



Equipment and Services 2022

Integrated HVAC-R Solutions for Commercial
and Industrial Markets

TRANE
TECHNOLOGIES

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.



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.



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.



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.



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.



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.

Continuing the transition to low-GWP refrigerants



R454B on chillers, heat pumps and rooftops with scroll compressors

The fluorinated refrigerants phase-down, as defined in the EU F-Gas Regulation, is a step-by-step approach where the quantities of HFCs, expressed in CO2 equivalent, that are placed on the market are gradually reduced. As a result of the phase-down, **HFC consumption will be reduced by 79% by 2030**. This is an unprecedented reduction and means that industry and users need to make the transition to refrigerants with a **lower Global Warming Potential (GWP)**.

Trane Experience

Trane, already recognized as a leading innovator in the HVAC industry, has **experience in designing products operating with low-GWP refrigerants**, and our entire portfolio of screw, high-speed centrifugal and centrifugal units is available with low and near-zero GWP refrigerant alternatives.

Now, we have extended the initiative to **encompass our portfolio of chillers, heat pumps and rooftops with scroll compressors** continue to be front running in the marketplace and to support your strong sustainability objectives. These scroll units are offered with R454B and are designed to lower their environmental impact with next-generation, low global warming potential (GWP) refrigerants and high-efficiency operation.

Why R454B?

Environmental impact:

This is the lowest GWP value option to replace R410A, with a GWP decrease of 76% and 31% lower than R32. Units deliver better seasonal cooling/heating efficiency and power usage compared to R410A - up to 5% improvement.

Quality and reliability:

Tested and tight refrigerants circuits that keep the refrigerant contained and with its original manufactured composition, ensure the highest performance as the unit was designed to achieve, for years to come.

Lower operating costs:

Our units with R454B are very competitive versus legacy Trane products (3 - 5% more efficient) and other products on the market.

In addition, because we choose the lowest GWP available and reduce the total refrigerant charge volume, we limit the financial impact of operating costs.

How? Governments set tax schemes and subsidy programs based on GWP values (the lower the GWP, the lower the tax). By investing in a lower GWP, you are reducing your cost of future refrigerant purchases.

Experience in design and manufacturing:

Decades of experience allows us to design refrigerant circuits optimized for any refrigerant. Our rigorous manufacturing and servicing processes guarantee a minimal risk for leakages. Your investment, and the environment are safer and protected.



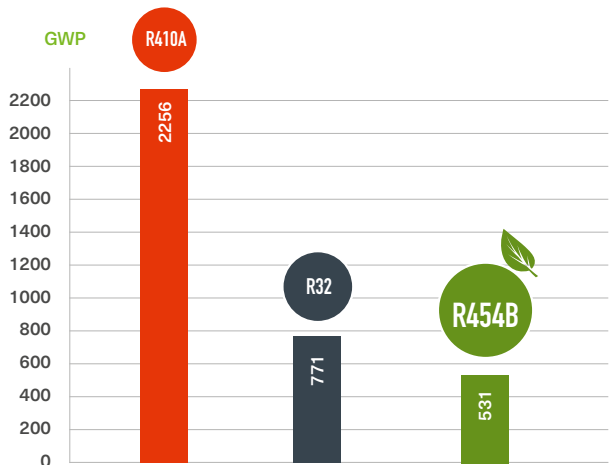
R454B option on all scroll units

- Now part of the EcoWise™ portfolio of products - refrigerant-bearing products that are designed to lower environmental impact with next generation, low global warming potential (GWP) refrigerants and high efficiency operation
- All models pass the high seasonal efficiency levels (Ecodesign SEER) mandatory from January 2021
- Excellent performance with enhanced operating map, also with high ambient air temperatures
- Proven chiller design with variable volume scroll compressors
- Short delivery times for immediate chiller replacement projects



R454B option on rooftops

- Now part of the EcoWise™ portfolio of products - refrigerant-bearing products that are designed to lower environmental impact with next generation, low global warming potential (GWP) refrigerants and high efficiency operation
- High unit efficiency
- Available with heat recovery wheel module and heat recovery circuit for lower operating costs
- Dehumidification system using partial heat recovery for lower energy consumption
- Tracer® Concierge to connect multiple units into one system



* according to the IPCC Assessment Report 6 (AR6)

What is GWP?

GWP is the global warming impact relative to the impact of the same quantity of carbon dioxide over a 100 year period.

Partnering with you for process freezing and high temperature heating



A flexible range of chillers designed for mild freezing process applications

Specially designed for food processing, food storage requiring negative temperature leaving brine between 0°C and -12°C

A safe, sustainable and cost-efficient alternative to R717 (ammonia) and R290 (propane) refrigeration systems.

Trane process chillers operating with near-zero GWP R1234ze

- Sinesis Advantage CGAF
2, 4 or 6 scroll compressors
120-260 kW
- Sinesis Prime RTAF G
2, 3 or 4 screw compressors
410-755 kW



Trane's solution for deep freezing applications

Ammolite is designed to suit applications which need leaving brine below -12°C.

- R717 refrigerant with zero GWP
- Lowest refrigerant charge in the industry



Industrial Heat Pumps for high temperature heating needs

Exergy heat pumps optimize the use of energy. Their goal is to repurpose traditionally unused and wasted energy to produce hot water for commercial or industrial process applications. Energy can be therefore sourced from from data centers, grey water, refrigeration plants or geothermy and efficiently transferred to where it is needed.

- Up to 120°C leaving water temperature
- 30-2000 kW heating capacity
- R1234ze, R1233zd(E), R450A, R513A, R134a, R410A
- Models RE/P/S with 3 different compressor technologies; Scroll, Piston or Screw
- Versatile control system for energy-efficient and easy operation with clear graphical user interface
- Multiple HVAC and industrial communication protocols available for integration in supervisory control system



What's New from Trane



Enhancements to CGAF/CXAF heat pumps and chillers range

- More compact version available up to 350 kW (models CXAF SSE and SHE)
- Extended operating maps - provides up to 65°C leaving hot water temperature and operates in ambient air temperatures down to -18°C
- New improved performances / higher heating capacity
- Total heat recovery (chillers only) or partial heat recovery option
- Compact footprint: less than 5 m² including tank and pumps
- Low weight: ideal for retrofit of existing HVAC systems
- HE and XE versions with AC or EC fans



CMAF simultaneous cooling and heating capacities now from 150 kW to 1400 kW

- Innovative Trane Adaptive Refrigerant System™
- Largest operating maps in the industry
- Market-leading TER ratios
- Proven Sintesis platform of chillers, heat pumps and multi-pipe units
- Sustainable R454B refrigerant

Must-see videos



Trane Heating, Naturally



Trane Adaptive Refrigerant System



What is TER?



