



**TRANE®**



**Air-Cooled Screw Chillers**  
The best bundled in one.  
Our best.



R1234ze

RTAF-G 320 – 1620 kW

**TRANE**  
TECHNOLOGIES

# 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 CO<sub>2</sub> 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.

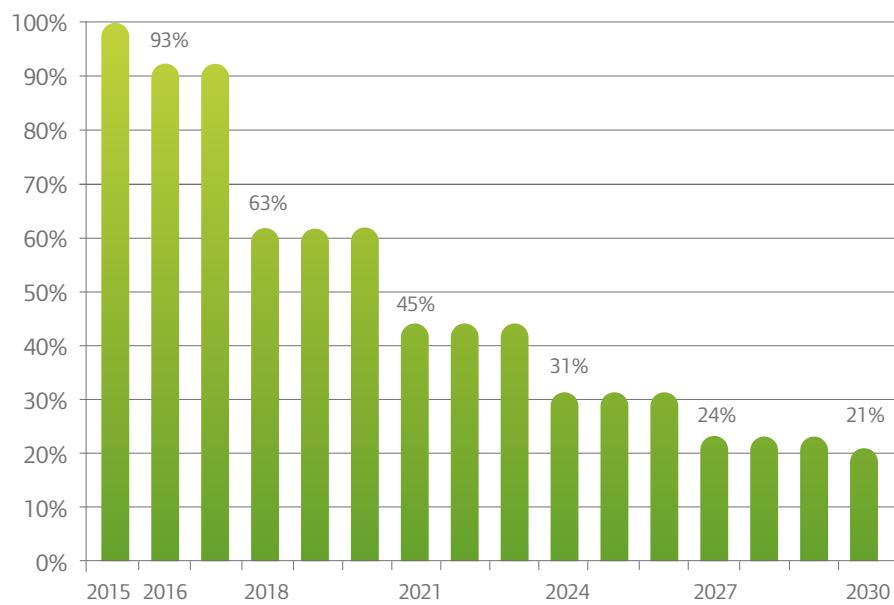
This is an unprecedented reduction and means that industry and users need to make, over time, the

transition to refrigerants with a lower global warming potential.

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

**Trane - provider of sustainable solutions.**

HFC consumption



Baseline value (100%) is the annual average of total quantity of CO<sub>2</sub> equivalents placed on the EU market from 2009 to 2012.

# An environmentally sustainable solution

## EcoWise™

Sintesis™ chillers are part of the 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 points under the LEED® Energy and Atmosphere (EA) Credit for Enhanced Refrigerant Management.

- **Low GWP refrigerant option** – Sintesis chillers are designed to operate with R-134a, DuPont™ Opteon® XP10 (R-513A) or Solstice® ze (R-1234ze).
- **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:*

R1234ze: GWP = <1

CO<sub>2</sub>: GWP = 1

R513A: GWP = 631

R134a: GWP = 1430

# The total package

## Quality, performance and reliability

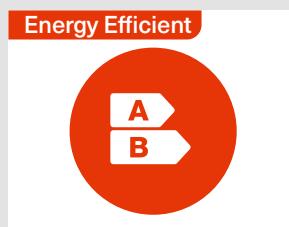
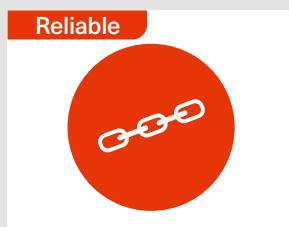
### The Trane advantage

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 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.

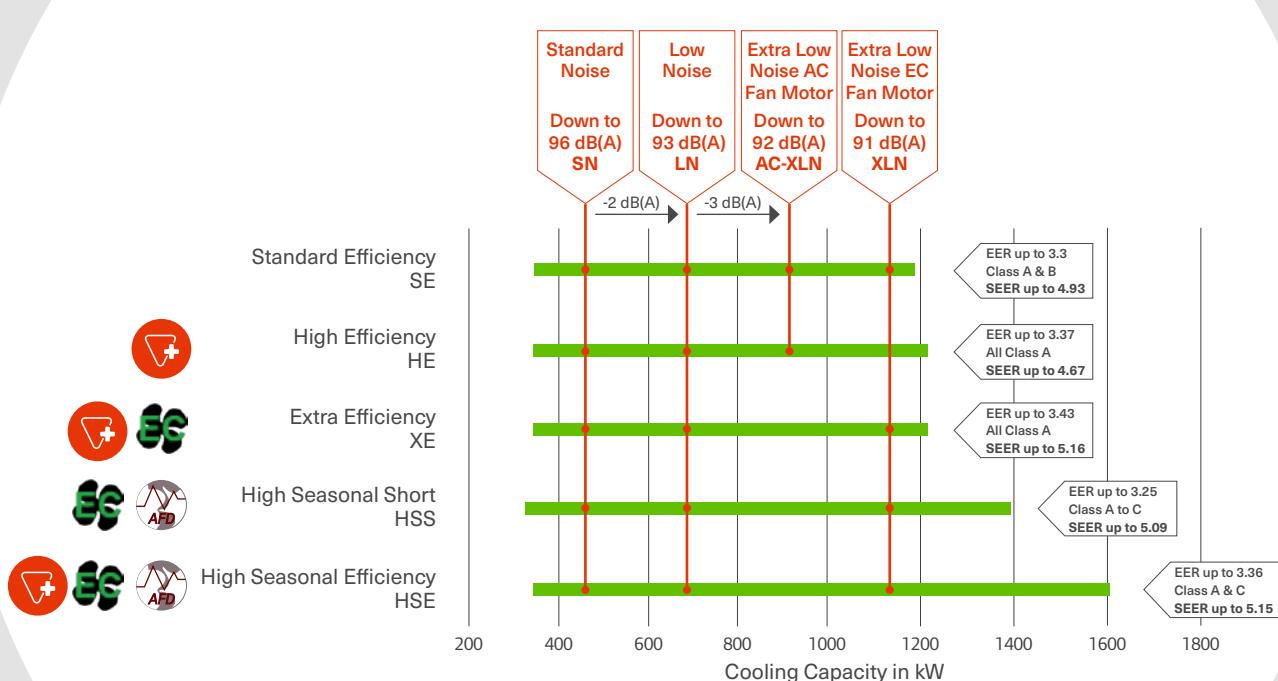
### Total compliance

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.

