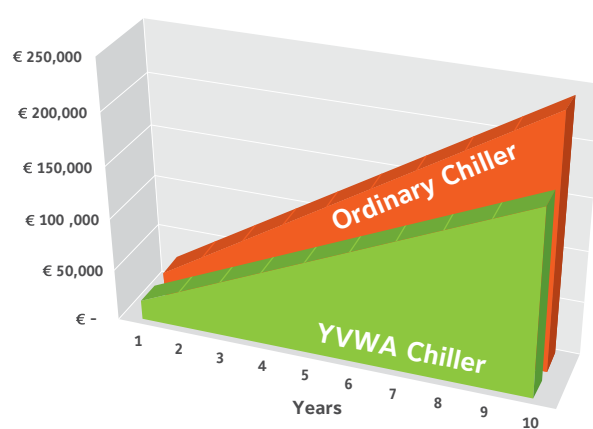
Unit	YVWA			
Dimensions	Length	mm	4 268	
	Width	mm	1 405	
	Height	mm	1 849	
Operating weight (kg)	5 957	6 336	6 412	6 260
Refrigerant charge (kg)	245	245	245	255

YVWA Efficiency vs. Ordinary Chiller



The YVWA chiller delivers superior energy performance at all operating hours.

YVWA Energy Cost vs. Ordinary Chiller



Note: 3,500 operating hours, 0.10 EUR/kWh energy rate, 800 kW design cooling load

An investment in an optimized YVWA chiller reduces energy costs by 25%.

YIA

Single stage hot water or steam powered absorption chiller

Cooling capacities from 280 kW to 3150 kW



Features

YIA chillers are available using low pressure steam or hot water. Compared to electrically driven chillers **YIA** chillers can dramatically lower system operating costs when using waste heat.

Applications particularly well suited to the **YORK YIA** absorption chiller include cogeneration, waste heat recovery from diesel or gas engine jacket water, turbine air inlet cooling and district heating and cooling installations.

Hot water units

Hot water units can operate with entering water temperature from 80 to 128°C.

Steam units

Steam units can operate with a steam pressure at generator inlet from 0.2 barg to 0.95 barg.

Refrigerant cycle

The **YORK YIA** high efficiency single-stage absorption refrigeration cycle uses water as the refrigerant and lithium bromide as the absorbent. It is the strong affinity and ease of separation that these two substances have for each other that makes the cycle work. The entire process occurs in hermetic vessels in a near complete vacuum. By using the environmental friendly ADVAGuard 750 inhibitor the internal corrosion rate and hydrogen generation is up to 8 times less than using lithium molybdate.

Chiller control

The **YORK YIA** chiller utilizes the OptiView control panel for advanced chiller control and building system integration.

Smart Purge is included to eliminate the need for time consuming manual purging of the chiller system.

Nominal capacity

YIA Model	1A1	1A2	2A3	2A4	2B1	3B2	3B3	4B4	4C1	5C2	5C3
Cooling Capacity kW	280	321	406	465	506	606	674	757	760	928	1048
EER (low temperature hot water)	0.61	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.68	0.69	0.61

YIA Model	6C4	7D1	7D2	8D3	8E1	9E2	10E3	12F1	13F2	14F3
Cooling Capacity kW	1145	1253	1415	1535	1885	2090	2265	2675	2940	3150
EER (low temperature hot water)	0.68	0.68	0.68	0.68	0.70	0.70	0.69	0.70	0.71	0.69

At 7°C leaving chilled water, 95°C entering generator water, and 29.4°C entering condenser water.

Technical data

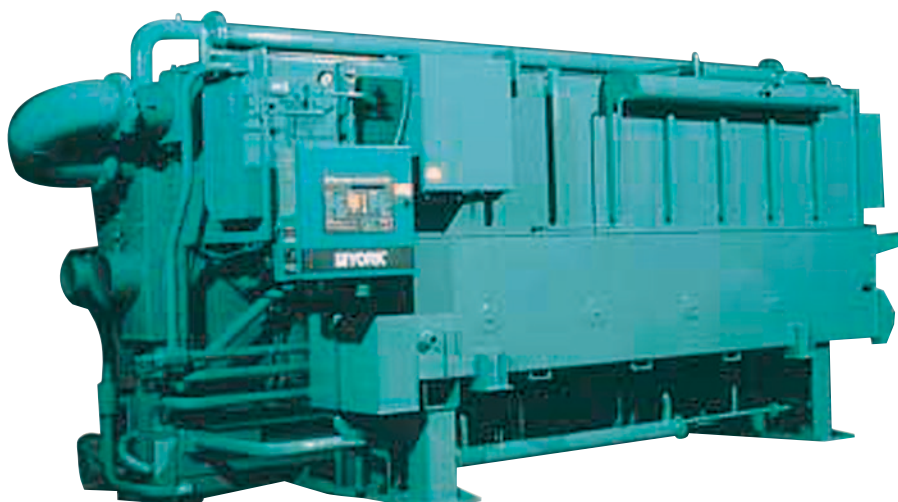
YIA Model			1A1	1A2	2A3	2A4	2B1	3B2	3B3	4B4	4C1	5C2	5C3	
Dimensions	Length	mm	3720	4330	4940	5550	4940	5550	6160	6770	5550	6160	6770	
	Width	mm	1760	1420				1580				1770		
	Height	mm	2320				2640				3020			
Operating weight kg			4950	5500	6130	6590	7900	8540	9490	10490	11400	12260	13620	

YIA Model			6C4	7D1	7D2	8D3	8E1	9E2	10E3	12F1	13F2	14F3
Dimensions	Length	mm	7530	6160	6770	7530	6870	7630		8390		9150
	Width	mm	1770	2110	1670	2110	2290		2480			
	Height	mm	3020	3540				3840		4240		
Operating weight kg			14760	17890	19840	21800	24110	26830	29790	35550	39050	41140

YPC-ST

Two-stage steam fed absorption chiller

Cooling capacities from 1055 kW to 2370 kW



Features

- The **YORK YPC** high efficiency two-stage absorption chiller uses water as the refrigerant and lithium bromide as the absorbent.
- The **YORK YPC** chiller is designed for chilled water applications.
- Product quality, reliability, and service after the sale is evident by having many YORK brand absorption chillers in operation for more than 35 years.
- ADVAGuard750 is used in YORK absorption chillers to extend chiller life by reducing the corrosion and non-condensable gas generation rates by more than eight (8) times beyond conventional molybdate inhibitors.
- An automatic refrigerant purge system is utilized to eliminate the need for time consuming manual purging of the chiller.