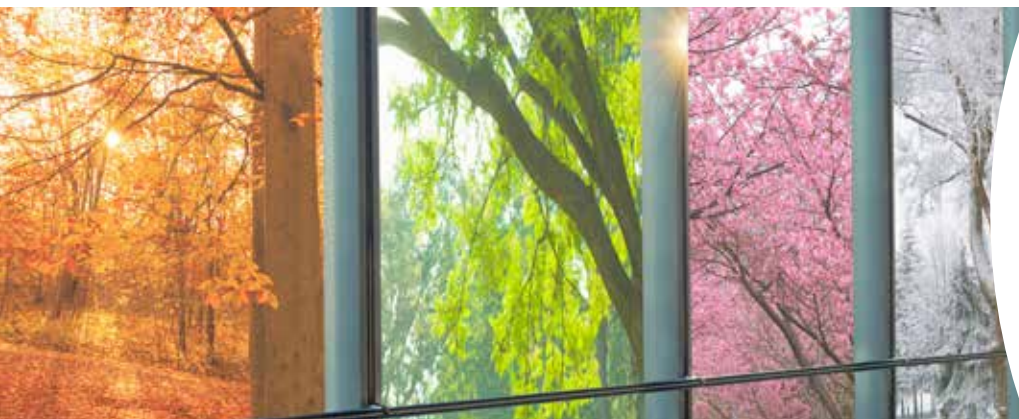
RTAF Extra Efficiency air-cooled variable volume index screw chillers

- Part load efficiency improvement featuring the latest Trane screw compressor with Variable Volume Index (Variable Vi) that allows the equipment to operate at the most appropriate pressure ratio to reach remarkable efficiency levels
- Permanent magnet motor as standard
- Integrated muffler as standard
- Multiple sound attenuation packages including Whisper Low Noise (WLN)
- XSS design is optimized for reduced overall length
- Optimized rapid restart
- Models RTAF XSE-XSS: 350-1250 kW
- EER up to 3.9, SEER up to 6.5



GVAF XSE and range designed for data center applications

- SEER up to 6.55
- GVAF is the best efficient certified air-cooled chiller
- High speed centrifugal compressor technology
- New XSE range fully optimized for R1234ze with 1, 2 or 3 compressors GVAF XSE with increased operating map and higher efficiencies. Units also available in a shorter version to have the smallest footprint possible.
- Improved free cooling with higher capacity, upgraded piping and connections and reduced pressure drop for optimized operation
- Dedicated option for data center applications with higher leaving water temperature option up to 25°C, optimized rapid restart, automatic transfer switch, uninterrupted power supply-ready controller



What's New from Trane



New CXC HSE heat pumps

- Inverter-driven scroll compressor
- Low-GWP R454B refrigerant
- Heating capacity 20-70 kW



Water-to-water heat pumps and chillers portfolio extension and new controller

- Portfolio extension up to 700 kW cooling or 835 kW heating
- Chillers, heat pumps and condenserless units
- Standard and high efficiency models
- Single and dual circuits
- Many different hydraulic modules available
- Sound attenuating options: low noise and super low noise
- Compact design: possible to install one side against wall, width of 900 mm, fits in all standard elevators - simplified access to work site
- Symbio 800: sophisticated Trane controller for optimal unit performances. Easier to integrate with other Trane units
- Easy to maintain: very good accessibility to all main components.



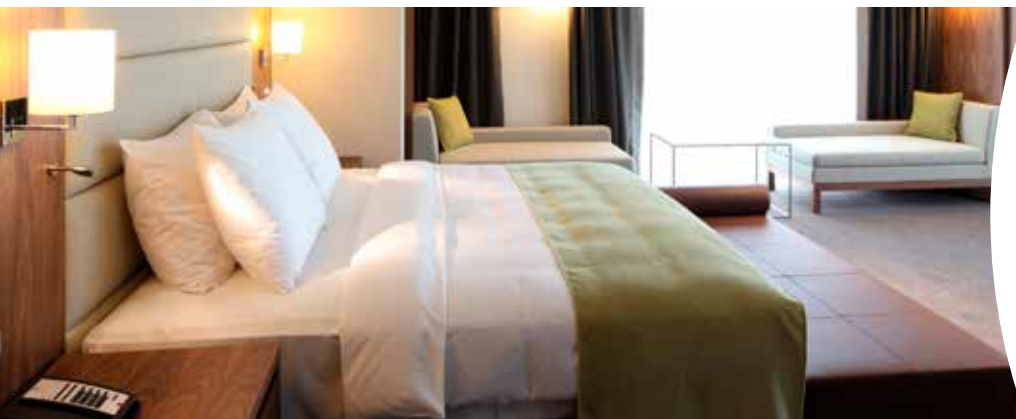
Water-to-water booster heat pump

- Ideal in combination with an air-to-water unit (Trane CXAF/RTXC) or a Multi-pipe unit (Trane CMAC/CMAF) to increase the leaving hot water temperature
- 77-550 kW
- Perfect for sanitary water to fully or partially replace boilers
- Applications: Hotel and commercial buildings, large apartment buildings, hospitals, office buildings
- Reduced footprint, easy installation and quiet operation
- Scroll compressor with R134a
- Brazed plate heat exchangers