The Trane model RTAF-G operates with R1234ze refrigerant which has a GWP value of less than one to exceed current F-Gas legislation requirements and help customers reduce their carbon dioxide (CO<sub>2</sub>) emissions. The complete range of sizes also achieves excellent part load efficiencies to comply with current Ecodesign requirements for Comfort chillers.

**A specific RTAF-G unit design specially dedicated to process applications with brine (ethylene glycol, propylene glycol, etc) applications is capable of supplying negative leaving brine temperature on process applications and surpasses the latest Medium Temperature Ecodesign Requirements.**

### A wide capacity range up to 1.6 MW



## Operating limits

RTAF G		
<b>Condenser Ambient Temperature</b>		
Standard (min/max)	(°C)	-10 / +46
with Low Ambient option (min/max)	(°C)	-20 / +46
with High Ambient option (min/max)	(°C)	-10 / +55
<b>Evaporator Leaving Water Temperature</b>		
Standard (min/max)	(°C)	-12 / +27
RTAF G Process range	(°C)	-12 / +4.4
Power supply	(V/Ph/Hz)	400/3/50
Refrigerant		R1234ze

Sintesis Prime RTAF-G is suited to critical environments like



Office buildings



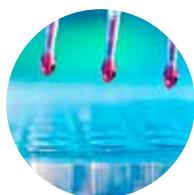
Healthcare



Data Centers



Automotive industry



Pharmaceutical industry



Plastic industry



Hospitality industry



District Cooling

# Trane Proprietary Technology\*

Provides the innovative solution your building needs

## Electronically Commutated (EC) fans

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

### \*Redesigned fan diffusers

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

### \* 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



**\* Trane Compressor**

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

**\* Tracer™ UC800 controller**

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



**\* Connectivity**

- Full interoperability via SmartCom interface Lontalk®, BACnet® and Modbus
- Full remote control capability via our Trane BMS

**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



**Three different refrigerant alternatives**

- R134a
- R513A
- R1234ze





### An affordable choice of sound versions



- 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 96 dB(A)**

- Compressor enclosure
- Additional insulation on the refrigerant circuit

**Low Noise Night Noise Set Back: LN-NNSB - average sound power Lw 96 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 93 dB(A)**

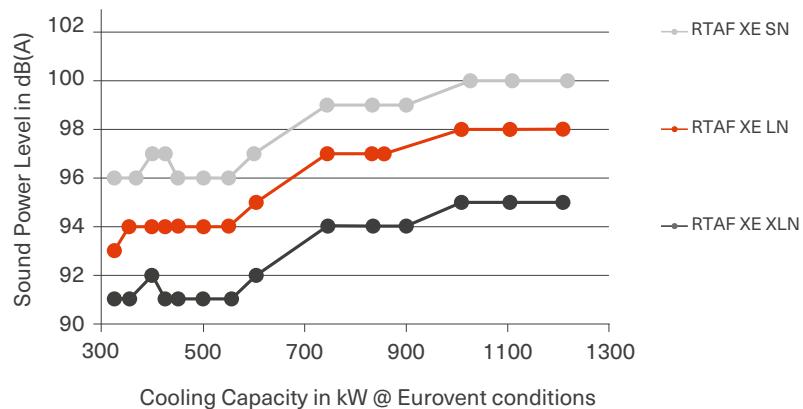
- Compressor enclosure
- Refrigerant line insulation

**Extra Low Noise-EC: XLN-EC - average sound power Lw 93 dB(A)\***



\* The lowest noise rating on the market.

### Sound levels



# XLN-EC

The quietest in the industry!

## The lowest sound levels...

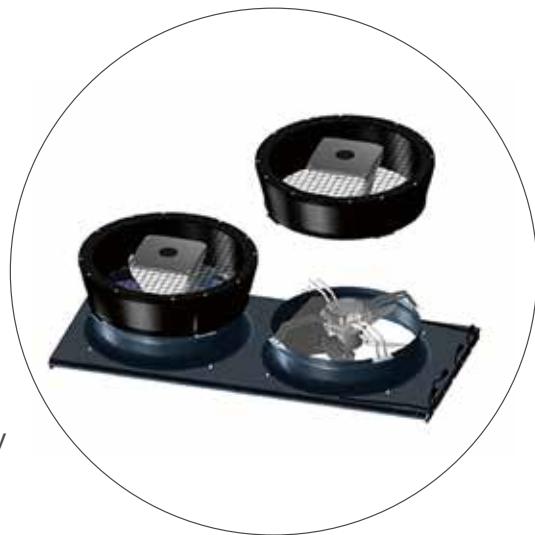
Extra Low Noise EC (XLN-EC): L<sub>w</sub> from 91 to 101dB(A) across the range thanks to:

- 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 five efficiency levels

- **High Efficiency (HE):** Class A with SEER up to 4.67
- **Standard Efficiency (SE):** Class B/A with SEER up to 4.93
- **Extra Efficiency (XE):** Class A with SEER up to 5.16
- **High Seasonal Short (HSS)** with Trane Adaptive Frequency™ Drive and a reduced footprint
- **High Seasonal Efficiency (H SE):** using Trane Adaptive Frequency™ Drive technology on the compressors allowing SEER up to 5.15



