



**TRANE®**

# AIRFINITY™

**Rooftops**

**High performance, proven reliability  
and easy installation**



**IR** Ingersoll Rand®

# Airfinity Rooftops

Comfort and economy



When it comes to installing and maintaining an HVAC system, every cent counts. From your initial capital investment to utility and maintenance expense, operating HVAC equipment can have a significant impact on your bottom line. This is why a Trane® Airfinity™ rooftop unit can be the perfect choice.

Trane delivers a product that is easy to install while providing exceptional reliability, meets stringent performance requirements and is competitively priced. Trane rooftop solutions deliver real value for you – and real comfort for your customer.

## **The performance you need at the lowest cost of ownership**

With a strong legacy of proven reliability, Airfinity rooftops can deliver high seasonal efficiency standards capable of meeting even the most stringent European regulations. By reducing energy and maintenance costs, you can save money on HVAC expenditure and invest it where it matters most: your business.

## **Integrated plug & play solution**

Thanks to its compact design and integrated control solution, installing and operating a rooftop has never been so easy. Every Airfinity unit can be customized to meet your exact needs, so you don't have to compromise.

## **Rapid, easy unit replacement**

Trane plug & play solutions allow compatibility with multiple roof curbs, without the need for expensive adapters or other modifications. Maximum adaptability for faster, easier, less expensive installations makes Trane the perfect choice for replacement applications.

# Key features and benefits

## of the Trane Airfinity™ solution

### Energy savings

- High efficiency scroll compressors operate in tandem for optimum performance under part load
- Electronically Commutated (EC) supply plug fan with modulating airflow for better adaptability to the building load
- Intelligent Trane CH536 controller with embedded energy saving features
- Free cooling technology to reduce annual energy costs
- Electronic Expansion Valve for tighter system control
- Market-leading modular and fully integrated heat recovery solutions for lower energy consumption.

### Easy installation, operation and maintenance:

- Double refrigeration circuit for enhanced reliability
- Light and compact for easy transportation and lifting
- Remote unit management with alarms and notifications
- EC plug fan requiring zero maintenance
- Innovative rail system for easy access to key components.

### Superior Indoor Air Quality for real comfort

- Filtration level up to F9, with easy-to-replace filters
- Double wall panel provided as standard for improved insulation and indoor air quality
- Dynamic defrost cycles to ensure comfort is never compromised
- Complete offering of exhaust options to prevent overpressure in the building
- Advanced design for up to 100% fresh air management.

### Environmentally friendly

- R410A HFC refrigerant for zero Ozone impact
- Optimized packaging for minimal waste.



# Key Features

## Indoor section

### Embedded control solutions

Trane CH536 controller with embedded energy saving functionalities. Centralized control panel for easy access and service. Remote service terminal provided as an option.

### EC Plug Fan

Compact, quiet and more efficient compared to traditional axial fans. Rail system for easy access and maintenance.

### Double skin panel

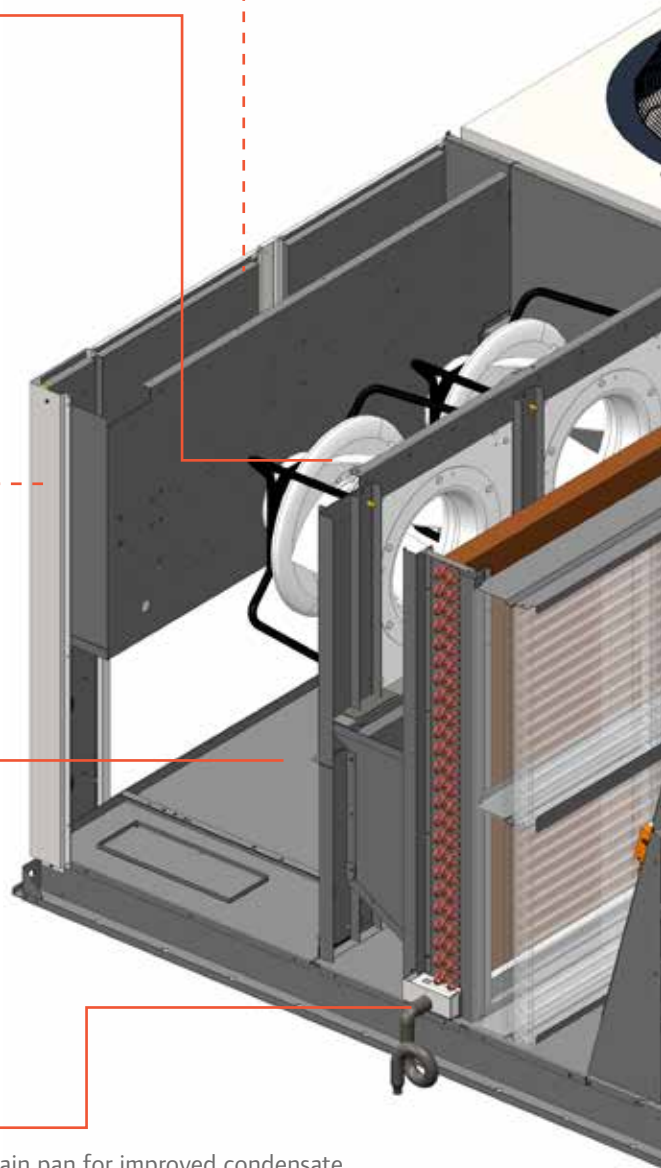
All units are provided with double wall and 25mm insulation as standard.

