



CONQUEST

**Air-cooled chillers and
air-to-water heat pumps**



CGAX/CXAX 40-165 kW

R454B

TRANE
TECHNOLOGIES

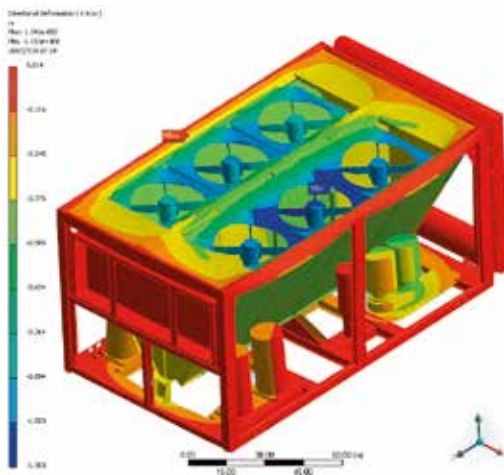
Trane Conquest

Air-cooled chillers and air-to-water heat pumps

Your primary concern when selecting HVAC equipment for your building should be comfort, efficiency and economy. Trane Conquest chillers and heat pumps uniquely combine the best in performance with the best in value.

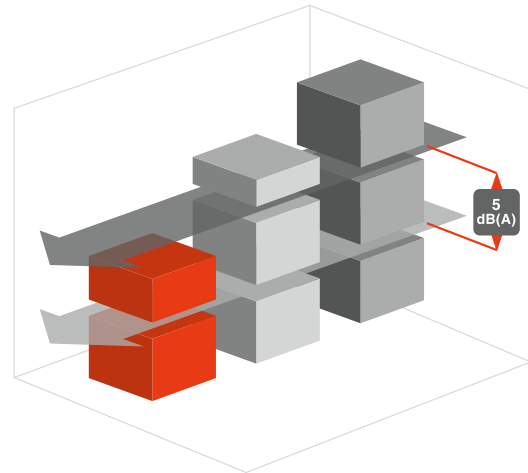
The smart and versatile Conquest range has been designed by Trane using over 100 years of experience to provide optimized efficiency with exceptionally low sound levels and high quality of materials and construction for total reliability.

Durability and high quality



Advanced FEA (Finished Element Analysis) and vibration testing guarantee robust design which is built-to-last.

Exceptionally low sound levels



- Industrial environment
- Urban environment
- Noise sensitive environment
- Standard units
- Low noise units



Sustainable

R454B is the best-balanced choice for your project and the environment.

According to the latest IPCC Assessment Report (AR6) the direct GWP of R454B is set at 531, well below the commonly accepted maximum direct GWP threshold of 750. For comparison, the direct GWP of R32 is set at 771 (AR6). On top of that, R454B units' seasonal and full load efficiencies are ~4-6% above R410A units of equal capacity.



Energy Efficient

The better the efficiency, the lower your energy costs. Trane has developed the Conquest range to optimize your Total Cost of Ownership (TCO). The design of the units has been optimized for part load operation since units always modulate throughout their real life utilization.



Quiet

Operating noise can be a significant intrusion into a sensitive building environment. The Conquest range includes both standard and low sound level models, so you can choose what suits your particular application. No compromise in operational efficiency has been made in providing these levels of sound attenuation. The Low Noise (LN) model achieves an impressive 47 dB(A) sound pressure level (@10m in free field).



Reliable

With equipment as critical as an HVAC system, quality is non-negotiable. At Trane we manufacture and design the core components and put our systems through extremely demanding performance and reliability tests. As a result, you have peace of mind, and we have the confidence to offer exceptional warranty cover of up to ten years.



Smart

The Trane Conquest range is made smart to make your life easier. It has the capability to provide all-year cooling in ambients from -18°C up to 46°C and all-year heating down to -15°C. It is ideally suited to comfort and process cooling applications and is fully Ecodesign compliant.

Units have a compact and low height design for quick and easy integration into jobsites. Footprint has been reduced by 30% versus the previous generation and unit height is between 1.5 and 1.75m depending on the model and options.

Operation could not be easier thanks to the Trane unit controller with LCD interface. Connectivity with Modbus, BACnet® and Trane BMS is made simple with the Smart Com interface.