# 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

## HSE

### RTAF HSE - High Seasonal Efficiency- Extra Low Noise -EC



Eurovent performances (1)												
	090	100	110	120	130	145	155	185	200	225		
Net cooling capacity (1) (2)	(kW)	327	358	394	427	460	510	554	607	718	812	
Net Power Input (1)(2)	(kW)	98	109	121	129	138	152	169	185	225	272	
Net EER (1) (2)		3,32	3,29	3,25	3,3	3,34	3,36	3,28	3,28	3,19	2,98	
Eurovent Energy class		A	A	A	A	A	A	A	A	B		
SEER (3)		4,53	4,59	4,64	4,72	4,82	4,9	4,87	4,65	4,95	4,83	
Space cooling efficiency $\eta_{S,C}$ (3)	(%)	178	181	183	186	190	193	192	183	195	190	
Sound Power Level (4)	dB(A)	91	91	92	91	91	91	92	96	98		
Compressor												
Circuit 1		15,58	17,08	18,8	20,35	21,94	24,75	26,43	28,95	34,23	38,7	
Circuit 2		36	32,6	39,4	33,5	33,1	34,5	39,2	37,7	34,3	43,7	
Refrigerant												
Charge Circuit 1	(kg)	44	43	43	44	45	58	58	63	66	66	
Charge Circuit 2	(kg)	42	41	41	45	43	48	48	49	62	62	
Dimensions & Weight												
Length	(mm)	5645	5645	5645	5645	5645	6770	6770	7895	7895	7895	
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672	
Operating weight	(kg)	4280	4305	4305	4365	4425	5240	5275	5655	5795	5745	
Eurovent performances (1)												
	210	230	265	275	300	285	305	340	385	405	470	
Net cooling capacity (1) (2)	(kW)	741	838	894	1000	1095	1026	1117	1199	1307	1404	1618
Net Power Input (1)(2)	(kW)	225	255	278	320	360	307	343	369	410	457	572
Net EER (1) (2)		3,29	3,29	3,22	3,13	3,04	3,34	3,26	3,25	3,19	3,07	2,83
Eurovent Energy class		A	A	A	A	B	A	A	A	B	C	
SEER (3)		4,83	4,91	4,95	4,87	4,94	5,15	5,09	5,13	5	5	4,72
Space cooling efficiency $\eta_{S,C}$ (3)	(%)	190	193	195	192	195	203	201	202	197	197	186
Sound Power Level (4)	dB(A)	94	94	94	97	98	95	95	95	97	98	101
Compressor												
Circuit 1		2	2	2	2	2	2	2	2	2	2	
Circuit 2		1	1	1	1	1	2	2	2	2	2	
Refrigerant												
Type		R1234ze										
Charge Circuit 1	(kg)	98	104	104	108	108	100	102	102	108	107	112
Charge Circuit 2	(kg)	40	49	49	51	53	92	96	102	108	110	110
Dimensions & Weight												
Length	(mm)	9390	10135	10135	10135	11260	12385	12385	13510	13510	13510	
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672	
Operating weight	(kg)	7245	7725	7635	7635	8060	9285	9510	9840	9655	9655	

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified  
Operating weight include basic unit weight + the additional weight corresponding to the noise version

## RTAF HSE - High Seasonal Efficiency- Standard and Low Noise



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>	<b>185</b>	<b>200</b>	<b>225</b>	
Net cooling capacity (1) (2)	(kW)	327	359	395	427	461	511	555	607	718	812
Net Power Input (1)(2)	(kW)	99	110	123	131	139	153	171	188	228	275
Net EER (1) (2)		3,29	3,26	3,22	3,27	3,31	3,33	3,25	3,23	3,15	2,95
Eurovent Energy class		A	A	A	A	A	A	A	A	B	
SEER (3)		4,38	4,56	4,61	4,68	4,78	4,86	4,83	4,61	4,87	4,76
Space cooling efficiency $\eta_{sc}$ (3)	(%)	172,2	179,4	181,4	184,2	188,2	191,4	190,2	181,4	191,8	187,4
Sound Power Level Standard Noise (4)	dB(A)	96	96	97	97	96	96	97	101	103	
Sound Power Level Low Noise (4)	dB(A)	93	94	94	94	94	94	95	98	100	
<b>Compressor</b>											
Circuit 1		1	1	1	1	1	1	1	1	1	
Circuit 2		1	1	1	1	1	1	1	1	1	
<b>Refrigerant</b>											
Type		R1234ze									
Charge Circuit 1	(kg)	44	43	43	44	45	58	58	63	66	66
Charge Circuit 2	(kg)	42	41	41	45	43	48	48	49	62	62
<b>Dimensions &amp; Weight</b>											
Length	(mm)	5645	5645	5645	5645	5645	6770	6770	7895	7895	7895
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	4180	4205	4205	4265	4325	5120	5155	5535	5675	5585
Additional weight for Low Noise version	(kg)	100	100	100	100	100	120	120	120	120	160

<b>Eurovent performances (1)</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>275</b>	<b>300</b>	<b>285</b>	<b>305</b>	<b>340</b>	<b>385</b>	<b>405</b>	<b>470</b>	
Net cooling capacity (1) (2)	(kW)	743	839	895	1002	1097	1028	1120	1200	1309	1407	1613
Net Power Input (1)(2)	(kW)	231	261	283	324	366	314	349	376	417	464	578
Net EER (1) (2)		3,22	3,22	3,16	3,09	3	3,27	3,21	3,19	3,14	3,03	2,79
Eurovent Energy class		A	A	A	B	B	A	A	A	B	C	
SEER (3)		4,76	4,86	4,77	4,8	4,87	5,03	4,95	4,98	4,96	4,96	4,6
Space cooling efficiency $\eta_{sc}$ (3)	(%)	187,4	191,4	187,8	189	191,8	198,2	195	196,2	195,4	195,4	181
Sound Power Level Standard Noise (4)	dB(A)	99	99	99	102	103	100	100	100	103	103	106
Sound Power Level Low Noise (4)		97	97	97	99	101	98	98	98	100	101	104
<b>Compressor</b>												
Circuit 1		2	2	2	2	2	2	2	2	2	2	
Circuit 2		1	1	1	1	1	2	2	2	2	2	
<b>Refrigerant</b>												
Type		R1234ze										
Charge Circuit 1	(kg)	98	104	104	108	108	100	102	102	108	107	112
Charge Circuit 2	(kg)	40	49	49	51	53	92	96	102	108	110	110
<b>Dimensions &amp; Weight</b>												
Length	(mm)	9390	10135	10135	10135	11260	12385	12385	13510	13510	13510	
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526	
Operating weight (standard noise)	(kg)	7085	7565	7455	7455	7840	9065	9290	9600	9415	9415	9415
Additional weight for Low Noise version	(kg)	160	160	180	180	220	220	220	240	240	240	240

