

TOSHIBA

EXPERIENCE
THE FUTURE



TOSHIBA AIR CONDITIONING > **CATALOGUE 2022**

Not all models shown are available in UK and ROI

 **Better Air Solutions**



EXPERIENCE THE FUTURE

> “Toshiba solutions
wherever you are”

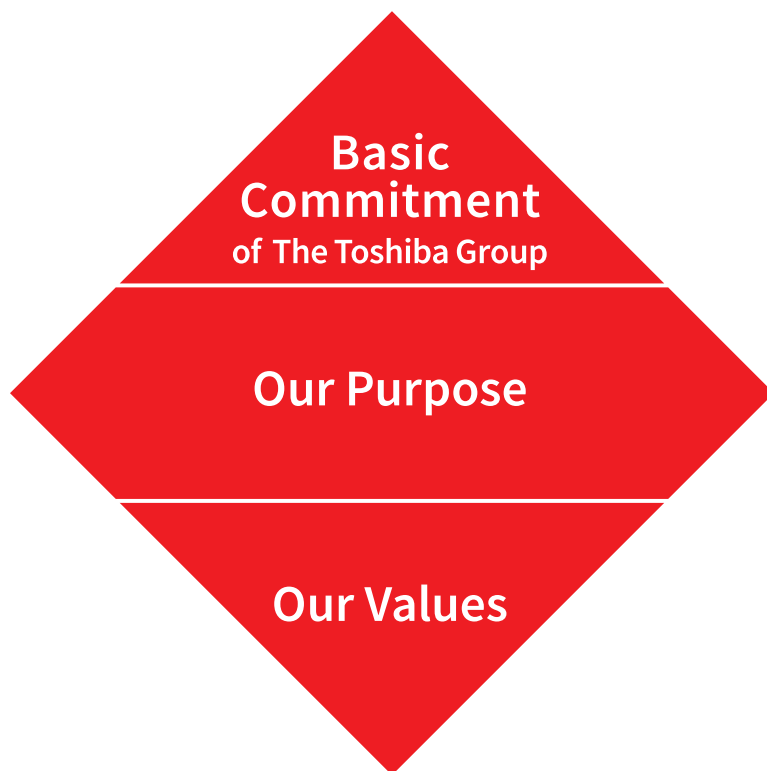
In 1961, Toshiba presented the first split air conditioning unit to the world – a system where the indoor and outdoor units are only connected by copper piping. Today, more than 50 years later, Toshiba still offers a wide range of top-quality products and services utilizing the best technologies.

RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY QUALITY



> THE ESSENCE OF TOSHIBA

> Basic Commitment of the Toshiba Group



Committed to **People**,
Committed to the **Future**

At Toshiba, we commit to raising the quality of life for people around the world, ensuring progress that is in harmony with our planet.

> ALWAYS ONE STEP AHEAD

First inverter-based
air conditioner



1981

Digital
twin rotary
air conditioner



1993

DC inverter
rotary compressor
with R410



2001

First digital
inverter control



2003

1st Toshiba's mini
VRF R410 (MiNi SMMS)



2004

2006

1st Toshiba
air-to-water
heat pump
ESTIA R410A



2009

2015

1st Toshiba's VRF for
commercial buildings

VRF (SMMS) R410A
Super Modular
Multi System



VRF (SHRM) R410A
Super Heat Recovery
Multi System



VRF R410A
Super Modular Multi System SMMS-e
Super Heat Recovery Multi System SHRM-e



> Our Purpose

We are Toshiba. We have an unwavering drive to make and do things that lead to a better world.

A planet that's safer and cleaner. A society that's both sustainable and dynamic. A life as comfortable as it is exciting. That's the future we believe. We see its possibilities, and work every day to deliver answers that will bring on a brilliant new day.

By combining the power of invention with our expertise and desire for a better world, we imagine things that have never been – and make them a reality.

That is our potential. Working together, we inspire a belief in each other and our customers that no challenge is too great, and there's no promise we can't fulfill.

We turn on the promise of a new day.

> Our Values

Do the right thing

We act with integrity, honesty and openness, doing what's right - not what's easy.

Look for a better way

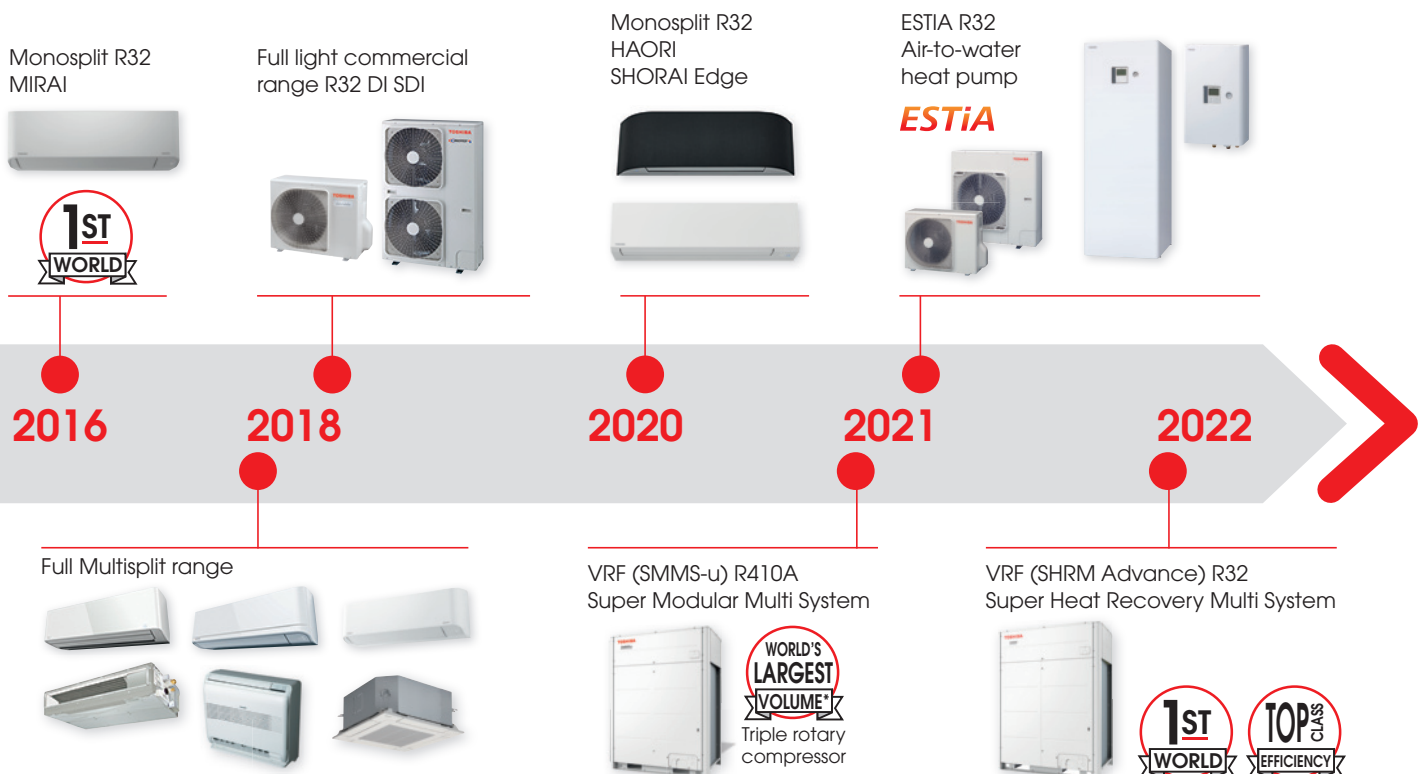
We continually strive to find new and better ways, embracing change as a means of progress.

Always consider the impact

We think about how what we do will change the world for the better, both today and for generations to come.

Create together

We collaborate with each other and our customers, so that we can grow together.



> TOSHIBA

AIR CONDITIONING VISION



Better Air Solutions

> CHOOSE THE EXPERT OF INSPIRED TECHNOLOGIES

Toshiba Air Conditioning's philosophy is based on profound respect for our global environment and the desire to improve our customers' quality of life worldwide.

In 1981, Toshiba developed the inverter technology for residential air conditioners which is nowadays employed by most air conditioning leading brands.

Inverter enables the unit to continuously regulate its cooling and heating capacity by altering the speed of the compressor using a variable-frequency drive to control the speed of the motor. This innovation ensures outstanding comfort and efficiency levels.

World's 1st
1981

Inverter
Driven
Compressor



World's 1st
1988

Twin Rotary
Residential
Use



World's 1st
1993

DC
Twin Rotary



World's 1st
1998

R410A
Residential
Use



World's 1st
2004

Dual Stage
Compressor



World's Largest
Volume*
2020

Triple Rotary
Compressor



* (as of Dec. 2020)

Our commitment to world-class **efficiency**, versatile **scalability** and leading **quality** means we create cutting-edge technologies to find the most forward-thinking solutions possible for your world. Toshiba Air Conditioning is an innovative provider of comprehensive air conditioning solutions with world-class reliability.

> Top-class energy efficiency

- The world's largest Triple rotary compressor ⁽¹⁾
- Twin rotary compressors
- All climates from -30°C (Daiseikai 9) to 54°C (MiNi SMMS-e Middle East range)
- Top class A+++ air to water heating solutions with ESTIA R32
- Environmentally-friendly refrigerants
- Optimal temperature control solutions for increased precision

> Entirely scalable solutions

Toshiba Air Conditioning develops cutting-edge technologies and advances that benefit people everywhere by offering the ideal combination of comfort and ecologically-superior products for residential, light commercial and large building applications.

> Superior manufacturing quality

Toshiba Air Conditioning's innovations ensure comprehensive building air conditioning solutions which have been subject to strict evaluation testing to guarantee world-class reliability.

Third party institute certifications for quality, safety and performance, guaranteed (TÜV, Eurovent, WEEE, RoHS, REACH, Intertek, Keymark).

(1) Source: Toshiba Carrier Corporation
(as of December 21, 2020)





QUALITY RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY

> “Committed to the Future”

Going further than just products and beyond their basic functions, to create reliable and safe solutions that can interact with each other and with users.