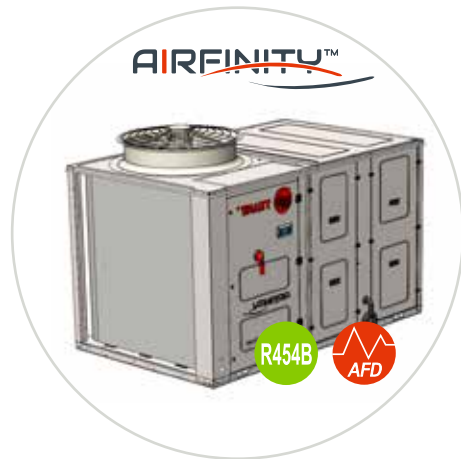


RTXC air-to-water heat pump with Trane screw compressor

- 380-770 kW heating and cooling capacity, extension to 1000 kW by Q3 2022
- R134a version with AC fans or optional EC fans for higher efficiency
- R513A version with EC fans
- Optional inverter-driven compressors (Q3 2022)
- Class A in full load efficiency cooling and heating
- Ecodesign Compliant (ErP 2021)
- Hot water up to 55°C
- Partial heat recovery option
- Heat pump operation down to -10°C ambient
- Fin & Tubes outdoor heat exchanger
- Falling film evaporator
- Optional compressor sound attenuation enclosure
- Duplex version available up to 1500 kW
- Trane controls with easy-to-use Tracer® TD7 touchscreen user interface



What's New from Trane



Enhancements to the rooftops portfolio

New design of small capacity Airfinity S rooftops

- Cooling/heating capacity from 18 to 42 kW
- Available with low-GWP R454B

Rooftop solutions for warehouses

- Extended airflow rate 18000-45000 m³/h
- Up to 100% fresh air
- Up to 800 Pa available external static pressure
- High efficiency rotary wheel
- Multi-rooftop control and management with Tracer Concierge

Microchannel coil on IC units

Compared to units with traditional copper/aluminium coils, IC with microchannel coils offer:

- +4% on cooling capacity
- +6% on SEER and EER
- -29% on refrigerant charge



GVWF XSE G Extended operating map and capacities

- Enhanced efficiencies up to a market-leading SEER of 10
- Additional high speed centrifugal compressor sizes
- R1234ze (GWP <1) optimized
- R515B compatible
- 1 compressor: GVWF 115 XSE G (375 kW) and GVWF 140 XSE G (520 kW)
- 2 compressors: GVWF 230 XSE G (510 kW) and GVWF 280 XSE G (1050 kW)
- 4 compressors GVWF 620 XSE G (2100 kW) featuring data center requirements:
 - High Capacity
 - Up to 30°C leaving evaporator water temperature
 - Fast restart control
 - Uninterruptible Power Supply (UPS)



Alternative A1 refrigerants on water-cooled screw chillers

- Alternative low-GWP refrigerants on screw units
- A1 classification
- R515B (GWP 299) on RTSF, RTWD and RTWF chillers and heat pumps from 180 to 1430 kW
- R513A (GWP 630) on RTHF chillers from 1150 to 3500 kW.



Trane® Tracer Symbio™ 800 controller

- Latest Generation Unit Controller replacing UC800
- One of the industry-best controls algorithms with patented strategies to respond to rapidly changing conditions to avoid disruption
- The touchscreen display TD7 facilitates navigation and access to data and alarms
- Multiple communication protocols supported for easier integration into BMS
- WIFI module enabling wireless communication
- Embedded schedule allows the controller to operate in stand-alone scheduled operation (without BMS)
- SD card for local back-up and peace of mind in case of equipment failures
- Expandable I/O which make the controller field-programmable. This feature can reduce project costs and enables customized sequence of operations
- Remote connectivity: used in conjunction with Trane Connect, you can get equipment data at anytime, anywhere independently from the BMS system and potentially save money by preventing equipment failures if Trane Connected Services enabled.



What's New from Trane



Trane Free Heating - reduce your boiler gas consumption

Trane free heating solution : a global system approach. Free Heating is an important part of the efficiency portfolio developed by Trane to optimize your operation on a overall system approach. This generates immediate savings by balancing cooling and heating demands and consequently reduces energy needs.

- Reduce the gas consumption on your existing water boiler
- Improve your system global efficiency
- Reduce the carbon foot print of your building
- Available as capital investment or operating expense.



Trane Free Cooling - saving energy the natural way

Cool outside air or water can be used as a free resource to help chill water which can be used for industrial processes or air conditioning. Trane Free Cooling is made simple and effective by using air-cooled dry coolers which remove unwanted heat without the need for integration with the chiller control.

For at least six months a year, the average outside ambient temperature is low enough to make Free Cooling possible.

Free Cooling uses external temperatures which are below the process temperature to:

- Reduce energy consumption and costs by up to 80%
- Reduce the carbon foot print of the building
- Extend chiller lifetime by reducing the load on mechanical parts.

Trane EaaS

A **short-term or long-term rental program** where you only pay for HVAC when you need it. Whether it's a repair, an upgrade or a replacement, Trane can offer a revolutionary approach to meet your needs. Forget investing and owning your HVAC system – we can give you «Equipment-as-a-Service» (EaaS).

- No upfront cost, positive cash flow
- The latest technology
- Easy switching to more powerful equipment
- Minimized running costs and a fixed monthly rate
- Full maintenance and warranty cover
- Total reliability, total availability
- Zero risk and maximum flexibility.

Pay for what you need, when you need it

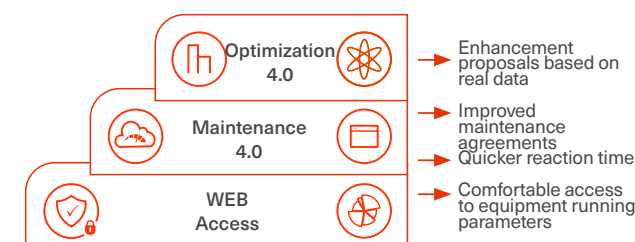
- EaaS Standby: At Trane depot or on your premises, ready to be connected.
- EaaS Partial use for seasonality
- Pay in full when you are using, otherwise pay a reduced rate.

Trane Connected Services: Continuous Maintenance Monitoring and Diagnosis

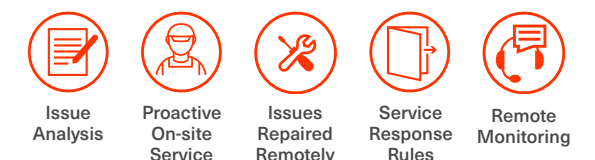
A new way of maintaining and improving Trane equipment

- Clients and Trane monitor equipment running conditions from anywhere, using a standard web browser.
- Connection occurs through fully secured infrastructure
- Gateway can collect information from ancillaries and depict an overall situation
- Trane can execute on maintenance inspections from remote and provide with reports on equipment's main running parameters
- Running parameters get harvested on a regular basis to provide insights on how running conditions evolve over time
- System based on Trane controller for which setup can be extended to accommodate live system optimization, such as Equipment Plant Optimizer.