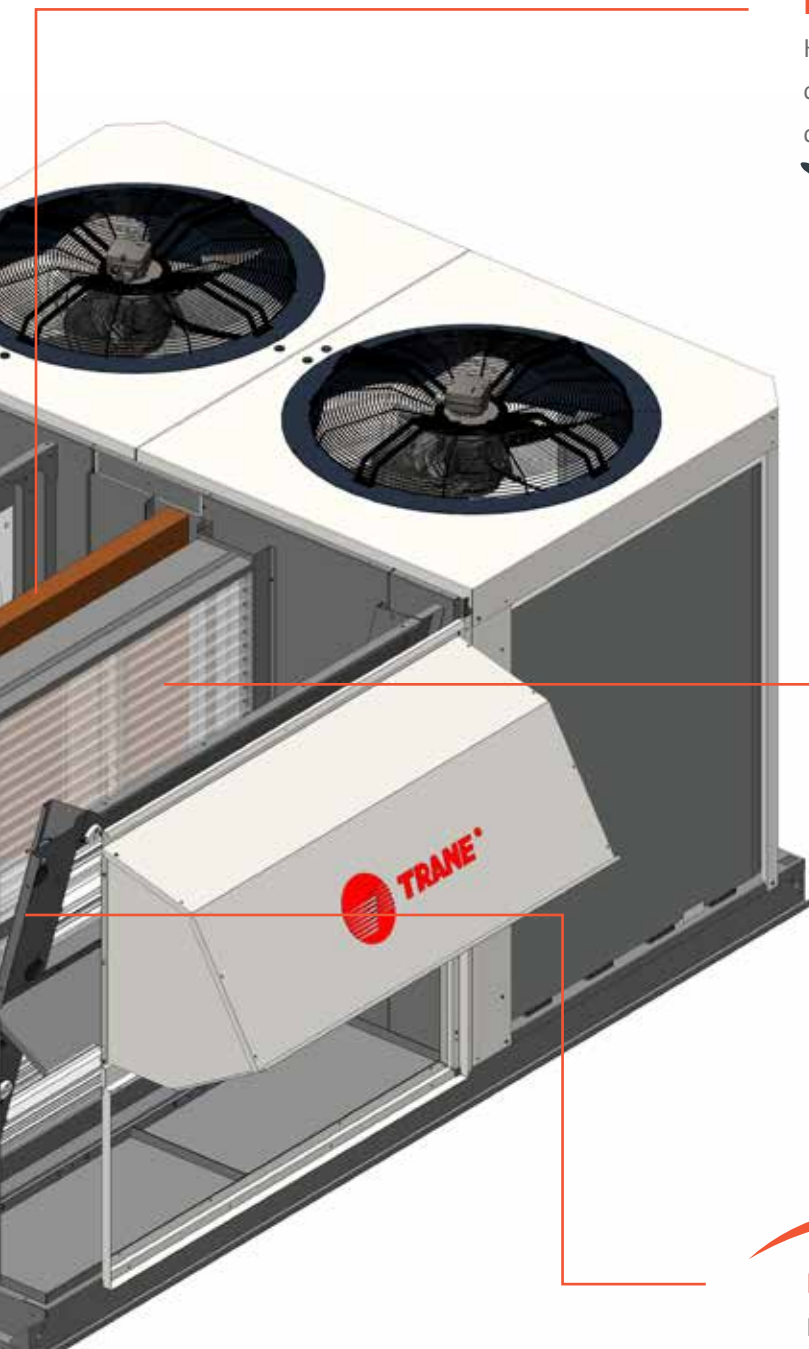
### Auxiliary heating

Complementary heating can be provided as an option (electric heater, hot water coil, staged or modulating gas burner).

### Sloped drain pan

Non-corrosive sloped drain pan for improved condensate management, preventing formation of microbial agents that lead to poor air quality.





## Epoxy coating

High quality epoxy coating can be provided on condenser and/or evaporator coils to prevent corrosion and extend unit lifetime.