Incorporating Toshiba’s technical building management systems, the world is made simpler, clearer and more effective.

QUALITY RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY

> TAILORED TO MEET CHALLENGES

Toshiba Air Conditioning, with heat pump technology at its core, aims to be an environmentally creative company which contributes to society and the global environment. A commitment to growth on a global scale by offering the highest-quality products and services based on heat application solutions which respond to all of our customers' needs.



PLYMOUTH, UNITED KINGDOM



TCEU - DISTRIBUTION SUPPORT
and
TCEU - ENGINEERING CENTRE

MONTLUEL, FRANCE



TCEU - ENGINEERING CENTRE
and
TOSHIBA EMEA

GNIEZNO, POLAND



TCAE - PRODUCTION FACILITIES



HARYANA, INDIA



TCAI - PRODUCTION FACILITIES



PATHUMTHANI, THAILAND



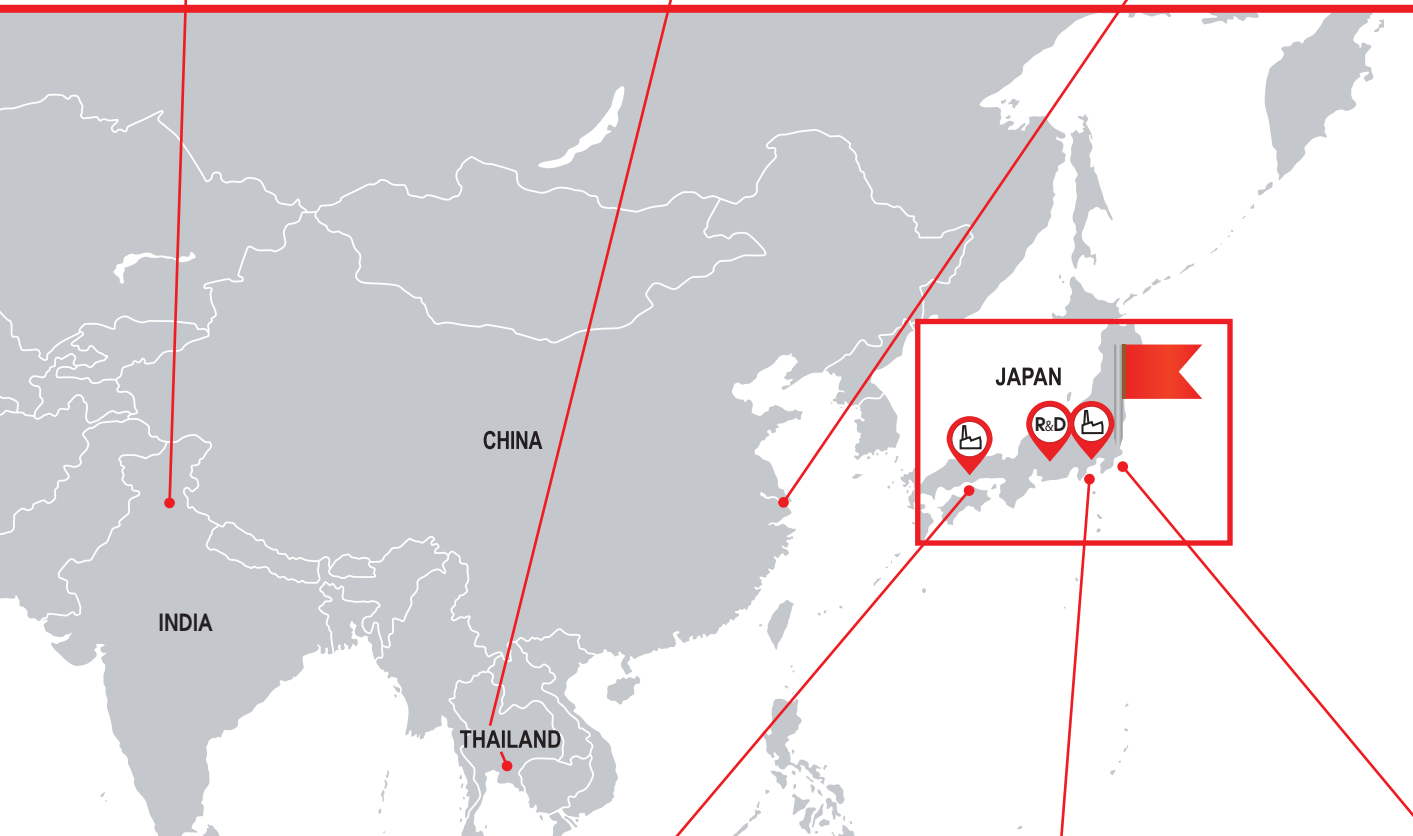
TCTC - ENGINEERING CENTRE



HANGZHOU, CHINA



TCAC - PRODUCTION FACILITIES



TSUYAMA-CITY, JAPAN



TCC - PRODUCTION FACILITIES



FUJI-CITY, JAPAN



TCC - PRODUCTION FACILITIES
and
TCC - ENGINEERING CENTRE



KAWASAKI-CITY, JAPAN



TCC - HEAD OFFICE

> LEADING THE WAY TO EXCELLENCE

Toshiba Air Conditioning's strengths centre on in-house research and development of advanced technologies and core components. They are accompanied by the production of air conditioners under the highest international standards, which incorporate quality control checks at each production stage for a wide variety of residential, commercial and business environments.

> A global innovation network

Toshiba Air Conditioning has R&D centres in Japan, Europe, Thailand and China. Its global research activities are managed and integrated to ensure all research sites collaborate to provide innovative solutions to customers across the world.

The Toshiba brand proudly holds more than 1200 patents in Japan and abroad, an outstanding number for any company.

Each year since 1994, Toshiba Air Conditioning has received a prestigious award for its significant achievements in air conditioning. This demonstrates Toshiba's innovative spirit, a relentless drive to improve its products and systems.

> Products designed to perform, engineered to perfection

In 1981 Toshiba Air Conditioning was the first company to incorporate inverter technology into air conditioning systems and has maintained its technological advantage over its competitors ever since. The development of the new and exclusive DC hybrid inverter system has reaffirmed this ability to innovate and maintain technological leadership in a fast-growing market. But for Toshiba Air Conditioning, innovation also means strong commitment to international institutions that carefully evaluate the impact of new technologies on the environment.

Toshiba Air Conditioning combines technological development with consideration for future generations: resulting in a range of extremely energy-efficient air conditioners, reducing greenhouse gas emissions at their source. Its continuous research into the development of inverter technology has provided remarkable results, both with regards to meeting the required comfort levels and continually reducing the system's energy consumption.



Quality production



Outdoor units production



Indoor units production

> In line with European standards

To improve its environmental responsibility, Toshiba Air Conditioning offers products that meet the following European standards:

EN 14511

Air conditioners, liquid chilling packages and heat pumps with electrically-driven compressors for space heating and cooling. Test methods.

EN 14825

Air conditioners, liquid chilling packages and heat pumps, with electrically-driven compressors, for space heating and cooling. Testing and rating with part loads and calculation of seasonal performance.

EN 16147

Heat pumps with electrically-driven compressors. Testing, performance rating and requirements for marking domestic hot water units.



All products ensure high operating efficiency and are cost-effective solutions for heating and cooling, guaranteed by their participation in the Eurovent programme. This acts as a guarantee for customers and users that the products will operate in accordance with the design specifications and that the data published is realistic.

Toshiba participates in the Eurovent Certification Performance programme for AC1, AC2 & VRF.

Check ongoing validity of certificate:

www.eurovent-certificate.com

For Estia certification, refer to Keymark heat pump certification program:

www.heatpumpkeymark.com



The entire production process is certified by international quality assurance institutes. Toshiba's air conditioners gained ISO 9001 certification for quality control management and quality insurance.



> ENVIRONMENTAL RESPONSIBILITY

> Toshiba Carrier Group's Basic Policy for the Environment

Toshiba Carrier Group aims to provide environmentally conscious products into the worldwide society and contribute to the society through business operation considering the reduction environmental burden, as a corporate to develop the system, manufacture, sell and provide services on Air-conditioning systems, hot-water-supply systems, ventilation systems, refrigerators, and compressors.

Moreover, we hold environmental initiatives to be one of our top priority tasks in corporate management, guided by the "Essence of Toshiba." We will strive to create enriched value and ensure harmony with the earth for people around the world now and in the future. Through our environmental management that aims to achieve a decarbonized society, a resource circulating society, and a society in harmony with nature, we will contribute to the realization of a sustainable society and turn on the promise of a new day.

> Environmental Future Vision 2050

Toshiba Carrier Group has been making efforts to solve the three issues of "Mitigation of Climate Change", "Effective Use of Resources", and "Management of Chemicals" in the "Environment Vision 2050" which formulated in Toshiba group in 2007. With the goal of "contributing to the realization of a sustainable society through environmental management which aims to create enriched value and to ensure harmony with the earth," Environmental Future Vision 2050 which newly formulated in 2020 aims to realize a sustainable society—in other words, a decarbonized society, a resource-circulating society, and a society that is in harmony with nature. We will promote the implementation of initiatives in three areas: "response to climate change," "response to the circular economy," and "consideration of ecosystems" so as to realize the ideal situation in 2050.

Learn more: <https://www.toshiba-carrier.co.jp/global/about/activity/management.htm#vision>

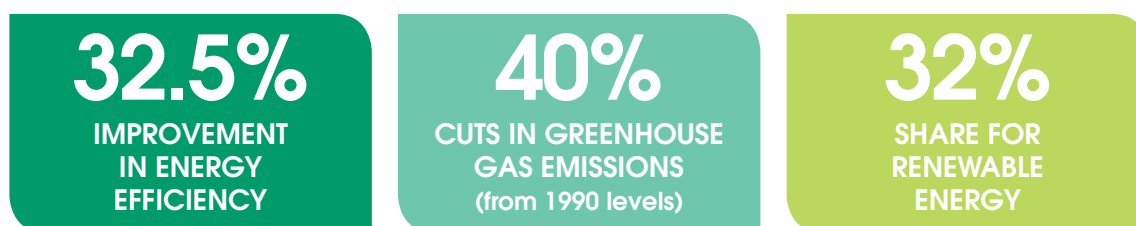


> Toshiba's commitment to the future

We all want to play an active part in preserving our planet.

