



TRANE®

Air-Cooled Screw Chillers

RTAF 300-1900 kW

The best bundled in one.

Our best.

SINTECIS



IR Ingersoll Rand®

Trane Sintesis

The best bundled in one. Our best.

The best buildings demand the best in HVAC. We have combined the best efficiency and performance in one system. Trane Sintesis provides leading temperature control in the most demanding applications. Exceptional efficiency keeps your operating costs low. Smart but easy to use controls ensure you get the best out of your system day after day, year after year.





The best in efficiency, low noise, high quality and smart operation



Energy Efficient

The better the efficiency, the lower your energy costs. Trane has developed the Sintesis range to optimize your Total Cost of Ownership (TCO). A choice of five efficiency levels means you can select a model that exactly meets the needs of your building, your climate and your budget.



Quiet

Operating noise is a significant intrusion into a sensitive building environment. The Sintesis range is simply the quietest system on the market. No compromise in operational efficiency has been made in providing a choice of three levels of noise attenuation.



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, we have the confidence to offer exceptional warranty cover of up to ten years.



Smart

The Trane Sintesis range is the smartest solution on the HVAC market. It has the capability to provide all-year cooling in ambients from -18°C up to 55°C. It is ideally suited to industrial applications and is Ecodesign 2016 compliant. Operation could not be easier thanks to smart controls and a user-friendly touchscreen interface. And connectivity with Modbus, BACnet®, LonTalk® and Trane BMS is simple with the Smart Com interface.



Trane Proprietary Technology*

provides the innovative solution your building needs

* Redesigned fan diffusers

- Remodelled to optimize airflow
- Fans consume less power
- Operating noise reduced

Electronically Commuted (EC) fans

- Improved capacity modulation
- Reduced power consumption
- Reduced energy costs

* Micro-channel condenser coils

- Leading edge coil design for increased corrosion resistance
- Longer life expectancy
- Increased efficiency with less refrigerant
- Reduced carbon footprint
- 10% overall unit weight reduction

* Trane smart control and interface combined

- Leading TD7 touch screen with 7" color display
- Clear display of critical information
- Monitor settings, data trending, reports and alarms
- Simple, intuitive navigation
- Effective operation, monitoring and management
- Durable construction for both indoor and outdoor use



* Compact - High performance - Integrated design

- Low charge (CHIL) flooded evaporator

- Reduced refrigerant volume
- Increased efficiency
- Reduced carbon footprint



* Tracer™ UC800 controller

- New generation of Trane control platform for chillers
- Advanced algorithms for the most challenging conditions
- Perfect balance of performance and economy



* Trane Compressor

- Direct drive, two screws helical rotary design
- Infinite capacity modulation via the slide valve
- Trane legendary reliability

Adaptive Frequency™ Drive on HSE and HSS versions

- Improved efficiency under part load conditions
- Improved capacity modulation
- Current surge reduced by a factor of 5



Two different refrigerant alternatives

- R134a
- R513A



The Total Package

Quality, performance and reliability

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 and processes 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 to work 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.

The Trane offering is...

Smart



Reliable



Energy Efficient



Quiet





Smart Com interface



The Smart Com interface provides complete connectivity with LonTalk®, BACnet®, Modbus and Trane BMS for remote monitoring. Total control over your system to optimize performance and reliability.

- 7" touch screen
- Intuitive menus
- Easy to use
- Full monitoring of data, settings and alarms
- Full connectivity for remote monitoring
- Trane will design the ideal control solution for your building

Smart flow control



- Trane Adaptive Frequency™ Drive on water pumps
- Variable primary flow to best adapt to jobsite conditions and energy savings

The best in quality, the best in reliability



At Trane we manufacture what we supply, so we enjoy full control from concept to delivery.

Our test procedures are the most rigorous in the industry, so your system will be totally dependable under the most demanding conditions.

Specialist industrial designers ensure every unit is as good looking as the building it is going into.

Because of the confidence we have in our products, we can offer the Trane Select 10 year warranty.

Total compliance

Trane ensures that all our products meet or exceed all requirements for efficiency, noise, refrigerants and safety. This means you can have total peace of mind.



Outstanding energy efficiency



Exceptional efficiency means less energy consumed and lower electricity bills.

Choose from five efficiency versions:

Standard Efficiency: SE

- ESEER up to 4.51
- EER up to 3.22



High Efficiency: HE

- ESEER up to 4.42
- EER up to 3.28

Extra Efficiency: XE



- ESEER up to 4.69
- EER up to 3.36

High Seasonal Short: HSS

- Adaptive Frequency™ Drive, inverter technology
- ESEER up to 4.62
- EER up to 3.16



High Seasonal Efficiency: HSE

- Adaptive Frequency™ Drive, inverter technology
- ESEER up to 4.75
- EER up to 3.28





Quietest system on the market

- Choose from five levels of sound attenuation depending on the sensitivity of the application.
- Achieved without any loss of operating efficiency and even improving performances with the Extra Low Noise-EC version.

Standard Noise: SN - average sound power Lw 98 dB(A)

Low Noise: LN - average sound power Lw 95 dB(A)

- Compressor enclosure
- Additional insulation on the refrigerant circuit

Low Noise Night Noise Set Back: LN-NNSB - average sound power Lw 95 dB(A)

- Compressor enclosure
- Additional insulation on the refrigerant circuit
- Night noise set back option

Extra Low Noise-AC: XLN-AC - average sound power Lw 91 dB(A)

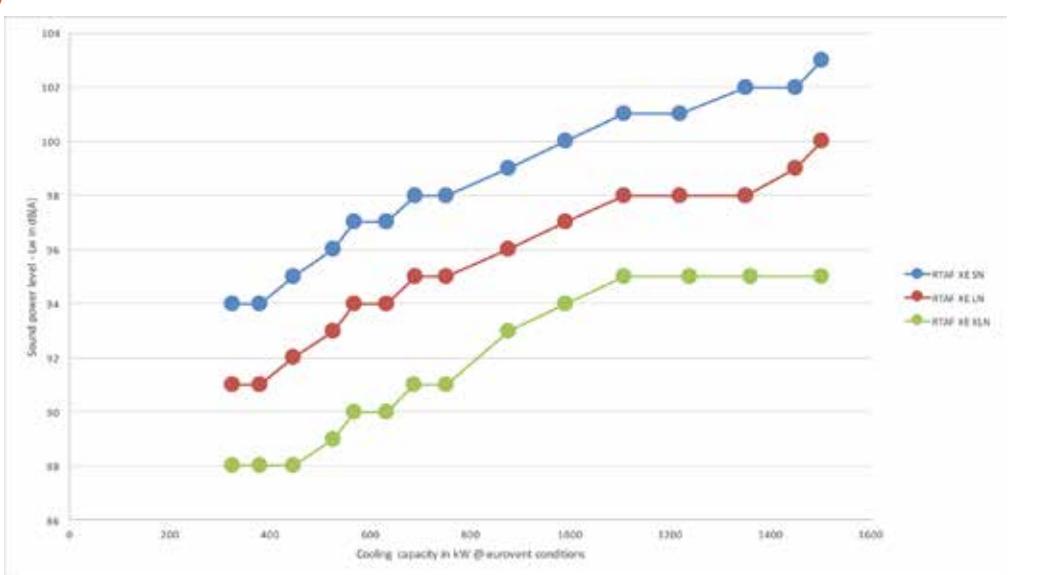
- Compressor enclosure
- Refrigerant line insulation