Nominal capacity and technical data

YPC-ST Model	14SC	16SL	17S	18S	19S
Cooling Capacity (kW)	1055	1547	1705	2039	2373
Length / Width / Height (m)	5.1 / 1.9 / 2.3	6.0 / 2.3 / 2.6	5.9 / 2.3 / 2.6	7.0 / 2.3 / 2.8	8.0/2.3/2.8
Operating weight (kg)	11030	17150	17510	20780	24190

Leaving chilled liquid 7°C Entering Tower Water 30°C.
Entering Steam 8 psi.

YPC-F

Two-stage direct fired chiller-heater

Cooling capacities from 703 kW to 2370 kW

Heating capacities from 565 kW to 1970 kW



Features

YPC-F is designed to provide both chilled or hot water. Both cooling and heating operations, with hot water up to 60°C, are performed through the evaporator as standard. Optionally an additional hot water heat exchanger providing hot water up to 79,4°C can be installed. With this option a parallel cooling and heating operation is possible.

Refrigerant cycle

The **YORK YPC** high efficiency two-stage absorption refrigeration cycle uses water as the refrigerant and lithium bromide as the absorbent. It is the strong affinity that these two substances have for each other that makes the cycle work. The entire process occurs in hermetic vessels in a near complete vacuum.

YORK's exclusive two-way split of solution flow allows the unit to operate at much lower solution concentrations and temperatures than in series flow systems. This dramatically increases the efficiency of the unit and virtually eliminates crystallisation problems. By using the environmentally friendly ADVAGuard 750 inhibitor the internal corrosion rate and hydrogen generation is up to 8 times less than using lithium molybdate.

Burner

YPC-F units can be operated by either natural gas, propane gas or fuel oil. Capacity control is accomplished by modulating the burner's firing rate.

Nominal capacity and technical data

YPC-F Model	12SC	13SC	14SC	15SL	16S	16SL	17S	18S	19S
Cooling Capacity (kW)	703	809	1055	1231	1407	1547	1705	2039	2373
Heating Capacity (kW)	563	675	844	1013	1125	1268	1407	1688	1969
Length / Width / Height (m)	4.0/1.9/2.3	4.0/2.0/2.3	5.0/1.9/2.3	5.0/2.5/2.7	5.0/2.5/2.7	6.0/2.6/2.8	6.0/2.6/2.8	7.0/2.7/3.0	8.0/2.7/3.0
Operating weight (kg)	9490	10830	12130	17360	17580	21180	21580	25190	29720

Leaving chilled liquid 7°C Entering Tower Water 30°C.
Leaving Hot Water 60°C.

YD

Water-cooled centrifugal chiller Dual centrifugal compressors

Cooling capacities from 7000 kW to 21000 kW

Smallest footprint per kW in the industry

Ideal Applications: district cooling, building retrofits / additions



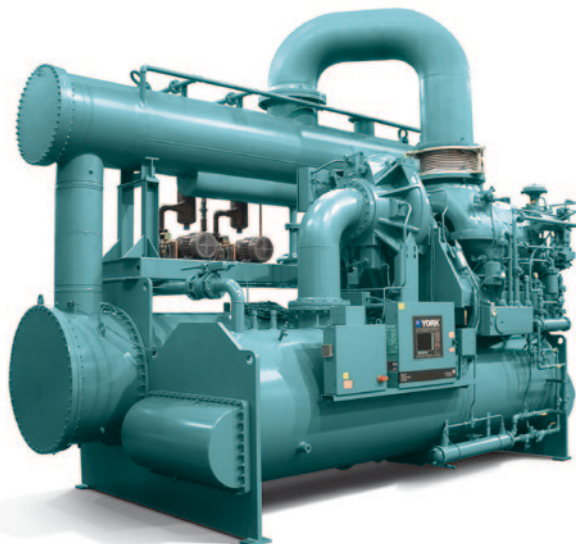
YST

Water-cooled centrifugal chiller Steam turbine driven centrifugal compressor

Cooling capacities from 2460 kW to 9850 kW

Packaged steam condenser, automatic start-up

Ideal Applications: co-generation, hybrid plants



CYK

Water-cooled centrifugal chiller Compound centrifugal compressors

Cooling capacities from 2100 kW to 8800 kW

High chiller lift capabilities

Ideal Applications: heat pump, process / industrial cooling, air-cooled condensing, brine chilling