## Double Air Filtration

Provided as standard with G4 filters, Airfinity™ units can be equipped with filters up to F9 to comply with local regulations and IAQ requirements.

## Economizer with intelligent control

Provided as standard with every Airfinity™ unit, the economizer allows introduction of fresh air into the building, as well as free cooling when conditions are favorable, saving up to 20% on annual energy consumption.

# Key Features

## Outdoor section & baseframe

### High efficiency scroll compressors

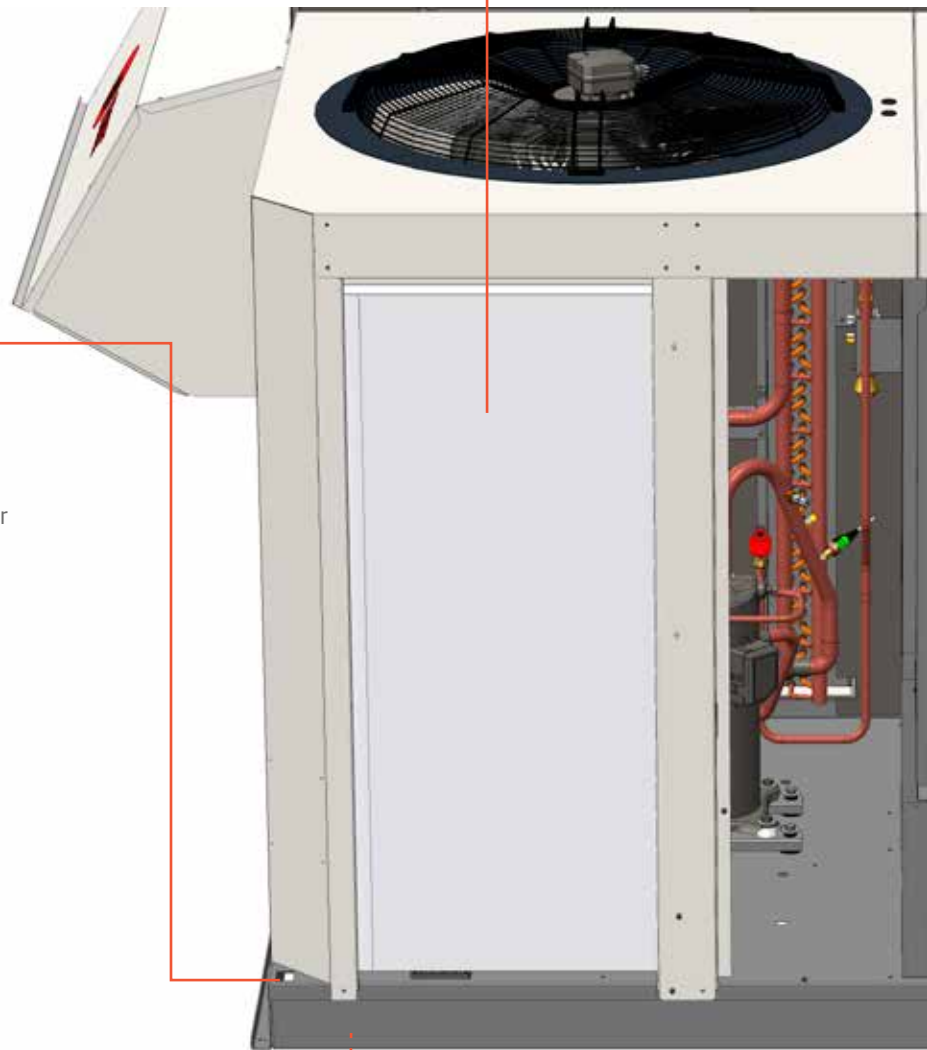
Compressors in tandem deliver high performance in part load thanks to capacity modulation.