Extra Low Noise-EC: XLN-EC - average sound power Lw 91 dB(A)*



* The lowest noise rating on the market.

Sound levels



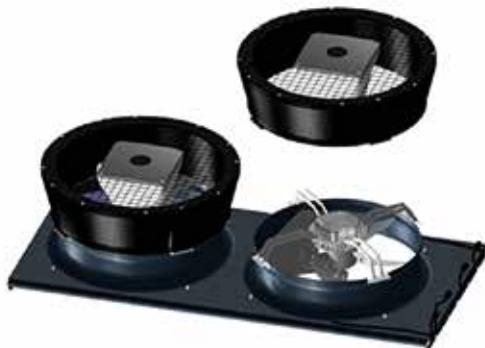
XLN-EC

The quietest in the industry!

The lowest sound levels...

Extra Low Noise EC (XLN-EC): L_w from 88 to 101dB(A) across the range thanks to:

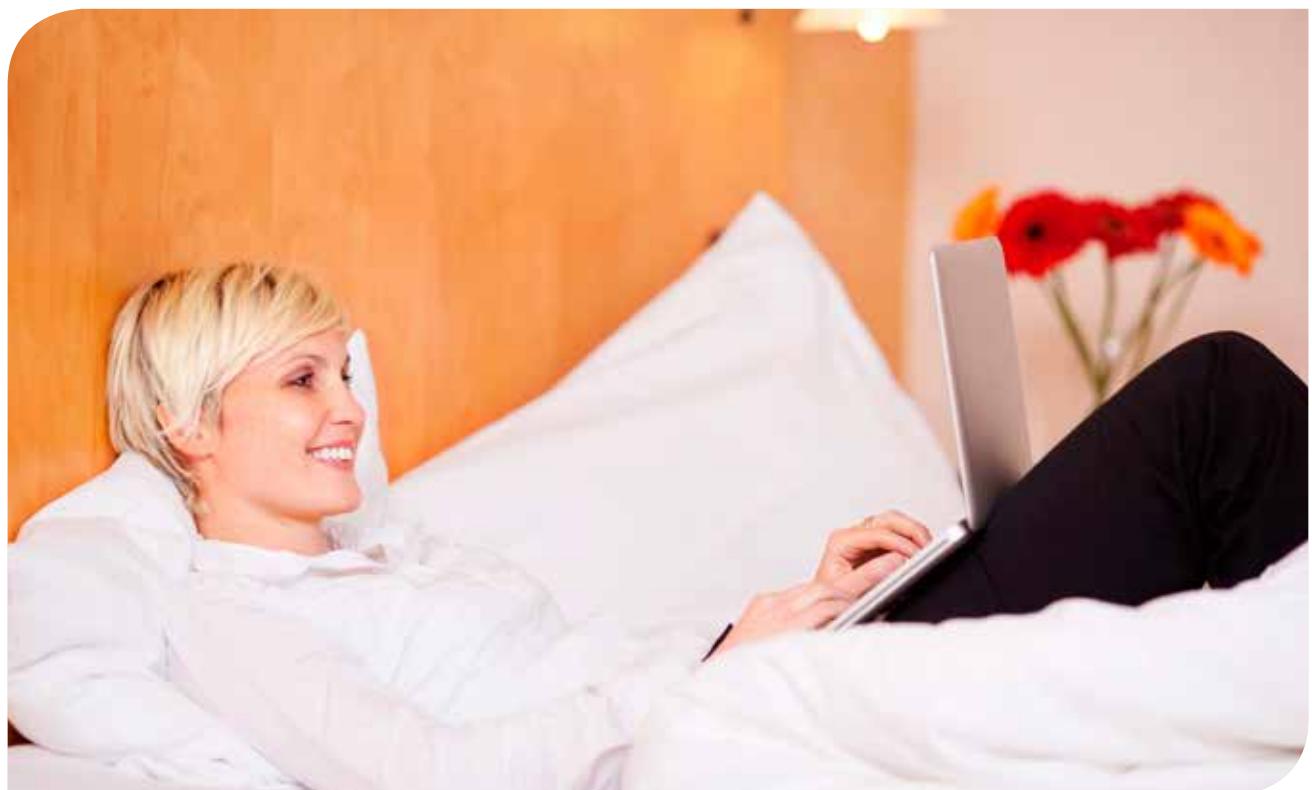
- Compressor enclosure
- Refrigerant line insulation
- EC fans with top diffusers



...at the efficiency that you need

The **XLN-EC** (Extra Low Noise EC)* version improves unit efficiency even further and is available in four efficiency levels for an optimized **Total Cost of Ownership (TCO)**

- **Standard Efficiency (SE)**: Class B/A
- **Extra Efficiency (XE)**: Class A with ESEER up to 4.69
- **High Seasonal Short (HSS)** using Trane Adaptive Frequency™
- **High Seasonal Efficiency (HSE)**: Class A, using Trane Adaptive Frequency™ Drive technology on the compressors allowing ESEER up to 4.75



Heat Recovery



Heat recovery is reusing the energy which is produced as a natural by-product of the cooling cycle. Trane Sintesis chillers with Partial or Total Heat Recovery option combine the energy savings from heat recovery operation with the cost savings from installation and maintenance. Units with the Heat Recovery option operate as a standard chiller as long as heat is not required or can simultaneously produce chilled and hot water for use in applications like:

- Heating or preheating of boiler systems or domestic water
- Air conditioning
- Ventilation air pre-heating
- Industrial processes.

