



# Air-Cooled Screw Chillers RTAF 300-1600 kW

The best bundled in one.  
Our best.

**SINTECIS**



# 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.



# SINTECIS

## 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  $-18^{\circ}\text{C}$  up to  $55^{\circ}\text{C}$ . 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



LONMARK  
SPONSOR



## \* 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



## \* Trane Compressor

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

# 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

- EER > 2.85
- ESEER > 3.84

### High Efficiency: HE



- EER > 3.00
- ESEER > 3.82

### Extra Efficiency: XE



- EER > 3.03
- ESEER > 4.11

### High Seasonal Short: HSS

- Adaptive Frequency Drive, inverter technology
- ESEER up to 4.55
- EER up to 3.16



### High Seasonal Efficiency: HSE

- Adaptive Frequency Drive, inverter technology
- ESEER up to 4.77
- EER up to 3.29







## Quietest system on the market

- 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 version.

**Standard Noise: SN - average sound power Lw 96 dB(A)**

**Low Noise: LN - average sound power Lw 93 dB(A)**

- Compressor enclosure
- Additional insulation on the refrigerant circuit

**Extra Low Noise: XLN - average sound power Lw 89 dB(A)\***

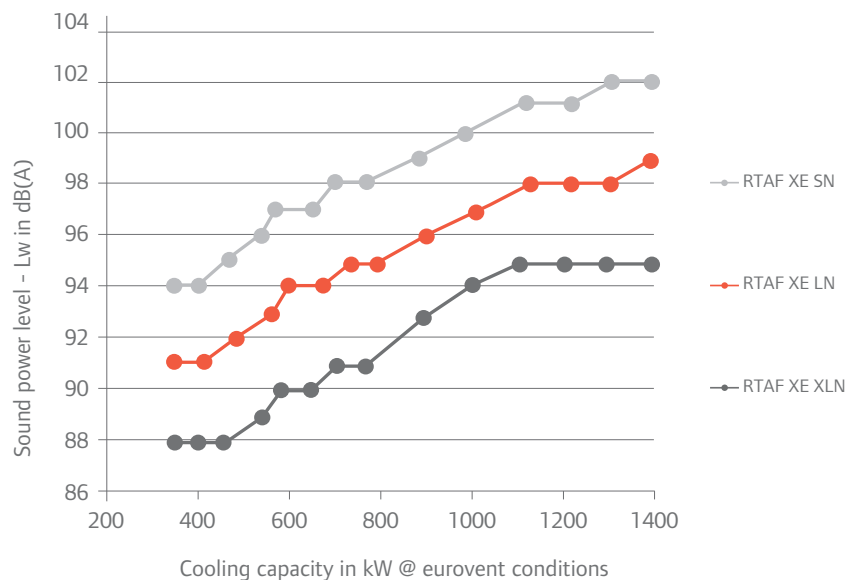


- Compressor enclosure
- Refrigerant line insulation
- EC fans with top diffusers



\* The lowest noise rating on the market.

### Sound levels



# General specifications

## SE/HE/XE



SE/HE/XE

HSE/HSS

XLN

### RTAF SE Standard Efficiency

Eurovent performances (1)		RTAF 090 SE	RTAF 105 SE	RTAF 125 SE	RTAF 145 SE	RTAF 155 SE	RTAF 175 SE	RTAF 190 SE	RTAF 205 SE
Net cooling capacity	(kW)	326	375	440	522	564	615	675	732
EER		3.14	3.10	3.02	3.16	3.06	2.98	3.05	3.00
ESEER		3.86	3.86	3.94	3.91	3.84	3.95	3.92	3.92
Eurovent efficiency class cooling		A	B	B	A	B	B	B	B
Sound power level (standard noise)	(dBA)	95	95	95	96	96	97	97	97
Sound power level (low noise)	(dBA)	92	92	92	93	93	94	94	94
<b>Dimensions</b>									
Unit length	(mm)	4520	4520	4520	5645	5645	5645	6770	6770
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2525	2525	2525	2525	2525	2525	2525	2525
<b>Weights (2)</b>									
Operating weight	(kg)	3295	3315	3495	3990	4260	4405	4880	4995