### Easy handling

Lifting holes designed to avoid damaging of the unit during transportation. Unit's robust structure also minimizes the need for packaging, reducing on-site waste after installation.

### Quick adapt

Airfinity units are ideal for replacement jobs thanks to their compatibility with Trane and non-Trane roofcurbs.



## Outdoor section fans

High efficiency axial fans allow for a smooth and quiet operation, with little to no need for maintenance. In particular for low ambient applications, EC-driven fans can be fitted as optional.

## Dual refrigeration circuit

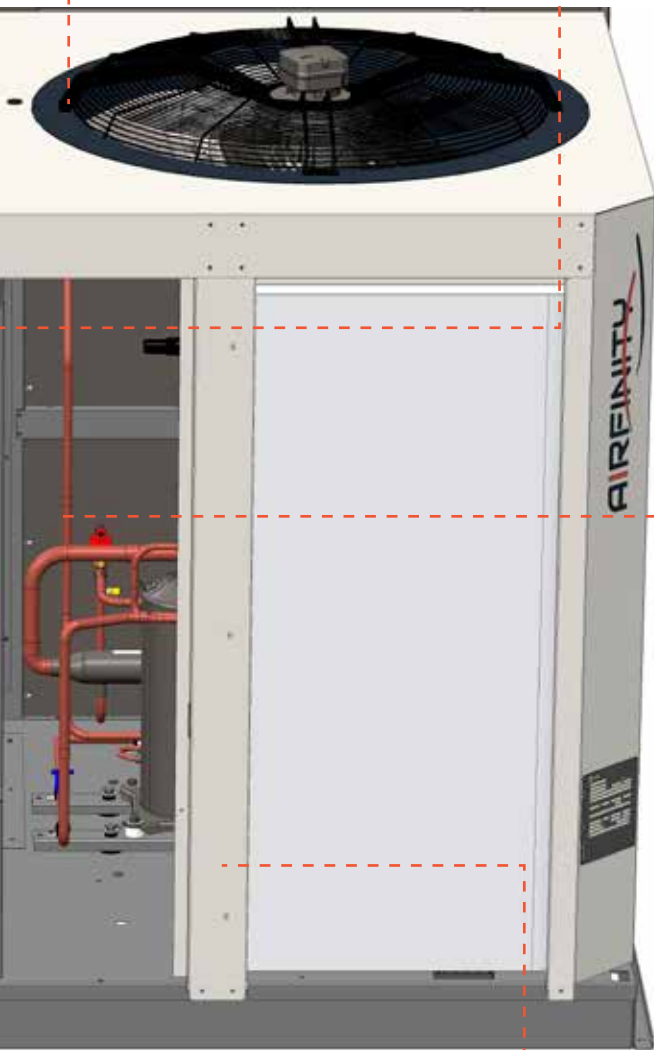
On top of improving capacity modulation and increasing part load efficiency, having two circuits also maximizes reliability by providing system redundancy.

## Electronic Expansion Valve

Thanks to its tight control and ability to operate at a lower condensing pressure, the EEV creates additional opportunities for energy savings.

## Easy-access panels

Can be removed easily using a common turn-key. Prevents corrosion and missing components after service.



# Energy recovery solutions

To enhance energy savings and reduce operating costs, Airfinity rooftops can be equipped with a heat recovery system. Heat recovery systems are ideal for climates in which there is a significant difference between outdoor and indoor air temperature, for example during winter months. Trane design ensures maximum efficiency with minimal impact on unit footprint and installation time.

