



Equipment and Services
Integrated HVAC-R Solutions
for Commercial
and Industrial Markets



Who we are

Trane is a leading provider of cooling, heating, ventilating, air conditioning and refrigeration (HVAC-R) systems, controls and services for commercial and industrial applications.

Founded in 1913 by James Trane and his son Reuben, Trane has a long history of industry-defining innovations in intelligent, energy efficient and sustainable solutions for diverse building comfort and process needs.

Trane's integrated HVAC-R systems and services enhance business performance, improve quality of life for building occupants and enable owners and operators to meet their business and operational objectives.

Total lifecycle management

HVAC-R systems are at the core of your building infrastructure and have a lifespan of over 30 years. Backed by over 100 years of experience, Trane understands that the operating costs of your HVAC-R infrastructure alone can account for almost 4 times the cost of your capital investment.

The costs of energy, maintenance, repairs and associated labor can amount up to 80% of building lifecycle costs. Trane offers expertise that enables you to manage and optimize your HVAC-R system lifecycle and reduce your total cost of ownership.

- At the planning and concept stages, we bring you the technical expertise and applications' know-how for different building types and help ensure that initial specifications get off to the right start.
- At the design stage, Trane engineers work with you to define and select the best equipment and control solutions that meet your specific needs.
- Trane offers start-up, turnkey installation and commissioning for projects.
- To enable smooth operations, we offer a wide portfolio of services ranging from temporary cooling solutions to energy monitoring and retrofits that give you peace of mind and sustain your investment for life.

Integrated HVAC-R systems

Trane manufactures, manages and services HVAC-R equipment, systems and controls for buildings and industrial processes all over the world. Through our global research and development facilities, we dedicate extensive resources in innovation for HVAC-R systems. Whether it concerns a system upgrade, renovation or new construction, our projects focus on:

- Reliability
- Energy efficiency
- Environmental responsibility
- Technological expertise
- State-of-the-art design
- Operational efficiency
- Fulfilling specific business needs, no matter how simple or complex



Solutions to meet your business needs

Trane has over a century of global experience providing customized HVAC-R systems and service applications for diverse vertical markets. We offer the broadest equipment portfolio in the industry, cover applications from deep freezing to extreme heating, and we partner with you to develop and deliver the best solutions that help meet your business goals.



Data centers: A data center requires systems' know-how to ensure adequate, energy efficient on-demand cooling, increase reliability, control costs and maximize uptime. From high efficiency cooling equipment, use of solutions like ice storage and free cooling, to system controls and total HVAC infrastructure management, Trane delivers reliable systems expertise that helps you improve Power Usage Effectiveness (PUE) and generate up to 60% energy savings.



Food and beverage: Either for simple warehousing or complex food processing, Trane develops integrated low temperature systems that can meet air distribution, temperature, humidity and filtration requirements. We partner with you to build and sustain high quality, productive manufacturing, storage and processing environments that comply with food safety regulations.



Healthcare: Trane addresses healthcare facility needs with the most advanced HVAC equipment and controls that meet the precise environmental requirements for individual spaces. We foster thermal comfort and high Indoor Air Quality (IAQ) to improve patient outcomes, maintain a hygienic healing environment and achieve operational efficiency 24/7/365.



Pharmaceuticals: Trane helps you comply with Good Manufacturing Practices (GMP) with HVAC systems that are designed to maintain temperature, pressures, humidity, filtration and airflow in manufacturing, storage areas and in clean rooms. Trane systems are proven to deliver energy savings and carbon footprint reduction for pharmaceutical manufacturers.



Commercial buildings: For commercial real estate, offices or multi-purpose buildings, Trane customizes HVAC systems with integrated scalable controls to help you manage your assets for optimum energy efficiency, occupant comfort and staff productivity.



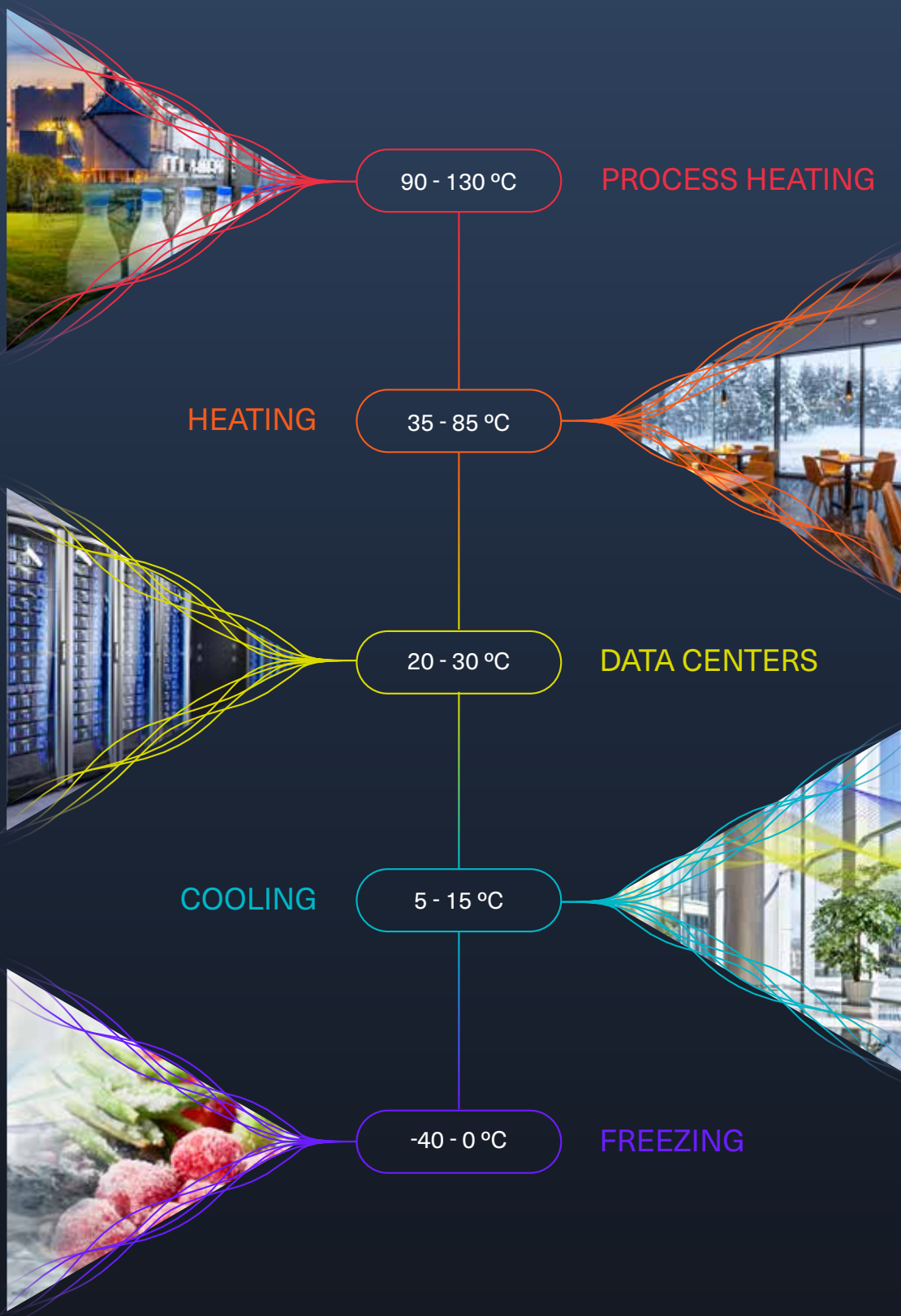
Hospitality: From empowering guest room comfort, sustaining facilities with complete care to enabling energy management and temporary cooling for outdoor recreation or events, Trane helps you deliver seamless hospitality at your hotel, restaurant, conference center or entertainment facility. Our flexible HVAC solutions ensure optimum environmental comfort for your guest experience while minimizing operating costs.