The innovative solution for your building needs

Variable Speed Driven AC fans (optional)

- Improved capacity modulation (at low ambient air operation)
- Enables low ambient operation
- Reduced power consumption
- Reduced energy costs

Adaptive Frequency™ Drive

- Optional on water pumps
- Improves user comfort and process accuracy
- Reduces pump consumption and energy bills



Tracer™ Symbio 800 unit controller

- Optional TD7 7" color touch screen to navigate to all useful control screens
- Full monitoring of data, settings and alarms
- Clear messages in 15 different languages
- Advanced algorithms ensuring smooth operation and optimum defrosting (CXAX heat pump)
- Customizable with customer communication package
 - Chilled/hot water set point
 - Demand limit set point (external)
 - Analogue capacity output
 - Programmable relays



Tracer™ Symbio 800 and TD7 touch screen

Optional hydraulic module

- Housed within the unit frame to keep overall size to a minimum
- Single or dual pump
- Optional water buffer tank

Scroll compressors

- High efficiency scroll compressors with intermediate discharge valves, increasing part load efficiencies and unit operating map

Micro-channel condenser coils

- Leading edge coil design for increased corrosion resistance
- Longer life expectancy
- Increased efficiency with 20% less refrigerant
- Reduced carbon footprint

Connectivity

- Smart Com interface integrates seamlessly with BACnet®, Modbus and Trane BMS



General Specifications

Operating outdoor air temperature range (min./max.)	(°C)	-18 / +46°C
Leaving water temperature range (min./max.)	(°C)	-12 / 20°C
Power supply	(V/Ph/Hz)	400/3/50

CGAX chillers

R454B

		CGAX 015	CGAX 017	CGAX 020	CGAX 023	CGAX 026	CGAX 030	CGAX 035	CGAX 036	CGAX 039	CGAX 040	CGAX 045	CGAX 046	CGAX 052	CGAX 060
Net cooling capacity (1)	(kW)	40.9	48.4	56.4	63.7	74.6	81.8	100.4	96.7	109.4	116.1	122.8	131.4	150.5	164.7
Total power input (1)	(kW)	14.6	17.3	18.1	21.1	24.5	28	33.6	33	37.5	36.2	40.3	42.2	48.4	55.5
EER		2.81	2.79	3.12	3.02	3.05	2.92	2.99	2.93	2.92	3.21	3.05	3.11	3.11	2.97
Seasonal space efficiency (ns,c) (3)	(%)	163.9	170.8	168.3	169.8	170.2	163.6	189.1	183.7	187.1	182.9	178.2	181.2	184.1	177.5
SEER		4.17	4.34	4.28	4.32	4.33	4.17	4.80	4.67	4.75	4.65	4.53	4.61	4.68	4.51
Number of circuit(s)		1	1	1	1	1	1	2	1	1	2	1	2	2	2
Number of compressors per circuit		2	2	2	2	2	2	2	3	3	2	3	2	2	2
Acoustic data															
Sound power level (standard noise) (2)	(dBA)	83	83	85	85	85	86	86	84	85	88	87	88	88	89
Sound power level (low noise) (2)	(dBA)	77	77	79	79	79	80	81	79	80	82	82	82	82	83
Dimensions and weights (operating)															
Length	(mm)	2346	2346	2346	2346	2346	2346	2327	2327	2327	2327	2327	2327	2327	2327
Width	(mm)	1285	1285	1285	1285	1285	1285	2250	2250	2250	2250	2250	2250	2250	2250
Height (standard noise)	(mm)	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524	1524
Height (low noise)	(mm)	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747	1747
Weight	(kg)	497	509	552	557	587	599	887	819	824	973	879	983	1004	1029

(1) At Eurovent conditions: 12/7°C entering/leaving water temperature and 35°C ambient temperature according to EN 14511-2018.

(2) At Eurovent conditions, with 1pW reference sound power, according to ISO9614

(3) According to EN14825:2018. Ecodesign rating for comfort chiller – fan coil application



Heating operating outdoor air temperature range (min./max.)	(°C)	-15 / +20
Heating leaving water temperature range (min./max.)	(°C)	+20 / +60
Cooling operating outdoor air temperature range (min./max.)	(°C)	-10 / +46
Cooling leaving water temperature range (min./max.)	(°C)	-10 / 20
Power supply	(V/Ph/Hz)	400/3/50