## Energy Recovery Module (ERM)

The Energy Recovery Module is a pre-packaged system that transfers both sensible and latent heat contained in the exhaust air to the fresh air introduced into the building, through use of an enthalpy wheel. The fully packaged assembly reduces total installation cost and time by avoiding the need for special roofcurbs to manage the exhaust air in applications with low to medium external static pressure. A micro-inverter also manages the rotation speed of the wheel in especially cold ambients, in order to avoid ice formation on the wheel.



### Energy Recovery Module comprising:

- heat exchanger
- G4 filters
- dampers
- a fully integrated exhaust fan to avoid overpressure in the building.

## ERM General data

Size		039/040	049/050	059/060	064/065	074/075	084/085	100	110	130
Dry efficiency, $\epsilon$	%	81	80	78	77	75	73	71	76	74
Wheel diameter	(mm)	1200	1200	1200	1200	1200	1200	1200	1500	1500
Airflow through the wheel*	(m <sup>3</sup> /s)	2340	2740	3310	3820	4400	4850	5700	6560	7600

\* Considering 30% of fresh air



## Energy Recovery Circuit (ERC)

The Energy Recovery Circuit features a dedicated high efficiency refrigeration circuit which uses exhaust air to pre-heat or pre-cool the fresh air introduced into the building. By recovering the heat in the exhaust air, the overall capacity of the machine can be **increased by up to 25%** in typical working conditions, without significantly impacting power consumption\*. As a result, the overall efficiency of the rooftop unit increased considerably, especially at part load conditions.

The ERC is fully integrated into the unit, therefore having zero impact on the installation footprint. Moreover, an exhaust module is provided as standard and mounted directly under the fresh air damper, avoiding the need of additional equipment to manage the exhaust air for applications with low to medium static pressure requirements.

Thanks to the additional refrigeration circuit and tighter control of the exhaust air, Trane ERC system guarantees superior performance when compared to alternative systems which utilize the outdoor coil.



Increases overall capacity **by up to 25%** thanks to thermodynamic heat recovery on the exhaust air.\*



\* Capacity gain with thermodynamic heat recover depends on volume of fresh air intake, outdoor and conditions and building load. For a detailed selection, please contact your Trane Sales Representative.

# General data



## Single compressor per circuit models

Cooling only units		IC039	IC049	IC059	IC064	IC074	IC084
Nominal airflow	(m <sup>3</sup> /h)	8200	10000	11100	12400	15500	16700
Net cooling capacity (1)	(kW)	43	52	59	66	82	89
Net EER	(kW/kW)	3.01	2.84	2.82	2.63	3.03	2.86
Eurovent class (cooling)		A	B	B	C	A	B
Seasonal space efficiency in cooling	(%)	152	138	131	126	136	133
Reversible heat pumps		IH039	IH049	IH059	IH064	IH074	IH084
Nominal airflow	(m <sup>3</sup> /h)	8200	10000	11100	12400	15500	16700
Net cooling capacity (1)	(kW)	41	51	57	65	80	87
Net EER	(kW/kW)	3.12	3.01	2.81	2.62	3.01	2.83
Eurovent class (cooling)		A	A	B	C	A	B
Seasonal space efficiency in cooling	(%)	166	152	138	128	145	135
Net heating capacity (1)	(kW)	38	47	54	63	71	78
Net COP	(kW/kW)	3.21	3.21	3.04	3.09	3.42	3.26
Eurovent class (heating)		B	B	C	C	A	B
Seasonal space efficiency in heating	(%)	111	109	104	106	103	102
Auxiliary heating data (optional)							
Electric heat (stage 1 / 2)	(kW)	12.5	12.5	12.5 / 25	12.5 / 25	12.5 / 25	12.5 / 25
Staged gas burner heat output (min / max)	(kW)	40 / 48	40 / 48	56 / 67	56 / 67	76 / 92	76 / 92
Modulating gas burner heat output (min / max)	(kW)	9 / 41	9 / 41	13 / 63	13 / 63	18 / 80	18 / 80
General data							
Number of refrigeration circuits					2		
Number of compressors per circuit					1		
Length (mm)	(mm)	3010	3010	3010	3010	3890	3890
Width (mm)	(mm)				2250		
Height (mm)	(mm)	1565	1565	1565	1565	1585	1585
Weight (downflow - without options)	(kg)	988	1005	1016	1016	1333	1347