Trane Sintesis model RTAF offers a heating capacity

- up to 25% of the cooling capacity with Partial Heat Recovery (PHR) option.
- up to 130% of the cooling capacity with Total Heat Recovery (THR) option.

Free-Cooling



Take the advantage of low ambient conditions to help cool water in your HVAC system.

- A small footprint compared to a system where a dry cooler and a chiller are used
- One single equipment control
- A wide range of capacities

Choose from four free-cooling alternatives.

- Total Direct Free-cooling
- Partial Direct Free-cooling
- Total Glycol-Free Free-cooling
- Partial Glycol-Free Free-cooling



General specifications

SE/HE/XE



RTAF SE Standard Efficiency - Standard and Low Noise

Eurovent performances (1)		90	105	125	140	145	150	155	170	175	185	190
Cooling capacity	(kW)	326	375	440	505	522	542	563	581	615	655	674
EER		3.14	3.10	3.02	2.96	3.15	2.82	3.05	2.70	2.98	2.87	3.04
ESEER		3.76	3.78	3.83	3.81	3.84	3.72	3.78	3.57	3.89	3.67	3.84
Eurovent class		A	A	B	B	A	C	B	D	B	C	B
Sound power level	(dBA)	95	95	95	96	96	96	96	97	97	97	97
Sound power level (low noise)	(dBA)	92	92	92	93	93	93	93	94	94	94	94
Dimensions and weights (operating)												
Length	(mm)	4520	4520	4520	4520	5645	4520	5645	4520	5645	5645	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3295	3315	3495	3668	3990	4100	4260	4240	4405	4240	4880

Eurovent performances (1)		200	205	250	280	310	350	355	380	410	450
Cooling capacity	(kW)	707	731	857	971	1073	1192	1173	1321	1445	1588
EER		2.80	3.00	2.95	2.95	2.86	2.84	2.92	2.88	2.91	3.05
ESEER		3.64	3.83	3.89	3.95	3.95	4.00	4.20	4.05	4.07	4.22
Eurovent class		C	B	B	B	C	C	B	C	B	B
Sound power level	(dBA)	97	97	99	100	101	101	105	101	102	105
Sound power level (low noise)	(dBA)	94	94	96	97	98	98	104	98	99	104
Dimensions and weights (operating)											
Length	(mm)	5645	6770	8271	9396	9396	10143	9396	11268	12393	12393
Width	(mm)	2200	2200	2220	2220	2220	2220	2220	2220	2220	2220
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	4565	4995	6367	6818	6923	8264	7008	8514	8749	8869

RTAF SE Standard Efficiency - Extra Low Noise -EC

Eurovent performances (1)		90	105	125	140	145	150	155	170	175	185	190
Net cooling capacity	(kW)	326	376	440	505	522	542	564	581	616	655	675
EER		3.22	3.17	3.08	3.01	3.22	2.86	3.10	2.74	3.03	2.91	3.10
ESEER		4.10	4.02	4.04	3.91	4.06	3.82	3.98	3.65	4.02	3.77	4.00
Eurovent class		A	A	B	B	A	C	A	C	B	B	A
Sound power level	(dBA)	88	89	89	89	89	90	90	90	90	91	91
Dimensions and weights (operating)												
Length	(mm)	4520	4520	4520	4520	5645	4520	5645	4520	5645	5645	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3336	3347	3509	3682	4024	4110	4290	4225	4410	4245	4905

Eurovent performances (1)		200	205	250	280	310	350	355	380	410	450
Net cooling capacity	(kW)	708	732	858	972	1074	1193	1186	1322	1447	1589
EER		2.84	3.05	3.00	3.00	2.90	2.90	3.00	2.93	2.95	3.11
ESEER		3.73	3.95	4.28	4.37	4.30	4.36	4.44	4.38	4.43	4.51
Eurovent class		C	B	B	B	C	C	B	B	B	A
Sound power level	(dBA)	91	91	93	94	94	94	103	95	95	103
Dimensions and weights (operating)											
Length	(mm)	5645	6770	8271	9396	9396	10143	9396	11268	12393	12393
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2672	2672	2672	2672	2672	2672	2672	2672
Weight	(kg)	4570	5008	6430	6890	7003	8338	7088	8595	8819	8819

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

RTAF SE Standard Efficiency - Extra Low Noise-AC

Eurovent performances (1)	90	105	125	140	145	150	155	170	175	185	190
Net cooling capacity (kW)	324	373	436	499	518	535	558	572	608	647	668
EER	3.19	3.12	3.02	2.94	3.16	2.79	3.04	2.66	2.96	2.84	3.04
ESEER	3.88	3.87	3.90	3.85	3.94	3.75	3.86	3.57	3.94	3.70	3.89
Eurovent class	A	A	B	B	A	C	B	D	B	C	B
Sound power level (dBA)	88	89	89	89	89	90	90	90	90	91	91
Dimensions and weights (operating)											
Length (mm)	4520	4520	4520	4520	5645	4520	5645	4520	5645	5645	6770
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3336	3347	3509	3682	4024	4110	4290	4225	4410	4245	4905

Eurovent performances (1)	200	205	250	280	310	350	355	380	410	450
Net cooling capacity (kW)	698	724	848	960	1060	1177	1166	1305	1428	1582
EER	2.76	2.98	2.93	2.93	2.83	2.81	2.89	2.86	2.88	3.04
ESEER	3.66	3.87	3.96	4.07	4.02	4.11	4.24	4.16	4.19	4.23
Eurovent class	C	B	B	B	C	C	C	C	C	B
Sound power level (dBA)	91	91	93	94	94	95	104	95	96	104
Dimensions and weights (operating)										
Length (mm)	5645	6770	8271	9396	9396	10143	9396	11268	12393	12393
Width (mm)	2200	2200	2220	2220	2220	2220	2220	2220	2220	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	4570	5008	6410	6870	6983	8318	7068	8575	8819	8939

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013



RTAF HE High Efficiency - Standard and Low Noise

Eurovent performances (1)		90	105	125	145	155	175	190	205
Net cooling capacity	(kW)	330	383	453	532	576	632	688	751
EER		3.15	3.17	3.17	3.24	3.16	3.14	3.15	3.14
ESEER		3.73	3.67	3.81	3.93	3.89	3.90	3.84	3.88
Eurovent class		A	A	A	A	A	A	A	A
Sound power level (standard noise)	(dBA)	95	95	96	96	97	97	98	98
Sound power level (low noise)	(dBA)	93	93	93	93	94	94	95	95
Dimensions and weights (operating)									
Length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3546	3557	3714	4224	4490	4615	5065	5168