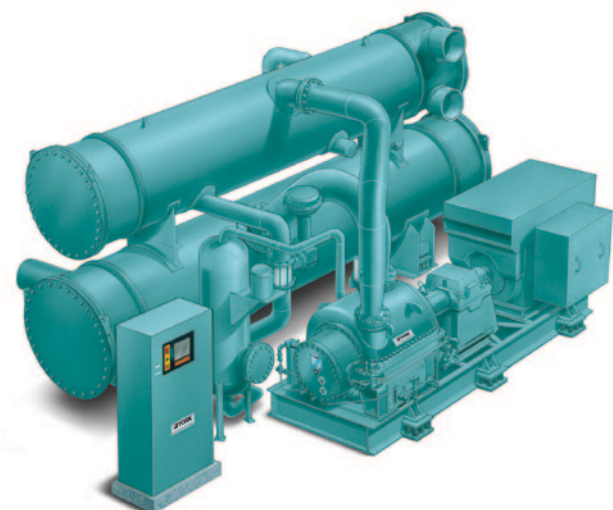
Titan OM

Water-cooled centrifugal chiller Electric motor, steam-turbine, or gas-engine driven centrifugal compressor

Cooling capacities from 10550 kW to 19350 kW

Flexibility, longest life expectancy

Ideal Applications: heat pump, process / industrial cooling, air-cooled condensing, brine chilling, district cooling

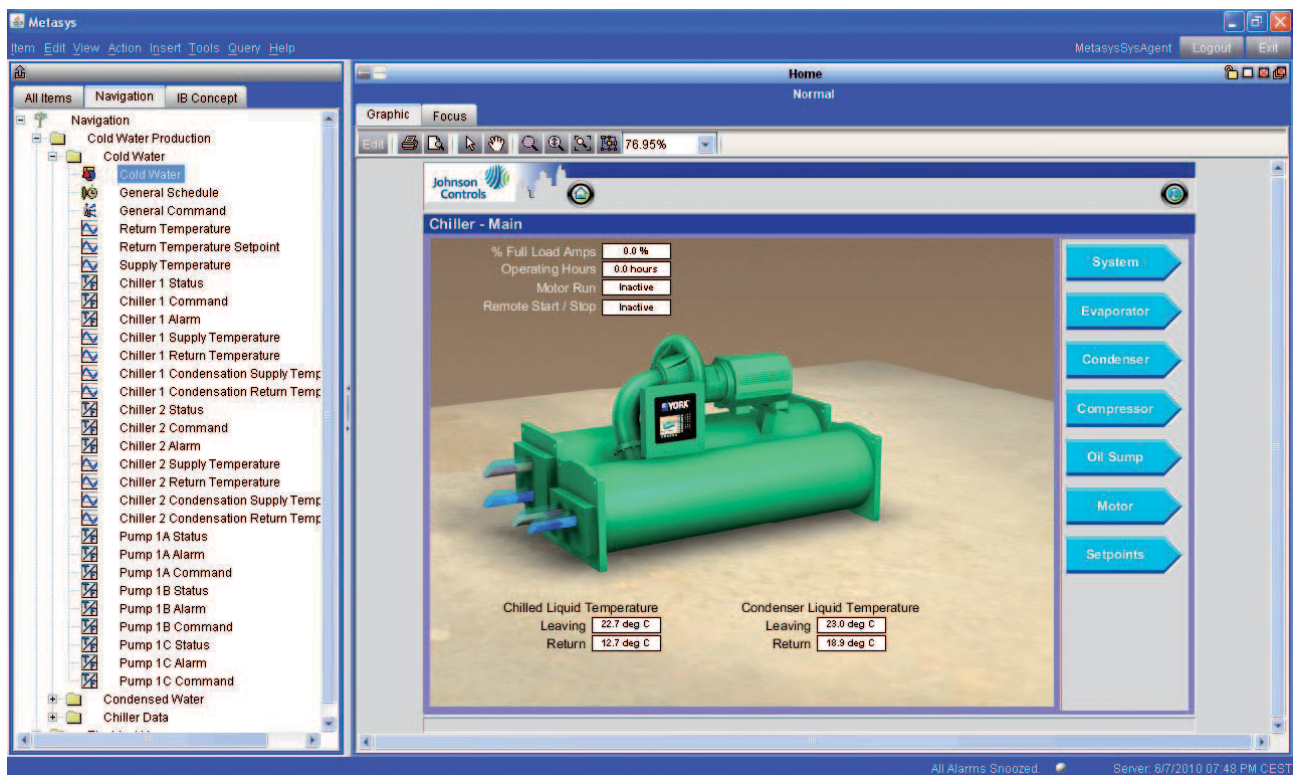


Central Plant Optimization™ 10

A facility's central chiller plant typically uses 20% of the building's total energy. Managing this load, while still maintaining occupant comfort, is a primary strategy for overall energy management.

Johnson Controls® Central Plant Optimization™ 10 (CPO 10) provides such a strategy combining expertise from designing YORK® chillers and Metasys® controls to save energy and improve reliability in the facility.

The application uses tested best practices to select the most efficient combination of chillers, pumps and cooling towers to match the building load. It then commands the selected devices providing the necessary sequencing of pumps, isolation valves and main equipment, while observing safety and stability operation requirements.



Creating a complex program without programming

The System Selection Tool (SST) is a control program generator that relies on defining the characteristics of the chiller plant and its control strategies. The tool supports **selection and sequencing** of

- up to eight chillers of different sizes
- up to eight (each) primary and secondary chilled water pumps of varying pumping capacities
- up to eight condenser water pumps
- cooling towers and bypass valve, including single speed, multi-speed, and vernier control
- devices that considers user-defined efficiency rating, runtime equalization, and the number-of-starts/number-of-stops equalization

Furthermore, **control definition** for the chiller plant in a single Field Equipment Controller (FEC)/Network Controller Engine (NCE), if supported by available memory and point Input/Output (I/O), or split across multiple FECs/NCEs, is offered.