### RTAF SE Standard Efficiency

Eurovent performances (1)		RTAF 250 SE	RTAF 280 SE	RTAF 310 SE	RTAF 350 SE	RTAF 380 SE	RTAF 410 SE
Net cooling capacity	(kW)	859	972	1074	1194	1322	1446
EER		2.97	2.96	2.86	2.85	2.89	2.91
ESEER		3.94	3.91	3.90	3.99	4.06	4.09
Eurovent efficiency class cooling		B	B	C	C	C	C
Sound power level (standard noise)	(dBA)	99	100	101	101	101	102
Sound power level (low noise)	(dBA)	96	97	98	98	98	99
<b>Dimensions</b>							
Unit length	(mm)	8265	9390	9390	10135	11260	12385
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>							
Operating weight	(kg)	6599	7199	7399	8399	8999	9299

### RTAF HE High Efficiency

Eurovent performances (1)		RTAF 090 HE	RTAF 105 HE	RTAF 125 HE	RTAF 145 HE	RTAF 155 HE	RTAF 175 HE	RTAF 190 HE	RTAF 205 HE
Net cooling capacity	(kW)	331	383	452	532	577	632	689	751
EER		3.16	3.18	3.17	3.25	3.18	3.14	3.17	3.15
ESEER		3.82	3.83	3.97	4.01	3.94	3.97	3.94	3.96
Eurovent efficiency class cooling		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
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2525	2525	2525	2525	2525	2525	2525	2525
<b>Weights (2)</b>									
Operating weight	(kg)	3605	3625	3800	4310	4580	4730	5180	5295

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

(2) Rated condition without pump package



**TRANE®**



# SINTECIS

## General specifications SE/HE/XE



### RTAF HE High Efficiency

Eurovent performances (1)		RTAF 250 HE	RTAF 280 HE	RTAF 310 HE	RTAF 350 HE	RTAF 380 HE	RTAF 410 HE
Net cooling capacity	(kW)	875	992	1113	1238	1362	1469
EER		3.07	3.08	3.08	3.06	3.07	3.00
ESEER		3.94	3.99	3.98	3.98	4.06	4.08
Eurovent efficiency class cooling		B	B	B	B	B	B
Sound power level (standard noise)	(dBA)	99	100	101	101	102	102
Sound power level (low noise)	(dBA)	96	97	98	98	98	99
<b>Dimensions</b>							
Unit length	(mm)	9390	10135	11260	12385	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>							
Operating weight	(kg)	6899	7399	7899	9099	9499	9599

### RTAF XE Extra Efficiency

Eurovent performances (1)		RTAF 090 XE	RTAF 105 XE	RTAF 125 XE	RTAF 145 XE	RTAF 155 XE	RTAF 175 XE	RTAF 190 XE	RTAF 205 XE
Net cooling capacity	(kW)	326	380	447	526	569	633	690	752
EER		3.35	3.28	3.23	3.32	3.23	3.18	3.21	3.19
ESEER		4.26	4.14	4.19	4.27	4.17	4.15	4.11	4.11
Eurovent efficiency class cooling		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
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2525	2525	2525	2525	2525	2525	2525	2525
<b>Weights (2)</b>									
Operating weight	(kg)	3605	3625	3800	4310	4580	4730	5180	5295

### RTAF XE Extra Efficiency

Eurovent performances (1)		RTAF 250 XE	RTAF 280 XE	RTAF 310 XE	RTAF 350 XE	RTAF 380 XE	RTAF 410 XE
Net cooling capacity	(kW)	876	993	1114	1238	1364	1471
EER		3.10	3.11	3.11	3.10	3.10	3.03
ESEER		4.29	4.33	4.32	4.43	4.51	4.46
Eurovent efficiency class cooling		A	A	A	A	A	B
Sound power level (standard noise)	(dBA)	99	100	101	101	102	102
Sound power level (low noise)	(dBA)	96	97	98	98	98	99
<b>Dimensions</b>							
Unit length	(mm)	9390	10135	11260	12385	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>							
Operating weight	(kg)	6899	7399	7899	9099	9499	9599