Eurovent performances (1)		250	280	310	350	355	380	410	450
Net cooling capacity	(kW)	872	986	1102	1233	1214	1352	1456	1605
EER		3.18	3.23	3.21	3.22	3.18	3.21	3.13	3.15
ESEER		4.15	4.13	4.10	4.14	4.26	4.18	4.18	4.20
Eurovent class		A	A	A	A	A	A	A	A
Sound power level (standard noise)	(dBA)	99	100	101	101	105	102	102	105
Sound power level (low noise)	(dBA)	96	97	98	98	104	98	99	104
Dimensions and weights (operating)									
Length	(mm)	9393	10143	11268	12393	11268	13518	13518	13518
Width	(mm)	2220	2220	2220	2220	2220	2220	2220	2220
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	6590	7010	7428	8763	7513	8935	8869	8989

RTAF HE High Efficiency - Extra Low Noise-AC

Eurovent performances (1)		90	105	125	145	155	175	190	205
Net cooling capacity	(kW)	330	381	450	529	572	627	683	744
EER		3.23	3.23	3.20	3.28	3.19	3.14	3.17	3.15
ESEER		3.95	3.82	3.93	4.05	3.99	3.99	3.94	3.96
Eurovent class		A	A	A	A	A	A	A	A
Sound power level	(dBA)	90	90	90	90	90	90	91	91
Dimensions and weights (operating)									
Length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3646	3657	3814	4344	4610	4735	5205	5308

Eurovent performances (1)		250	280	310	350	355	380	410	450
Net cooling capacity	(kW)	864	978	1093	1222	1211	1341	1442	1600
EER		3.18	3.24	3.21	3.22	3.18	3.21	3.12	3.14
ESEER		4.41	4.42	4.19	4.30	4.32	4.33	4.32	4.24
Eurovent class		A	A	A	A	A	A	A	A
Sound power level	(dBA)	96	97	98	98	104	98	99	104
Dimensions and weights (operating)									
Length	(mm)	9393	10143	11268	12393	11268	13518	13518	13518
Width	(mm)	2220	2220	2220	2220	2220	2220	2220	2220
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	6750	7190	7628	8983	7713	9175	9109	9229

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

RTAF XE Extra Efficiency - Standard and Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205
Net cooling capacity (kW)	326	380	447	527	569	633	689	752
EER	3.34	3.28	3.23	3.32	3.21	3.18	3.20	3.19
ESEER	4.17	4.10	4.15	4.21	4.13	4.10	4.06	4.04
Eurovent class	A	A	A	A	A	A	A	A
Sound power level (standard noise) (dBA)	94	94	95	96	97	97	98	98
Sound power level (low noise) (dBA)	91	91	92	93	94	94	95	95
Dimensions and weights (operating)								
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3546	3557	3714	4224	4490	4615	5065	5168

Eurovent performances (1)	250	280	310	350	355	380	410	415	450
Cooling capacity (kW)	876	990	1107	1237	1218	1359	1463	1479	1606
EER	3.21	3.26	3.23	3.24	3.24	3.24	3.16	3.15	3.19
ESEER	4.52	4.62	4.57	4.58	4.54	4.58	4.52	4.50	4.51
Eurovent class	A	A	A	A	A	A	A	A	A
Sound power level (dBA)	99	100	101	101	105	102	102	103	105
Sound power level (low noise) (dBA)	96	97	98	98	104	98	99	100	104
Dimensions and weights (operating)									
Length (mm)	9393	10143	11268	12393	11268	13518	13518	13518	13518
Width (mm)	2220	2220	2220	2220	2220	2220	2220	2220	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	6590	7010	7428	8763	7513	8935	8869	8869	8989

RTAF XE Extra Efficiency - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205
Cooling capacity (kW)	325	380	447	526	568	633	688	751
EER	3.36	3.30	3.24	3.33	3.21	3.20	3.22	3.21
ESEER	4.20	4.14	4.18	4.24	4.15	4.13	4.09	4.07
Eurovent class	A	A	A	A	A	A	A	A
Sound power level (dBA)	88	88	88	89	90	90	91	91
Dimensions and weights (operating)								
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	3646	3657	3814	4344	4610	4735	5205	5308

Eurovent performances (1)	250	280	310	350	355	380	410	450
Cooling capacity (kW)	875	990	1107	1237	1217	1358	1463	1606
EER	3.25	3.30	3.28	3.29	3.27	3.28	3.20	3.22
ESEER	4.59	4.69	4.64	4.64	4.60	4.65	4.58	4.57
Eurovent class	A	A	A	A	A	A	A	A
Sound power level (dBA)	93	94	95	95	103	95	95	103
Dimensions and weights (operating)								
Length (mm)	9393	10143	11268	12393	11268	13518	13518	13518
Width (mm)	2220	2220	2220	2220	2220	2220	2220	2220
Height (mm)	2672	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	6750	7190	7628	8983	7713	9175	9109	9229

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

HSE/HSS

Trane Adaptive Frequency™ Drive

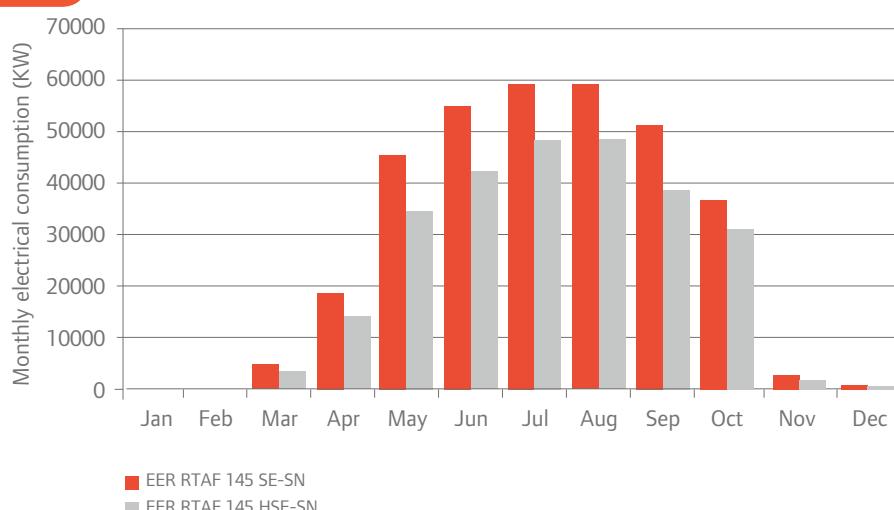
The highest efficiencies - and up to 1900 kW