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified  
Operating weight include basic unit weight + the additional weight corresponding to the noise version

# General specifications

## HSS

### RTAF HSS - High Seasonal Short - Extra Low Noise -EC



Eurovent performances (1)		090	100	110	120	130	145	155	185	200	225
Net cooling capacity (1) (2)	(kW)	320	349	386	417	448	501	543	601	709	801
Net Power Input (1)(2)	(kW)	101	112	125	134	144	156	174	188	229	283
Net EER (1) (2)		3,18	3,11	3,1	3,12	3,11	3,22	3,11	3,2	3,1	2,83
Eurovent Energy class		A	A	A	A	A	A	A	A	A	C
SEER (3)		4,46	4,49	4,55	4,6	4,64	4,79	4,76	4,61	4,86	4,75
Space cooling efficiency $\eta_{S,C}$ (3)	(%)	175,4	177	179	181	182,6	188,6	187,4	181,4	191,4	187
Sound Power Level (4)	dB(A)	91	91	91	92	92	91	92	92	96	98
Compressor											
Circuit 1		1	1	1	1	1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1	1	1	1	1
Refrigerant											
Type		R1234ze									
Charge Circuit 1	(kg)	41	40	40	41	42	55	55	60	63	63
Charge Circuit 2	(kg)	39	38	38	42	40	45	45	46	59	59
Dimensions & Weight											
Length	(mm)	4520	4520	4520	4520	4520	5645	5645	6770	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672
Operating weight	(kg)	3930	3955	3955	4010	4070	4920	4955	5335	5475	5425

Eurovent performances (1)		210	230	265	275	300	285	305	340	385	405
Net cooling capacity (1) (2)	(kW)	735	818	884	989	1075	1009	1095	1180	1296	1391
Net Power Input (1)(2)	(kW)	228	265	283	327	378	315	355	378	417	467
Net EER (1) (2)		3,23	3,08	3,12	3,02	2,84	3,2	3,08	3,12	3,11	2,98
Eurovent Energy class		A	B	A	B	C	A	B	A	A	B
SEER (3)		4,8	4,73	4,88	4,79	4,87	5,09	5,02	5,07	4,92	4,94
Space cooling efficiency $\eta_{S,C}$ (3)	(%)	189	186,2	192,2	188,6	191,8	200,6	197,8	199,8	193,8	194,6
Sound Power Level (4)	dB(A)	94	94	94	97	98	95	95	95	98	99
Compressor											
Circuit 1		2	2	2	2	2	2	2	2	2	2
Circuit 2		1	1	1	1	1	2	2	2	2	2
Refrigerant											
Type		R1234ze									
Charge Circuit 1	(kg)	90	93	93	96	96	90	94	94	108	107
Charge Circuit 2	(kg)	40	44	49	51	51	88	91	96	100	104
Dimensions & Weight											
Length	(mm)	8265	8265	9390	9390	9390	10135	10135	11260	12385	12385
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672	2672	2672
Operating weight	(kg)	6895	7045	7310	7310	7440	8710	8870	9185	9520	9520

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified

Operating weight include basic unit weight + the additional weight corresponding to the noise version

## RTAF HSS - High Seasonal Short - Standard and Low Noise



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>	<b>185</b>	<b>200</b>	<b>225</b>	
Net cooling capacity (1) (2)	(kW)	321	350	386	418	449	502	543	602	709	801
Net Power Input (1)(2)	(kW)	101	113	125	135	145	157	175	190	233	286
Net EER (1) (2)		3,17	3,1	3,08	3,1	3,1	3,2	3,1	3,16	3,04	2,8
Eurovent Energy class		A	A	B	A	A	A	A	B	C	
SEER (3)		4,44	4,46	4,51	4,56	4,6	4,74	4,7	4,55	4,8	4,69
Space cooling efficiency η <sub>SC</sub> (3)	(%)	174,6	175,4	177,4	179,4	181	186,6	185	179	189	184,6
Sound Power Level Standard Noise (4)	dB(A)	97	97	97	97	97	96	96	97	101	103
Sound Power Level Low Noise (4)	dB(A)	94	94	95	94	94	94	95	98	101	
<b>Compressor</b>											
Circuit 1		1	1	1	1	1	1	1	1	1	
Circuit 2		1	1	1	1	1	1	1	1	1	
<b>Refrigerant</b>											
Type		R1234ze									
Charge Circuit 1	(kg)	41	40	40	41	42	55	55	60	63	63
Charge Circuit 2	(kg)	39	38	38	42	40	45	45	46	59	59
<b>Dimensions &amp; Weight</b>											
Length	(mm)	4520	4520	4520	4520	4520	5645	5645	6770	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	3830	3855	3855	3910	3970	4800	4835	5215	5355	5265
Additional weight for Low Noise version	(kg)	100	100	100	100	100	120	120	120	120	160

<b>Eurovent performances (1)</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>275</b>	<b>300</b>	<b>285</b>	<b>305</b>	<b>340</b>	<b>385</b>	<b>405</b>	
Net cooling capacity (1) (2)	(kW)	737	820	886	991	1078	1012	1099	1183	1299	1395
Net EER (1) (2)		3,17	3,04	3,08	2,99	2,82	3,15	3,05	3,08	3,07	2,95
Eurovent Energy class		A	B	B	B	C	A	B	B	B	B
SEER (3)		4,73	4,69	4,72	4,98	4,79	4,98	4,9	4,94	4,89	4,9
Space cooling efficiency η <sub>SC</sub> (3)	(%)	186,2	184,6	185,8	196,2	188,6	196,2	193	194,6	192,6	193
Sound Power Level Standard Noise (4)	dB(A)	99	99	99	102	103	100	100	101	103	104
Sound Power Level Low Noise (4)	dB(A)	97	97	97	99	101	98	98	98	100	102
<b>Compressor</b>											
Circuit 1		2	2	2	2	2	2	2	2	2	
Circuit 2		1	1	1	1	1	2	2	2	2	
<b>Refrigerant</b>											
Type		R1234ze									
Charge Circuit 1	(kg)	90	93	93	96	96	90	94	94	108	107
Charge Circuit 2	(kg)	40	44	49	51	51	88	91	96	100	104
<b>Dimensions &amp; Weight</b>											
Length	(mm)	8265	8265	9390	9390	9390	10135	10135	11260	12385	12385
Width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	6735	6885	7130	7130	7220	8490	8650	8945	9280	9280
Additional weight for Low Noise version	(kg)	160	160	180	180	220	220	240	240	240	