Client



Trane



Trane Equipment

Air-cooled chillers and condensing units

Air-cooled chillers



Scroll compressor
CGB
15-50 kW



Scroll compressor
Modular Flex II/Flex HSE
55-135 kW



Scroll compressor
CGAX
40-165 kW



Scroll compressor
CGAF
192-670 kW



Screw compressor
RTAF
300-1900 kW







High speed centrifugal compressor
GVAF
450-1615 kW

Condensing units

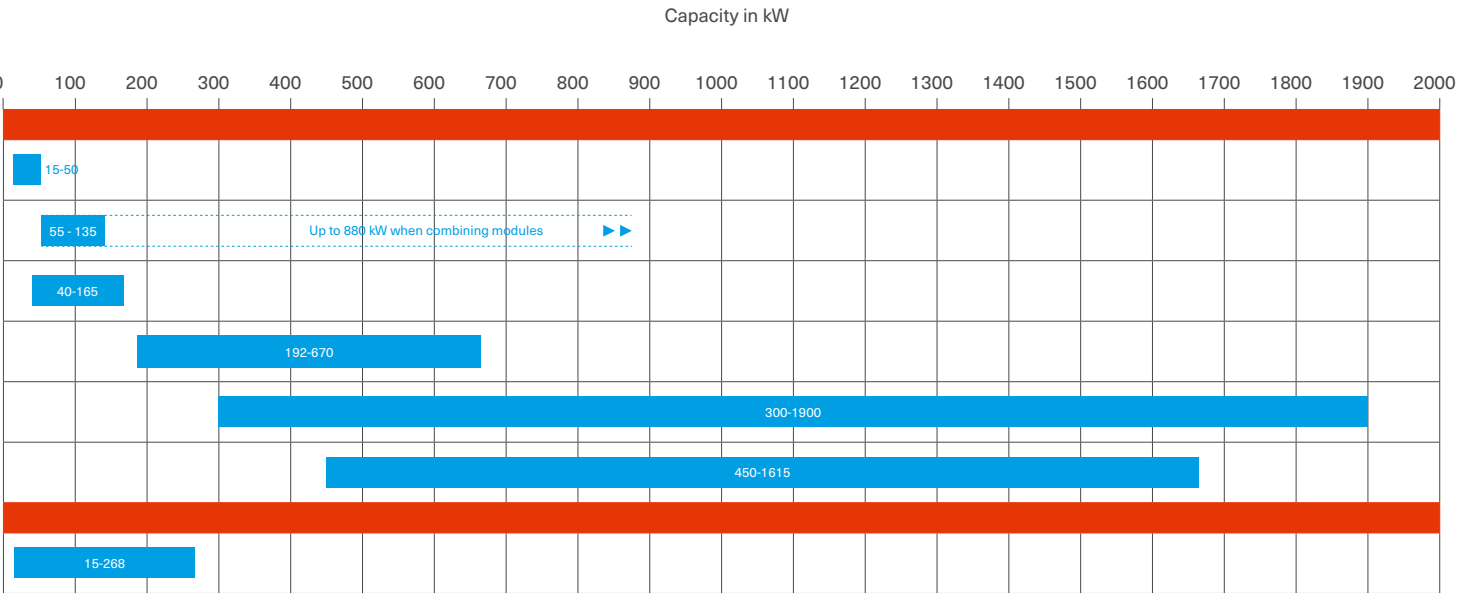


Scroll compressor
RAUS
15-268 kW



						Compressor			Water heat exchanger		Efficiency version					Sound version			
		Refrigerant circuits	Adaptive Frequency™ Drive	Free cooling	Heat recovery	Renewable Energy for Heating	Scroll	Screw	High speed centrifugal	Brazed plate	Shell and tube	Standard	High	Extra high	High Seasonal	Excellent	Standard	Low	Extra Low
CHILLERS																			
	CGB	1					●			●		●					●	●	
	Flex II/ Flex HSE	1	●		●		●			●		●			●		●	●	●
	CGAX	1/2			P		●			●		●	●				●	●	
	CGAF	2		●	●		●			●	●	●	●	●			●	●	●
	RTAF	1/2	●	●	●	●		●			●	●	●	●	●	●	●	●	●
	GVAF	2	●	●					●		●					●			●
CONDENSING UNITS																			
	RAUS	1/2					●			●		●					●		

P= Partial



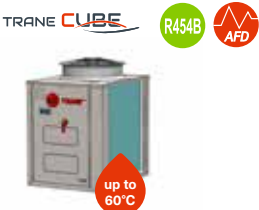
Trane Equipment

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

Air-to-water heat pumps



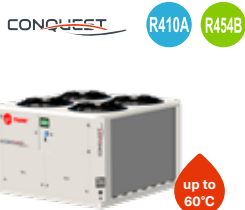
Scroll compressor with inverter
Cooling 6-70 kW
Heating 6-70 kW



Scroll compressor, CXC HSE
Cooling 15-60 kW
Heating 20-70 kW



Scroll compressor
Modular Flex II/Flex HSE
Cooling 55-116 kW
Heating 55-130 kW



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



Scroll compressor, EC plug fans, indoor installation
CXCN
Cooling 50-250 kW
Heating 50-270 kW