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

(2) Rated condition without pump package

# HSE/HSS

## Trane Adaptive Frequency Drive

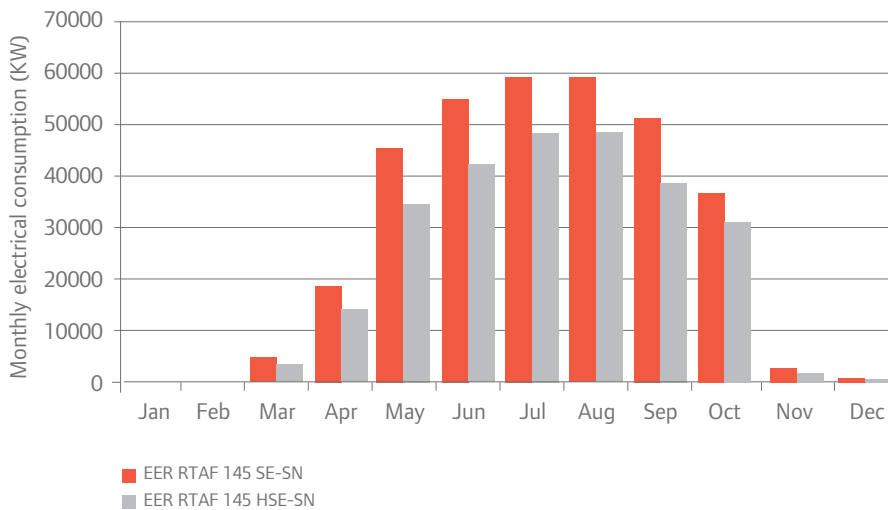
### The highest efficiencies - and up to 1600 kW

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

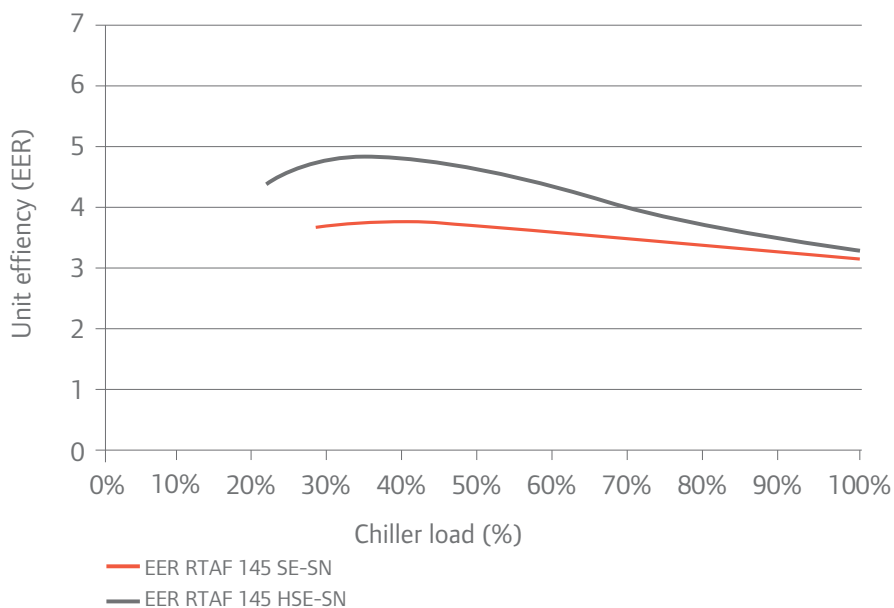
- EER up to 3.3
- ESEER up to 4.8
- Reduced inrush current by 5
- Improved capacity modulation

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-SN / HSE-LN High Seasonal Efficiency - Standard and Low Noise