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified  
Operating weight include basic unit weight + the additional weight corresponding to the noise version

# General specifications

**XE**

## RTAF XE - Extra Efficiency - Extra Low Noise - EC



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>	
Net cooling capacity (1) (2)	(kW)	329	360	395	427	459	509	552
Net EER (1) (2)		3.36	3.34	3.31	3.35	3.38	3.43	3.38
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.18	4.22	4.26	4.34	4.45	4.62	4.51
Space cooling efficiency ηs.c (3)	(%)	164	166	167	171	175	182	177
Sound power level (4)	(dB(A))	91	91	92	91	91	91	91
<b>Compressor</b>								
Circuit 1		1	1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1	1
<b>Refrigerant</b>								
Type					R1234ze			
Charge Circuit 1	(kg)	44	43	43	44	45	58	58
Charge Circuit 2	(kg)	42	41	41	45	43	48	48
<b>Dimensions &amp; Weight</b>								
Length	(mm)	5645	5645	5645	5645	5645	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672
Operating weight	(kg)	4115	4140	4140	4200	4260	4930	4965

<b>Eurovent performances (1)</b>	<b>185</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>285</b>	<b>305</b>	<b>340</b>	
Net cooling capacity (1) (2)	(kW)	613	740	835	899	1025	1115	1204
Net EER (1) (2)		3.38	3.32	3.35	3.29	3.36	3.31	3.31
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.40	4.73	4.80	4.96	4.89	4.89	5.16
Space cooling efficiency ηs.c (3)	(%)	173	186	189	195	193	193	203
Sound power level (4)	(dB(A))	92	94	94	94	95	95	95
<b>Compressor</b>								
Circuit 1		1	2	2	2	2	2	2
Circuit 2		1	1	1	1	2	2	2
<b>Refrigerant</b>								
Type					R1234ze			
Charge Circuit 1	(kg)	63	98	104	104	100	102	102
Charge Circuit 2	(kg)	49	40	49	49	92	96	102
<b>Dimensions &amp; Weight</b>								
Length	(mm)	7895	9390	10135	10135	12385	12385	13510
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2672	2672	2672	2672	2672	2672	2672
Operating weight	(kg)	5320	6905	7365	7335	8935	9160	9490

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified

Operating weight include basic unit weight + the additional weight corresponding to the noise version

## RTAF XE - Extra Efficiency - Standard and Low Noise



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>	
Net cooling capacity (1) (2)	(kW)	329	360	396	427	460	509	553
Net EER (1) (2)		3.33	3.31	3.28	3.32	3.35	3.4	3.35
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.14	4.19	4.22	4.30	4.39	4.58	4.46
Space cooling efficiency $\eta_{sc}$ (3)	(%)	162	165	166	169	173	180	175
Sound power level (standard noise) (4)	(dB(A))	96	96	97	97	96	96	96
Sound power level (low noise) (4)	(dB(A))	93	94	94	94	94	94	94
<b>Compressor</b>								
Circuit 1		1	1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1	1
<b>Refrigerant</b>								
Type		R1234ze						
Charge Circuit 1	(kg)	44	43	43	44	45	58	58
Charge Circuit 2	(kg)	42	41	41	45	43	48	48
<b>Dimensions &amp; Weight</b>								
Length	(mm)	5645	5645	5645	5645	5645	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	4015	4040	4040	4100	4160	4810	4845
Additional weight for Low Noise version	(kg)	100	100	100	100	100	120	120
<b>Eurovent performances (1)</b>								
Net cooling capacity (1) (2)	(kW)	613	742	837	900	1027	1118	1205
Net EER (1) (2)		3.33	3.25	3.28	3.23	3.29	3.25	3.25
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.32	4.68	4.76	4.91	4.84	4.84	5.1
Space cooling efficiency $\eta_{sc}$ (3)	(%)	170	184	187	193	191	191	201
Sound power level (standard noise) (4)	(dB(A))	97	99	99	99	100	100	100
Sound power level (low noise) (4)	(dB(A))	95	97	97	97	98	98	98
<b>Compressor</b>								
Circuit 1		1	2	2	2	2	2	2
Circuit 2		1	1	1	1	2	2	2
<b>Refrigerant</b>								
Type		R1234ze						
Charge Circuit 1	(kg)	63	98	104	104	100	102	102
Charge Circuit 2	(kg)	49	40	49	49	92	96	102
<b>Dimensions &amp; Weight</b>								
Length	(mm)	7895	9390	10135	10135	12385	12385	13510
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	5200	6745	7205	7155	8715	8940	9250
Additional weight for Low Noise version	(kg)	120	160	160	180	220	220	240

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

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Operating weight include basic unit weight + the additional weight corresponding to the noise version

# General specifications

**HE**

## RTAF HE - High Efficiency - Extra Low noise - AC



<b>Eurovent performances (1)</b>		<b>090*</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>
Net cooling capacity (1) (2)	(kW)	332	365	397	429	462	511	555
Net EER (1) (2)		3.22	3.24	3.24	3.29	3.33	3.37	3.32
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		3.76	3.85	4.01	4.14	4.26	4.29	4.32
Space cooling efficiency ηs.c (3)	(%)	147.6	151	157	162	167	169	170
Sound power level (4)	(dB(A))	92	92	92	92	92	92	92
<b>Compressor</b>								
Circuit 1		1	1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1	1
<b>Refrigerant</b>								
Type		R1234ze						
Charge Circuit 1	(kg)	44	43	43	44	45	58	58
Charge Circuit 2	(kg)	42	41	41	45	43	48	48
<b>Dimensions &amp; Weight</b>								
Length	(mm)	4645	5645	5645	5645	5645	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight	(kg)	4115	4140	4140	4200	4260	4930	4965