Scroll compressor, CXAF
Cooling 192-700 kW
Heating 181-700 kW



Screw compressor
RTXC
Cooling 380-770 kW
Heating 380-770 kW

Multi-pipe units



Scroll compressor
CMAC
Cooling 50-230 kW
Heating 50-260 kW



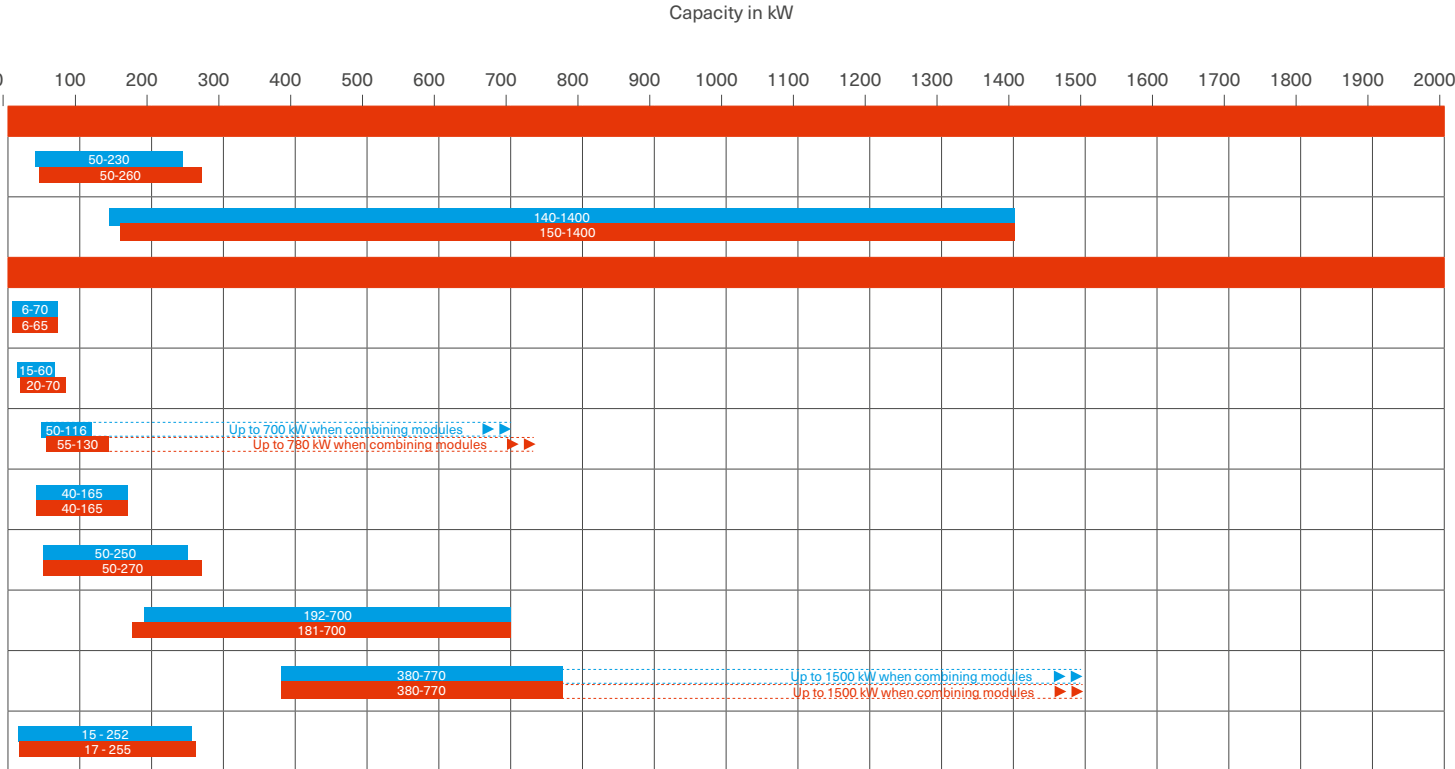
Scroll compressor
CMAF
Cooling 140-1400 kW
Heating 150-1400 kW

Condensing units



Scroll compressor
RAUX
15-252 kW
17-255 kW

		Refrigerant circuits			Compressor		Water heat exchanger		Efficiency version				Sound version		
		Heat recovery	Renewable Energy for Heating		Scroll	Screw	Brazed plate	Shell and tube	Standard	High	Extra high	High Seasonal	Standard	Low	Extra Low
MULTI-PIPE UNITS															
BALANCE™	CMAC	1/2	•	•	•		•		•	•		•	•	•	•
SINTECIS BALANCE™	CMAF	2	•	•	•		•		•	•		•	•	•	•
HEAT PUMPS															
PICEQ		1		•	•		•		•				•	•	•
TRANE CUBE	CXC HSE	1		•	•		•					•	•	•	
FLEX	Flex II	1	P	•	•		•		•				•	•	•
CONQUEST	CXAX	1/2	P	•	•		•		•	•			•	•	
LYRA	CXCN	1/2	P	•	•		•		•				•	•	•
SINTECIS ADVANTAGE	CXAF	1/2	P	•	•		•		•	•			•	•	•
	RTXC	1/2	P	•		•		•			•		•	•	
	RAUX	1/2			•		•		•				•		