Eurovent performances (1)		RTAF 090 HSE	RTAF 105 HSE	RTAF 125 HSE	RTAF 145 HSE	RTAF 155 HSE	RTAF 175 HSE	RTAF 190 HSE	RTAF 205 HSE
Net cooling capacity	(kW)	330	383	452	534	576	638	695	755
EER		3.26	3.17	3.11	3.19	3.10	3.07	3.10	3.07
ESEER		4.42	4.37	4.55	4.71	4.61	4.53	4.53	4.53
Eurovent efficiency class cooling		A	A	A	A	A	B	A	B
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
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>									
Operating weight	(kg)	3705	3765	3945	4450	4760	4915	5405	5520

Eurovent performances (1)		RTAF 245 HSE	RTAF 250 HSE	RTAF 280 HSE	RTAF 310 HSE	RTAF 350 HSE	RTAF 380 HSE	RTAF 410 HSE	RTAF 450 HSE
Net cooling capacity	(kW)	875	882	999	1118	1243	1369	1473	1586
EER		2.85	3.03	3.04	3.04	3.03	3.04	2.97	2.84
ESEER		4.29	4.40	4.43	4.46	4.59	4.62	4.56	4.41
Eurovent efficiency class cooling		C	B	B	B	B	B	B	C
Sound power level (standard noise)	(dBA)	104	99	100	101	101	102	102	109
Sound power level (low noise)	(dBA)	101	97	98	99	99	99	100	107
<b>Dimensions</b>									
Unit length	(mm)	7895	9390	10135	11260	12385	13510	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>									
Operating weight	(kg)	5520	7099	7599	8099	9399	9699	9899	9899

### RTAF HSE - XLN High Seasonal Efficiency - Extra Low noise

Eurovent performances (1)		RTAF 090 HSE-XLN	RTAF 105 HSE-XLN	RTAF 125 HSE-XLN	RTAF 145 HSE-XLN	RTAF 155 HSE-XLN	RTAF 175 HSE-XLN	RTAF 190 HSE-XLN	RTAF 205 HSE-XLN
Net cooling capacity	(kW)	330	383	451	533	575	638	694	755
EER		3.29	3.21	3.13	3.22	3.12	3.10	3.14	3.11
ESEER		4.46	4.43	4.62	4.77	4.68	4.62	4.62	4.61
Eurovent efficiency class cooling		A	A	A	A	A	A	A	A
Sound power level	(dBA)	88	88	88	89	90	90	91	91
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	3805	3865	4045	4570	4880	5035	5545	5660

Eurovent performances (1)		RTAF 245 HSE-XLN	RTAF 250 HSE-XLN	RTAF 280 HSE-XLN	RTAF 310 HSE-XLN	RTAF 350 HSE-XLN	RTAF 380 HSE-XLN	RTAF 410 HSE-XLN	RTAF 450 HSE-XLN
Net cooling capacity	(kW)	875	882	999	1117	1243	1369	1472	1585
EER		2.88	3.06	3.08	3.07	3.06	3.08	3.00	2.86
ESEER		4.36	4.51	4.51	4.53	4.66	4.69	4.63	4.51
Eurovent efficiency class cooling		C	B	B	B	B	B	B	C
Sound power level	(dBA)	97	93	94	95	95	95	95	103
<b>Dimensions</b>									
Unit length	(mm)	7895	9390	10135	11260	12385	13510	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	5660	7099	7599	8099	9399	9699	9899	9899

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

(2) Rated condition without pump package

## General specifications HSE/HSS

### RTAF HSS-SN / HSS-LN High Seasonal Short - Standard and Low Noise

Eurovent performances (1)		RTAF 090 HSS	RTAF 105 HSS	RTAF 125 HSS	RTAF 145 HSS	RTAF 155 HSS	RTAF 175 HSS	RTAF 190 HSS
Net cooling capacity	(kW)	330	378	445	529	571	621	681
EER		3.11	3.03	2.94	3.08	2.98	2.90	2.98
ESEER		4.24	4.17	4.33	4.44	4.38	4.38	4.40
Eurovent efficiency class cooling		A	B	B	B	B	C	B
Sound power level (standard noise)	(dBA)	95	95	95	96	96	97	97
Sound power level (low noise)	(dBA)	92	92	92	93	93	94	94
<b>Dimensions</b>								
Unit length	(mm)	4520	4520	4520	5645	5645	5645	6770
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>								
Operating weight	(kg)	3421	3472	3629	4149	4450	4575	5110