<b>Eurovent performances (1)</b>		<b>185</b>	<b>210</b>	<b>230*</b>	<b>265</b>	<b>285</b>	<b>305</b>	<b>340</b>
Net cooling capacity (1) (2)	(kW)	611	737	831	895	1020	1108	1199
Net EER (1) (2)		3.36	3.29	3.32	3.26	3.33	3.27	3.27
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.30	4.51	4.08	4.52	4.63	4.57	4.67
Space cooling efficiency ηs.c (3)	(%)	169	177	160	178	182	180	184
Sound power level (4)	(dB(A))	92	94	94	94	95	95	95
<b>Compressor</b>								
Circuit 1		1	2	2	2	2	2	2
Circuit 2		1	1	1	1	2	2	2
<b>Refrigerant</b>								
Type		R1234ze						
Charge Circuit 1	(kg)	63	98	104	104	100	102	102
Charge Circuit 2	(kg)	49	40	49	49	92	96	102
<b>Dimensions &amp; Weight</b>								
Length	(mm)	7895	9390	10135	10135	12385	12385	13510
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight	(kg)	5320	6905	7365	7335	8935	9160	9490

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

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Operating weight include basic unit weight + the additional weight corresponding to the noise version

## RTAF HE - High Efficiency - Standard and Low Noise



<b>Eurovent performances (1)</b>	<b>090*</b>	<b>100*</b>	<b>110*</b>	<b>120*</b>	<b>130</b>	<b>145</b>	<b>155</b>	
Net cooling capacity (1) (2)	(kW)	332	365	398	431	464	513	558
Net EER (1) (2)		3.13	3.16	3.17	3.23	3.28	3.3	3.27
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		3.67	3.76	3.76	3.89	4.15	4.21	4.20
Space cooling efficiency ηsc (3)	(%)	144	148	148	153	163	165	165
Sound power level (standard noise) (4)	(dB(A))	97	97	97	97	97	97	97
Sound power level (low noise) (4)	(dB(A))	95	95	95	95	94	95	95

### Compressor

Circuit 1		1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1

### Refrigerant

Type					R1234ze			
Charge Circuit 1	(kg)	44	43	43	42	45	58	58
Charge Circuit 2	(kg)	42	41	41	45	43	48	48

### Dimensions & Weight

Length	(mm)	5645	5645	5645	5645	5645	6770	6770
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	4015	4040	4040	4100	4160	4810	4845
Additional weight for Low Noise version	(kg)	100	100	100	100	100	120	120

<b>Eurovent performances (1)</b>	<b>185</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>285</b>	<b>305</b>	<b>340</b>	
Net cooling capacity (1) (2)	(kW)	612	740	835	907	1024	1114	1219
Net EER (1) (2)		3.3	3.24	3.26	3.21	3.26	3.22	3.23
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		4.19	4.38	4.36	4.41	4.55	4.51	4.55
Space cooling efficiency ηsc (3)	(%)	165	172	172	174	179	177	179
Sound power level (standard noise) (4)	(dB(A))	97	99	98	99	100	100	100
Sound power level (low noise) (4)	(dB(A))	95	96	97	97	98	98	98

### Compressor

Circuit 1		1	2	2	2	2	2
Circuit 2		1	1	1	1	2	2

### Refrigerant

Type					R1234ze			
Charge Circuit 1	(kg)	63	98	104	104	100	102	102
Charge Circuit 2	(kg)	49	40	49	49	92	96	102

### Dimensions & Weight

Length	(mm)	7895	9390	10135	10135	12385	12385	13510
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	5200	6745	7315	7335	8900	9125	9435
Additional weight for Low Noise version	(kg)	120	160	160	160	220	220	240

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

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Operating weight include basic unit weight + the additional weight corresponding to the noise version

# General specifications

SE

## RTAF SE - Standard Efficiency - Extra Low Noise - EC



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>145</b>	<b>155</b>
Net cooling capacity (1) (2) (kW)	330	361	392	424	455	507	550
Net EER (1) (2)	3.19	3.18	3.16	3.19	3.18	3.29	3.23
Eurovent Energy class - Cooling	A	A	A	A	A	A	A
SEER (3)	4.09	4.14	4.14	4.23	4.24	4.45	4.29
Space cooling efficiency ηs.c (3) (%)	161	162	162	166	167	175	169
Sound power level (4) (dB(A))	92	92	92	92	92	92	92
<b>Compressor</b>							
Circuit 1	1	1	1	1	1	1	1
Circuit 2	1	1	1	1	1	1	1
<b>Refrigerant</b>							
Type				R1234ze			
Charge Circuit 1 (kg)	41	40	40	41	42	55	55
Charge Circuit 2 (kg)	39	38	38	42	40	45	45
<b>Dimensions &amp; Weight</b>							
Length (mm)	4520	4520	4520	4520	4520	5645	5645
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Operating weight (kg)	3785	3810	3810	3870	3925	4625	4660

<b>Eurovent performances (1)</b>	<b>185</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>285</b>	<b>305</b>	<b>340</b>
Net cooling capacity (1) (2) (kW)	607	735	817	889	1009	1094	1185
Net EER (1) (2)	3.31	3.25	3.14	3.2	3.21	3.13	3.18
Eurovent Energy class - Cooling	A	A	A	A	A	A	A
SEER (3)	4.39	4.47	4.50	4.72	4.54	4.93	4.72
Space cooling efficiency ηs.c (3) (%)	173	176	177	186	179	194	186
Sound power level (4) (dB(A))	92	94	94	94	95	95	95
<b>Compressor</b>							
Circuit 1	1	2	2	2	2	2	2
Circuit 2	1	1	1	1	2	2	2
<b>Refrigerant</b>				R1234ze			
Type							
Charge Circuit 1 (kg)	60	90	93	93	90	94	94
Charge Circuit 2 (kg)	46	40	44	49	88	91	96
<b>Dimensions &amp; Weight</b>							
Length (mm)	6770	8265	8265	9390	10135	10135	11260
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2672	2672	2672	2672	2672	2672	2672
Operating weight (kg)	5020	6575	6725	7030	8400	8560	8875

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified

Operating weight include basic unit weight + the additional weight corresponding to the noise version