Other industries: From chemicals and plastics manufacturing to electronics, energy rentals, utilities and district cooling/heating. Trane has extensive expertise in delivering high efficiency HVAC equipment, controls and services. Trane solutions are customized for even the most demanding environments and provide reliable performance all year round.

Precision Thermal Solutions

Expertly Engineered Systems for All Temperature Requirements



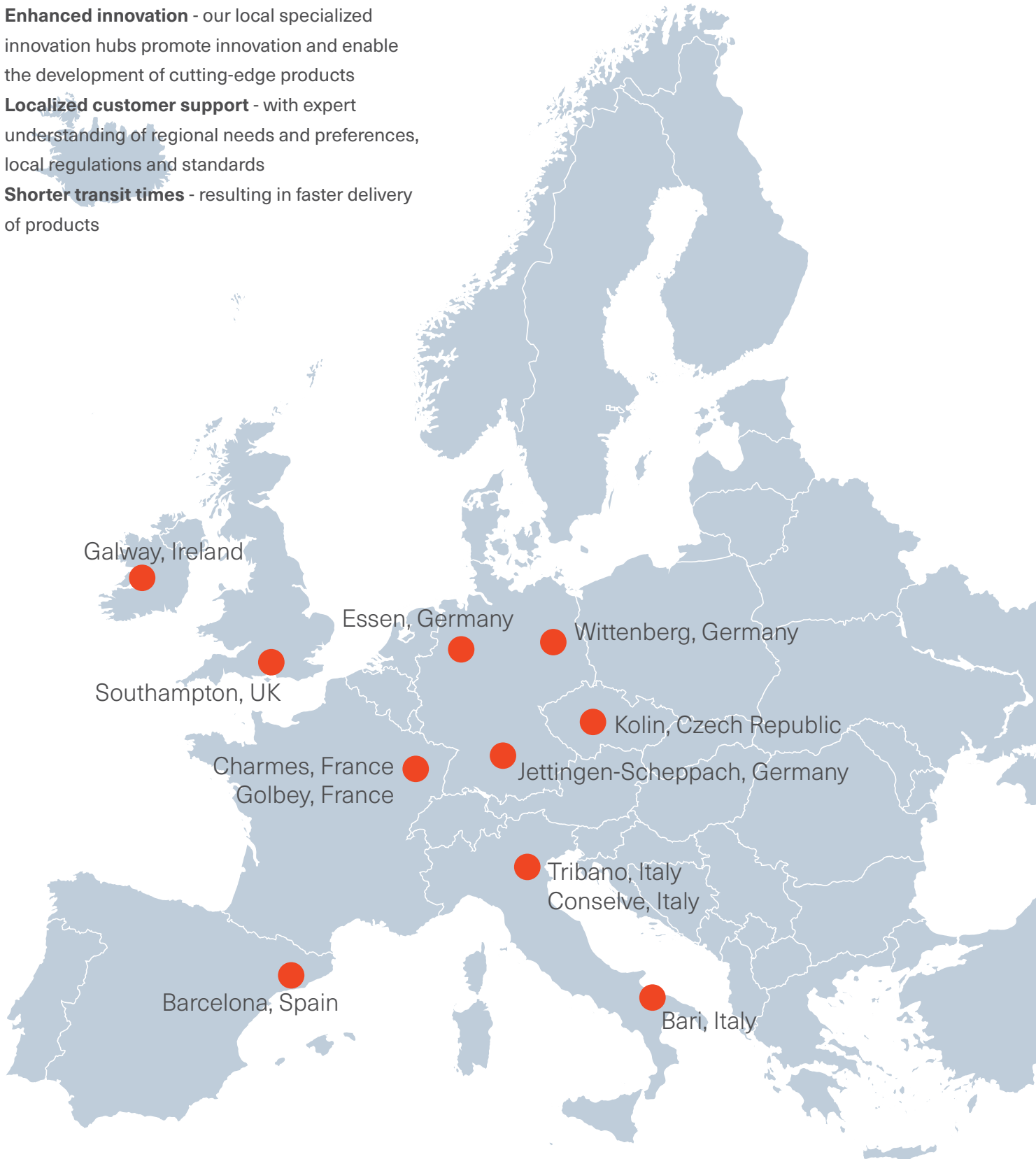
Building Excellence Across Europe

Our Extensive Manufacturing Network and Facilities

Enhanced innovation - our local specialized innovation hubs promote innovation and enable the development of cutting-edge products

Localized customer support - with expert understanding of regional needs and preferences, local regulations and standards