At Toshiba Air Conditioning, we believe we can make a difference. With a global vision for our evolving world, we are committed to advancing research and developing super-energy-efficient and cleaner technologies that not only use significantly less energy but help maintain air quality using state-of-the-art air purification systems for homes and businesses.

This commitment is in line with the 2030 European climate and energy package targets.



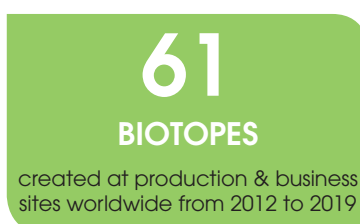
Learn more:

https://ec.europa.eu/clima/eu-action/climate-strategies-targets/2030-climate-energy-framework_en

Toshiba also assesses the impacts of its business activities, products and services on the environment and sets targets aiming to reduce environmental impacts and prevent pollution.



In addition to mitigating climate change and reducing pollution, Toshiba Group is also conducting group-wide environmental activities based on the recognition of the importance of maintaining and expanding environments for conserving biodiversity.



Source: Toshiba Group Sustainability Report 2020

Learn more: <https://www.toshiba.co.jp/sustainability/en/report/download.htm>



QUALITY RELIABILITY ENVIRONMENT PROFITABILITY SIMPLICITY

➤ “Committed to efficiency and comfort”

Every field has its own requirements and specifics directly related to its business and the space it occupies, be it residential, shops, offices or hotels. Toshiba reinvigorates spaces, creates comfortable environments and encourages productivity.

> FOR A MORE INSPIRING WORLD



> A range in line with our environmental vision

Toshiba is offering a complete range of air-to-air products dedicated to cooling and heating in comfort applications. With individual system solutions from 2 to 28kW, we are able to address residential and light commercial markets requirements.

Residential

HAORI is a truly elegant air conditioner, featuring a stylish textile fabric cover that uses Toshiba inverter and compressor technology with R32, offering A+++ performance and year-round comfort.

Light commercial

A full range of Toshiba R32 light commercial systems is available on the European market including a R32 Super Digital Inverter with best in class efficiency.

Business

After the switch to low GWP refrigerant for its residential and light commercial products, Toshiba is now one of the first to launch a top blow VRF using R32: The SHRM Advance. Give a new environmental dimension to your projects.





> An easy change...

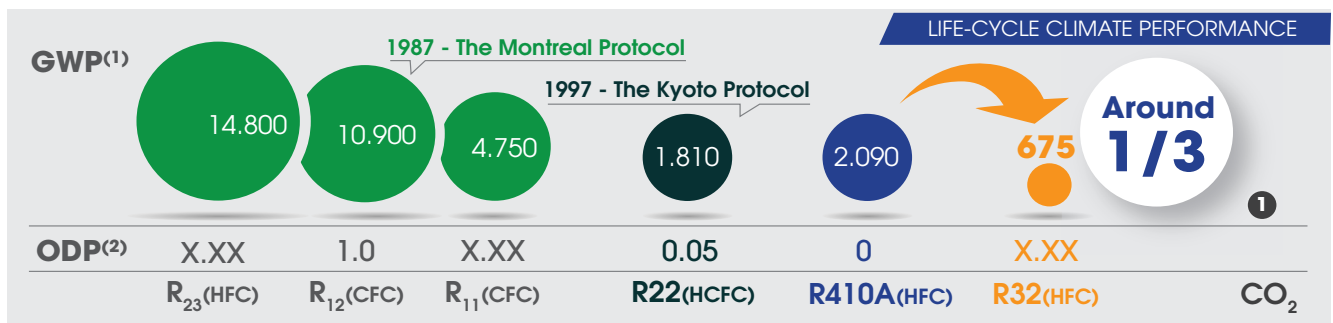
The fundamental design and control of Toshiba systems remains unchanged with the new R32 refrigerant. Toshiba's unique combination of twin rotary compressors and all inverter driven control also contributes to guaranteed accuracy and expertise of flawless Japanese quality. All these result in the high level of performance and efficiency Toshiba customers are used to.



> ...to the benefit of all

Environmental oriented

- The perfect balance between environment safety and your comfort
- Energy efficiency increased for greater savings

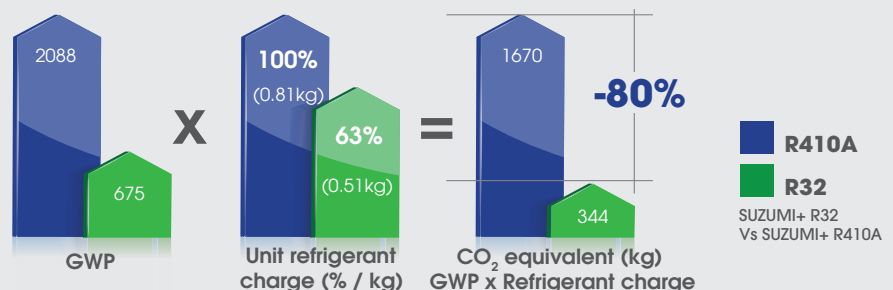


Installer friendly

- Working pressures for R410A and R32 refrigerant are similar
- R32 refrigerant can be easily charged in both liquid or gas state
- Safety commissioning instructions are similar to those for R410A
- R32 and R410A equipments is the same except for the refrigerant recovery pump and the reclaim cylinder
- Toshiba flare joints certified ISO14903

> The right choice to make

R32 low GWP, combined with Toshiba units 30% reduction of refrigerant charge, allows to reduce the total equivalent CO₂ by 80% of the system, in comparison with equivalent capacities of Toshiba R410A legacy units.



> F-GAS COMPLIANCE

> TOSHIBA AIR CONDITIONING RESPONDS TO REGULATORY EVOLUTIONS

The European F-gas regulation (517/2014) has been in force since 1 January 2015, it aims to protect the environment by reducing greenhouse gas emissions and progressively deploying new rules related to the use of HydroFluoroCarbons refrigerants (HFCs) in heating and cooling systems.

This regulation will ensure manufacturers turn to refrigerants with lower Global Warming Potential (GWP).

The phase down is a step-by-step approach, this regulation introduces an ambitious gradual reduction of HFC quantities that are put on the market in the EU by HFC producers and distributors (in equivalent tons of CO₂), with an initial reduction of 37% from 2018 and a final objective of cutting quantities by 79% by 2030.



*HFC consumption compared to equivalent tons of CO₂

> Your safety first and foremost

Based on the requirements of the F-gas regulation, only certified installers can carry out Dx system installations. The implementation of systems using HFC requires thus some specific precautions such as a strict control of the leakages and a periodic checking of the refrigerant charge.

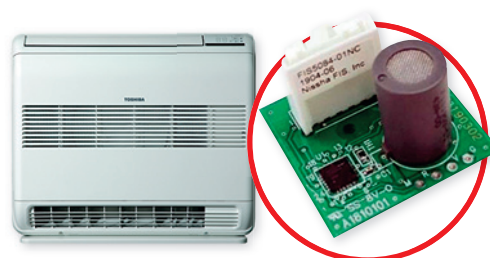
For equipment containing			Leak checks without leak detection	Leak checks with leak detection
Between 5 and 50 tonnes CO ₂ equivalent	2.38 and 23.8kg R410A	7.41 and 74.1kg R32	Every 12 months	Every 24 months
Between 50 and 500 tonnes CO ₂ equivalent	23.8 and 238kg R32	74.1 and 740kg R32	Every 6 months	Every 12 months
More than 500 tonnes CO ₂ equivalent	More than 238kg R410A	More than 740kg R32	Every 3 months	Every 6 months

> Toshiba leak detection system

Residential

Increase console installation flexibility!

R32 leak detection sensor is available as an option for RAS Console. This accessory offers a total flexibility to install a Console with large R32 multisplit systems in average room surface (minimum room surface 7sqm in combination with RAS-5M34U2AVG according to IEC 60335-2-40).



Light Commercial

This is the first Toshiba product delivered with an embedded leak detection sensor.

To ease product integration in every type of light commercial applications, Toshiba floor standing unit is delivered with plug & play embedded R32 leak detection sensor. Its integrated remote controller will inform end user on sensor status and leakage risks with an alarm.



Business

Whatever your constraints, we have the leak detection solution for VRF applications.



• LEAK DETECTION

Each room is fitted with a leak detection sensor. When the refrigerant concentration level exceeds EN378 limits the sensor is activated, an audible and visual alarm is triggered and the affected FCU will also stop displaying a fault code. A contact can enable third party ventilation to dilute refrigerant spread into the room.



Audible and visual alarm when a leak is detected

• INDOOR UNIT ISOLATION

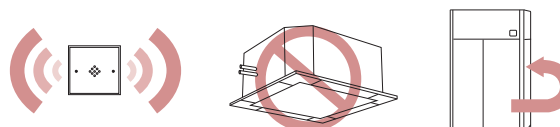
The indoor unit(s) can be isolated with valves on liquid and gas piping lines. This system ensures that only the indoor unit concerned is isolated, allowing the rest of the system to continue operating.



Audible and visual alarm including the isolation of concerned indoor units when a leak is detected

• PUMP DOWN

The refrigerant leak is indicated whereas mechanical isolation and pump back of refrigerant to the outdoor unit are set to decrease potential harm to occupants, reducing refrigerant loss and negative impacts on the environment. In this case entire system is stopped.



Audible-visual alarm and refrigerant pump down when a leak is detected

Toshiba Air Conditioning leak detection solutions are compliant with EN378 standard related to buildings open to the public and thus answer some of the safety constraints.

> ECODESIGN & ENERGY LABELLING

The European 2030 climate and energy framework for improving energy efficiency will have a significant impact on the heating, ventilation and air conditioning sectors.

Today, buildings are responsible for the largest energy consumption, with HVAC systems being the most energy-intensive of all. The HVAC sector is now committed to manufacturing energy-efficient products for its clients to ensure sustainable development.