Eurovent performances (1)		RTAF 205 HSS	RTAF 250 HSS	RTAF 280 HSS	RTAF 310 HSS	RTAF 350 HSS	RTAF 380 HSS	RTAF 410 HSS
Net cooling capacity	(kW)	736	866	979	1077	1200	1330	1450
EER		2.92	2.92	2.92	2.81	2.82	2.87	2.88
ESEER		4.39	4.37	4.27	4.23	4.40	4.45	4.49
Eurovent efficiency class cooling		B	B	B	C	C	C	C
Sound power level (standard noise)	(dBA)	97	99	100	101	101	102	102
Sound power level (low noise)	(dBA)	94	97	98	99	99	99	100
<b>Dimensions</b>								
Unit length	(mm)	6770	8265	9390	9390	10135	11260	12385
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>								
Operating weight	(kg)	5218	6700	7300	7500	8500	9000	9400

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

Eurovent performances (1)		RTAF 090 HSS-XLN	RTAF 105 HSS-XLN	RTAF 125 HSS-XLN	RTAF 145 HSS-XLN	RTAF 155 HSS-XLN	RTAF 175 HSS-XLN
Net cooling capacity	(kW)	330	378	445	529	570	621
EER		3.16	3.07	2.97	3.11	3.01	2.92
ESEER		4.33	4.26	4.41	4.54	4.46	4.46
Eurovent efficiency class cooling		A	B	B	A	B	B
Sound power level (standard noise)	(dBA)	88	89	89	89	90	90
<b>Dimensions</b>							
Unit length	(mm)	4520	4520	4520	5645	5645	5645
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2526	2526	2526	2526
<b>Weights (2)</b>							
Operating weight	(kg)	3501	3552	3709	4249	4550	4675

Eurovent performances (1)		RTAF 190 HSS-XLN	RTAF 205 HSS-XLN	RTAF 250 HSS-XLN	RTAF 280 HSS-XLN	RTAF 310 HSS-XLN	RTAF 350 HSS-XLN	RTAF 380 HSS-XLN	RTAF 410 HSS-XLN
Net cooling capacity	(kW)	681	735	866	979	1076	1199	1329	1450
EER		3.01	2.95	2.94	2.94	2.83	2.84	2.89	2.90
ESEER		4.48	4.46	4.44	4.34	4.30	4.48	4.53	4.55
Eurovent efficiency class cooling		B	B	B	B	C	C	C	C
Sound power level	(dBA)	91	91	93	94	94	94	95	95
<b>Dimensions</b>									
Unit length	(mm)	6770	6770	8265	9390	9390	10135	11260	12385
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2526	2526	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	5230	5338	6799	7399	7599	8599	9099	9499

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

(2) Rated condition without pump package

# XLN

The quietest in the industry!

## The lowest sound levels...

Extra Low Noise (XLN): Lw from 88 to 91dB(A) across the range thanks to:

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

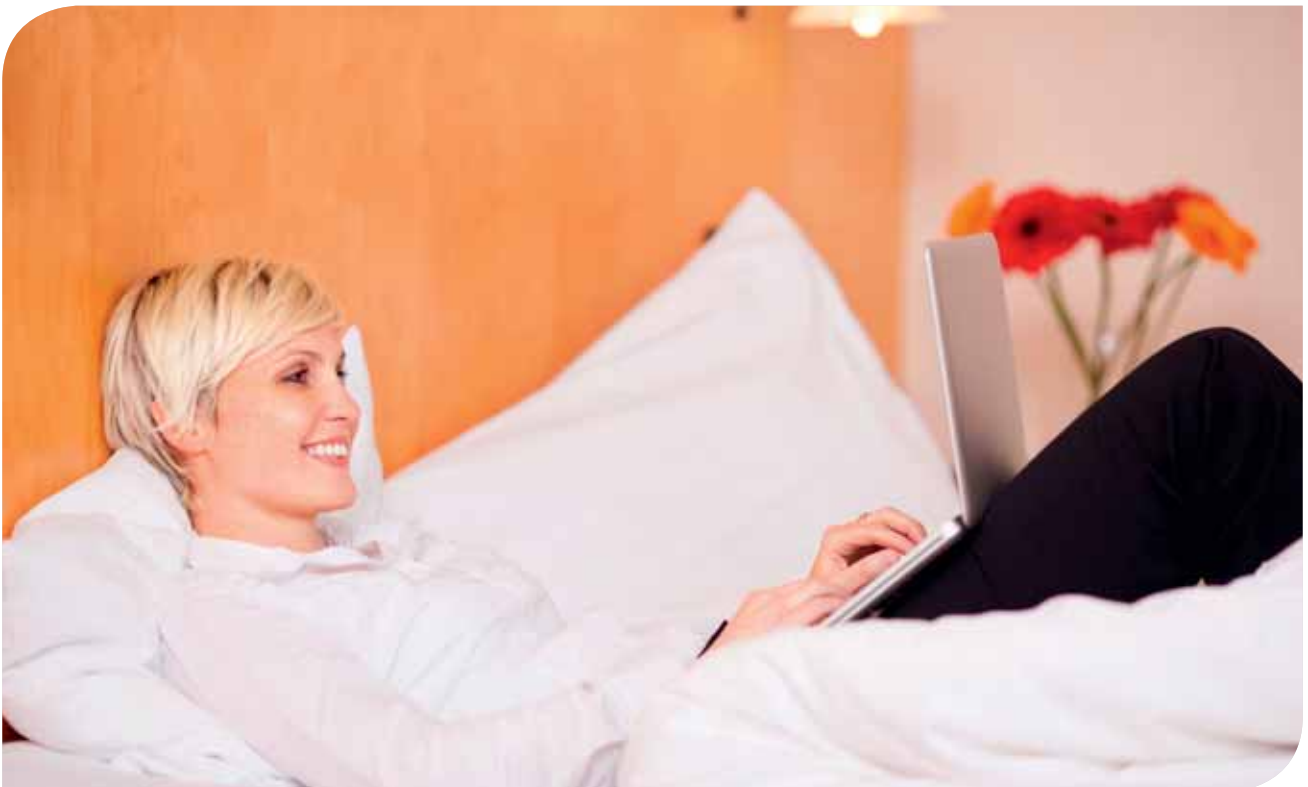


## ...at the efficiency that you need

The **XLN** (Extra Low Noise)\* version improves even further the unit efficiency and is available in three 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 3.35
- **High Seasonal Efficiency (HSE):** Class A, using Trane Adaptive Frequency Drive technology on the compressors allowing ESEER up to 4.8



# General specifications

## XLN



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

Eurovent performances (1)		RTAF 090 SE-XLN	RTAF 105 SE-XLN	RTAF 125 SE-XLN	RTAF 145 SE-XLN	RTAF 155 SE-XLN	RTAF 175 SE-XLN	RTAF 190 SE-XLN	RTAF 205 SE-XLN
Net cooling capacity	(kW)	326	376	440	522	564	616	676	732
EER		3.23	3.17	3.08	3.22	3.12	3.03	3.11	3.05
ESEER		4.13	4.07	4.06	4.12	4.02	4.08	4.04	4.01
Eurovent efficiency class cooling		A	A	B	A	A	B	A	B
Sound power level	(dBA)	88	89	89	89	90	90	91	91
<b>Dimensions</b>									
Unit length	(mm)	4520	4520	4520	5645	5645	5645	6770	6770
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	3375	3395	3575	4090	4360	4505	5000	5115