## RTAF SE - Standard Efficiency - Extra Low Noise - AC



<b>Eurovent performances (1)</b>	<b>090</b>	<b>100</b>	<b>110</b>	<b>120*</b>	<b>130</b>	<b>145</b>	<b>155</b>
Net cooling capacity (1) (2) (kW)	328	359	390	421	451	504	546
Net EER (1) (2)	3.17	3.15	3.13	3.15	3.14	3.26	3.19
Eurovent Energy class - Cooling	A	A	A	A	A	A	A
SEER (3)	3.83	3.90	3.86	3.97	4.16	4.22	4.15
Space cooling efficiency ηsc (3) (%)	150	153	151	156	163	166	163
Sound power level (4) (dB(A))	92	92	92	92	92	92	92
<b>Compressor</b>							
Circuit 1	1	1	1	1	1	1	1
Circuit 2	1	1	1	1	1	1	1
<b>Refrigerant</b>							
Type				R1234ze			
Charge Circuit 1 (kg)	41	40	40	41	42	55	55
Charge Circuit 2 (kg)	39	38	38	42	40	45	45
<b>Dimensions &amp; Weight</b>							
Length (mm)	4520	4520	4520	4520	4520	5645	5645
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (kg)	3410	3445	3445	3870	4220	4365	3310

<b>Eurovent performances (1)</b>	<b>185</b>	<b>210</b>	<b>230</b>	<b>265</b>	<b>285</b>	<b>305</b>	<b>340</b>
Net cooling capacity (1) (2) (kW)	604	730	810	885	1000	1084	1178
Net EER (1) (2)	3.28	3.22	3.1	3.16	3.17	3.08	3.13
Eurovent Energy class - Cooling	A	A	A	A	A	B	A
SEER (3)	4.30	4.54	4.22	4.49	4.46	4.53	4.62
Space cooling efficiency ηsc (3) (%)	169	179	166	177	175	178	182
Sound power level (4) (dB(A))	92	94	94	94	95	95	95
<b>Compressor</b>							
Circuit 1	1	2	2	2	2	2	2
Circuit 2	1	1	1	1	2	2	2
<b>Refrigerant</b>							
Type				R1234ze			
Charge Circuit 1 (kg)	60	90	93	93	90	94	94
Charge Circuit 2 (kg)	46	40	44	49	88	91	96
<b>Dimensions &amp; Weight</b>							
Length (mm)	6770	8265	8265	9390	10135	10135	11260
Width (mm)	2200	2200	2200	2200	2200	2200	2200
Height (mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (kg)	4470	6575	6725	7030	8400	8560	8875

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified

Operating weight include basic unit weight + the additional weight corresponding to the noise version

# General specifications

SE

## RTAF SE - Standard Efficiency - Standard and Low Noise



Eurovent performances (1)		090*	100	110	120*	130*	145	155*
Net cooling capacity (1) (2)	(kW)	330	361	392	424	455	507	550
Net EER (1) (2)		3.11	3.11	3.10	3.12	3.13	3.23	3.17
Eurovent Energy class - Cooling		A	A	A	A	A	A	A
SEER (3)		3.76	3.84	3.82	3.93	4.07	4.15	4.04
Space cooling efficiency $\eta_{sc}$ (3)	(%)	148	150	150	154	160	163	159
Sound power level (standard noise) (4)	(dB(A))	97	97	97	97	97	97	97
Sound power level (low noise) (4)	(dB(A))	95	95	95	95	95	95	95
Compressor								
Circuit 1		1	1	1	1	1	1	1
Circuit 2		1	1	1	1	1	1	1
Refrigerant								
Type		R1234ze						
Charge Circuit 1	(kg)	41	40	40	41	42	55	41
Charge Circuit 2	(kg)	39	38	38	42	40	45	39
Dimensions & Weight								
Length	(mm)	4520	4520	4520	4520	4520	5645	5645
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	3685	3710	3710	3770	3825	4505	4540
Additional weight for Low Noise version	(kg)	100	100	100	100	100	120	120
Eurovent performances (1)		185	210	230	265	285	305	340
Net cooling capacity (1) (2)	(kW)	607	734	817	889	1008	1093	1185
Net EER (1) (2)		3.23	3.19	3.08	3.14	3.15	3.08	3.11
Eurovent Energy class - Cooling		A	A	B	A	A	B	A
SEER (3)		4.21	4.44	4.20	4.44	4.40	4.44	4.41
Space cooling efficiency $\eta_{sc}$ (3)	(%)	165	174	165	174	173	174	174
Sound power level (standard noise) (4)	(dB(A))	97	99	99	99	100	100	100
Sound power level (low noise) (4)	(dB(A))	95	96	97	97	98	98	98
Compressor								
Circuit 1		1	2	2	2	2	2	2
Circuit 2		1	1	1	1	2	2	2
Refrigerant		R1234ze						
Type		R1234ze						
Charge Circuit 1	(kg)	60	90	93	93	90	94	94
Charge Circuit 2	(kg)	46	40	44	49	88	91	96
Dimensions & Weight								
Length	(mm)	6770	8265	8265	9390	10135	10135	11260
Width	(mm)	2200	2200	2200	2200	2200	2200	2200
Height	(mm)	2526	2526	2526	2526	2526	2526	2526
Operating weight (standard noise)	(kg)	4900	6415	6565	6850	8180	8340	8635
Additional weight for Low Noise version	(kg)	120	160	160	160	220	220	240

(1) Evaporator 12/7°C and 0.0 m<sup>2</sup>K/kW, and condenser at 35°C

(2) Net performances calculated as per EN 14511 following Eurovent rules

(3) nsc/ SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2000 kW maximum capacity - COMMISSION REGULATION (EU) N° 2016/2281 of 30 November 2016.

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

\* Not available for comfort applications for countries adopting the Ecodesign Directive Tier 1. Not Eurovent certified

Operating weight include basic unit weight + the additional weight corresponding to the noise version

# RTAF-G

## Process Units

With the introduction of a specific innovative design, optimized for negative temperature cooling, Trane Sintesis provides a highly efficient and sustainable (<1GWP) solution without any compromise on safety or reliability.