> ECODESIGN

In the European Union, the Ecodesign Directive encourages HVAC manufacturers to design products taking into consideration their environmental impact throughout entire lifecycle. It establishes a framework for the setting of mandatory energy efficiency requirements for all energy-related products (ERPs).

> Ecodesign and Energy Labelling for Air-to-Water heat pumps

Air-to-Water heat pumps have been subject by the Ecodesign (< 400kW) and Energy Labelling (< 70kW) regulations since 26 September 2015. Heat pumps launched before this date are not concerned and all must conform to display the CE mark.

For more information visit

www.ecodesign.toshiba-airconditioning.eu

> New energy efficiency metric: Seasonal efficiency (SEER and SCOP)

The Seasonal Coefficient of Performance, is a new European parameter to rate heat pumps in terms of energy efficiency. It is an update to the Coefficient of Performance, which previously recorded the power consumed to power produced ration in heating and cooling modes for one operating point.

Unlike the EER/COP, the SEER/SCOP take into account performances during cooler seasons because it includes temperature variations by including numerous realistic measurement points. When combined, this results in a more accurate energy classification.

SEER/SCOP compared to EER/COP

TEMPERATURE		CAPACITY (KW)		AUXILIARY MODES (KWH)		HOURS	
	EER COP	SEER SCOP	EER COP	SEER SCOP	EER COP	SEER SCOP	EER COP
	One temperature requirement	Numerous rating temperatures (range of average temperatures)	Full load	Partial load + Full load	Auxiliary power modes are not considered	Incl. consumption auxiliary modes: - Standby mode - Off mode - Thermostat off, etc.	N/A

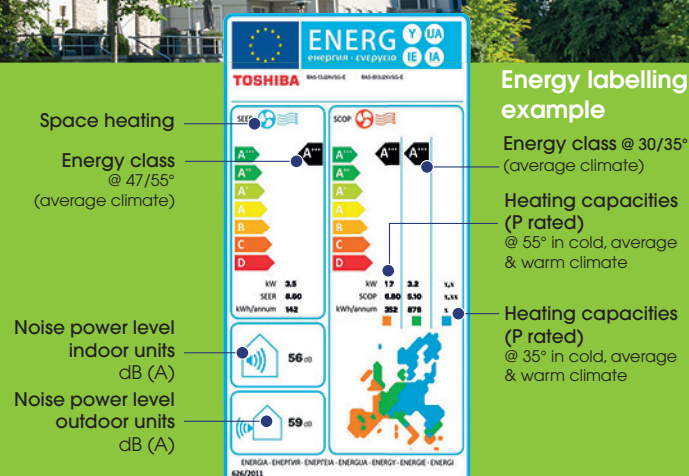
SEASONAL COEFFICIENT OF PERFORMANCE CALCULATION

This is the ratio between annual heating/cooling demand and annual energy input over an entire heating/cooling season.

$$\begin{aligned}
 \text{SCOP} &= \frac{\text{ANNUAL HEATING DEMAND}}{\text{ANNUAL ENERGY INPUT}} \\
 \text{SEER} &= \frac{\text{ANNUAL COOLING DEMAND}}{\text{ANNUAL ENERGY INPUT}}
 \end{aligned}$$

ENERGY LABELLING

The Energy Labelling regulation was created to offer end users understandable information about a product's energy efficiency rating. European Energy Labelling regulations also assign ratings from G to A++ based on their energy efficiency; inciting better ratings in the sector and providing clients with clearer information.



Designed for the future

Toshiba Air Conditioning is committed to designing products and solutions with increasingly lower environmental impacts. This subsequently reducing indirect CO₂ emissions generated by electricity consumption. Toshiba Air Conditioning's long-standing commitment to sustainable development is ahead of schedule for the European climate and energy package requirements for 2030.

All Toshiba Air Conditioning products sold today in Europe are fully compliant with the latest Ecodesign directives.



Lot 1: Air-to-Water heating systems up to 400kW including air-to-water heat pumps >>> ESTIA SPLIT.



Lot 2: Water heaters and hot water storage tanks. Including ESTIA DHW-HP.



Lot 6: Residential and non residential ventilation including air treatment VN units.



Lot 10: Air-to-Air heat pumps up to 12kW >>>> SEYIA, SHORAI Edge, HAORI, DAISEIKAI 9, Console, Digital Inverter, Super Digital Inverter.



Lot 11: Electric motors from 125W to 500kW including ventilation fans.



Lot 21: Heat pumps above 12kW including residential, light commercial systems and VRF >>> DI, SDI, Big DI, MiNi SMMS-e, SMMS-e, SHRM-e, SMMS-u.

Toshiba Air Conditioning's dedicated public website provides energy labels with detailed performances for all systems.

For more information visit

www.ecodesign.toshiba-airconditioning.eu

EXPERIENCE THE FUTURE



> TO GUIDE YOU



MAX EFFICIENCY



CAPACITY



OPERATION



D.H.W



SOUND
LEVEL



AIR FLOW



INDIVIDUAL
HOUSING



COLLECTIVE
HOUSING



SHOPS



SHOPPING
CENTRES



BUSINESSES



ADMINISTRATION



HEALTHCARE



HOTELS

RESIDENTIAL AIR TO WATER

P30



RESIDENTIAL AIR TO WATER

RESIDENTIAL AIR TO AIR

P48



RESIDENTIAL AIR TO AIR

LIGHT COMMERCIAL

P172



LIGHT COMMERCIAL

BUSINESS

P236



BUSINESS

CONTROLS

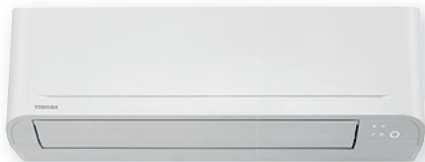
P300



CONTROLS

> NEW AIR-TO-AIR SYSTEM

SEIYA



SEIYA is a cost-effective silent solution that uses the new Toshiba Inverter and compressor technologies with R32 to offer A++ cooling performance and year-round comfort.

SEIYA

A++ ENERGY CLASS
in cooling and heating for year-round comfort

SEER up to **7.0** | SCOP up to **4.6**

SEIYA

SILENCE IS GOLDEN

- Ultra-quiet system down to **19dB(A)**
- Silent operation down to **42dB(A)**
- car traffic **70dB(A)**
- refrigerator **40dB(A)**
- rustling leaves **20dB(A)**

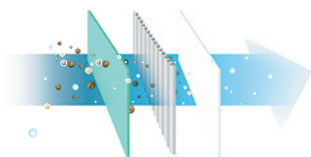
Designed to maximize your comfort, Toshiba SEIYA remote control offers functions that make everyday life simpler.

The remote can be wired to the indoor unit to prevent loss.



PM2.5 refers to particulate matters coming from atmospheric pollution that have a diameter of less than 2.5 micrometers.

ULTRA
fresh
FILTER



Studies have found a close link between exposure to fine particles and lung disease or worsen chronic disease.

SEIYA

INDOOR AIR QUALITY

Ultra-Fresh filter captures
UP TO 85% OF PM2.5
for healthy living spaces at home*

*Nantong dell purification equipment factory Co., Ltd.

NEW LIGHT COMMERCIAL PRODUCTS

Focus on the essential



Digital Inverter Classic

The new DI Classic offers all of Toshiba expertise for a wide range of light commercial applications and at an affordable cost.

New design



Standard 4-Way Cassette

The Standard 4-Way Cassette panel has been revised to offer a flat design, PM2.5 filters compatibility and optional occupancy sensor.

NEW BUSINESS PRODUCTS

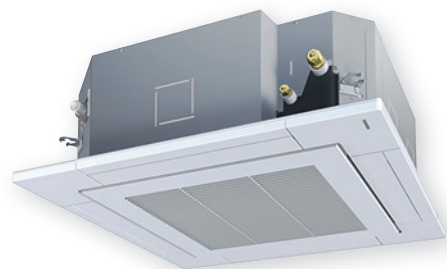
Unique R32 VRF concept



SHRM Advance

Push the boundaries of VRF systems featuring a more environmentally friendly profile, wide flexibility and top-class efficiency. SHRM Advance is launched with a complete set of accessories: FS box, R32 sensor & shut-off valve.

Smart

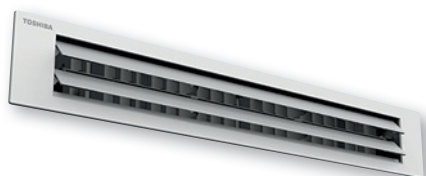


UT Smart Cassette

LC Smart Cassette is now compatible with all VRF outdoor units for dramatically boosted efficiencies.

More than ever committed to excellence

Louver for SSD



3DW

Enhance your Slim Duct installation with Toshiba's motorized 3DW louvre for pleasant design and optimized air diffusion.



YHP Cassette

Increasing capacity with no compromise on advantages: 150mm height small chassis, low sound level, air purifier, motion sensor, white design and even more.

ON YOUR OWN AS A FAMILY IN A GROUP ON YOUR OWN



Surpassing well-being

Following European commitments to reduce emissions by 20% by 2020, energy waste from residential heating and domestic hot water has been identified as a possible reduction target. Air-to-water heat pumps are classed as a form of renewable energy technology, contrary to heating systems that rely on fossil fuels or inefficient electrical heating.

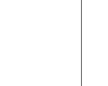
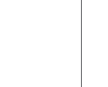
They are now considered to be ideal solutions for space heating and domestic hot water. Residential heat production using gas, oil or electricity increases atmospheric CO² emissions levels. In addition, these traditional heating systems are less efficient and therefore have higher running and maintenance costs. Toshiba Estia air-to-water heat pumps are the ideal solution for increasing energy efficiency, using air as its main source of energy. This all-in-one system is designed to ensure that the right temperature for space heating and domestic sanitary hot water is achieved quickly and efficiently, with the additional advantage of also functioning as a cooling source, in the warmer seasons.