Flexibility, ready for use



A **variety of primary control strategies** are also available, including

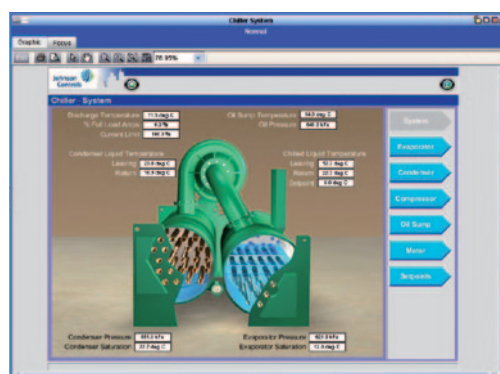
- measuring building chilled-water flow and differential temperature
- chillers' kW load flow through a decoupler pipe in a primary/secondary system differential temperature only in a constant speed chilled water pump system

It is also possible to select **dozens of secondary strategies**, such as

- open loop control of the cooling towers (as defined by the American Society of Heating, Refrigerating and Air-Conditioning Engineers)
- closed loop control of condenser-water setpoint

After making the selections, SST **generates a complete program** by linking together appropriate software modules. This process removes the variability commonly found in totally custom-generated programs using a traditional software program editor.

Once the software modules are linked, the tool allows the entry of all equipment parameters. The resulting program can also be run in a simulator mode to verify proper operation before downloading it into Metasys®.





Air Handling Systems & Terminal Devices

CUSTOM & "HYGIENIC" AIR HANDLING UNITS

FAN COIL UNITS

CLOSE CONTROL UNITS

SMARTPAC – FACTORY PACKAGED CONTROLS



YMA

Custom air handling units

A complete range from 0.25 m³/s to 50 m³/s



Features

The YMA family of air handling units consists of a range of models having air volumes ranging from 0.25 m³/s to 50 m³/s and total static pressures as high as 2000 Pascal: to ensure maximum flexibility and the best solution for your application, units are available in increments of 40mm in height and 50mm in width.

YMA Air Handling Units can be manufactured in varied configurations, with a wide selection of components, to meet customer requirements.

Units are also available in line with the requirements of hospital sector specifications.



Units may include combinations of any of the following:

- Single or double decked units.
- Indoor or outdoor applications - Outdoor units are available with a flat or sloping roof, louvres, rainhoods, birdscreens and special finishes.
- Site assembled units.
Where space constraints restrict the size of a single item modules can easily be aligned and locked together by gaskets and stainless steel bolts inserted into factory predrilled assembly holes.
- Air mixing boxes and various filter options.
- Gas fired burners.
- Cooling and heating coils.
- Humidifiers
- Heat recovery systems.
- UV sterilising lamps.
- Dessicant and thermal wheels.
- Sound attenuation.
- ATEX Certification.
- Factory fitted controls and sensors with YORK SmartPAC Factory Packaged Controls.
These include all necessary piping, wiring, controls and refrigeration equipment to provide a complete central air conditioning plant.

YMA-C

"Hygienic" Air Handling Units

A complete range from 0.8 m³/s to 60 m³/s



Features

A range of YORK® "Hygienic" Air Handling Units, offering unique solutions to the application of Central Station Air Conditioning in a sterile environment.

There are many factors affecting air quality, comfort conditions and the efficient operation of Air Handling Units.

These include:

- Mechanical performance
- Thermal transmission through the Air Handling Unit casing
- Air leakage
- Noise transmission
- Bacteria protection
- Air cleanliness and filter efficiency
- Fan and motor efficiency
- Dehumidification
- Humidification

These factors are valid for the air conditioning of commercial buildings and hotels etc., as well as hygiene sensitive environments such as hospitals, laboratories, clean rooms, food processing and a variety of other process systems.

YORK® YMA-C AHU'S have been specifically designed to address all of these factors:

- Mechanical performance
- Thermal efficiency
- Air leakage and cleanliness

YORK® Fan Coil units

Driven by innovative trends and modern technology, the YORK® Fan Coil Units have been designed around a platform of models, versions and accessories, all of which have been independently tested and certified by Eurovent. The YORK® Fan Coil range meets today's demanding requirements of performance, size, acoustics, low energy, ease of installation and maintenance.



ECM Technology



Running costs. Energy consumption. Life cycle.

These are 3 issues that are becoming more and more important in the choice of Fan Coil Units. With these criteria in mind, Johnson Controls offers the ECM range of FCU.

ECM technology comprises a **brushless motor** combined to a **dedicated electronic device** (inverter). In comparison to conventional units equipped with asynchronous three-speed motors, the fancoil and cassette units with brushless motors can obtain a considerable energy saving, by **reducing power consumption up to 70%**.

Air flow rate can be varied in continuous by means of a 1-10 V signal generated both by our controls or by independent controls systems. The continuous air flow control improves the **acoustic comfort** and allows a more punctual reply to the variation of the thermal loads, enhancing the **stability of ambient temperature**.

Technology

ECM technology consists of a brushless motor combined with an inverter managed by specific regulators. The controller uses a modulating signal with 0-10VDC tension to regulate the fan speed.

The brushless electric motor is composed of a rotor having permanent magnets, whose magnetic fields interact with the ones produced by the stator winding. The **transfer of current is no longer by mechanical commutator** (sliding contacts) **but by an electronic commutation system**: one electronic controller (inverter) powers the motor's stator and generates rotating magnetic fields, that in turn determine the rotor's speed.

Brushless motor develop much less heat than the traditional brushed motors and they have much lower mechanical resistance than the standard asynchronous maintenance. The absence of brushes eliminates also the main source of electromagnetic noise.