High Seasonal Efficiency (HSE)*: with Trane Adaptive Frequency™ Drive technology on the compressors and fans:

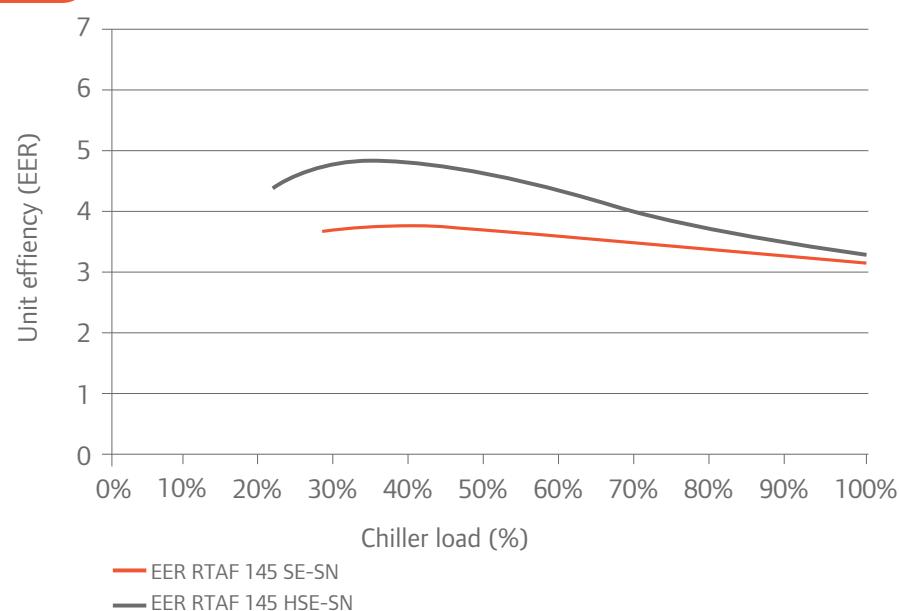
- **EER up to 3.28**
- **ESEER up to 4.75**
- **Reduced inrush current by 5**
- Improved **capacity modulation**

The High Seasonal Efficiency Short (HSS) version equipped with one condensing coil less, shortening its length.

Monthly chiller consumption



Unit efficiency improvement



General specifications

HSE/HSS



RTAF HSE - High Seasonal Efficiency - Standard and Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205	245	250
Cooling capacity (kW)	330	383	450	530	575	637	695	747	869	880
EER	3.26	3.18	3.11	3.19	3.15	3.12	3.20	3.15	2.84	3.12
ESEER	4.48	4.38	4.40	4.43	4.49	4.52	4.55	4.53	4.30	4.57
Eurovent class	A	A	A	A	A	A	A	A	C	A
Sound power level (dBA)	94	94	95	96	97	97	98	98	104	99
Sound power level (low noise) (dBA)	91	91	92	93	94	94	95	95	101	96
Dimensions and weights (operating)										
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895	7895	9396
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3746	3797	3959	4484	4790	4920	5430	5533	5533	6970

Eurovent performances (1)	280	310	350	370	380	400	410	450	510	550
Cooling capacity (kW)	997	1115	1243	1397	1354	1496	1473	1592	1801	1899
EER	3.16	3.14	3.16	3.16	3.17	2.92	3.10	2.86	3.10	2.91
ESEER	4.64	4.68	4.68	4.56	4.69	4.43	4.69	4.46	4.56	4.48
Eurovent class	A	A	A	A	A	B	A	C	A	B
Sound power level (dBA)	100	101	101	106	102	107	102	107	106	107
Sound power level (low noise) (dBA)	97	98	98	105	98	106	99	104	105	106
Dimensions and weights (operating)										
Length (mm)	10143	11268	12393	11268	13518	11268	13518	13518	13518	13518
Width (mm)	2220	2220	2220	2220	2220	2220	2220	2220	2220	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	7440	7878	9223	8158	9415	8158	9349	9785	9629	9629

RTAF HSE - High Seasonal Efficiency - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205	245	250
Cooling capacity (kW)	330	383	450	530	574	637	695	753	868	879
EER	3.28	3.21	3.13	3.21	3.17	3.15	3.24	3.19	2.86	3.15
ESEER	4.54	4.44	4.47	4.49	4.56	4.59	4.62	4.58	4.36	4.63
Eurovent class	A	A	A	A	A	A	A	A	C	A
Sound power level (dBA)	88	88	88	89	90	90	91	91	97	93
Dimensions and weights (operating)										
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895	7895	9396
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2672
Weight (kg)	3746	3797	3959	4484	4790	4920	5430	5533	5533	6970

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013



Eurovent performances (1)	280	310	350	370	380	400	410	450	510	550
Cooling capacity (kW)	997	1115	1243	1404	1354	1504	1463	1591	1810	1911
EER	3.19	3.18	3.19	3.21	3.20	2.97	3.14	2.90	3.15	2.96
ESEER	4.69	4.74	4.74	4.60	4.74	4.48	4.75	4.52	4.61	4.53
Eurovent class	A	A	A	A	A	B	A	B	A	B
Sound power level (dBA)	94	95	95	104	95	105	95	101	104	105
Dimensions and weights (operating)										
Length (mm)	10143	11268	12393	11268	13518	11268	13518	13518	13518	13518
Width (mm)	2220	2220	2220	2220	2220	2220	2220	2220	2220	2220
Height (mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	7440	7878	9223	8158	9415	8158	9349	9785	9629	9629

RTAF HSS - High Seasonal Short - Standard and Low Noise

Eurovent performances (1)	90	105	125	140	145	150	155	170	175	185
Cooling capacity (kW)	330	378	443	509	526	545	567	582	617	656
EER	3.11	3.04	2.95	2.88	3.07	2.74	2.97	2.60	2.89	2.78
ESEER	4.36	4.26	4.26	4.15	4.29	4.20	4.37	4.17	4.39	4.29
Eurovent class	A	B	B	C	B	C	B	D	C	C
Sound power level (dBA)	95	95	95	96	96	96	96	97	97	97
Sound power level (low noise) (dBA)	92	92	92	93	93	93	93	94	94	94
Dimensions and weights (operating)										
Length (mm)	4520	4520	4520	4520	5645	4520	5645	4520	5645	5645
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3436	3487	3654	3784	4164	4225	4470	4465	4595	4835