> RESIDENTIAL AIR TO WATER

AS A FAMILY IN A GROUP ON YOUR OWN AS A FAMILY

> ESTIA SPLIT

Toshiba ESTIA air-to-water high efficiency Heat Pumps provide space heating and/or comfort cooling throughout the year.
The compact and silent outdoor units are associated with a large range of hydraulic modules. ESTIA solutions are available in several versions:

ESTIA SPLIT - Rated heating capacities (kW)		4.0	6.0	8.0	11.0	14.0	16.0
	ESTIA SPLIT R32 All-In-One - 1 zone 220/240V-1-50Hz						
	ESTIA SPLIT R32 All-In-One - 2 zones 220/240V-1-50Hz						
	ESTIA SPLIT R32 Wall mounted 220/240V-1-50Hz						
	ESTIA SPLIT R410A Wall mounted 220/240V-1-50Hz						
	ESTIA SPLIT R410A Wall mounted 380/400V-3N-50Hz						

- R32
- R410A

ESTIA Domestic Hot Water Heat Pump volumes (Litres)		190	260
			

- R134a

ESTIA SPLIT

> RESIDENTIAL AIR TO WATER

Space heating for any emitters



Under floor heating

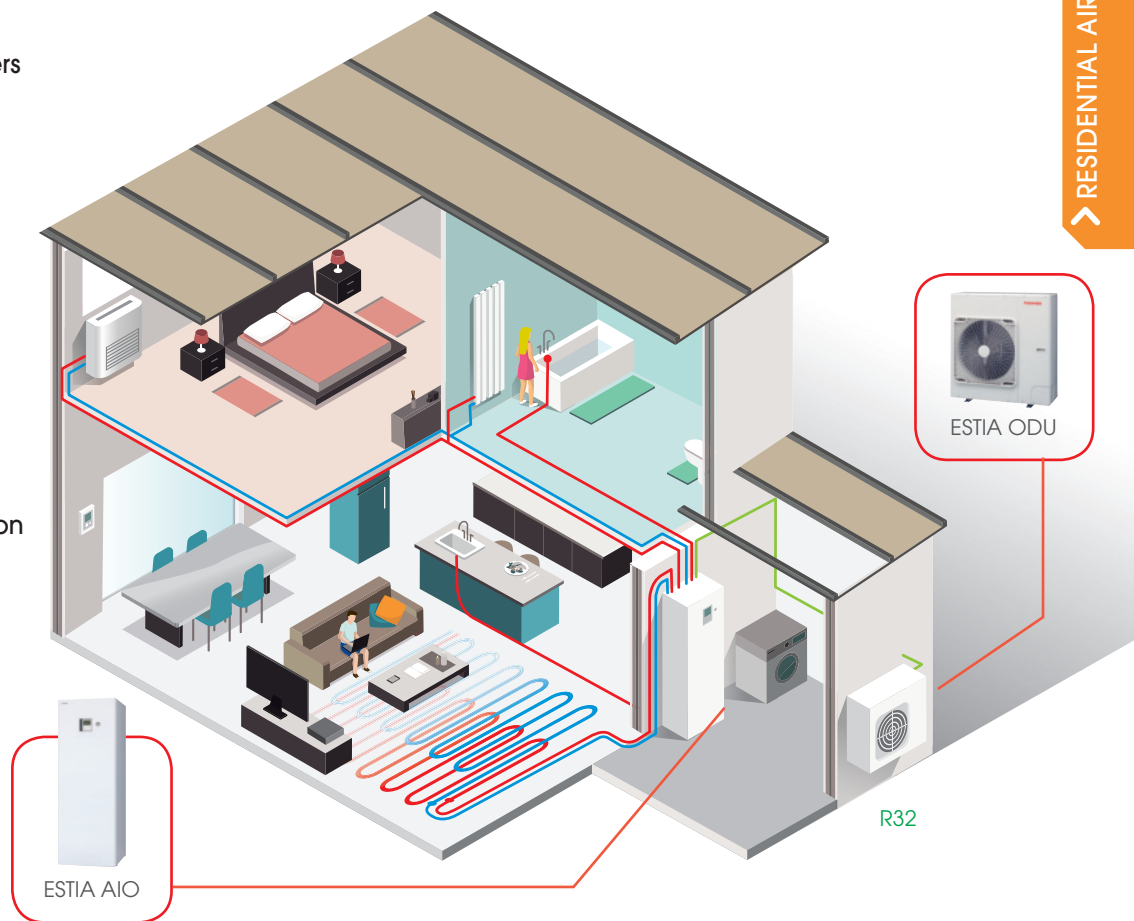


Medium or low temperature radiators

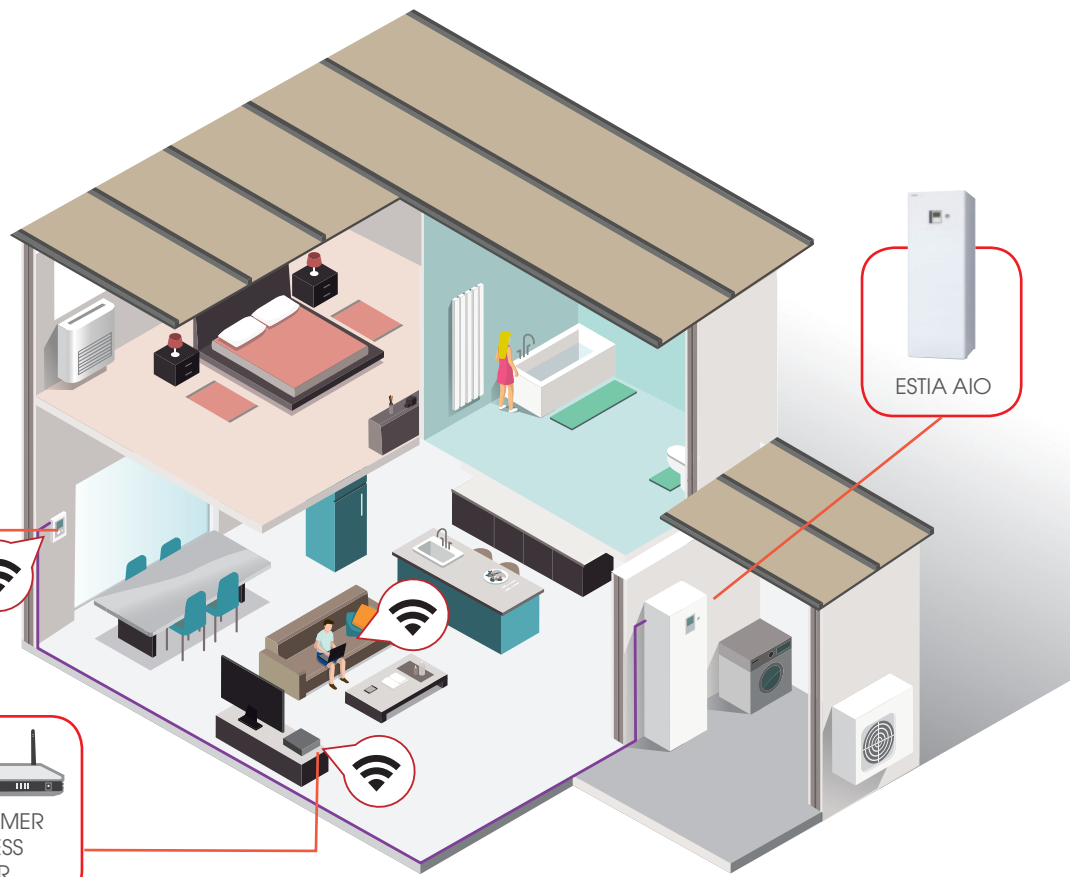


Fan coils
Comfort cooling & heating

Domestic hot water production



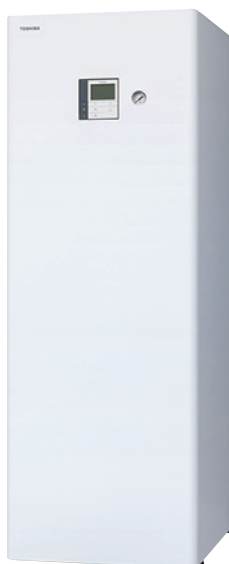
With ESTIA R32 Wireless Interface & Toshiba Home AC Control APP, make your heat pump smart and enhance your comfort at home or away.



ESTIA SPLIT R410A & R32 – WALL MOUNTED & ALL-IN-ONE

OUTDOOR UNITS

Toshiba has a long and successful experience in the production of air-to-air heat pumps. The same reliable and award-winning technology is also at the core of these new air-to-water heat pumps benefiting from the advanced inverter technology and the Toshiba DC twin-rotary compressor. ESTIA heat pumps operate with the reliable and safe R410A & R32 low GWP refrigerants.



HYDRO UNITS

Compact and silent outdoor units are associated with hydraulic modules on the indoor side: refrigeration connections to ease the installation.

ESTIA hydro modules are available in three versions:

- All-In-One with integrated DHW cylinder 1 zone: Space heating & cooling, DHW production.
- All-In-One with integrated DHW cylinder 2 zones: Dual-zone space heating & cooling, DHW production.
- Wall-mounted hydraulic module: Space heating & cooling provided with a compact module installed on the wall. DHW production possibility thanks to a remote tank.



HOT WATER TANK

The ESTIA tank is a compact stainless steel insulated tank producing domestic hot water for sanitary use.

The performance of the overall system is also maximised thanks to the integrated coaxial heat exchanger.

The internal electric heater is controlled to optimise the use of the system in the case of extreme outdoor air temperatures. This solution reduces running costs and guarantees a constant hot water temperature inside the tank.

CONTROLLER 2 zones with weekly timer



The large screen remote controller is designed to be simple, intuitive and easy to use.

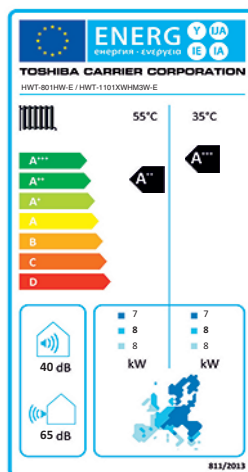
The remote controller allows independent heating to a maximum of 2 zones and domestic hot water.

It regulates the water temperature and optimises the systems energy consumption. The anti-bacteria control and the hot water boost functions can easily be activated.