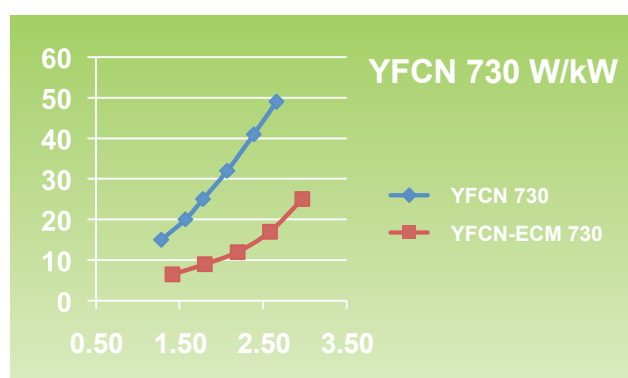
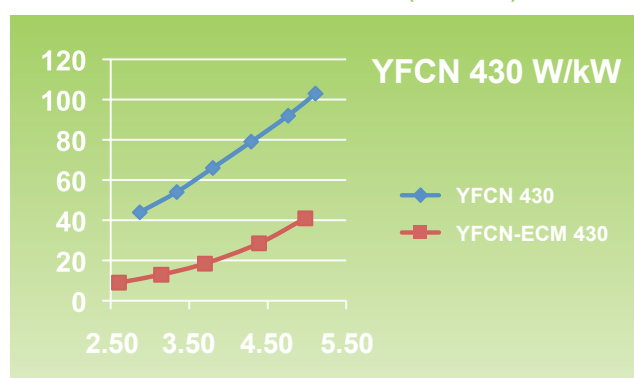
Features

- Brushless motor with inverter.
- 0-10VDC control signal.
- Low mechanical resistance and heat gain.
- Continuous regulation of the fan speed.
- Specifically designed electronic and digital regulators, also for BMS systems.
- Possibility to manually set the desired three fan speeds (MIN/MED/MAX).
- Available for fan coil and cassette units.

Advantages (compared to traditional brushed motors)

- Energy saving: electrical absorption reduced up to 70%.
- Higher efficiency: possibility to adapt the air volume and the capacities accordingly to the actual room loads.
- Higher comfort: reduced variation of the temperature and relative humidity in the room.
- Extremely quiet operation.
- Reduced wear and higher reliability.
- Longer life expectancy of the motor.

Power consumption: YFCN versus YFCN-ECM (W/kW)



YORK® Close Control units

Maintaining a constant temperature, purity and humidity of air is essential for ensuring a stable environment for critical electronic and computer equipment, this is why there is the need for close control air conditioning. Unlike comfort air conditioning, close control systems must operate constantly 24/7 requiring high reliability and minimal power consumption. Johnson Controls knows that no two close control requirements are the same, this is why the YORK® range of custom close control units offers quiet, compact and energy efficient equipment that can be configured to needed requirements.



An extensive offering

- cooling capacities of **up to 220kw (chilled water) or 100kw (direct expansion)** with optional free cooling models. Up flow or down flow configuration, either as self-contained packaged units or suitable for connection to remote condensers, are also available
- **optional direct expansion units** fitted with scroll compressors, which have much lower noise and energy consumption than reciprocating compressors
- **R410a** refrigerant units available
- optional **Free Cooling coil** to reduce energy consumption required through use of mechanical cooling
- plug fan with **Electronically Commuted 'EC' fans** option, to allow fully modulating control of airflow
- **low component face velocities**, for a lower total pressure drop and reduced energy consumption
- **minimised dimensions**, enabling one of the market's greatest ratios between sensible cooling capacity and base foot print

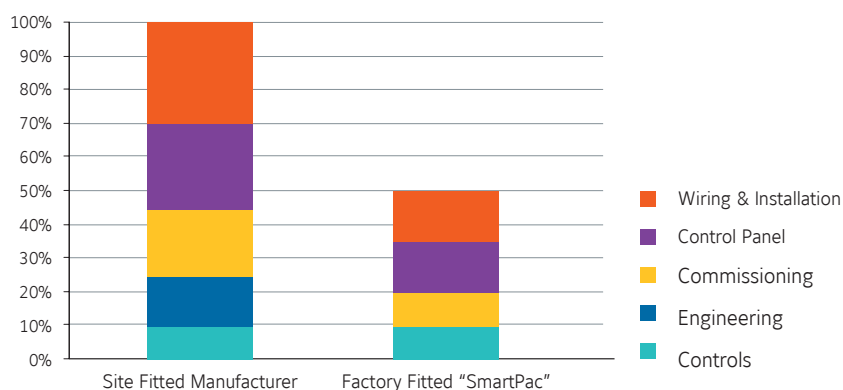


SmartPac

SmartPac from Johnson Controls offers factory packaged control solutions that reduce cost, enhance quality and optimise site time.

Once on site, the equipment can be started immediately. Commissioning time is dramatically reduced, allowing to better control the project costs through simplifying equipment installation and commissioning.

Quality is ensured through application and testing to European Installation regulations at the factory. Pre-installed software is configured to deliver air at the specified volume, temperature and humidity.



SmartPac and YORK® Air Handling units

The Air Handling Unit arrives on site **ready to connect** to the site network, and final commission is simplified through the unit's keypad and display.

Panel Power wiring, controls wiring, Variable Speed Drive, pre-engineered controller and required peripheral devices are all supplied, factory fitted and tested.