Eurovent performances (1)	190	200	205	245	250	280	310	350	380	410
Cooling capacity (kW)	676	706	731	839	862	968	1066	1195	1312	1432
EER	2.96	2.71	2.91	2.66	2.91	2.91	2.81	2.81	2.86	2.88
ESEER	4.45	4.25	4.41	4.21	4.36	4.44	4.22	4.50	4.54	4.56
Eurovent class	B	C	B	D	B	B	C	C	C	C
Sound power level (dBA)	97	97	97	104	99	100	101	101	101	102
Sound power level (low noise) (dBA)	94	94	94	101	96	97	98	98	98	99
Dimensions and weights (operating)										
Length (mm)	6770	5645	6770	6770	8271	9396	9396	10143	11268	12393
Width (mm)	2200	2200	2200	2200	2220	2220	2220	2220	2220	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	5130	4570	5233	5233	6650	7140	7258	8578	8835	9059

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013



RTAF HSS - High Seasonal Short - Extra Low Noise

Eurovent performances (1)		90	105	125	140	145	150	155	170	175	185
Cooling capacity	(kW)	330	378	443	509	526	545	567	582	617	656
EER		3.16	3.08	2.98	2.90	3.11	2.76	3.00	2.61	2.92	2.81
ESEER		4.42	4.32	4.32	4.22	4.35	4.27	4.43	4.25	4.45	4.36
Eurovent class		A	B	B	B	A	C	B	D	B	C
Sound power level	(dBA)	88	89	89	89	89	90	90	90	90	91
Dimensions and weights (operating)											
Length	(mm)	4520	4520	4520	4520	5645	4520	5645	4520	5645	5645
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672
Weight	(kg)	3436	3487	3654	3784	4164	4225	4470	4465	4595	4835

Eurovent performances (1)		190	200	205	245	250	280	310	350	380	410
Cooling capacity	(kW)	676	710	730	839	861	968	1065	1195	1311	1431
EER		2.99	2.75	2.94	2.67	2.93	2.94	2.83	2.83	2.89	2.90
ESEER		4.51	4.31	4.47	4.27	4.42	4.49	4.27	4.55	4.59	4.62
Eurovent class		B	C	B	D	B	B	C	C	C	C
Sound power level	(dBA)	91	91	91	97	93	94	94	94	95	95
Dimensions and weights (operating)											
Length	(mm)	6770	5645	6770	6770	8271	9396	9396	10143	11268	12393
Width	(mm)	2200	2200	2200	2200	2220	2220	2220	2220	2220	2220
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672
Weight	(kg)	5130	4570	5233	5233	6650	7140	7258	8578	8835	9059

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

The Future of F-Gases

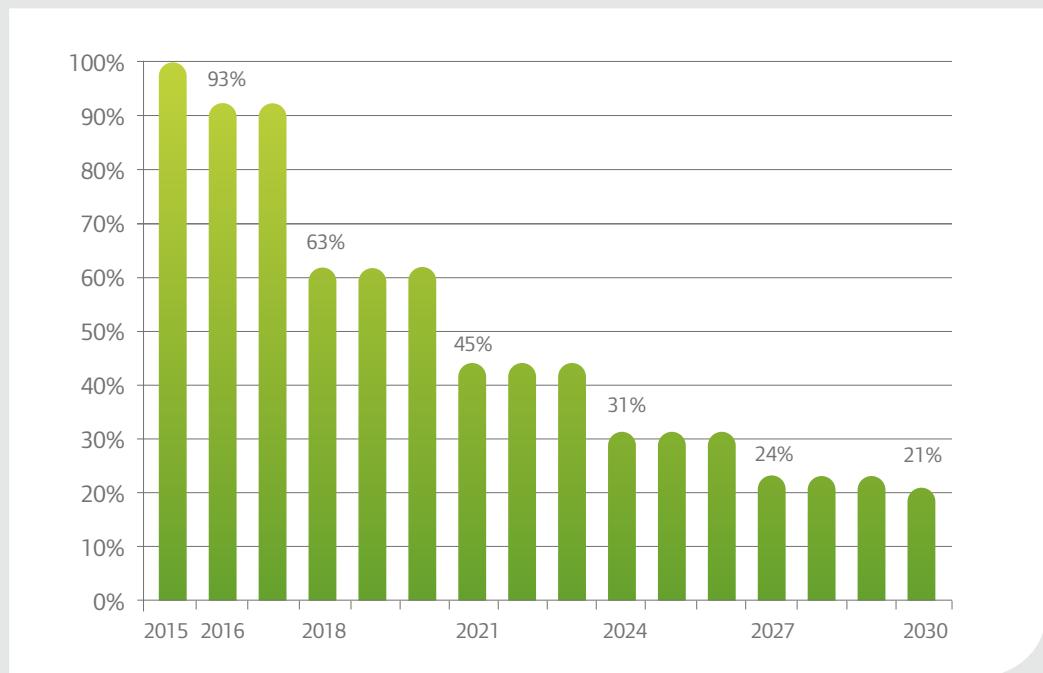
The fluorinated refrigerants phase-down, as defined in the new EU F-Gas Regulation, is a step-by-step approach where the quantities of HFCs expressed in CO₂ equivalent that are placed on the market are gradually reduced. As a result of the phase-down, HFC consumption will be reduced by 79% by 2030.

This is an unprecedented reduction and means that industry and users need to make, over time, the transition to refrigerants with a lower global warming potential.

Trane, recognized as a leading innovator in the HVAC industry, introduces this new lower GWP refrigerant in Sintesis and other products to be front running in the marketplace and to support your strong sustainability objectives.

Ingersoll Rand and Trane - providers of sustainable solutions.

HFC consumption



Baseline value (100%) is the annual average of total quantity of CO₂ equivalents placed on the EU market from 2009 to 2012.

An environmentally sustainable solution

EcoWise™

Sintesis™ chillers are part of the Ingersoll Rand EcoWise™ portfolio of products that are designed to lower their environmental impact with next-generation, low global warming potential (GWP) refrigerants and high-efficiency operation.

- **High efficiency operation** – To deliver lower operating costs, Sintesis chillers are optimized for both full- and part-load performance.

- **Lower refrigerant charge** – The CHIL evaporator and microchannel condenser reduce the amount of refrigerant required by up to 40 percent compared to earlier designs, making it even easier to earn a point under the LEED® Energy and Atmosphere (EA) Credit for Enhanced Refrigerant Management.

- **Low GWP refrigerant option** – Sintesis chillers are designed to operate with either R-134a or DuPont™ Opteon® XP10 (R-513A), a next-generation refrigerant with a 55 percent lower GWP than R-134a.