- Standard product designed for operation with brine
- Safe and efficient
- Environmentally responsible
- Cost effective choice

## Operating limits

RTAF G Process		
<b>Condenser Ambient Temperature</b>		
Standard (min/max)	(°C)	-10 / +46
With Low Ambient option (min/max)	(°C)	-20 / +46
<b>Evaporator Leaving Brine Temperature</b>		
RTAF G Process range	(°C)	-12 / +4.4
Power supply	(V/Ph/Hz)	400/3/50
Refrigerant		R1234ze

Sintesis Prime RTAF-G Process Units are suited to critical environments like



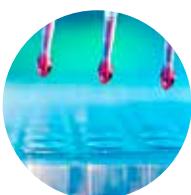
Food and beverage industry



Cold Room



Industrial



Pharmaceutical industry



Ice Rink



Milk Factory

# RTAF-G

## Process Units

A choice of 3 unit sizes with 2, 3 or 4 compressors running with 2 Adaptive Frequency™ Drives

Unit Size HSE	Number of Compressors	Unit Length	Cooling Capacity	SEPR MT
Meters				at -8 / -4 / 35 with 30% EG
101	2	5.7	446 kW	3.42
141	3	8.3	598 kW	3.25
191	4	10.1	767 kW	3.27

### An affordable choice of sound versions



- Choose from three 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 - 102 & 103 dB(A) sound Power

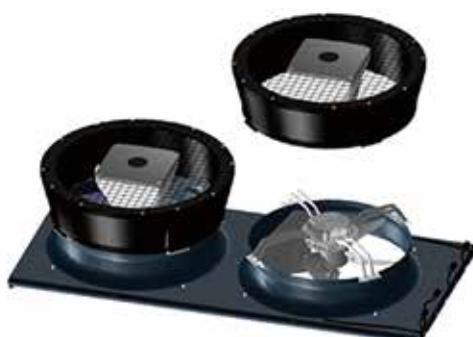
### Low Noise: LN - 99 & 101 dB(A) sound Power

- Compressor enclosure
- Additional insulation on the refrigerant circuit

### Extra Low Noise: XLN EC - 97 & 98 dB(A) sound Power



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



# RTAF-G

## Process Units

### Heat Recovery Option



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 cater
- Air conditioning
- Ventilation air pre-heating
- Industrial processes
- Defrosting system.

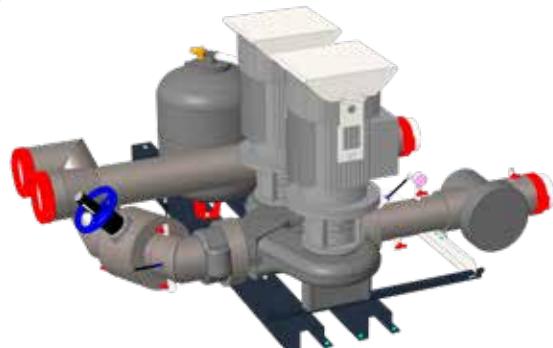
Specific for **negative temperature process applications**, Trane offers three levels of heat recovery, answering the very specific requirements of industrial users, such as fast defrost cycles.

- 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.
- up to 50% of the cooling capacity with Partial Heat Recovery Plus.

### Hydraulic Module

- Dual Pumps
  - Standard or high head pressure
- Smart Flow Control (size 101 and 191)
  - Constant water flow (adjust the pump speed without cooling demand)
  - Constant delta T control with variable flow
  - Constant delta P control with variable flow
- Optional Variable primary Flow

**VPF**



HSE

HSS

XE

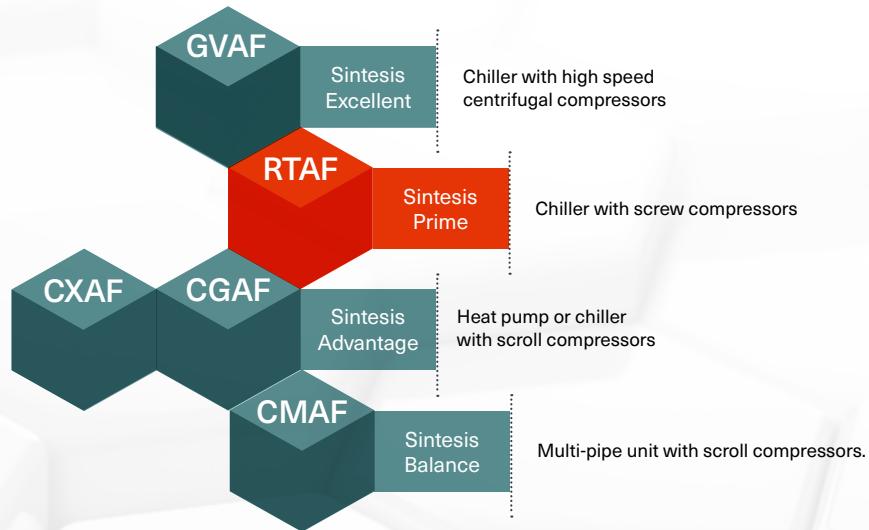
HE

SE

Process Units



## Family of chillers, heat pumps and multi-pipe units



The Sintesis™ Prime model RTAF belongs to the Trane Sintesis™ portfolio representing industry leading performance and flexibility. Always striving for a perfect fit, not only to your building and application requirements but also to your sustainability and budget targets.

### The Trane Sintesis Prime range:

- Unit sizes providing cooling capacities from 300 - 2090 kW
- Seven efficiency versions
- Four levels of sound attenuation
- 3 refrigerant alternatives
- Perfectly suited for comfort and process application with extended operating map:
  - Standard leaving water temperature range from +5°C up to +27°C
  - Low leaving water temperature range from +5°C down to -12°C with Glycol
  - 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

### Factory-mounted options:

- Hydraulic kit with dual pumps
- Smart flow control
- Partial heat recovery
- Total heat recovery
- Free-cooling
- For a complete and detailed list of all options and accessories, please refer to the product catalog or contact your local Trane office.



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](http://trane.eu) or [tranetechnologies.com](http://tranetechnologies.com).