Shorter transit times - resulting in faster delivery of products



Equipment

Air-cooled chillers

TRANE **CUBE**



Scroll compressor
CGC
15-55 kW

FLEX



Scroll compressor
Modular Flex
55-135 kW

CONQUEST



Scroll compressor
CGAX
40-165 kW

ARIESN



Scroll compressor
iAriesN
175-335 kW

SINTECIS™
ADVANTAGE



Scroll compressor
CGAF
137-670 kW

SINTECIS™
PRIME



Screw compressor
RTAF
300-1900 kW



Screw compressor
RTDF
128-383 kW

SINTECIS™
EXCELLENT



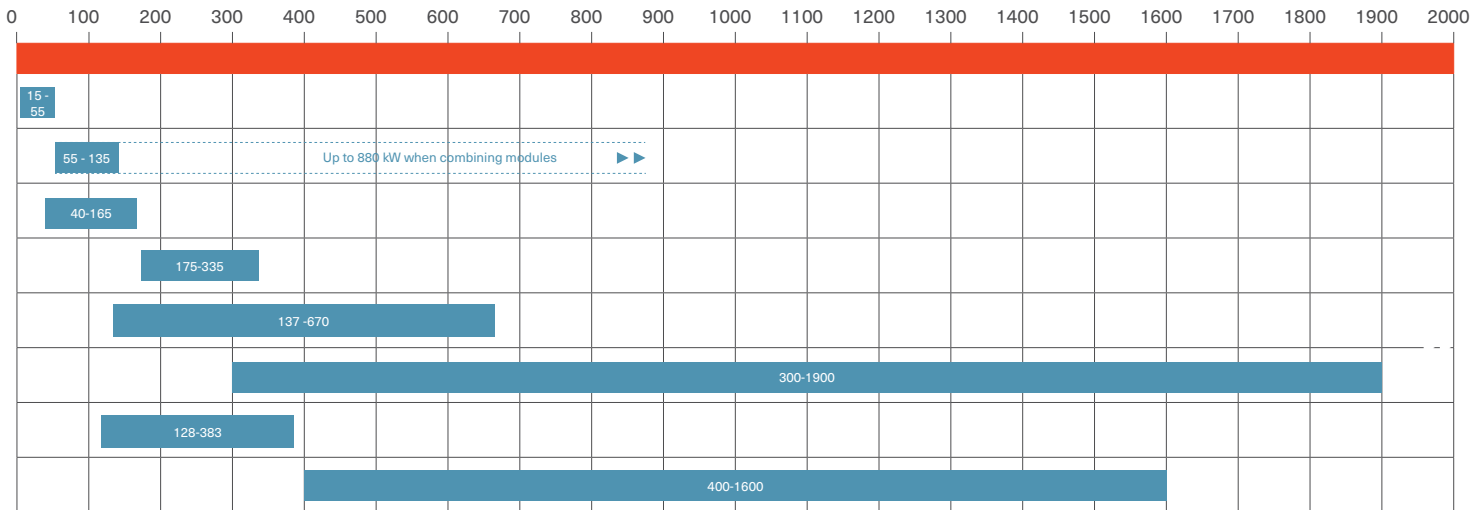
High speed centrifugal
compressor
GVAF
400-1600 kW

						Compressor			Water heat exchanger		Refrigerant						
		Refrigerant circuits	Adaptive Frequency™ Drive	Free cooling	Heat recovery	Scroll	Screw	High speed centrifugal	Brazed plate	Shell and tube	R454B	R513A	R1234ze	R717	R410A	R290	R134a
CHILLERS																	
TRANE CUBE	CGC	1	●		P	●			●		●						
FLEX	Flex	1	●		●	●			●		●				●		
CONQUEST	CGAX	1/2			P	●			●		●				●		
ARIESN	iAriesN	2	●		P	●			●							●	
SINTECIS™ ADVANTAGE	CGAF	2		●	●	●			●	●	●				●		
SINTECIS™ PRIME	RTAF	1/2	●	●	●		●			●		●	●				●
	RTDF									●				●			
SINTECIS™ EXCELLENT	GVAF	1/2	●	●				●		●		●	●				●

P= Partial



Capacity in kW



Equipment

Air-to-water heat pumps / Multi-pipe units

Air-to-water heat pumps

LEAF



Inverter-driven scroll compressor
Cooling 6-22 kW
Heating 8-30 kW

TRANE CUBE AFD



Scroll compressor
CXC
Cooling 15-55 kW
Heating 18-61 kW

FLEX



Liquid injection scroll compressor
Modular Flex/Flex HP HT
Cooling 55-144 kW
Heating 54-154 kW

CONQUEST



Scroll compressor
CXAX
Cooling 40-165 kW
Heating 40-160 kW

SINTECIS™ ADVANTAGE



Scroll compressor
CXAF
Cooling 127-700 kW
Heating 124-700 kW



Screw compressor
RTXC
Cooling 370-950 kW
Heating 380-1030 kW

					Compressor		Water heat exchanger		Refrigerant				
		Refrigerant circuits	Heat recovery	Renewable Energy for Heating	Scroll	Screw	Brazed plate	Shell and tube	R454B	R513A	R410A	R134a	R290
MULTI-PIPE UNITS													
	CMAC	1/2	•	•	•		•				•		
	CMAF	2	•	•	•		•		•		•		
	RTMG					•	•			•			
HEAT PUMPS													
					•		•						•
	CXC	1		•	•		•		•				
	Flex	1	P	•	•		•		•		•		
	CXAX	1/2	P	•	•		•		•		•		
	CXAF	1/2	P	•	•		•		•		•		
	RTXC	1/2	P	•		•		•		•		•	

P= Partial

Multi-pipe units

BALANCE™



up to 65°C

Scroll compressor
CMAF
Cooling 50-140 kW
Heating 50-150 kW

SINTECIS™
BALANCE™



up to 68°C

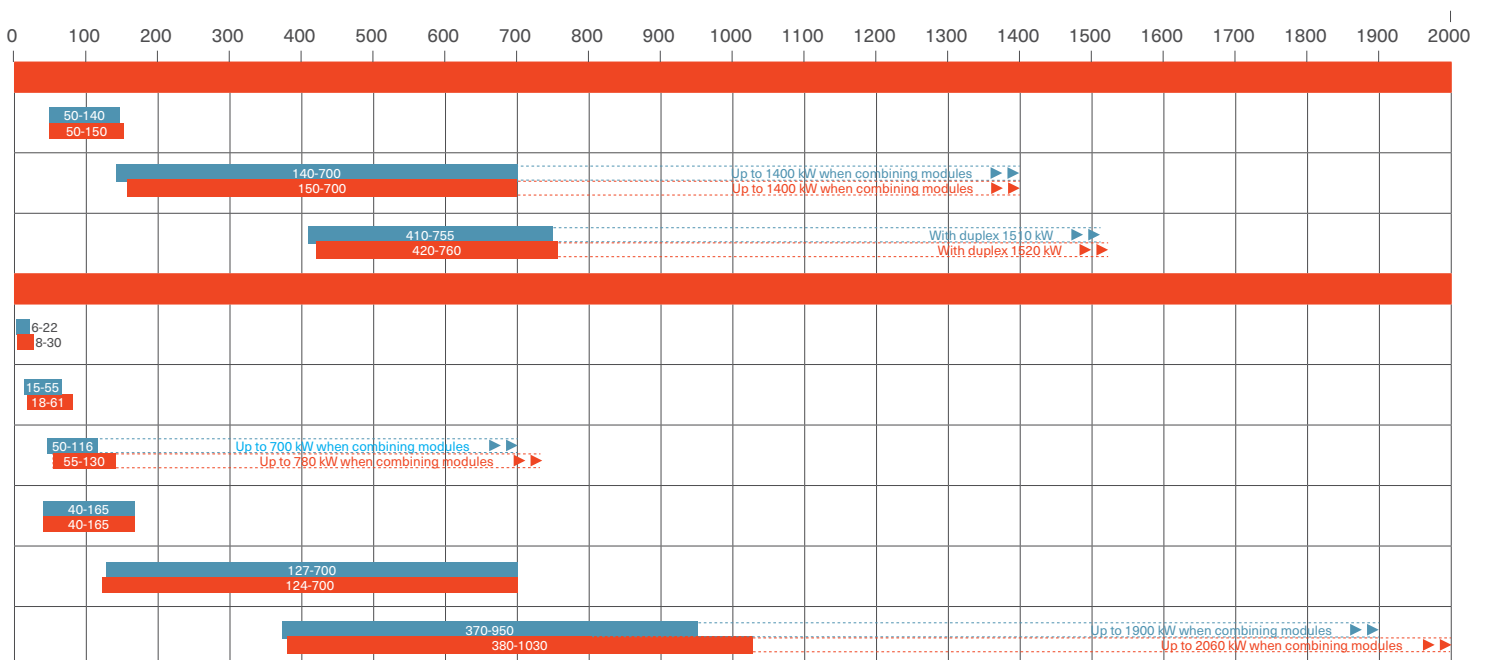
Scroll compressor
CMAF
Cooling 140-700 kW
Heating 150-700 kW



up to 60°C

Screw compressor
RTMG
Cooling 410 - 755kW (with duplex 1510 kW)
Heating 420 - 760 kW (with duplex 1520 kW)