- **Reduced risk of refrigerant leaks** – The microchannel design used in Sintesis chillers eliminates brazed U-bend connections and their potential for refrigerant leaks, helping maintain peak chiller efficiency and reliability.

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.

Example:

CO₂ : GWP = 1

R134a: GWP = 1430

R513A: **GWP = 631** (55% below R134a)



General specifications

SE/HE/XE/HSE/HSS



RTAF SE Standard Efficiency - Standard and Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190
Cooling capacity (kW)	318	372	435	517	558	609	668
EER	2.93	2.95	2.87	3.00	2.90	2.82	2.89
ESEER	3.81	3.68	3.71	3.73	3.66	3.76	3.71
Eurovent class	B	B	C	B	C	C	C
Sound power level (dBA)	95	95	95	96	96	97	97
Sound power level (low noise) (dBA)	92	92	92	93	93	94	94
Dimensions and weights (operating)	205	250	280	310	350	380	410
Length (mm)	4520	4520	4520	5645	5645	5645	6770
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3295	3330	3510	3970	4240	4400	4820

Eurovent performances (1)	205	250	280	310	350	380	410
Cooling capacity (kW)	724	850	962	1061	1181	1308	1429
EER	2.84	2.81	2.79	2.69	2.69	2.73	2.74
ESEER	3.71	3.75	3.83	3.81	3.90	3.94	3.96
Eurovent class	C	C	C	D	D	C	C
Sound power level (dBA)	97	99	100	101	101	101	102
Sound power level (low noise) (dBA)	94	96	97	98	98	98	99
Dimensions and weights (operating)	205	250	280	310	350	380	410
Length (mm)	6770	8271	9396	9396	10143	11268	12393
Width (mm)	2200	2220	2220	2220	2220	2220	2220
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	4845	6485	7025	7070	8460	8830	9185

RTAF SE Standard Efficiency - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190
Cooling capacity (kW)	319	372	436	517	559	610	669
EER	2.95	2.97	2.89	3.02	2.92	2.84	2.92
ESEER	4.13	3.86	3.85	3.89	3.80	3.83	3.82
Eurovent class	B	B	C	B	B	C	B
Sound power level (dBA)	88	89	89	89	90	90	91
Dimensions and weights (operating)	205	250	280	310	350	380	410
Length (mm)	4520	4520	4520	5645	5645	5645	6770
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	3375	3410	3590	4070	4340	4500	4940

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

Eurovent performances (1)		205	250	280	310	350	380	410
Cooling capacity	(kW)	724	851	963	1063	1183	1309	1431
EER		2.86	2.85	2.84	2.73	2.73	2.77	2.78
ESEER		3.77	3.98	4.24	4.17	4.24	4.26	4.31
Eurovent class		C	C	C	C	C	C	C
Sound power level	(dBA)	91	93	94	94	94	95	95
Dimensions and weights (operating)								
Length	(mm)	6770	8271	9396	9396	10143	11268	12393
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672
Weight	(kg)	4965	6625	7185	7230	8640	9030	9405

RTAF HE High Efficiency - Standard and Low Noise

Eurovent performances (1)		90	105	125	145	155	175	190
Cooling capacity	(kW)	323	379	448	527	571	626	682
EER		2.95	3.03	3.02	3.09	3.02	2.98	3.01
ESEER		3.64	3.58	3.70	3.81	3.77	3.78	3.73
Eurovent class		B	B	B	B	B	B	B
Sound power level	(dBA)	95	95	96	96	97	97	98
Sound power level (low noise)	(dBA)	93	93	93	93	94	94	95
Dimensions and weights (operating)								
Length	(mm)	5645	5645	5645	6770	6770	6770	7895
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3595	3630	3810	4220	4485	4640	5075

Eurovent performances (1)		205	250	280	310	350	380	410
Cooling capacity	(kW)	743	866	982	1101	1225	1348	1453
EER		2.98	2.92	2.92	2.92	2.90	2.91	2.84
ESEER		3.76	3.75	3.81	3.81	3.88	3.94	3.96
Eurovent class		B	B	B	B	C	B	C
Sound power level	(dBA)	98	99	100	101	101	102	102
Sound power level (low noise)	(dBA)	95	96	97	98	98	98	99
Dimensions and weights (operating)								
Length	(mm)	7895	9393	10143	11268	12393	13518	13518
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	5210	6785	7325	7695	9105	9410	9475

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013



RTAF XE Extra Efficiency - Standard and Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205
Cooling capacity (kW)	319	376	443	521	563	626	683	744
EER	2.95	3.03	3.02	3.09	3.02	2.98	3.01	2.98
ESEER	3.64	3.58	3.70	3.81	3.77	3.78	3.73	3.76
Eurovent class	A	A	B	A	B	B	B	B
Sound power level (dBA)	94	94	95	96	97	97	98	98
Sound power level (low noise) (dBA)	91	91	92	93	94	94	95	95
Dimensions and weights (operating)								
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3595	3630	3810	4220	4485	4640	5075	5210

Eurovent performances (1)	250	280	310	350	380	410	415
Cooling capacity (kW)	867	983	1103	1225	1349	1454	1476
EER	2.92	2.92	2.92	2.90	2.91	2.84	2.999
ESEER	3.75	3.81	3.81	3.88	3.94	3.96	4.405
Eurovent class	B	B	B	B	B	C	B
Sound power level (dBA)	99	100	101	101	102	102	103
Sound power level (low noise) (dBA)	96	97	98	98	98	99	100
Dimensions and weights (operating)							
Length (mm)	9393	10143	11268	12393	13518	13518	13518
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	6785	7325	7695	9105	9410	9475	9039

RTAF XE Extra Efficiency - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190
Cooling capacity (kW)	318	376	442	520	563	626	682
EER	3.14	3.15	3.08	3.17	3.07	3.04	3.07
ESEER	4.29	4.02	4.05	4.11	4.02	4.00	3.96
Eurovent class	A	A	B	A	B	B	B
Sound power level (dBA)	88	88	88	89	90	90	91
Dimensions and weights (operating)							
Length (mm)	5645	5645	5645	6770	6770	6770	7895
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	3695	3730	3910	4340	4605	4760	5215

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

Eurovent performances (1)		205	250	280	310	350	380	410
Cooling capacity	(kW)	744	867	983	1102	1225	1349	1454
EER		3.04	2.97	2.98	2.97	2.95	2.96	2.88
ESEER		3.94	4.22	4.30	4.28	4.35	4.38	4.34
Eurovent class		B	B	B	B	B	B	C
Sound power level	(dBA)	91	93	94	95	95	95	95
Dimensions and weights (operating)								
Length	(mm)	7895	9393	10143	11268	12393	13518	13518
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672
Weight	(kg)	5350	6945	7505	7895	9325	9650	9715