P= Partial

Trane Equipment

Water-cooled chillers and condenserless units

Water-cooled chillers and condenserless units



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



Screw compressor
RTSF G
185-385 kW



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



Screw compressor
RTHD Evo
545-1450 kW



High speed centrifugal
compressor
GVWF
310-2660 kW



Screw compressor
RTWF
345-1860 kW

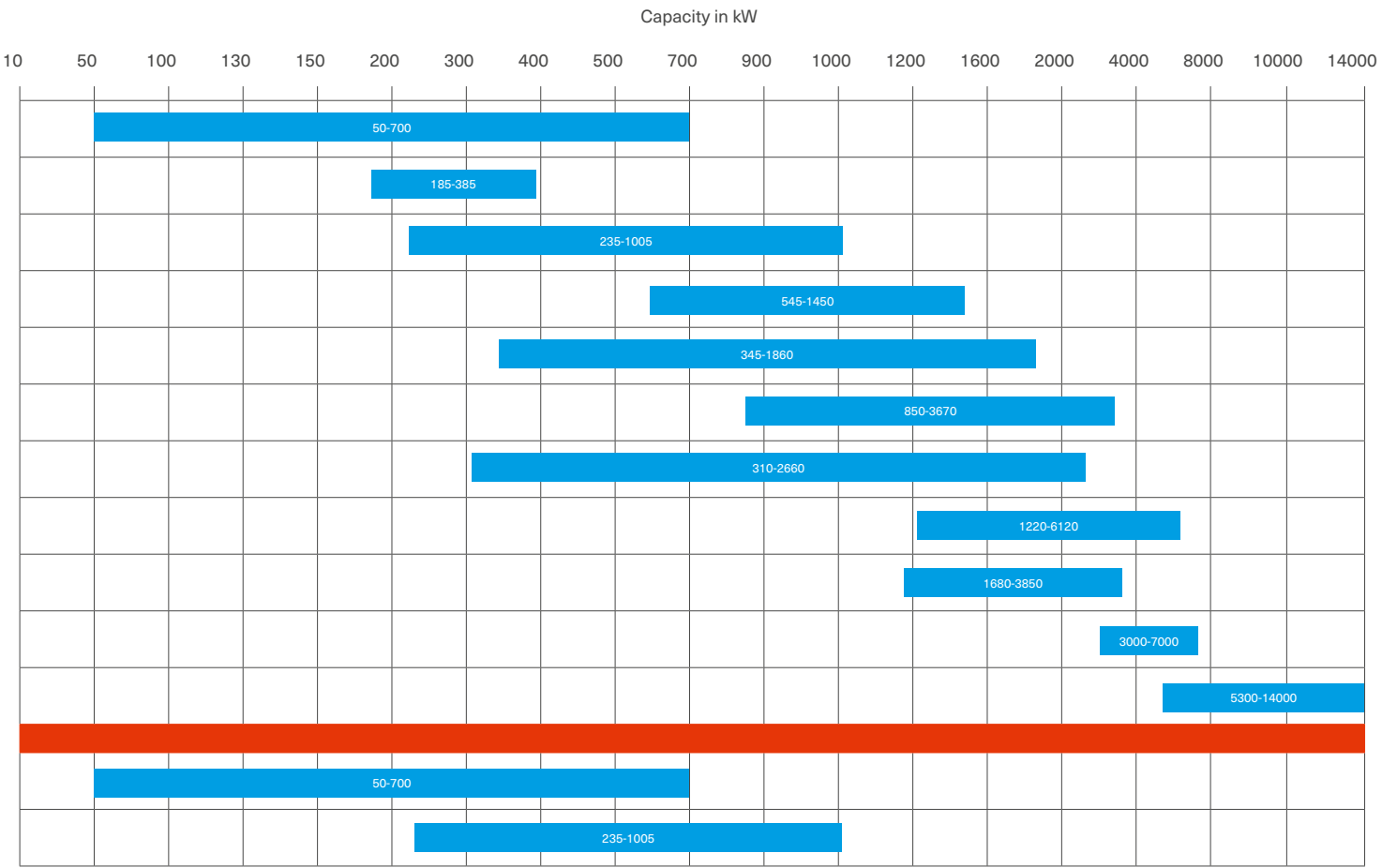


Screw compressor
RTHF
850-3670 kW



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

					Compressor				Water heat exchanger		Efficiency version				
		Refrigerant circuits	Adaptive Frequency™ Drive	Heat recovery	Scroll	Screw	Centrifugal	High Speed Centrifugal	Brazed plate	Shell and tube	Standard	High	Extra high	High Seasonal	Excellent
CHILLERS															
FLEX O	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															
FLEX O	CCUF	1/2			•				•		•	•			
	RTUD	2	•			•				•	•	•	•		



Trane Equipment

Water-to-water heat pumps

Water-to-water heat pumps



FLEX O R410A R454B

up to 60°C

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



LIFT R134a

up to 80°C

Scroll compressor
Heating 77-550 kW



CITY BOOSTER R1234ze R515B

up to 80°C

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



RTWD R134a R1234ze R515B

up to 75°C

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



XSTREAM R134a R513A R1234ze R515B

up to 85°C

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











EXERGY R410A R134a R513A R1234ze R1233ze R450A

up to 120°C

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



Trane heating. Naturally.

					Compressor			Water heat exchanger		Efficiency version				
		Refrigerant circuits	Adaptive Frequency™ Drive	Renewable Energy for Heating	Scroll	Screw	Piston	Brazed plate	Shell and tube	Standard	High	Extra high	High Seasonal	
HEAT PUMPS														
	CXWF	1/2		●	●			●			●			
		1		●	●			●		●				
	RTSF	1	●	●		●		●					●	
	RTWD	2	●	●		●			●	●	●	●	●	
	RTWF	2	●	●		●			●	●	●		●	
	RE	1/2		●	●			●		●				
	P	1/2		●			●	●		●				
	S-180 - 580	1		●		●		●		●				
	S-600 - 2000	2		●		●			●	●				



Trane Equipment

UniTrane™ 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

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



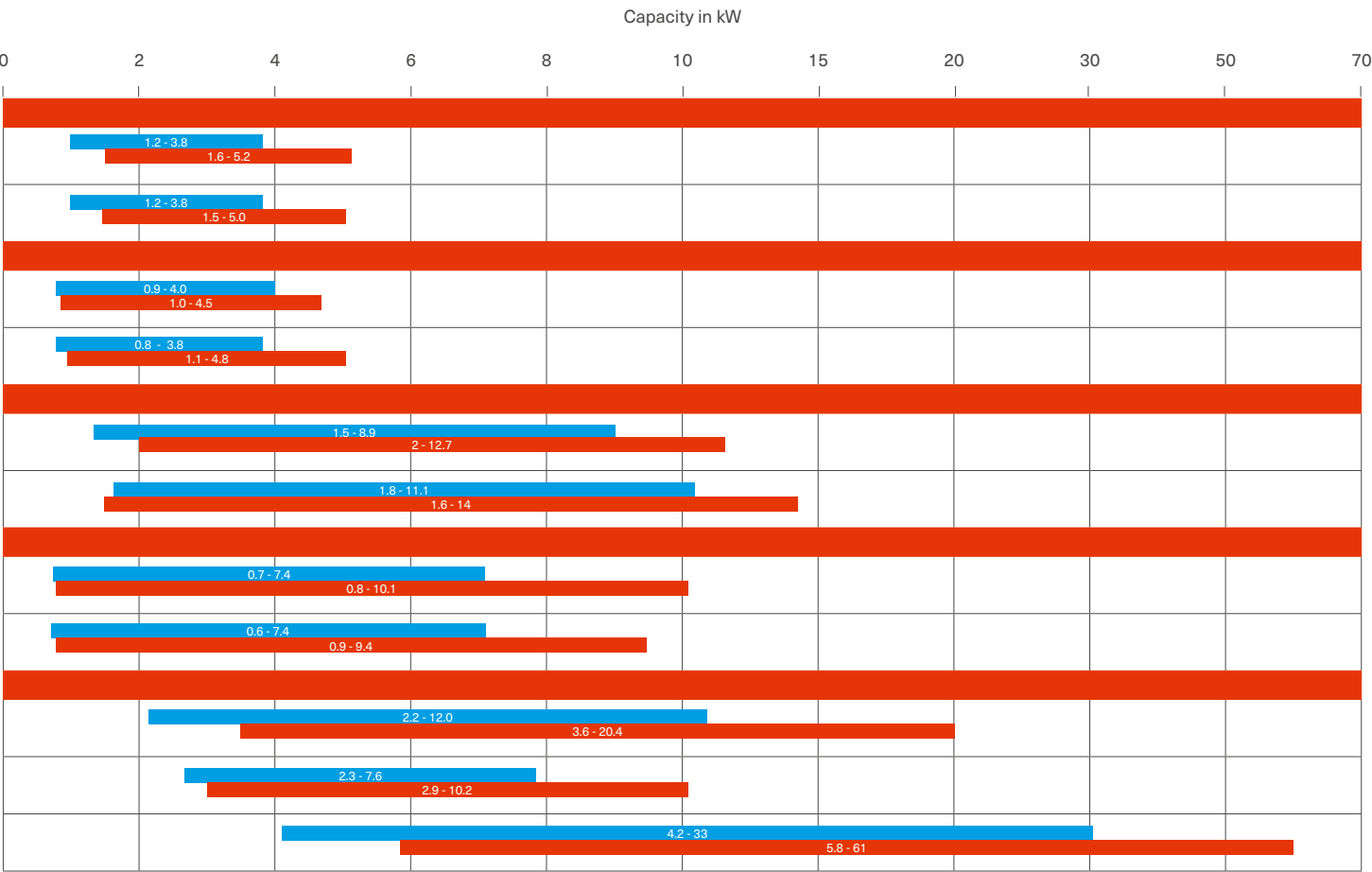
Ductable blower unit
AC fan motor
B-Line BFSL
1-60 kW