Capacity in kW



Equipment

Water-cooled chillers and condenserless units

Water-cooled chillers and condenserless units

CITY ADVANTAGE



Scroll compressor
Water-cooled and
condenserless
CGWF/CCUF
50-700 kW

CITY



Screw compressor
RTSF G
185-385 kW

RTWD



Screw compressor
Water-cooled and
condenserless
RTWD-RTUD
235-1005 kW

RTHD^{evo}



Screw compressor
RTHD Evo
545-1450 kW

		Compressor						Water heat exchanger		Refrigerant								
		Refrigerant circuits	Adaptive Frequency™ Drive	Heat recovery	Scroll	Screw	Centrifugal	High Speed Centrifugal	Brazed plate	Shell and tube	R410A	R454B	R1234ze	R515B	R134a	R513A	R514A	R1233zd
CHILLERS																		
CITY ADVANTAGE	CGWF	1/2			•				•		•	•						
CITY	RTSF	1	•			•			•				•	•				
RTWD	RTWD	2	•			•				•			•	•	•			
RTHD^{evo}	RTHD evo	1	•			•				•					•			
XSTREAM	RTWF	2	•			•			•				•	•	•	•		
XSTREAM	RTHF	2	•			•			•				•	•	•	•		
XSTREAM EXCELLENT	GVWF	1/2	•				•		•				•	•	•	•		
CenTraVac™	CVHF	1	•							•								•
CenTraVac™	CVHG	1								•								•
Series E™ CenTraVac™	CVHH	1	•	•					•									•
Series E™ CenTraVac™	CDHH	2	•	•					•									•
CONDENSERLESS UNITS																		
CITY ADVANTAGE	CCUF	1/2			•				•		•	•						
	RTUD	2	•			•			•		•	•						

XSTREAM
EXCELLENT



High speed centrifugal compressor
GVWF
350-2560 kW

XSTREAM



Screw compressor
RTWF
345-1860 kW

XSTREAM

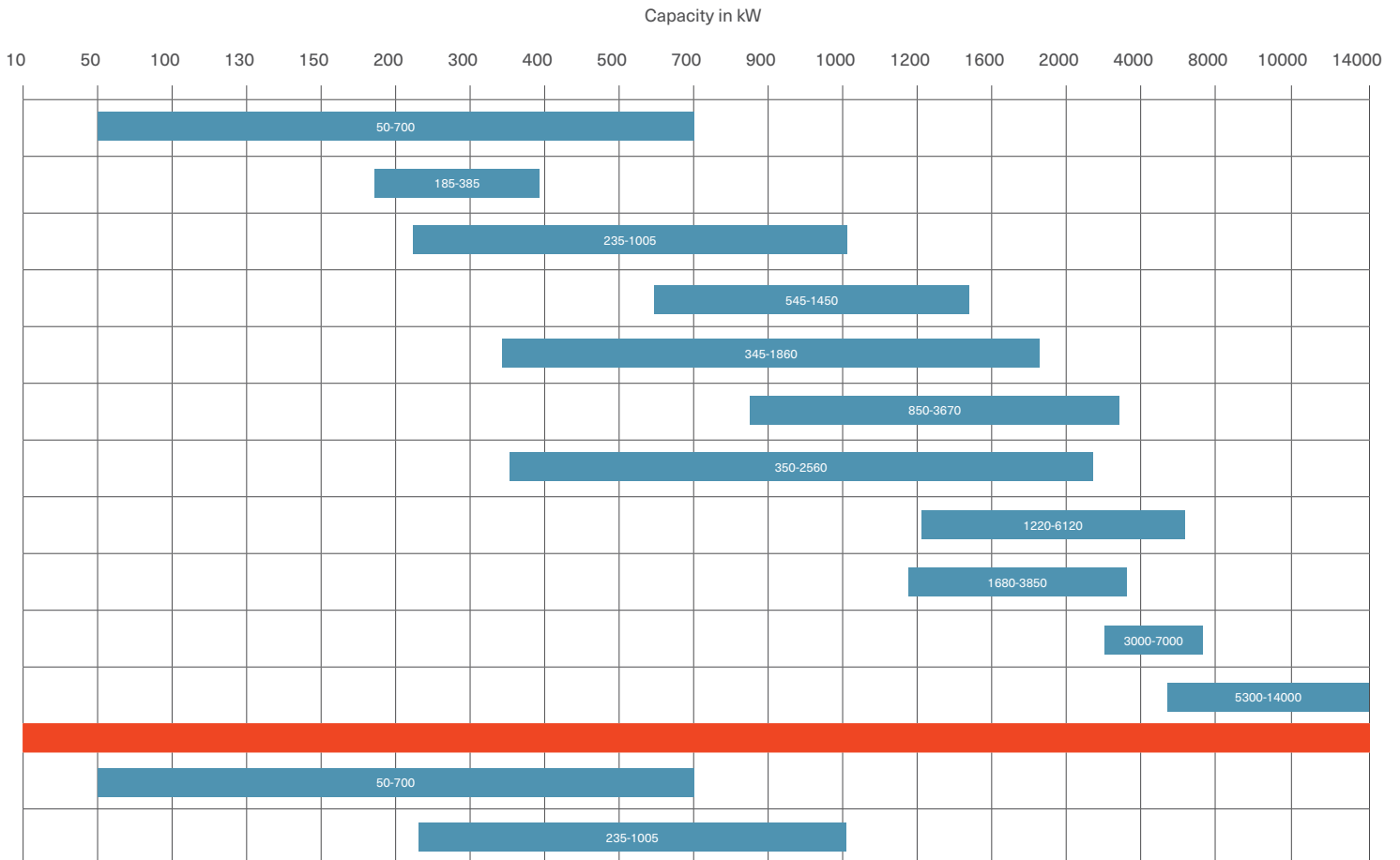


Screw compressor
RTHF
850-3670 kW

Series E™
CenTraVac™
CenTraVac™



Centrifugal compressor
CVHH 3000-7000 kW
CDHH 5300-14000 kW
CVHF 1220-6120 kW
CVHG 1680-3850 kW