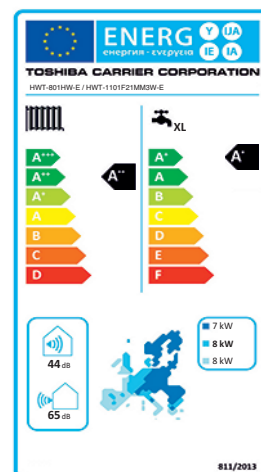
The remote controller can also be used to set weekly timers for the system and, when used as a second remote controller, can be used to control room air temperature.

Leading energy efficiency A+++/A++ with COP up to 5.20 rated conditions.

With its best-in-class COP performance, the ESTIA air-to-water heat pump system delivers more heating power with less energy consumption. With the Toshiba advanced inverter, Estia air-to-water heat pump system only delivers the heating capacity required, thus reducing the amount of electricity used and the running costs of the heating system.



ESTIA Space Heating
Energy label



ESTIA combination & heater
(with Domestic Hot Water)
Energy label

> ESTIA DOMESTIC HOT WATER HEAT PUMP

The best energy savings for sanitary hot water production throughout the year

Toshiba DHW-HP is providing best in class performances on the market with:

- A+ Energy Label Class
- High COP 3.69 according to EN16147
- Very low noise level and Silent function
- Variable air flow rate & high ESP fan up to 200 Pa
- Hot water production up to 65°C

The Toshiba DHW-HP provides 80% energy savings Vs traditional electric water heaters with best in class COP 3.69 (EN16147 LCIE certified). Compatible with solar systems (photovoltaic panels ready or solar built-in extra coil), and smart grid ready, makes it the best solution for increased energy savings.

The innovative and adaptive controller is user friendly with 5 operational modes AUTO, ECO, BOOST, SILENT and HOLIDAY.

Toshiba DHW-HP offers flexible control solutions with low electricity tariff mode, energy consumption display, Smart grid ready, Modbus connectivity, Air Cooling function & Floor Heating function with extra coil.

Toshiba DHW-HP is particularly reliable thanks to its anti-corrosion enamelled steel tank with magnesium anode.

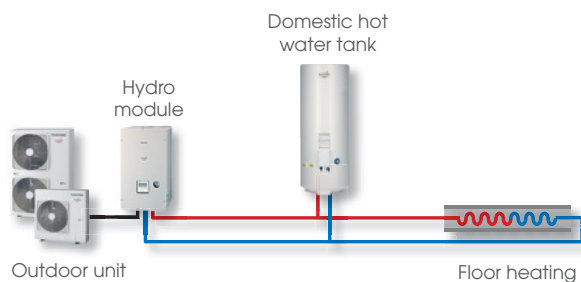
The electrical heater back-up provides hot water at any time.



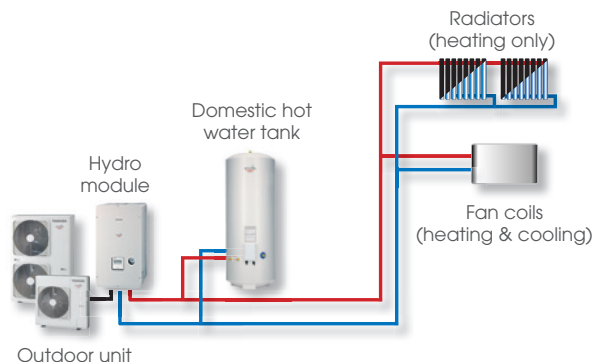
ONE SYSTEM, FULL COMBINATIONS FLEXIBILITY

For new houses or refurbishment projects ESTIA heat pumps offer a variety of combinations. Some examples are shown below:

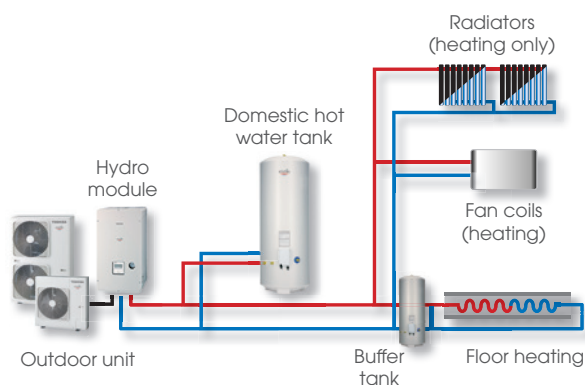
1 Space heating with domestic hot water



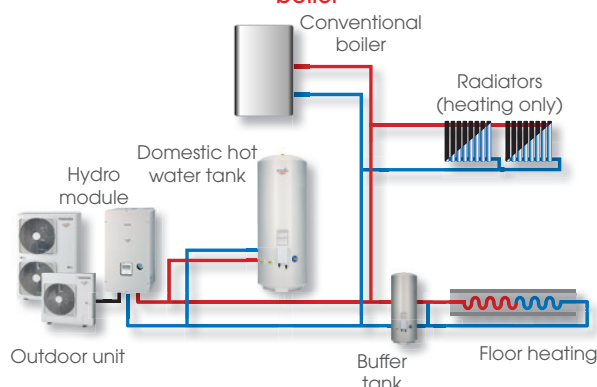
1 Space heating/cooling with domestic hot water



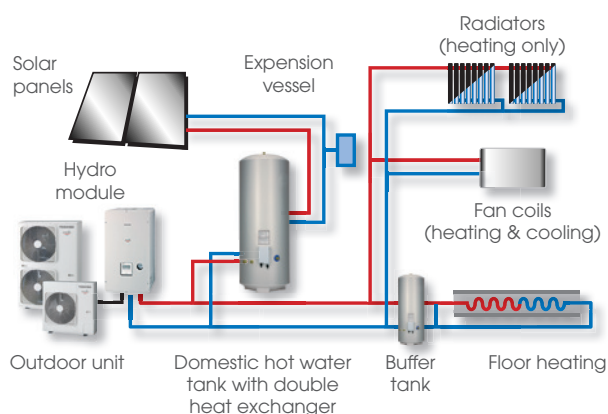
2 Space heating with domestic hot water



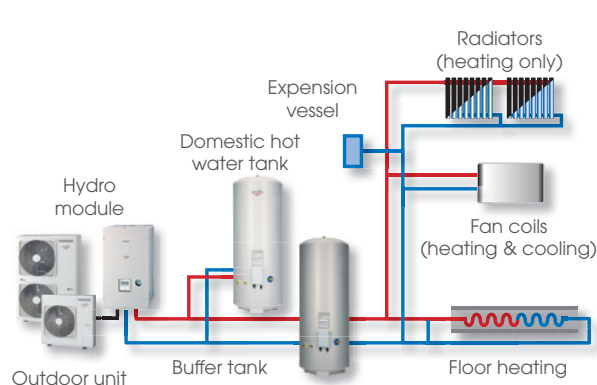
2 Space heating with domestic hot water & backup boiler



2 Space heating/cooling (multiple zones) with domestic hot water & solar panels



2 Space heating/cooling (multiple zones) with domestic hot water



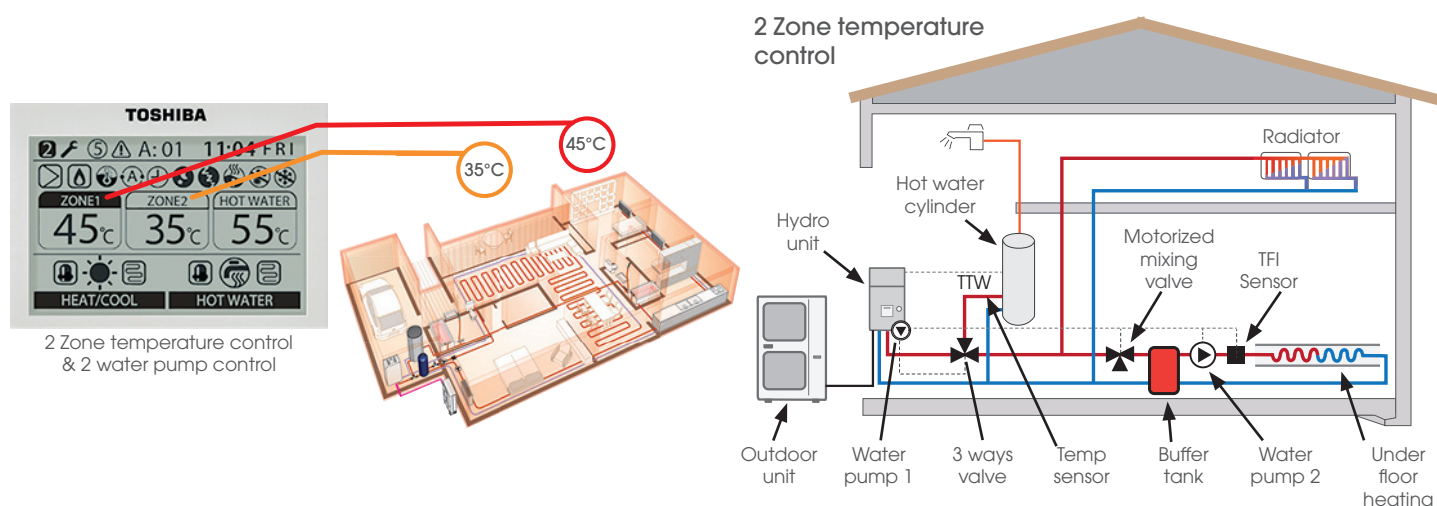
In existing dwellings already equipped with traditional gas or fuel boilers, the Toshiba ESTIA air-to-water heat pump system can be combined with the existing heating system to fully cover and optimise all heating needs, all year round. The boiler is then only used as a back-up source during some extreme weather days during the winter. The intelligent Toshiba control balances the energy source in the most efficient way.

Toshiba offers different control solutions to meet end users' and designers' expectations. From local individual control and settings to computer-based TCC-Link network, all indoor units can be programmed and set to suit the operational needs. Remote control systems offer a wide range of features including schedule timers, diagnostic functions, input/output signals, to name a few.