SmartPac and YORK® Fan Coil units

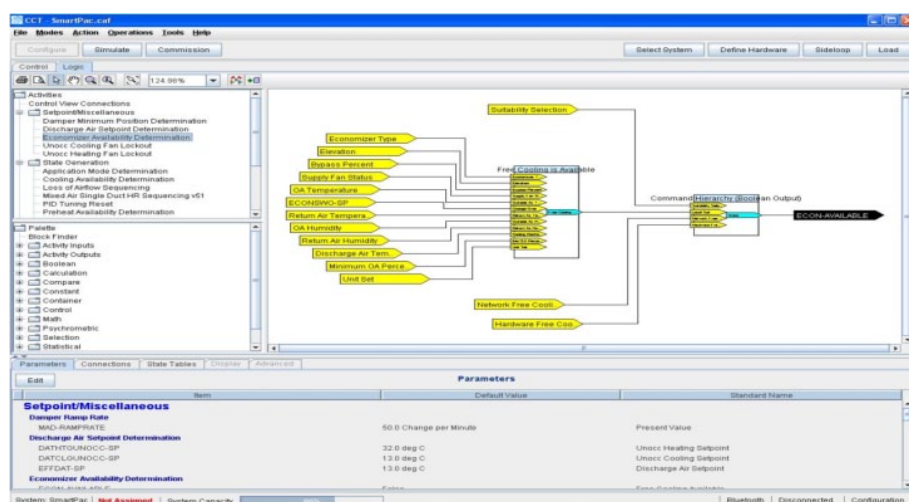
YORK® Fan Coil Units are available with factory packaged controls and numerous options for controllers and valves **to allow reduced installation time on site.**

Either EUBAC approved or alternative configurable controllers are offered, and a choice of BACNet, N2 Open or LON communication options is no extra cost. Valve requirements can also be met with a wide range of modulating and on/off actuators and isolation valves available and factory fitted.



SmartPac and YORK® Roof Top & Close Control units

Factory packaged controls' solution enable, to **dramatically reduce on-site commissioning costs.** Both are delivered to site with pre-installed controls, factory tested and ready to apply the power.



SmartPac and YORK® Standard Control panel

With a standardized design the YORK® Airside Equipment is a **cost effective solution.** Furthermore, Variable Speed Drives give extra efficiency communicating the Johnson controller in either full native BACNet or LON or N2 protocols allowing seamless communication with existing control systems.

YORK AIR-CONDITIONING PRODUCTS



Comprehensive Building Solutions

LIGHT COMMERCIAL AIR CONDITIONING

INDUSTRIAL REFRIGERATION

METASYS® BUILDING AUTOMATION AND
CONTROL SYSTEMS

Light commercial air conditioning

Johnson Controls large offering enables to meet the light commercial sector's specific needs, providing one solution for each type of application.

Hydro systems

Johnson Controls designs, manufactures and services a wide range of products for air conditioning markets, including water and air cooled chillers, fan coil units plus controls. A wide range of solutions is offered to meet all needs and make the end users comfortable with sophisticated solutions.

Air systems

A complete range of air systems are designed, produced and fully factory tested in Europe. This ensures high tech products with unbeatable lead time and low energy solution with enhanced features. Johnson Controls YKN2open control board fitted in the whole range gives access to remote monitoring, helping service and maintenance to keep the units operative in optimum conditions.





ECOFRIO v2

Air cooled chiller /
Air to water heat pump

YLCA / YLHA 12 to 150

A complete range from 12 to 151 kW



YHK & YHK ECM

Hydro Cassette &
Inverter Hydro Cassette

YHK 20 to 110 / YHK ECM 25 to 95

A complete range from 1.3 to 11.1 kW



ACTIVA Rooftop

Cooling only / Cooling only + gas /
Heat pump / Heat pump + gas

ARC-ARG-ARH-ARD 017 to 090 A

A complete range from 17 up to 84 kW



Industrial refrigeration

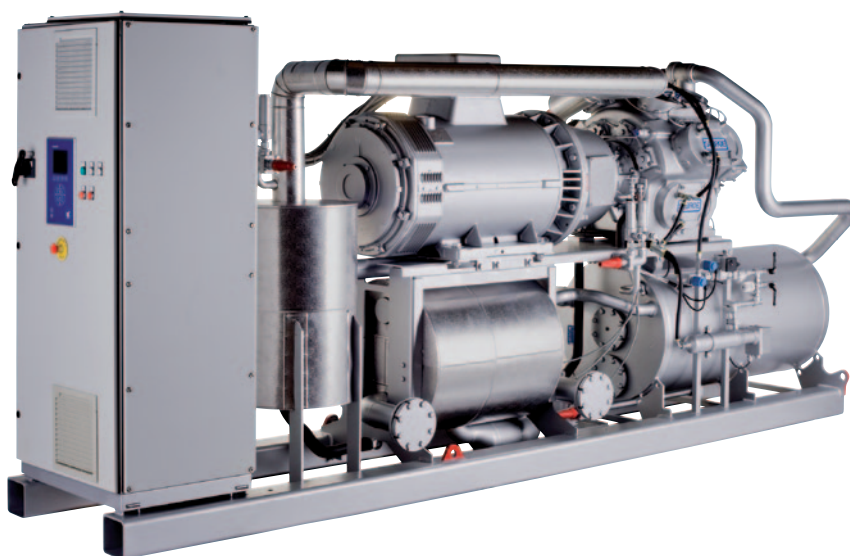


Johnson Controls Industrial Refrigeration designs, manufactures, tests, installs and commissions highly efficient and environmentally sustainable refrigeration solutions for the demanding conditions encountered in industrial environments.

HeatPAC

Packaged ammonia heat pump – ready to run

HeatPAC is an extremely compact heat pump package based on Sabroe HPO/HPC **high-pressure reciprocating compressors**, using environmentally responsible ammonia as refrigerant. This unique integrated configuration is designed to provide exceptional heat pump performance from the smallest possible footprint, and with only a very small refrigerant charge. Factory assembly and end-of-line capacity testing ensure very high degrees of safety and reliability.