Equipment

Water-to-water heat pumps

Water-to-water heat pumps

CITY
ADVANTAGE



up to 65°C

Scroll compressor
CXWF
Cooling 50-700 kW
Heating 50-835 kW

LIFT



up to 80°C

Scroll compressor
Heating 36-550 kW

CITY
BOOSTER



up to 80°C

Screw compressor
RTSF G
Cooling 185-385 kW
Heating 205-445 kW

RTWD



up to 75°C

Screw compressor
RTWD
Cooling 235-1005 kW
Heating 265-1140 kW

XSTREAM



up to 85°C

Screw compressor
RTWF
Cooling 345-1860 kW
Heating 385-2020 kW

XSTREAM
EXCELLENT



up to 65°C

High Speed centrifugal
compressor
GVWF XSH G
Heating 380-1510 kW

EXERGY



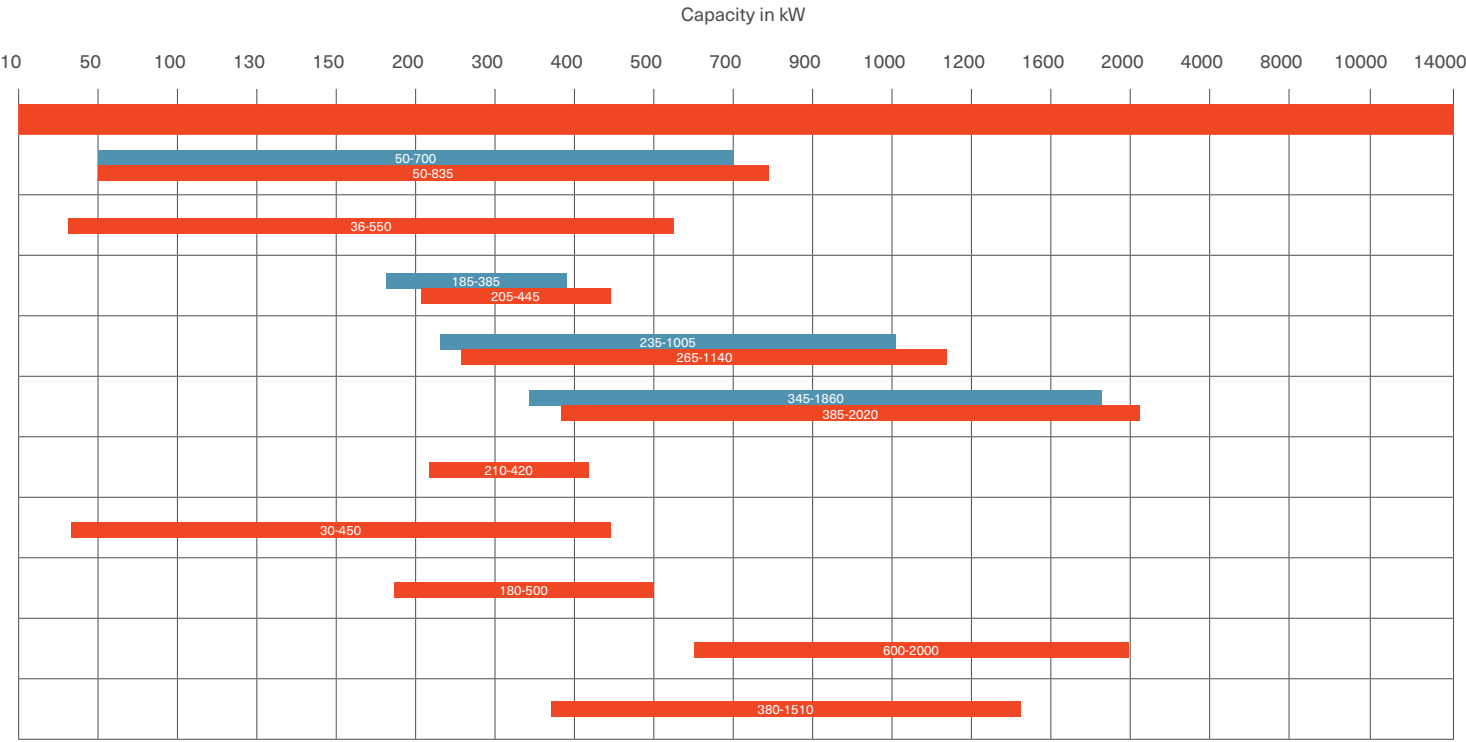
up to 120°C

Piston, scroll or screw
compressor
RE/P/S Series
Heating 30-2000 kW

		Compressor				Water heat exchanger		Refrigerant									
		Refrigerant circuits	Adaptive Frequency™ Drive	Scroll	Screw	Piston	High Speed Centrifugal	Brazed plate	Shell and tube	R410A	R454B	R1234ze	R615B	R134a	R513A	R1233zd	R450A
HEAT PUMPS																	
CITY ADVANTAGE	CXWF	1/2		•				•		•	•						
LIFT		1		•				•						•	•		
CITY	RTSF	1	•		•			•				•	•				
RTWD	RTWD	2	•		•				•			•	•	•			
XSTREAM	RTWF	2	•		•				•			•	•	•	•		
EXERGY	RE	1/2		•				•		•							
EXERGY	P	1/2				•		•				•	•	•	•	•	•
EXERGY	S-180 - 580	1			•			•				•	•	•	•		•
EXERGY	S-600 - 2000	2			•			•				•	•	•	•		•
XSTREAM EXCELLENT	GVWF XSH	1/2	•				•		•			•	•				



Trane heating. Naturally.



Equipment

Water terminals

Hi-wall units



AC or EC fan motor
W-Line WFS/WFE
5-30 kW

1-way cassettes



AC or EC fan motor
CFAS/CFAE
1-4 kW
AC or EC fan motor

4-way cassettes



CWS/CWE
1-11 kW

		Application					Mounting options					Fan motor type	
		Ducted	Non-ducted	2-pipe	4-pipe	Reversible	Ceiling-mounted	Floor-mounted	Built-in Horizontal	Built-in Vertical	Wall-mounted	AC	Low energy consumption EC
HI-WALL UNITS													
W-line	WFS		•	•		•					•	•	
W-Line	WFE		•	•		•				•			•
1-WAY CASSETTES													
	CFAS		•	•	•	•	•					•	
	CFAE		•	•	•	•	•						•
4-WAY CASSETTES													
	CWS		•	•	•	•	•					•	
	CWE		•	•	•	•	•						•
FLEXI CABINET-TYPE UNITS													
	FCAS/FKAS/FVAS		•	•	•	•		•	•	•		•	
	FCAE/FKAE/FVAE		•	•	•	•		•	•	•			•
CONCEALED UNITS													
D-Line	DFSL	•		•	•	•			•			•	
D-Line	DFEL	•		•	•	•			•				•
B-Line	BFSL	•		•	•	•			•			•	