Eurovent performances (1)		RTAF 250 SE-XLN	RTAF 280 SE-XLN	RTAF 310 SE-XLN	RTAF 350 SE-XLN	RTAF 380 SE-XLN	RTAF 410 SE-XLN
Net cooling capacity	(kW)	860	973	1075	1195	1324	1447
EER		3.02	3.01	2.90	2.90	2.94	2.95
ESEER		4.26	4.25	4.23	4.36	4.45	4.44
Eurovent efficiency class cooling		B	B	B	C	B	B
Sound power level	(dBA)	93	94	94	94	95	95
<b>Dimensions</b>							
Unit length	(mm)	8265	9390	9390	10135	11260	12385
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>							
Operating weight	(kg)	6599	7199	7399	8399	8999	9299

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

Eurovent performances (1)		RTAF 090 XE-XLN	RTAF 105 XE-XLN	RTAF 125 XE-XLN	RTAF 145 XE-XLN	RTAF 155 XE-XLN	RTAF 175 XE-XLN	RTAF 190 XE-XLN	RTAF 205 XE-XLN
Net cooling capacity	(kW)	326	380	447	526	569	633	689	752
EER		3.36	3.30	3.24	3.33	3.23	3.20	3.24	3.21
ESEER		4.29	4.20	4.21	4.30	4.19	4.19	4.14	4.14
Eurovent efficiency class cooling		A	A	A	A	A	A	A	A
Sound power level	(dBA)	88	88	88	89	90	90	91	91
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	3705	3725	3900	4430	4700	4850	5320	5435

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

(2) Rated condition without pump package



## General specifications XLN

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

Eurovent performances (1)		RTAF 250 XE-XLN	RTAF 280 XE-XLN	RTAF 310 XE-XLN	RTAF 350 XE-XLN	RTAF 380 XE-XLN	RTAF 410 XE-XLN
Net cooling capacity	(kW)	876	993	1114	1237	1363	1470
EER		3.14	3.14	3.14	3.12	3.13	3.05
ESEER		4.36	4.39	4.40	4.46	4.56	4.51
Eurovent efficiency class cooling		A	A	A	A	A	B
Sound power level	(dBA)	93	94	95	95	95	95
<b>Dimensions</b>							
Unit length	(mm)	9390	10135	11260	12385	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>							
Operating weight	(kg)	6899	7399	7899	9099	9499	9599

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

Eurovent performances (1)		RTAF 090 HSE-XLN	RTAF 105 HSE-XLN	RTAF 125 HSE-XLN	RTAF 145 HSE-XLN	RTAF 155 HSE-XLN	RTAF 175 HSE-XLN	RTAF 190 HSE-XLN	RTAF 205 HSE-XLN
Net cooling capacity	(kW)	330	383	451	533	575	638	694	755
EER		3.29	3.21	3.13	3.22	3.12	3.10	3.14	3.11
ESEER		4.46	4.43	4.62	4.77	4.68	4.62	4.62	4.61
Eurovent efficiency class cooling		A	A	A	A	A	A	A	A
Sound power level	(dBA)	88	88	88	89	90	90	91	91
<b>Dimensions</b>									
Unit length	(mm)	5645	5645	5645	6770	6770	6770	7895	7895
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	3805	3865	4045	4570	4880	5035	5545	5660

Eurovent performances (1)		RTAF 245 HSE-XLN	RTAF 250 HSE-XLN	RTAF 280 HSE-XLN	RTAF 310 HSE-XLN	RTAF 350 HSE-XLN	RTAF 380 HSE-XLN	RTAF 410 HSE-XLN	RTAF 450 HSE-XLN
Net cooling capacity	(kW)	875	882	999	1117	1243	1369	1472	1585
EER		2.88	3.06	3.08	3.07	3.06	3.08	3.00	2.86
ESEER		4.36	4.51	4.51	4.53	4.66	4.69	4.63	4.51
Eurovent efficiency class cooling		C	B	B	B	B	B	B	C
Sound power level	(dBA)	97	93	94	95	95	95	95	103
<b>Dimensions</b>									
Unit length	(mm)	7895	9390	10135	11260	12385	13510	13510	13510
Unit width	(mm)	2200	2200	2200	2200	2200	2200	2200	2200
Unit height	(mm)	2672	2672	2672	2672	2672	2672	2672	2672
<b>Weights (2)</b>									
Operating weight	(kg)	5660	7099	7599	8099	9399	9699	9899	9899