Heat recovery units



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

		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	•		•	•			•			•	



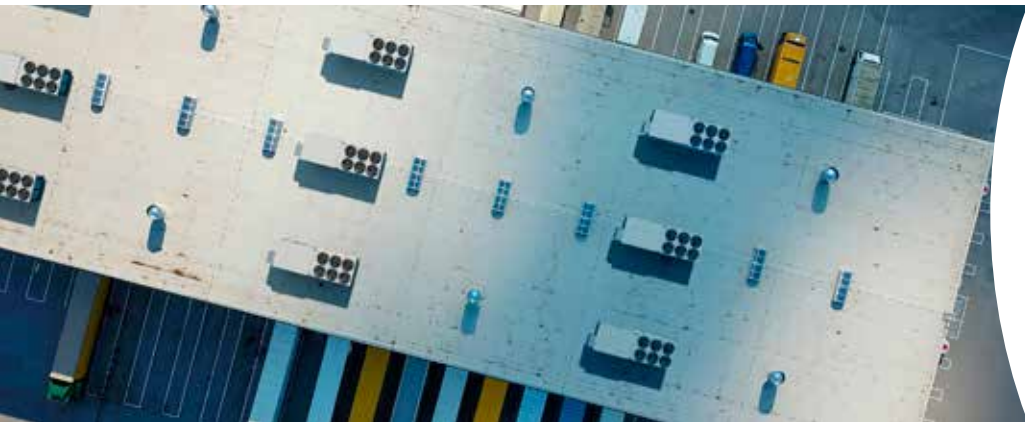
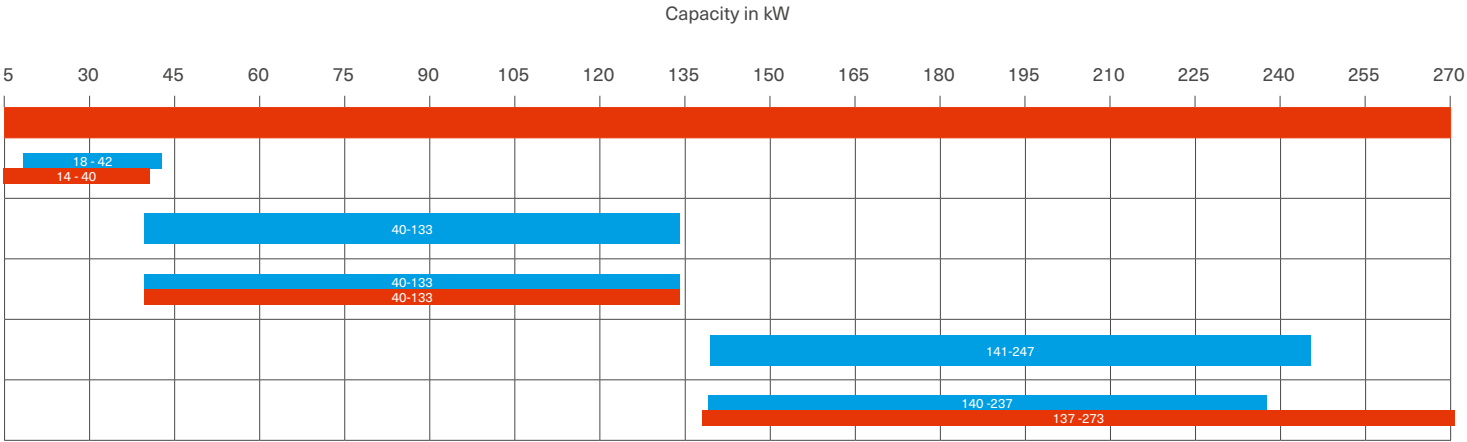
Trane Equipment

Rooftops

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



				Application		Airflow			Auxiliary heat			Heat recovery		
		Refrigerant circuits	Free cooling	Heat pump	Cooling only	Downflow	Horizontal flow	Multi-directional	Modulating gas burner	Hot water coil	Electric heater	Enthalpy Rotary Wheel (ERM)	Energy recovery circuit (ERC)	Thermodynamic heat recovery
ROOFTOPS														
AIRFINITY S	IH	1	●	●		●	●	●	●	●	●			●
AIRFINITY™	IC	1/2	●		●	●	●	●	●	●	●	●	●	
	IH	2	●	●		●	●	●	●	●	●	●	●	
AIRFINITY XL	IC	2	●		●	●	●	●	●	●	●	●		
	IH	2	●	●		●	●	●	●	●	●	●		