Flexi cabinet-type units



Cabinet or concealed
AC or EC fan motor Harmony FCAS/
FCAE/FVAS/FVAE/FKAS/FKAE
1-6.5 kW

Ductable concealed units



Ductable fan coil unit
AC or EC fan motor
D-Line DFSL/DFEL
1-16 kW

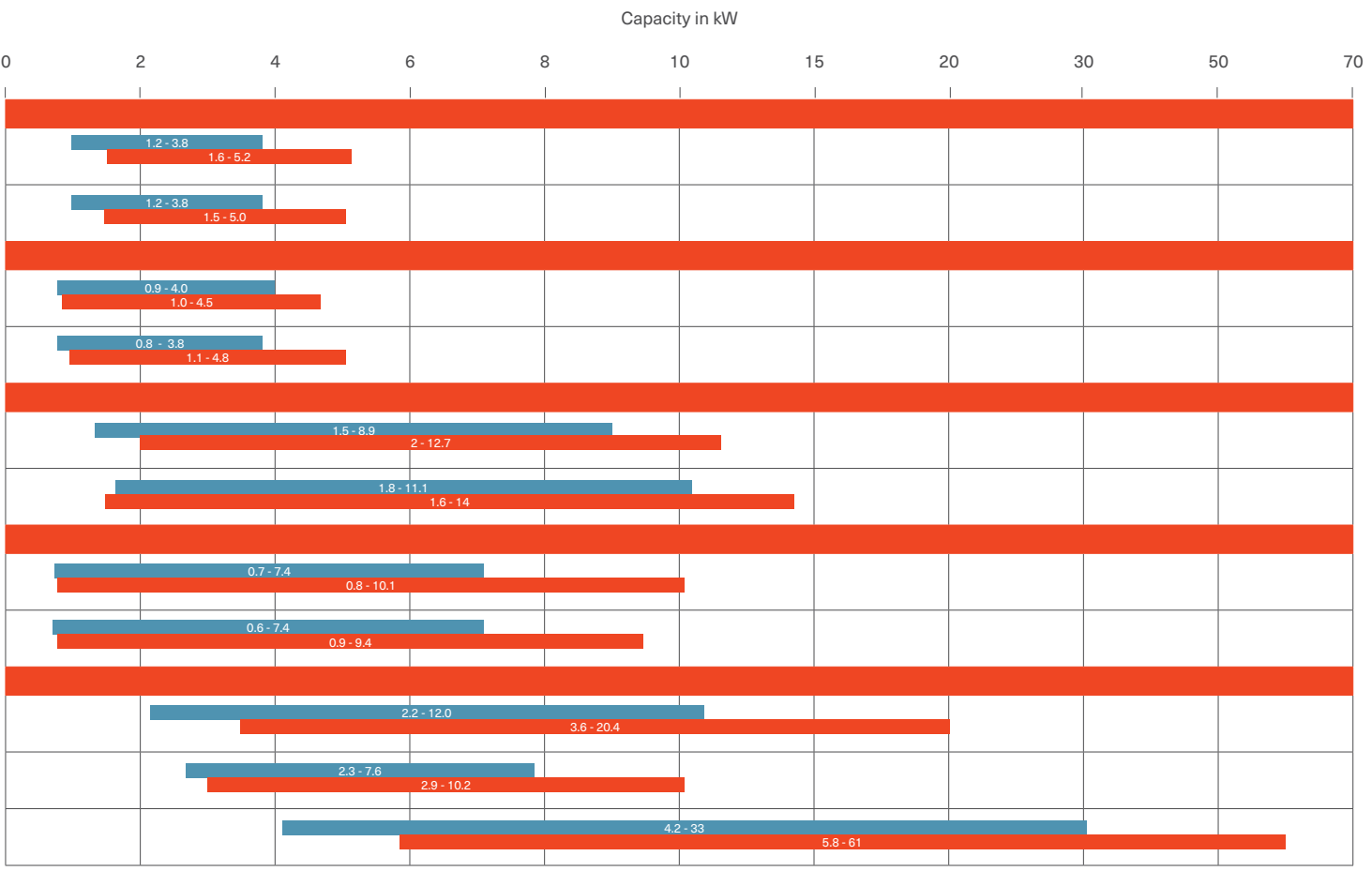


Ductable blower unit
AC fan motor
B-Line BFSL
1-60 kW

Heat recovery units



Heat recovery units with
counterflow heat exchanger
300-2600 m³/h



Equipment Rooftops

Cooling only, heat pump, dual fuel and gas-fired



Airfinity S
Cooling 15-80 kW
Heating 15-80 kW



Airfinity One
Cooling 40-130 kW
Heating 40-130 kW

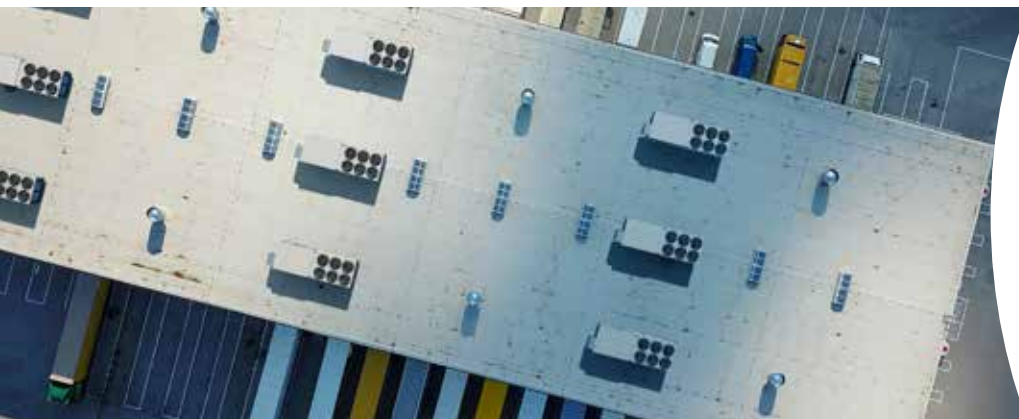


Airfinity XL
Cooling 140-250 kW
Heating 135-270 kW



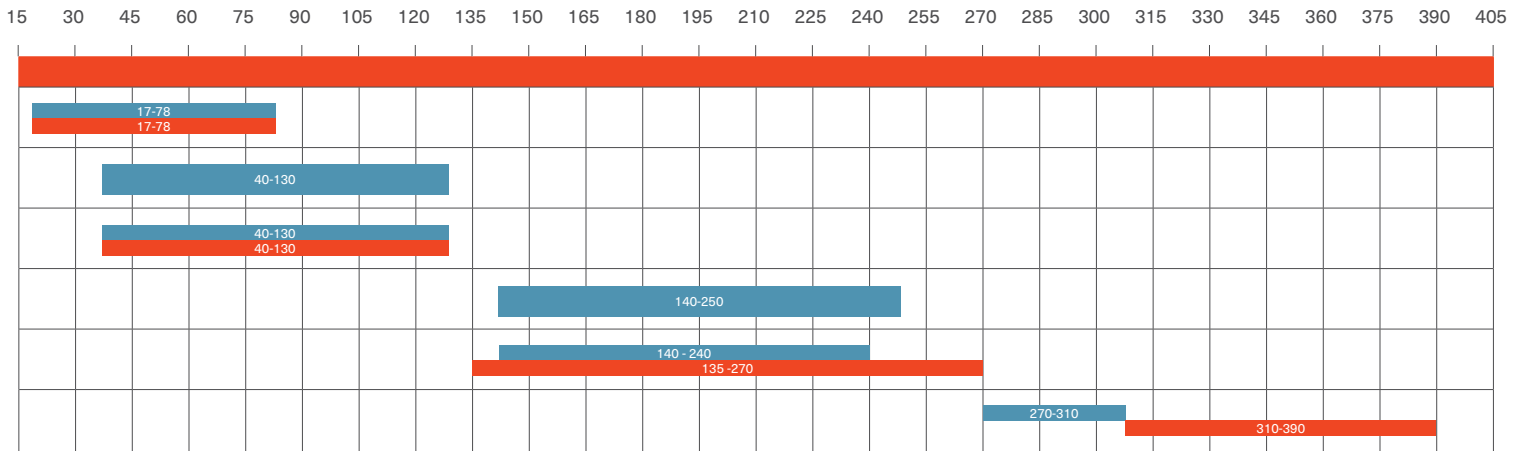
Airfinity Mega
Cooling 270-310 kW
Heating 310-390 kW

		Application		Auxiliary heat			Heat recovery			Refrigerant		
		Refrigerant circuits	Free cooling	Heat pump	Cooling only	Modulating gas burner	Hot water coil	Electric heater	Enthalpy Rotary Wheel (ERM)	Energy recovery circuit (ERC)	Thermodynamic heat recovery	R410A
ROOFTOPS												
	IH	1	●	●		●	●	●	●	●	●	●
	IC	1/2	●		●	●	●	●	●		●	●
	IH	1 / 2	●	●		●	●	●	●		●	●
	IC	2	●		●	●	●	●	●		●	●
	IH	2	●	●		●	●	●	●		●	●
	IH	2	●	●		●	●	●	●			●



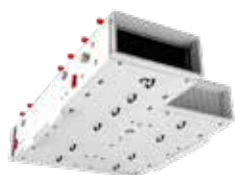


Capacity in kW



Equipment

Air handling units



AL-KO EASYAIR® flat
Compact unit
for comfort
applications



AL-KO EASYAIR®
Compact unit
for comfort
applications



AL-KO AT4
customized applications
T2/TB2 *

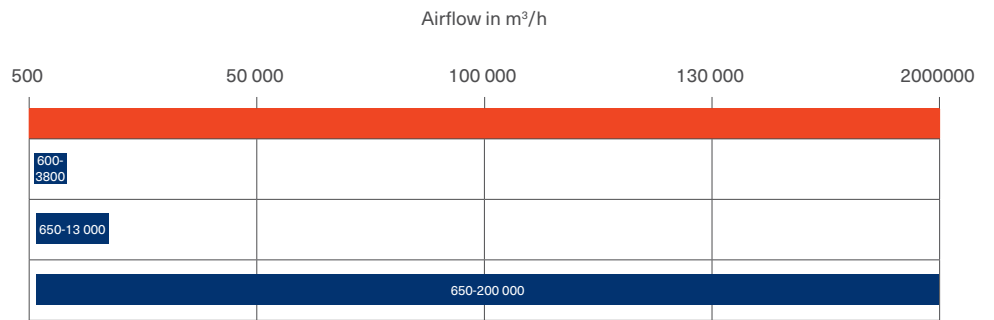
	Application						Certifications					Standard					
	Comfort	Hospital & Lab	Swimming pool	Food Industry (T1/TB1)	Industry (Data centers, power stations, ...)	Customized	CE marking	VDI 6022 German compliant construction	Compliant to CO4 BS for hospitals	ATEX certified construction	Eurovent	50 mm panels	25 mm panels	60 mm panels	Modular self supporting panel design	High flexibility (dimensions/components/materials/options)	High efficiency solutions