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

(2) Rated condition without pump package

# The Future of F-Gases

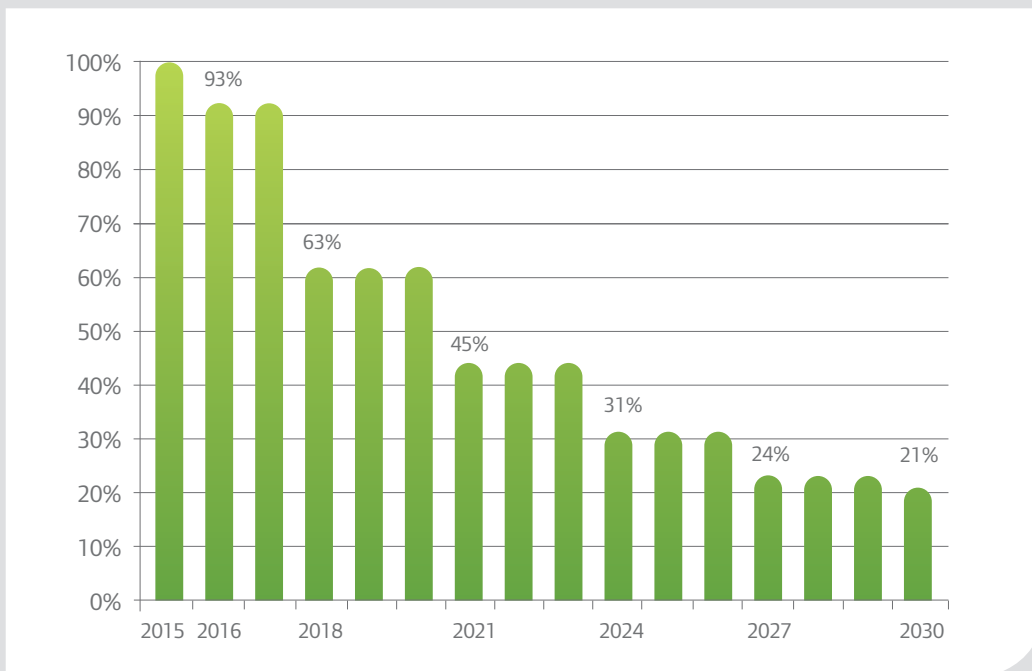
The fluorinated refrigerants phase-down, as defined in the new EU F-Gas Regulation, is a step-by-step approach where the quantities of HFCs expressed in CO<sub>2</sub> equivalent that are placed on the market are gradually reduced. As a result of the phase-down, HFC consumption will be reduced by 79% 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 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 CO<sub>2</sub> equivalents placed on the EU market from 2009 to 2012.

# An environmentally sustainable solution



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:*

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

R134a: GWP = 1430

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

# Range Description

a model for every application

## The Trane Sintesis range

- Unit sizes providing cooling capacities from 300kW to 1600kW
- 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



Trane® is a brand of Ingersoll Rand®. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Ingersoll Rand®, Trane®, Thermo King® and Club Car® — work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results.



[engineer.trane.com](http://engineer.trane.com)

[trane.com](http://trane.com)

[ingersollrand.com](http://ingersollrand.com)

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. Trane bvba, Lenneke Marelaan 6, 1932 Sint-Stevens-Woluwe, Belgium, ON 0888.048.262 - RPR Brussels

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

© 2015 Trane – All rights reserved  
RTAF-SLB001-GB June 2015