Toshiba offers a number of local control products that can be used to control a single indoor unit, or group of up to 8 indoor units, from a position adjacent to that indoor unit or group. It is possible to install these local controllers up to 500 m from the connected indoor unit which allows greater flexibility when designing the installation site.

2 Zone & 2 water pump control

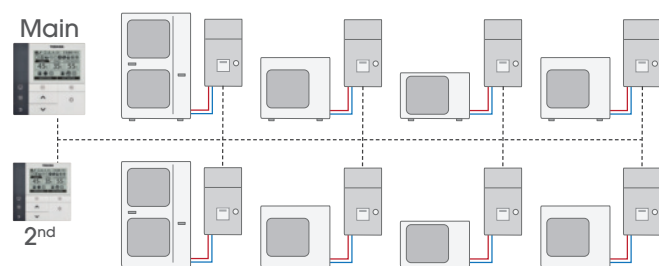
Space heating/cooling (multiple zones) with domestic hot water.



Control integration

ESTIA Master/Slave group control function allows up to 2 remote controllers to operate simultaneously up to 8 systems. ESTIA Open protocol interfaces Modbus & KNX are available in Home Energy Management Systems.

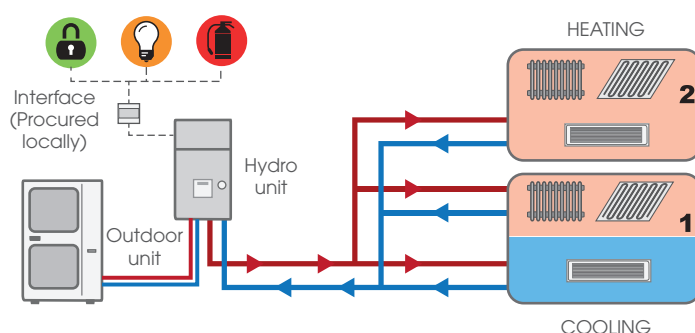
Group control function



One remote controller can operate simultaneously up to 8 systems

Note: Maximum connections configuration: 8 outdoors and 2 remote controllers

Open protocol interfaces



Modbus and KNX interfaces are available to use in Home Energy Management Systems

HWT-HW ESTIA SPLIT R32 – ALL-IN-ONE



ESTIA R32 All-In-One air-to-water reversible Heat Pumps provide space heating or comfort cooling throughout the year, with an integrated 210L Domestic Hot Water cylinder. They are ideal for new constructions and renovation.

High energy efficiency for superior energy savings

- A+++/A++ energy class in space heating low & medium temperature with part load efficiency η_s up to 183%.
- A+ energy class in domestic hot water production with part load efficiency η_s dhw up to 136%.

Silent operation

- Silent outdoor unit down to 32dB(A) at 5m: No noise pollution for the neighborhoods.
- Silent indoor unit only 30 dB(A) at 1m.

Easy to install, easy to control

- Very compact outdoor unit (1 fan technology).
- Floor standing All-In-One hydro module 600x670mm footprint for easy integration.
- Second-zone kit factory fitted for easy management of two different leaving water temperatures (under floor heating & radiators).
- All components accessible on the facade: Simplified access for installation and maintenance.
- Large screen remote controller, intuitive and easy to use.
- Power consumption display.
- Compatible with the latest generations of connected thermostats.
- Remote control via smartphones: Wireless interface option compatible with the Toshiba Home AC Control App.

COP MAX	CAPACITY	OPERATION	HOT WATER
5.20	4kW > 11kW	-25°C > +43°C	+20°C > +65°C

Best in class performances:

> **Toshiba Twin Rotary compressors** & inverter technology, with injection technology on sizes 8 & 11kW

> **65°C maximum leaving water temperature** ideal for renovation and boiler replacement

> **COP Domestic Hot Water up to 3.21** (EN16147)

> Heat pump operation for **DHW production up to +43°C outside air temperature** to maximize energy savings

> **Back-up heaters** 3kW or 6kW or 9kW



011-1W0457
011-1W0468

ESTiA



INDOOR UNITS

HWT-601F21SM3W-E
HWT-601F21ST6W-E
HWT-1101F21SM3W-E
HWT-1101F21ST6W-E



OUTDOOR UNITS

HWT-401HW-E
HWT-601HW-E



HWT-801H(R)W-E
HWT-1105H(R)W-E



REMOTE CONTROLS

HWS-AMSU51-E

ESTIA SPLIT R32 – ALL-IN-ONE

ESTIA SPLIT R32 – ALL-IN-ONE Performance data

PRELIMINARY DATA

Outdoor unit		Air T°		Water T°		HWT-	401HW-E	601HW-E	801H(R)W-E	1105H(R)W-E	1105H(R)W-E
Hydro unit combination		Air T°		Water T°		HWT-	601F21S**W-E	601F21S**W-E	1101F21S**W-E	1101F21M**W-E	1101F21M**W-E
Under floor heating	Max heating capacity	+7°C	35°C	kW	H		7.25	7.25	11.90	13.24	
	Nominal heating capacity (rated)	+7°C	35°C	kW	H		4.00	6.00	8.00	11.00	
	COP (rated)	+7°C	35°C	W/W	H		5.20	4.80	5.19	4.60	
	Energy Efficiency Class - Average Climate - Low LWT		35°C		H		A+++	A+++	A+++	A+++	
	ETAs h (ηs) - Average Climate - Low LWT		35°C		H		178	180	182	179	
	SCOP - Average Climate - Low LWT		35°C		H		4.53	4.58	4.63	4.55	
	Max heating capacity	-7°C	35°C	kW	H		4.8	6.06	8.11	9.10	
	Heating capacity (1)	-7°C	35°C	kW	H		4.25	5.26	7.21	7.95	
	COP (1)	-7°C	35°C	W/W	H		3.06	2.97	2.70	2.54	
	Max heating capacity	-10°C	35°C	kW	H		4.40	5.57	7.49	8.45	
	Max heating capacity	-15°C	35°C	kW	H		3.73	4.75	6.46	7.37	
	Heating capacity (1)	-15°C	35°C	kW	H		3.43	4.39	5.96	6.77	
	COP (1)	-15°C	35°C	W/W	H		2.54	2.56	2.40	2.27	
Radiators heating & DHW	Energy Efficiency Class - Average Climate - Medium LWT		55°C				A++	A++	A++	A++	
	ETAs h (ηs) - Average Climate - Medium LWT		55°C				135	132	142	142	
	SCOP - Average Climate - Medium LWT		55°C				3.45	3.37	3.63	3.62	
	Max heating capacity	+7°C	45°C	kW	H		6.97	6.97	11.75	12.41	
	Max heating capacity	-7°C	45°C	kW	H		4.48	5.8	8.00	8.44	
	Max heating capacity	-15°C	45°C	kW	H		3.37	4.03	6.54	7.52	
	Max heating capacity	+7°C	55°C	kW	H		6.51	7.53	9.96	10.17	
	Max heating capacity	-7°C	55°C	kW	H		4.31	5.42	7.35	7.72	
	Max heating capacity	-10°C	55°C	kW	H		-	-	7.00	7.38	
	Max heating capacity	-15°C	55°C	kW	H		-	-	6.41	6.81	
	Cooling capacity nominal	35°C	7/12°C	kW	C		4.00	5.00	6.00	8.00	
	EER nominal			W/W	C		3.45	3.3	3.2	2.8	
Cooling	Cooling capacity (2)	35°C	18/23°C	kW	C		5.28	6.28	7.64	10.21	
	EER			W/W	C		4.65	4.13	3.93	3.39	

Max heating capacities are shown at peak value during operation, at max compressor operating range in accordance with EN14511.

Nominal heating capacity are given at water delta T° 5°C and rated compressor operating frequency in accordance with EN14511.

(1) Heating capacity at -7°C are shown at max compressor operating frequency in accordance with EN14511.

(2) Cooling capacity at rated compressor frequency from A35 W12/7 condition.

Energy Efficiencies Class & Seasonal space heating energy efficiency (ηs) are provided for Average Climate conditions in accordance with EN14825.

ESTIA SPLIT R32 – ALL-IN-ONE Physical data outdoor

Outdoor unit	HWT-	401HW-E	601HW-E	801HW-E	1105HW-E	801HRW-E	1101HRW-E
Dimensions (HxWxD)	mm	630 x 800 x 300			1050 x 1010 x 370		
Weight	kg	42			75		
Sound power level (Rated) H/C	dB(A)	59/60	62/61	63/62	64/62	63/62	64/62
Sound power level (Silent Mode) H/C	dB(A)	54/55	58/57	58/59	62/60	58/59	62/60
Sound pressure level (Rated) H/C at 1m (1)	dB(A)	45/46	46/45	51/50	51/49	51/50	51/49
Sound pressure level (Silent Mode) H/C et 1m (1)	dB(A)	40/41	42/41	46/47	49/47	46/47	49/47
Sound pressure level (Rated) H/C at 5m (2)	dB(A)	37/38	40/39	41/40	42/40	41/40	42/40
Sound pressure level (Silent Mode) H/C at 5m (2)	dB(A)	32/33	36/35	36/37	40/38	36/37	40/38
Compressor type		DC Twin rotary			DC Twin rotary w/injection		
Refrigerant / Charge amount (kg)		R32 / 0.9			R32 / 1.25		
Flare connections (gas-liquid)		4/8" - 2/8"			5/8" - 2/8"		
Minimum pipe length	m	5			5		
Maximum pipe length (with Ref. charge)	m	30			30		
Maximum height difference	m	30			30		
Chargeless pipe length	m	20			8		
Operating range in space heating*	°C	-20 ~ 25			-25 ~ 25		
Operating range Domestic hot water	°C	-20 ~ 43			-25 ~ 43		
Operating range in cooling	°C	10 ~ 43			10 ~ 43		
Bottom plate heater power	W	-			75		
Power supply	V-ph-Hz	220/230-1-50					

* Depending on the conditions only back-up heater operates.

** Heater Operation in more than 35°C.

(1) Noise pressure levels EN 12102 at 1m, open field directivity 2.

(2) Noise pressure levels EN 12102 at 5m, open field directivity 2.