Main benefits:

- High reliability – proven components
- Fast installation – quick start-up
- High efficiency – high saving potential



HeatPAC packaged ammonia heat pumps

Type	Heating capacity kW	Cooling capacity kW	Power consumption kW	EER	R717 charge kg	Dry weight kg	Dimensions			Sound press. level **) dB(A)
							L mm	W mm	H mm	
HPAC 24-W *)	240	202	38	6.3	20	2020	2800	1000	2000	75
HPAC 26-W *)	359	302	57	6.3	23	2230	2850	1000	2000	76
HPAC 28-W *)	484	408	77	6.3	25	2420	2900	1000	2000	77
HPAC 104-W *)	570	478	93	6.1	28	2630	3050	1000	2000	81
HPAC 106-W *)	852	715	138	6.2	37	3300	3750	1000	2000	82
HPAC 108-W *)	1149	965	186	6.2	48	3950	4050	1000	2000	83

Condenser water inlet +64°C, outlet +70°C. Evaporator water inlet +39°C, outlet +34°C.

Motor: 3 x 400V / 50Hz, 1470 rpm

EER ratio average = heating capacity / power consumption = 6.2

Capacities are nominal values

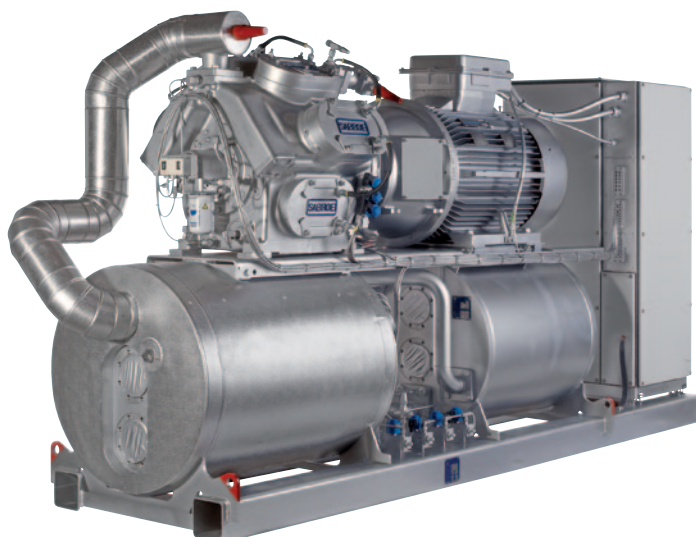
*) W = Heat pump unit water/water

**) Mean sound pressure levels in free field over reflecting plane, distance at 1 m. All data are based on sound power measurements.

ChillPAC

Packaged ammonia chillers – ready to run

Johnson Controls offers a comprehensive range of ChillPAC ammonia chillers consisting of **15 models** – optimised to meet the requirements in different market segments. **Customised solutions** are also available on request. All units are supplied with Y/D starters or variable-speed drive as standard. All ChillPAC ammonia chillers are supplied with PED approval (European Pressure Equipment Directive). Other approvals are available on request.



Main benefits:

- Fast installation – quick start-up
- High reliability – 100% factory tested
- Minimised life cycle costs
- High safety standards – small refrigerant charge



ChillPAC water chillers (water: inlet +12°C, outlet +7°C)

Type	Cooling capacity kW	EER	R717 charge kg	Dry weight kg	Dimensions			Sound press.level *) dB(A)
					L mm	W mm	H mm	
CPAC 104S-A	230	5.1	13	3300	2900	1000	2000	78
CPAC 104L-A	294	5.3	15	3476	2900	1000	2000	79
CPAC 106S-A	346	5.2	20	3725	3100	1000	2000	79
CPAC 104E-A	357	5.4	18	3555	3100	1000	2000	79
CPAC 106L-A	442	5.4	22	3814	3100	1000	2000	80
CPAC 108S-A	466	5.3	24	4037	3300	1000	2000	80
CPAC 106E-A	538	5.4	27	4045	3200	1000	2000	81
CPAC 108L-A	590	5.4	30	4203	3200	1000	2000	82
CPAC 112S-A	695	5.4	36	5120	3800	1000	2200	82
CPAC 108E-A	718	5.5	36	4510	3500	1000	2000	82
CPAC 112L-A	878	5.4	43	5633	4200	1000	2200	83
CPAC 116S-A	923	5.3	47	5962	4300	1000	2200	83
CPAC 112E-A	1066	5.4	53	6037	4600	1000	2200	83
CPAC 116L-A	1173	5.3	58	6524	4800	1000	2200	83
CPAC 116E-A	1398	5.3	62	6678	5000	1000	2200	84

ChillPAC brine chillers (ethylene glycol 30%: inlet -4°C, outlet -8°C)

Type	Cooling capacity kW	EER	R717 charge kg	Dry weight kg	Dimensions			Sound press.level *) dB(A)
					L mm	W mm	H mm	
CPAC 104S-C	117	3.2	13	3170	2900	1000	2000	78
CPAC 104L-C	151	3.2	15	3341	3000	1000	2000	79
CPAC 106S-C	173	3.2	17	3471	3000	1000	2000	79
CPAC 104E-C	187	3.2	18	3534	3000	1000	2000	79
CPAC 106L-C	225	3.2	20	3971	3000	1000	2000	80
CPAC 108S-C	230	3.2	20	3743	3200	1000	2000	80
CPAC 106E-C	273	3.2	21	3730	3200	1000	2000	81
CPAC 108L-C	297	3.2	23	3983	3200	1000	2000	82
CPAC 112S-C	341	3.2	27	4749	3800	1000	2200	82
CPAC 108E-C	364	3.2	28	4230	3400	1000	2000	82
CPAC 112L-C	441	3.2	33	5232	4100	1000	2150	84
CPAC 116S-C	450	3.2	34	5366	4100	1000	2150	83
CPAC 112E-C	543	3.2	41	5566	4100	1000	2150	84
CPAC 116L-C	587	3.2	46	5803	4300	1000	2150	84
CPAC 116E-C	718	3.2	52	6234	4400	1000	2150	83

Condenser: water inlet +30°C, outlet +35°C. Motor: 3 x 400 V, 50 Hz, 1460 rpm

The above data are only valid for the stated temperatures and operating conditions. Capacities are nominal.