AIR HANDLING UNITS																	
AL-KO EASYAIR® flat	●						●	●				●			●		●
AL-KO EASYAIR®	●						●	●							●		●
AL-KO AT4	●	●	●	●	●	●	●	●		●	●				●	●	●

AL-KO, a leading European manufacturer of high-quality air handling units and extraction systems, is a brand of Trane Technologies

Learn more <https://alko-airtechnology.com/en/>



Options								
Factory mounted controls	Factory tests	Polyurethane or mineral wool insulation	Integrated refrigeration	Flat pack	Gas burner	False ceiling units	Packaged units	Compact units
•	•		•	•		•		•
•	•		•					•
•	•		•	•	•		•	



AL-KO
QUALITY FOR LIFE



Cold Store Rental Solutions



C-store Flexible container

Highly flexible solution for any temperature set-point between +45°C and -40°C in ambient conditions up to +50°C



C-store PLUS Top class insulation container

Flexible C-store container with market-leading container insulation



C-store G PLUS Top energy efficient storage

The sustainable solution completed with market-leading insulation container box



Superfreezer Unique low temperature solution

Ultra-low temperatures for the most sensitive and valuable cargo

	Refrigerants			10 ft 4 europalettes	20 ft 10 europalettes	40 ft HC 22 europalettes	45 ft HC 33 europalettes
	R452A	R134a	R23				
COLD STORE RENTAL SOLUTIONS							
C-Store	•			•	•	•	•
C-store PLUS / C-store G PLUS	•	•		•	•		
Superfreezer		•	•	•	•		
M-Store	•					•	
F-Store	•				•	•	





**M-Store
Modular storage**

Tailormade modular container storage to answer any requirements of evolving space and configuration



**F-Store
Blast freezer**

Portable fast chilling and blast freezer container with the highest cooling capacity