## Dual compressor per circuit models

Cooling only units		IC040	IC050	IC060	IC065	IC075	IC085	IC100	IC110	IC130
Nominal airflow	(m <sup>3</sup> /h)	8700	10600	12100	13700	15700	16700	19800	21600	25500
Net cooling capacity (1)	(kW)	44	54	62	73	84	91	109	123	136
Net EER	(kW/kW)	3.15	2.92	3.07	3.02	3.02	2.96	3.03	2.81	2.63
Eurovent class (cooling)		A	B	A	A	A	B	A	B	C
Seasonal space efficiency in cooling	(%)	161	152	132	139	137	138	138	131	121
Reversible heat pumps		IH040	IH050	IH060	IH065	IH075	IH085	IH100	IH110	IH130
Nominal airflow	(m <sup>3</sup> /h)	8700	10600	12100	13700	15700	16700	19800	21600	25500
Net cooling capacity (1)	(kW)	44	54	61	72	82	88	104	113	133
Net EER	(kW/kW)	3.23	3.11	3.05	3.01	3.03	2.91	3.02	2.81	2.63
Eurovent class (cooling)		A	A	A	A	A	B	A	B	C
Seasonal space efficiency in cooling	(%)	176	172	146	151	144	143	146	137	125
Net heating capacity (1)	(kW)	39	49	55	64	72	77	92	104	125
Net COP	(kW/kW)	3.27	3.25	3.21	3.28	3.41	3.32	3.43	3.32	3.21
Eurovent class (heating)		B	B	B	B	A	B	A	B	B
Seasonal space efficiency in heating	(%)	113	119	114	118	126	123	128	128	118
Auxiliary heating data (optional)		040	050	060	065	075	085	100	110	130
Electric heat (stage 1 / 2)	(kW)	12.5	12.5	12.5 / 25	12.5 / 25	12.5 / 25	12.5 / 25	25 / 37.5	25 / 37.5	25 / 37.5
Staged gas burner heat output (min / max)	(kW)	40 / 48	40 / 48	56 / 67	56 / 67	76 / 92	76 / 92	76 / 92	76 / 92	76 / 92
Modulating gas burner heat output (min / max)	(kW)	9 / 41	9 / 41	13 / 63	13 / 63	18 / 80	18 / 80	23 / 97	23 / 97	23 / 97
General data										
Number of refrigeration circuits										2
Number of compressors per circuit										2
Length (mm)	(mm)	3010	3010	3010	3010	3890	3890	3890	3890	3890
Width (mm)	(mm)					2250				
Height (mm)	(mm)	1565	1565	1565	1565	1585	1585	1890	1890	1890
Weight (downflow - without options)	(kg)	1100	1112	1116	1153	1342	1348	1566	1570	1570



Airfinity™ Solar combines the best of both worlds: market-leading rooftop air-conditioning units together with proven silicon PV technology and best-in-class inverters. As soon as the sun is shining, the PV panels contribute to the electricity needs of the rooftop unit. The total savings of the system depend on the local irradiance (sunlight per m<sup>2</sup> and per year) and on the electricity purchase price.

## Key features and benefits

- ✓ **Total solution:** Designed for high performance, easy installation and trouble-free operation in combination with the Trane Airfinity™ rooftop.
- ✓ **Complete package:** You no longer need to think about your PV installation and HVAC equipment separately. Trane can provide you with the complete package, ensuring you have the optimum design for your installation and simplifying logistics.
- ✓ **Plug & Play:** All components have been carefully selected to be easily connectable on-site, without any hassle.
- ✓ **Independent and reliable:** The system is designed to be entirely based on self-consumption, which means you can eliminate the heavy bureaucratic load traditionally associated with these kinds of systems.
- ✓ **Optimized for maximum efficiency:** Airfinity™ Solar uses 98%+ efficient inverters allowing the use of ModBus for easy integration into a Building Management System.
- ✓ **Ideal for BREAAAM / LEED building certification:** Increase the value of your property by using completely renewable and sustainable technologies.
- ✓ **Enhanced brand reputation:** Trane's Airfinity™ Solar solutions contribute supporting proof of your initiatives towards reducing your carbon footprint.

Trane is proud to lead the HVAC industry towards a cleaner, more sustainable future at an affordable cost.



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



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