A = Air conditioning application (temperature above 0°C)

C = Chiller application (temperature below 0°C)

*) Mean sound pressure levels in free field over reflecting plane, distance at 1 m.

All data are based on sound power measurements made according to ISO 9614-2



Manufacturer reserves the rights to change specifications without prior notice.

Metasys® Building Automation and Control Systems

Metasys® building management system from Johnson Controls ensures all of the building systems – comfort controls, lighting, fire safety, security and HVAC equipment – operate together in harmony. With an innovative, IT-based infrastructure, software and wireless capabilities, Metasys® is the one building management system that coordinates and organizes all the information logically to deliver it where and when needed, giving more control and easier access to information than any other system of its kind.

Already the winner of the 2009 Frost & Sullivan North American BAS Market Leadership Award, Metasys® now offers even more.

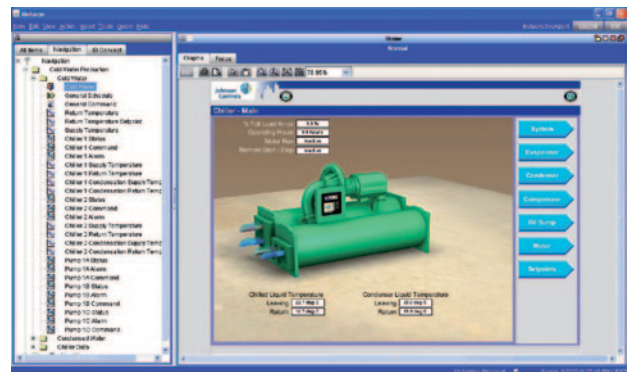
Ease of use

- Easy to configure and deploy
- No special training is required to use it
- *Enhanced Ready Access Portal* (RAP) graphics capability, combined with the tenant user setup capabilities, deliver targeted views of data to any building occupants. It's also now compatible with Apple iPhone® or iPod® Touch platforms.



More efficiency, less costs

- The Energy Essentials leverages the Metasys® Advanced Reporting System to take the existing data and present it in an organized and informative way, providing easy-to-configure, easy-to-use and actionable energy reports
- The improved Johnson Controls Central Plant Optimization™ 10 (CPO 10) helps facility managers operate their chiller plants more efficiently. CPO algorithms are used to operate and sequence plant equipment in an efficient and reliable manner, and to ensure that runtime, starts and stops are equalized across the individual plant components saving energy and improving reliability in the facility.



Single platform communication

- Enhanced, single platform interface of thousands of different hardwired and wireless systems, devices and equipment.
- Even more control options and better information access by users, thanks to:
 - Field Equipment Controllers redesigning
 - Terminal Equipment Controller updates and improvements
 - Added wireless and network sensors
 - Enhanced software and firmware



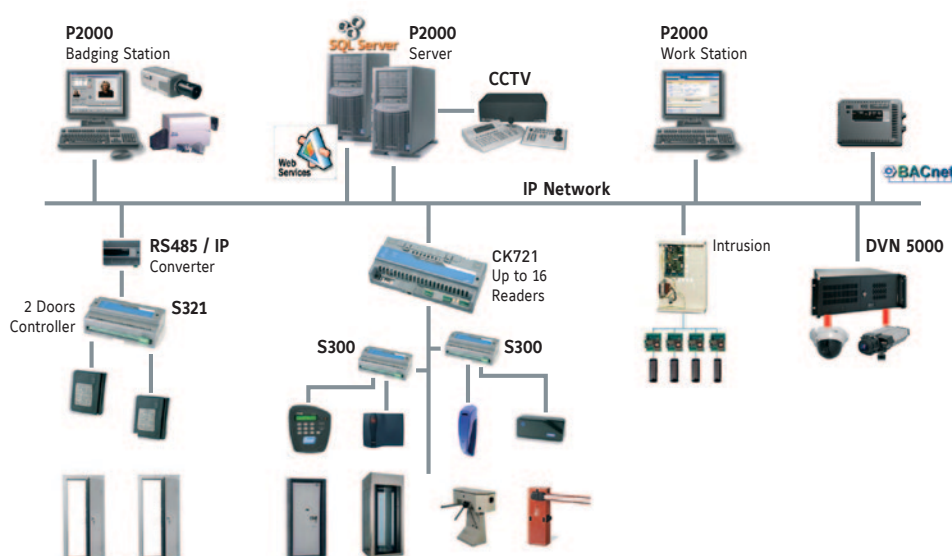
Wireless Capabilities

- Increased control flexibility, streamlines retrofits and faster download times, thanks to the latest wireless technologies that Metasys® incorporates into more devices.
- At system's user interface, network automation, field controller or room sensing levels, Wireless Building Technologies from Johnson Controls always result in increased application flexibility and cost effectiveness.



Security features

- Metasys® now incorporates P2000 Security Management System, whose software and network controllers ensure the safety of employees and security of company assets.
- P2000 open integration platform, designed for interoperability with a variety of security subsystems including access control, alarm & intrusion detection, video surveillance, visitor management.



About Johnson Controls

Johnson Controls delivers products, services and solutions that increase energy efficiency and lower operating costs in buildings for more than one million customers.

Operating from 500 branch offices in more than 150 countries, the company is a leading provider of equipment, controls and services for heating, ventilating, air-conditioning, refrigeration and security systems. Johnson Controls is involved in more than 500 renewable energy projects including solar, wind and geothermal technologies.

Its solutions have reduced carbon dioxide emissions by 13.6 million metric tons and generated savings of \$7.5 billion since 2000. Many of the world's largest companies rely on Johnson Controls to manage 1.5 billion square feet of their commercial real estate.