Trane Equipment

Climate Changer™ air handling units



CCBA
for comfort
applications
500-200000 m³/h



CLCF
for comfort
applications
1000-55000 m³/h



CLCF for hospital,
laboratory and
pharmaceutical
applications
1000-55000 m³/h



CCTA-CCTB for
customized applications
1000-160000 m³/h

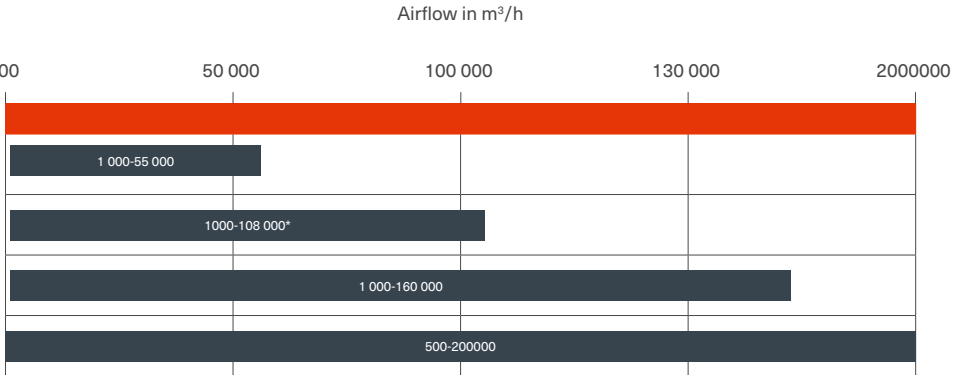


CCEC for customized
applications requiring
high air flow
1000-250000 m³/h



	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																	
CLCF	•	•	•		•		•	•	•	•	•	•			•		•
CCEC	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•
CCTA/CCTB			•	•	•	•	•	•	•	•	•	•	•	•		•	•
CCBA	•	•	•		•	•	•				•	•	•	•	•	•	•

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






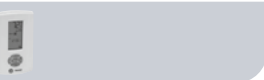
* up to 250000 m³/h upon request

Trane Controls

Building Management Systems and Heating and Cooling Plant Controls

Whether managing one or multiple facilities, Trane will support by selecting, designing and implementing the best controls for the building’s requirements. Trane BMS controls have full flexibility integrating the latest IT technologies, such as IP networking and web services support.

Trane Tracer® architecture

Enterprise	Tracer® Ensemble™	
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® Ensemble is a web based solution for managing single or multiple buildings from one interface. Tracer® Synchrony is a cost-effective single building solution for managing your HVAC equipment from a web-enabled interface. Tracer® Ensemble, Tracer® Synchrony and Tracer® Symbio™ controllers support open and standard protocols as well as working with non-Trane BACnet system controllers.

Chiller and Heat Pump Plant Controls

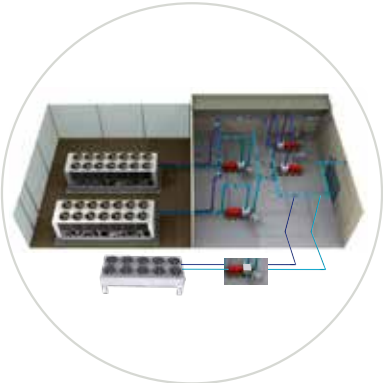
Trane has leveraged over 40 years of experience in controls to develop a suite of advanced heating and cooling Plant Controls. These include pre-packaged factory built control solutions and advanced control solutions for multiple chiller and heat pump applications. Running multiple energy strategies for optimization by operating the components of a chilled and hot water systems at their best efficiency.

Rooftop Controls

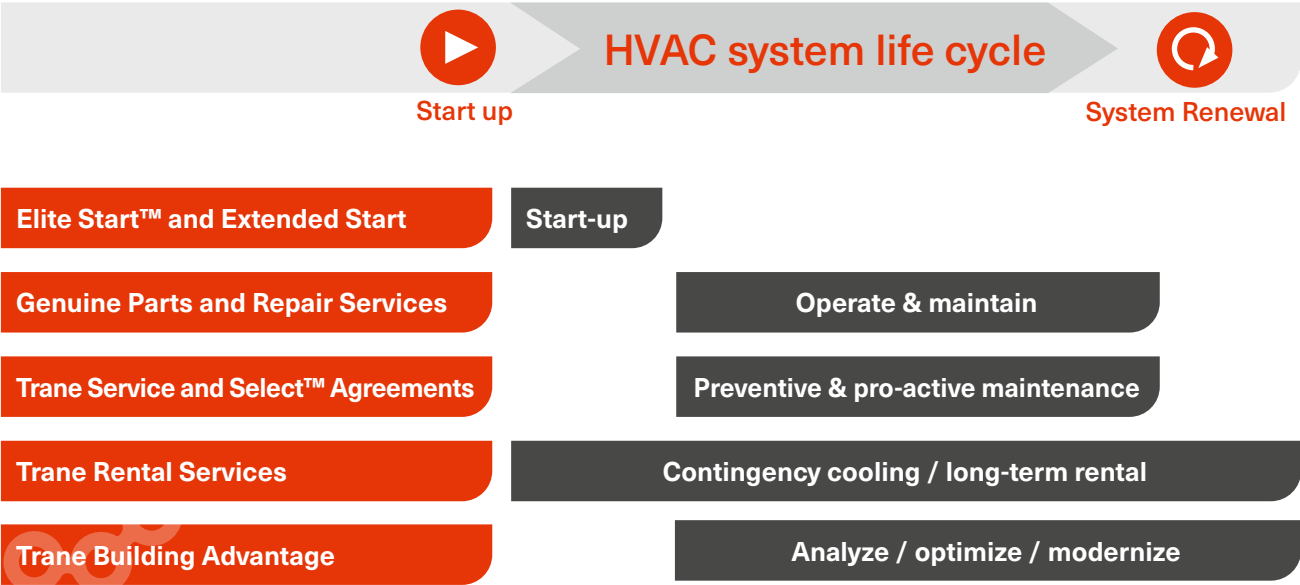
Tracer® Concierge is a packaged control solution for managing rooftops and simple on/off lighting system. most efficient point can realize savings of 25%.

Mobile Apps

The Trane BAS Operator and Trane BAS Occupant apps help you to monitor your system and respond to your building occupant’s needs by adjusting temperatures, schedules, and viewing critical alerts that require immediate service. The apps can be used on a tablet or smart phone operating iOS™ and Android™ devices.



Trane Service



Elite Start™

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.

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.



A must-see NEW video
<https://youtu.be/mUvJpqkoDko>



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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