RTAF HSE - High Seasonal Efficiency - Standard and Low Noise

Eurovent performances (1)		90	105	125	145	155	175	190	205
Cooling capacity	(kW)	322	375	443	524	565	627	682	742
EER		3.13	3.02	2.94	3.01	2.91	2.88	2.91	2.88
ESEER		4.37	4.27	4.31	4.37	4.31	4.32	4.31	4.31
Eurovent class		A	B	B	B	B	C	B	C
Sound power level	(dBA)	94	94	95	96	97	97	98	98
Sound power level (low noise)	(dBA)	91	91	92	93	94	94	95	95
Dimensions and weights (operating)									
Length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	3700	3735	3915	4320	4585	4850	5325	5460

Eurovent performances (1)		245	250	280	310	350	380	410	450
Cooling capacity	(kW)	862	868	984	1100	1225	1349	1450	1586
EER		2.75	2.84	2.86	2.85	2.85	2.86	2.79	2.72
ESEER		4.11	4.27	4.30	4.33	4.44	4.46	4.48	4.33
Eurovent class		C	C	C	C	C	C	C	C
Sound power level	(dBA)	104	99	100	101	101	102	102	107
Sound power level (low noise)	(dBA)	101	96	97	98	98	98	99	104
Dimensions and weights (operating)									
Length	(mm)	7895	9396	10143	11268	12393	13518	13518	13518
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
Weight	(kg)	5460	7005	7575	7945	9345	9650	9715	9715

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013



RTAF HSE - High Seasonal Efficiency - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190	205
Cooling capacity (kW)	321	375	442	524	564	627	682	741
EER	3.16	3.05	2.96	3.03	2.93	2.91	2.95	2.91
ESEER	4.43	4.34	4.38	4.43	4.37	4.38	4.37	4.37
Eurovent class	A	B	B	B	B	B	B	B
Sound power level (dBA)	88	88	88	89	90	90	91	91
Dimensions and weights (operating)								
Length (mm)	5645	5645	5645	6770	6770	6770	7895	7895
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	3800	3835	4015	4440	4705	4970	5465	5600

Eurovent performances (1)	245	250	280	310	350	380	410	450
Cooling capacity (kW)	862	868	983	1099	1224	1349	1449	1585
EER	2.77	2.87	2.89	2.88	2.87	2.89	2.81	2.77
ESEER	4.17	4.32	4.35	4.39	4.49	4.51	4.53	4.39
Eurovent class	C	C	C	C	C	C	C	C
Sound power level (dBA)	97	93	94	95	95	95	95	103
Dimensions and weights (operating)								
Length (mm)	7895	9396	10143	11268	12393	13518	13518	13518
Width (mm)	2200	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	5600	7165	7755	8145	9565	9890	9955	9955

RTAF HSS - High Seasonal Short - Standard and Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190
Cooling capacity (kW)	322	371	435	520	560	608	667
EER	2.97	2.88	2.77	2.89	2.79	2.70	2.79
ESEER	4.24	4.16	4.17	4.24	4.18	4.22	4.24
Eurovent class	B	C	C	C	C	C	C
Sound power level (dBA)	95	95	95	96	96	97	97
Sound power level (low noise) (dBA)	92	92	92	93	93	94	94
Dimensions and weights (operating)							
Length (mm)	4520	4520	4520	5645	5645	5645	6770
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	3400	3435	3615	4075	4340	4610	5070

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

Eurovent performances (1)	205	250	280	310	350	380	410
Cooling capacity (kW)	720	851	963	1057	1181	1308	1425
EER	2.73	2.73	2.73	2.62	2.63	2.67	2.69
ESEER	4.21	4.19	4.21	4.18	4.33	4.36	4.42
Eurovent class	C	C	C	D	D	D	D
Sound power level (dBA)	97	99	100	101	101	101	102
Sound power level (low noise) (dBA)	94	96	97	98	98	98	99
Dimensions and weights (operating)							
Length (mm)	6770	8271	9396	9396	10143	11268	12393
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Weight (kg)	5100	6685	7275	7325	8700	9070	9425

RTAF HSS - High Seasonal Short - Extra Low Noise

Eurovent performances (1)	90	105	125	145	155	175	190
Cooling capacity (kW)	322	371	435	520	559	607	667
EER	3.02	2.92	2.79	2.92	2.82	2.73	2.82
ESEER	4.30	4.21	4.23	4.31	4.24	4.28	4.29
Eurovent class	B	B	C	B	C	C	C
Sound power level (dBA)	88	89	89	89	90	90	91
Dimensions and weights (operating)							
Length (mm)	4520	4520	4520	5645	5645	5645	6770
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	3480	3515	3695	4175	4240	4710	5190

Eurovent performances (1)	205	250	280	310	350	380	410
Cooling capacity (kW)	720	851	962	1057	1180	1307	1425
EER	2.75	2.75	2.75	2.64	2.65	2.69	2.71
ESEER	4.27	4.24	4.26	4.23	4.38	4.42	4.48
Eurovent class	C	C	C	D	D	D	C
Sound power level (dBA)	91	93	94	94	94	95	95
Dimensions and weights (operating)							
Length (mm)	6770	8271	9396	9396	10143	11268	12393
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Weight (kg)	5220	6825	7435	7485	8880	9270	9645

(1) At evaporator water temperature: 12°C / 7°C - Condenser air temperature 35°C according to EN14511:2013

Range Description

a model for every application

The Trane Sintesis range

- Unit sizes providing cooling capacities from 300 - 1900kW
- Five efficiency versions: **SE, HE, XE, HSE/HSS**
- Three levels of sound attenuation: SN, LN, XLN
- Standard R134a or optional low GWP R513A

Factory mounted options

- Hydraulic kit with dual pumps
- Smart flow control
- Partial heat recovery
- Total heat recovery
- Free-cooling

Operating map

Perfectly suited for comfort and process application with:

- Standard leaving water temperature range from +5°C up to +20°C
- Low leaving water temperature range from +5°C down to -12°C with Glycol

This is available all year-round, in all regions no matter how hot or cold it gets.

- Standard ambient option: from -10°C to 46°C
- High ambient option: right up to 55°C
- Low ambient option: right down to -18°C



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We are committed to using environmentally conscious print practices that reduce waste.

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