CXAX heat pumps

		CXAX 015	CXAX 017	CXAX 020	CXAX 023	CXAX 026	CXAX 030	CXAX 035	CXAX 036	CXAX 039	CXAX 040	CXAX 045	CXAX 046	CXAX 052	CXAX 060
Net heating capacity (1)	(kW)	41.3	47.5	54.9	61.9	68.4	77.2	94.5	92.8	105.2	109.3	116.2	123.3	136.2	154.5
Total power input (1)	(kW)	14.1	16	18.6	20.2	22.5	25	31.5	29.7	34	37.2	37.9	42.1	45.6	51.7
COP	(kW/kW)	2.93	2.97	2.95	3.07	3.04	3.09	3.00	3.12	3.09	2.94	3.07	2.93	2.99	2.99
Seasonal space efficiency in heating (2)	(%)	125.9	130.1	125.6	126.8	128.7	132.8	136.0	142.4	133.9	125.9	135.8	129.0	133.3	136.1
SCOP (2)	(kW/kW)	3.22	3.33	3.21	3.25	3.29	3.39	3.48	3.63	3.42	3.22	3.47	3.30	3.41	3.48
Net cooling capacity (3)	(kW)	39	44.2	55.2	61.8	68.1	75	92.6	89.6	102.8	109	111.7	121.8	137.3	151.2
Total power input (3)	(kW)	13.8	16.1	18.2	20.9	24	26.6	32.3	30.8	34.5	35.8	39.2	41.7	47.5	52.9
EER	(kW/kW)	2.83	2.74	3.04	2.96	2.84	2.82	2.87	2.91	2.98	3.04	2.85	2.92	2.90	2.86
Seasonal space efficiency (η _{s,c})	(%)	169.7	171.4	170.5	170.6	163.1	161.4	179.2	186.8	178.9	172.4	172.9	170.8	171.4	169.0
SEER	(kW/kW)	4.32	4.36	4.34	4.34	4.15	4.11	4.55	4.75	4.55	4.38	4.40	4.34	4.36	4.30
Number of circuit(s)		1	1	1	1	1	1	2	1	1	2	1	2	2	2
Number of compressors per circuit		2	2	2	2	2	2	2	3	3	2	3	2	2	2
Acoustic data															
Sound power level (standard noise) (4)	(dBA)	84	84	85	85	85	86	87	86	87	89	88	86	88	89
Sound power level (low noise) (4)	(dBA)	78	78	81	80	80	81	81	80	81	84	82	83	83	84
Dimensions and weights (operating)															
Length	(mm)	2346	2346	2346	2346	2346	2346	2327	2327	2327	2327	2327	2327	2327	2327
Width	(mm)	1285	1285	1285	1285	1285	1285	1285	2250	2250	2250	2250	2250	2250	2250
Height (standard noise)	(mm)	1524	1524	1524	1524	1524	1724	1524	1524	1524	1524	1524	1524	1524	1724
Height (low noise)	(mm)	1747	1747	1747	1747	1747	1947	1747	1747	1747	1747	1747	1747	1747	1947
Weight	(kg)	539	545	582	624	630	665	974	881	925	998	942	1072	1093	1163

(1) At Eurovent conditions: 40/45°C entering/leaving water temperature and DB/WB 7°C/6°C ambient temperature according to EN 14511-2018
(2) According to EN 14825-2018. Ecodesign rating at low temperature conditions. Ambient air temperature 7°C dry bulb/6°C wet bulb - Hot water temperature 30/35°C
(3) At Eurovent conditions: 12/7°C entering/leaving water temperature and 35°C ambient temperature according to EN 14511-2018.
(4) At Eurovent conditions, with 1pW reference sound power, according to ISO9614

The Trane Conquest range

- 14 unit sizes providing capacities from 40 kW to 165 kW
- Cooling only CGAX: ambient from -18°C to +46°C, leaving chilled water temperature down to -12°C
- Heat pump CXAX: ambient down to -15°C, leaving hot water temperature up to 60°C
- Two acoustic versions: Standard Noise (SN), Low Noise (LN)
- Single or dual circuit choice on 90-130 kW range

Options and accessories

- Hydraulic module
- Buffer tank
- Variable Primary Flow
- Low ambient air operation down to -18°C
- Partial heat recovery
- Modbus, BACnet® communication interfaces
- R454B refrigerant detector, factory installed
- Softstarter

The Trane advantage

Trane is recognized as a world leader with over 100 years of experience in creating and sustaining safe, comfortable and energy efficient environments while improving the performance of buildings around the world.

Trane solutions optimize indoor environments with a broad portfolio of energy efficient heating, ventilating and air conditioning systems, building services, parts support and advanced controls.

To ensure your equipment continues working at its optimum throughout the life of the building, Trane provides a full range of service solutions combined with in-house expertise and an extensive support network.



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.