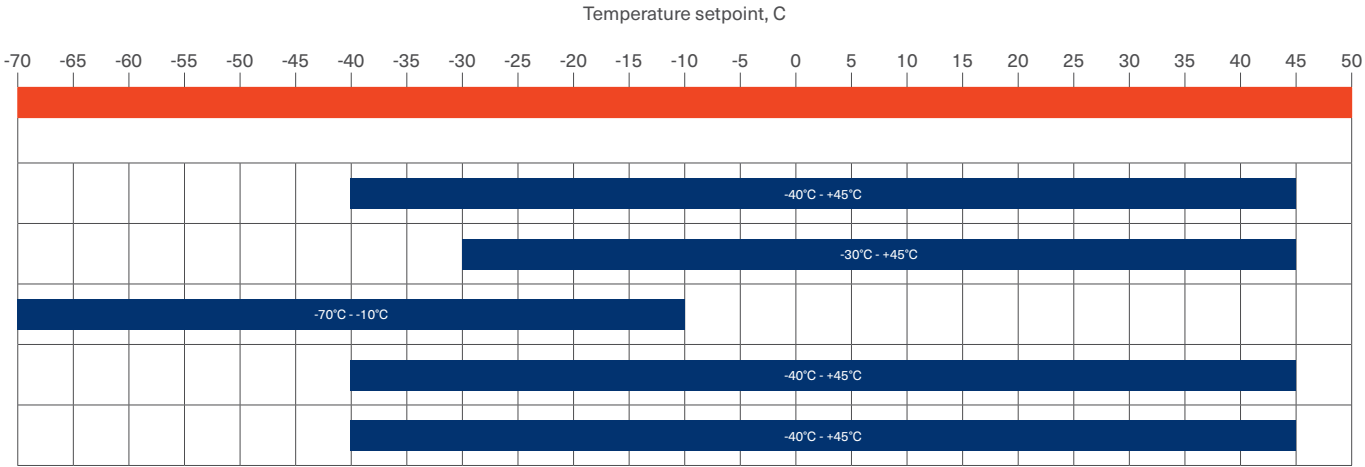
Battery Pack

Portable battery for cold storage with capacity from 35 to 105 kWh



**Clip-on Genset
SGCO3500**

15kW genset designed for robust and efficient operation with containers up to 10 days without refuel



Service

Trane service solutions ensure the most reliable and cost-effective performance from your HVAC systems from day one – and on through their complete lifecycle.



Start up

All Trane engineers and technicians are experts in refrigeration, air conditioning and controls. Trane will take the extra step beyond installation to perfectly adapt the system to its environment.

Trane Service & Select™ Agreements

Each agreement is tailored to meet the budget and operating needs of your facility and can include both preventive maintenance to keep your equipment running and predictive maintenance to identify potential problems.

Trane Select™ Agreements add two layers of protection:

- Trane makes sure any potential problem is corrected before anyone in your building becomes aware of it.
- You know exactly what services and parts are covered eliminating surprises when it comes to expense.

Trane offers a full set of **digital maintenance patterns** as an option to standard Service Agreements. This includes features such as secured remote access to assets, remote inspections, remote diagnostics, and cloud IA-driven monitoring based on continuous data collection.

Repair & Parts

Our fast response factory-trained service technicians and diagnostic tools enable us to perform adjustments or repairs when you need them using a Full range of HVAC parts and supplies:

- Meeting the specifications of the original components
- Available in real time
- Quick and efficient ordering and delivery service
- Reduced equipment downtime



Trane Building Advantage

40 to 60% of your total energy budget goes into running your chiller plant. Our mission with Trane Building Advantage is clear: to bring you the services, tools, equipment and expertise to transform your building.

Our customers measure HVAC systems by their reliability, efficiency and environmental impact. The suite of enhancement solutions we call Trane Building Advantage has been developed to deliver results at two levels:

Components: By targeting individual components of the system we can ensure they meet design requirements and so optimize life cycle costs.

Plant: We leverage our expertise and use proprietary analysis software to produce a holistic system design to suit specific needs within clear cost parameters.

Trane Rental Services

Whether it's extra cooling or heating needed during extreme weather conditions or a short-term replacement following an emergency, businesses sometimes require equipment to condition an indoor environment on a temporary basis.

Trane Rental Services can provide fast, safe and cost effective solutions using modern and reliable equipment.



System Optimization

Intelligent Controls Solutions for Smarter System Management

Whatever the scale of your operations, Trane will provide you with outstanding support – helping to select, design and implement the best HVAC solutions for your building and process requirements.

Trane Tracer® architecture

Building	Tracer® Synchrony™
Equipment	Tracer® Symbio™
Occupant spaces	Wireless sensors

A complete range of smart solutions

The Trane Tracer® range of controls solution extends from sensors, unit controllers, system controllers and enterprise control solutions. They contain pre-engineered applications and graphics to optimize control, saving energy. Tracer® system controller can be accessed from any PC, tablet or connected devices and eliminates the need for a dedicated computer and monitor. Tracer Synchrony is a cost effective web based HVAC Management system which includes many energy savings pre engineered applications. Tracer Ensemble is a web based BAS aggregation front End. Both these products offer advanced cybersecurity features, including full support of latest BACnet Secure communication protocol, and encrypted data communication. Tracer Synchrony and Tracer Symbio controllers support seamlessly and simultaneously standard protocols such as BACnet, Modbus or LonTalk.



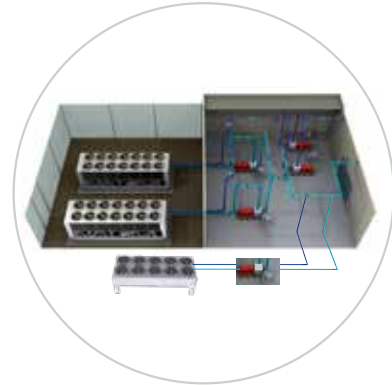
Chiller and Heat Pump Plant Controls

Trane has leveraged over 40 years of experience in controls to develop cooling and heating control systems, featuring chillers and heat pumps, and to provide energy-efficient and reliable cooling and heating solutions.

These include pre-engineered solutions for multiple chiller and heat pump applications. Running multiple energy strategies for optimization by operating the components of the chilled and hot water systems at their best efficiency.

Rooftop Controls

Tracer® Concierge is a packaged control solution for managing rooftops and simple on/off lighting system. most efficient point can realize significant savings.



Trane Tracer[®] Symbio[™]

Enhanced Energy Efficiency and Serviceability

Controlling large equipment for energy efficiency is critical for focused energy cost management and sustainability initiatives. Decades of global experience in chillers and heat pumps has led to development of the renowned proprietary design Trane Tracer[®] Symbio[™] equipment controller.

It is the industry's first application-specific and field-programmable controller – providing more flexibility and customizable operation sequences. Building automation systems integration meets industry standards to enable a more integrated process and is made even more flexible with new communication protocol options.



Flexibility

As occupant and building needs evolve, Symbio solves present and future challenges. Symbio easily integrates with older systems via open standard protocols. Upgradeable software also offers proactive cybersecurity updates and future enhancements that comply with changing energy codes.



Connectivity

Connected buildings meet occupant demands with ease by allowing secure access to system and equipment data anytime, anywhere. Use data collected by Symbio to remotely monitor, troubleshoot, schedule and control equipment.



Serviceability

Symbio can be reprogrammed easily and often with non-proprietary software service tools and built-in interfaces. Users benefit from multi-language support. Utilize detailed event logs, trends, and alarm management to ensure optimized system performance. Symbio automates and streamlines equipment start-up and allows you to remotely diagnose and manage systems.





**RUN
WITH
US**



TRANE
TECHNOLOGIES



A must-see video promoting our smaller capacity product portfolio starting at 5 kW.
<https://www.youtube.com/watch?v=7bABj2XvO5s&t=2s>



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit trane.eu or tranetechnologies.com.

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