ESTIA SPLIT R32 – ALL-IN-ONE Physical data Hydro unit

Hydro unit	HWT-	601F21SM3W-E	601F21ST6W-E	1101F21SM3W-E	1101F21ST6W-E	1101F21ST9W-E	1101F21MM3W-E	1101F21MT6W-E	1101F21MT9W-E		
Outdoor unit	HWT-	401 & 601				801 & 1101					
Load Profile		L				XL					
DHW Energy Efficiency Class		A+				A+					
DHW ETA _{WH} (η _{WH}) - Average Climate	%	136				130					
COP at Air7°C (EN16147)		3.21				3.12					
Vmax @40°C	L	220				220					
Heating time	Hrs	01h36				01h05					
Leaving water temperature (without electrical heater)	°C	H	20 ~ 55°C				20 ~ 65°C				
Maximum leaving water temperature (with electrical heater)	°C	H	20 ~ 55°C				20 ~ 65°C				
Leaving water temperature (cooling)	°C	C					7 ~ 25°C				
Tank	Water volume	L					210				
	Material						Enamelled				
	Maximum water pressure	bar					6				
	Expansion vessel volume	L					10				
2 zone operation						-				Available	
Weight	Kg					157				162	
Sound power level	dB(A)					42				44	
Sound pressure level at 1 m	dB(A)					31				32	
Electric back up heater capacity	kW	3.0	6.0	3.0	6.0	9.0	3.0	6.0	9.0		
Electric back up heater supply	V-ph-Hz	220 ~ 230-1-50	380 ~ 400-3N-50	220 ~ 230-1-50	380 ~ 400-3N-50		220 ~ 230-1-50	380 ~ 400-3N-50			
Maximum current	A	13	13 x 2	13	13 x 2	13 x 3	13	13 x 2	13 x 3		
Dimensions (HxWxD)	mm					1700 x 600 x 670					
Weight	Kg					157				162	

HWT-HW

ESTIA SPLIT R32 – WALL MOUNTED

ESTIA R32 wall-mounted air-to-water reversible Heat Pumps provide space heating or comfort cooling throughout the year. They are ideal for new constructions and renovation. They can be combined with a separated tank for domestic hot water production (150, 200 and 300L).

High energy efficiency for superior energy savings

- A+++/A++ energy class in space heating low & medium temperature with part load efficiency η_s up to 183%.
- A+/A energy class in domestic hot water production with part load efficiency η_s dhw up to 122%.

Silent operation

- Silent outdoor unit down to 32dB(A) at 5m: No noise pollution for the neighborhoods.
- Silent indoor unit only 28 dB(A) at 1m.

Easy to install, easy to control

- Very compact outdoor unit (1 fan technology).
- The most compact wall-mounted hydro module on the market for easy integration.
- All components accessible on the facade: Simplified access for installation and maintenance.
- Possible management of a second water pump for 2 zones.
- Large screen remote controller, intuitive and easy to use.
- Power consumption display.
- Compatible with the latest generations of connected thermostats.
- Remote control via smartphones: Wireless interface option compatible with the Toshiba Home AC Control App.

COP MAX



5.20

CAPACITY



4kW > 11kW

OPERATION



-25°C > +43°C

HOT WATER



+20°C > +65°C

Best in class performances:

> **Toshiba Twin Rotary compressors** & inverter technology, with injection technology on sizes 8 & 11kW

> **65°C maximum leaving water temperature** ideal for renovation and boiler replacement

> **COP Domestic Hot Water up to 2.93** (EN16147)

> Heat pump operation for **DHW production up to +43°C outside air temperature** to maximize energy savings

> **Back-up heaters** 3kW or 6kW or 9kW

011-1W0457
011-1W0458**ESTiA****INDOOR UNITS**

HWT-601XWHM3W-E
HWT-601XWHT6W-E
HWT-1101XWHM3W-E

**OUTDOOR UNITS**

HWT-401HW-E
HWT-601HW-E



HWT-801H(R)W-E
HWT-1105H(R)W-E

**REMOTE CONTROLS**

HWS-AMSU51-E

**DOMESTIC HOT WATER TANKS**

HWS-1501CSHM3-E
HWS-2101CSHM3-E
HWS-3001CSHM3-E

ESTIA SPLIT R32 – WALL MOUNTED

ESTIA SPLIT R32 – WALL MOUNTED Performance data

PRELIMINARY DATA

Outdoor unit	Air T°	Water T°	HWT- HWT-	401HW-E 601XWH**W-E	601HW-E 601XWH**W-E	801H(R)W-E 1101XWH**W-E	1105H(R)W-E 1101XWH**W-E
Hydro unit combination							
Under floor heating							
Max heating capacity	+7°C	35°C	kW	H	7.25	7.25	11.90
Nominal heating capacity (rated)	+7°C	35°C	kW	H	4.00	6.00	11.00
COP (rated)	+7°C	35°C	W/W	H	5.2	4.8	5.19
Energy Efficiency Class - Average Climate - Low LWT		35°C	H	A+++	A+++	A+++	A+++
ETAs h (ηs) - Average Climate - Low LWT		35°C	%	H	178	180	182
SCOP - Average Climate - Low LWT		35°C	H	4.53	4.58	4.63	4.55
Max heating capacity	-7°C	35°C	kW	H	4.80	6.06	8.11
Heating capacity (1)	-7°C	35°C	kW	H	4.25	5.26	7.21
COP (1)	-7°C	35°C	W/W	H	3.06	2.97	2.70
Max heating capacity	-10°C	35°C	kW	H	4.4	5.57	7.49
Max heating capacity	-15°C	35°C	kW	H	3.73	4.75	6.46
Heating capacity (1)	-15°C	35°C	kW	H	3.43	4.39	5.96
COP (1)	-15°C	35°C	W/W	H	2.54	2.56	2.40
Radiators heating & DHW							
Energy Efficiency Class - Average Climate - Medium LWT		55°C	H	A++	A++	A++	A++
ETAs h (ηs) - Average Climate - Medium LWT		55°C	%	H	135	132	142
SCOP - Average Climate - Medium LWT		55°C	H	3.45	3.37	3.63	3.62
Max heating capacity	+7°C	45°C	kW	H	6.97	6.97	11.75
Max heating capacity	-7°C	45°C	kW	H	4.48	5.80	8.00
Max heating capacity	-15°C	45°C	kW	H	3.37	4.03	6.54
Max heating capacity	+7°C	55°C	kW	H	6.51	7.53	9.96
Max heating capacity	-7°C	55°C	kW	H	4.31	5.42	7.35
Max heating capacity	-10°C	55°C	kW	H	-	-	7.00
Max heating capacity	-15°C	55°C	kW	H	-	-	6.41
Cooling capacity nominal	35°C	7/12°C	kW	C	4.00	5.00	6.00
EER nominal			W/W	C	3.45	3.3	3.2
Cooling capacity (2)	35°C	18/23°C	kW	C	5.28	6.28	7.64
EER			W/W	C	4.65	4.13	3.93

Max heating capacities are shown at peak value during operation, at max compressor operating range in accordance with EN14511.

Nominal heating capacity are given at water delta T° 5°C and rated compressor operating frequency in accordance with EN14511.

(1) Heating capacity at -7°C are shown at max compressor operating frequency in accordance with EN14511.

(2) Cooling capacity at rated compressor frequency from A35 W12/7 condition.

Energy Efficiencies Class & Seasonal space heating energy efficiency (ηs) are provided for Average Climate conditions in accordance with EN14825.

ESTIA SPLIT R32 – WALL MOUNTED Physical data outdoor

Outdoor unit	HWT-	401HW-E	601HW-E	801HW-E	1101HW-E	801HRW-E	1101HRW-E
Dimensions (HxWxD)	mm	630 x 800 x 300				1050 x 1010 x 370	
Weight	kg	42				75	
Sound power level (Silent Mode) H/C	dB(A)	54/55	58/57	58/59	62/60	58/59	62/60
Sound pressure level (Rated) H/C at 1m (1)	dB(A)	45/46	46/46	51/50	51/51	51/50	51/49
Sound pressure level (Silent Mode) H/C at 1m (1)	dB(A)	40/41	42/41	46/47	49/47	46/47	49/47
Sound pressure level (Rated) H/C at 5m (2)	dB(A)	37/38	40/39	41/40	42/40	41/40	42/40
Sound pressure level (Silent Mode) H/C at 5m (2)	dB(A)	32/33	36/35	36/37	40/38	36/37	40/38
Compressor type		DC Twin rotary				DC Twin rotary w/injection	
Refrigerant / Charge amount (kg)		R32 / 0.9				R32 / 1.25	
Flare connections (gas-liquid)		4/8" - 2/8"				5/8" - 2/8"	
Minimum pipe length	m	5				5	
Maximum pipe length (with Ref. charge)	m	30				30	
Maximum height difference	m	30				30	
Chargeless pipe length	m	20				8	
Operating range in space heating*	°C	-20 ~ 25				-25 ~ 25	
Operating range Domestic hot water	°C	-20 ~ 43				-25 ~ 43	
Operating range in cooling	°C					10 ~ 43	
Bottom tape heater power	W					75	
Power supply	V-ph-Hz					220/240-1-50	

* Depending on the conditions only back-up heater operates.

** Heater Operation in more than 35°C.

(1) Noise pressure levels EN 12102 at 1m, open field directivity 2.

(2) Noise pressure levels EN 12102 at 5m, open field directivity 2.

ESTIA SPLIT R32 – WALL MOUNTED Physical data Hydro unit

Hydro unit	HWT-	601XWHM3W-E	601XWHT6W-E	1101XWHM3W-E	1101XWHT6W-E	1101XWHT9W-E
Outdoor unit	HWT-	401 & 601			801 & 1101	
Leaving water temperature (without electrical heater)	°C	H	20 ~ 55°C		20 ~ 65°C	
Maximum leaving water temperature (with electrical heater)	°C	H	55		65	
Leaving water temperature (cooling)	°C	C		7 ~ 25°C		
Dimensions (HxWxD)	mm			720 x 450 x 235		
Weight	Kg			27		
Sound power level	dB(A)			40		
Sound pressure level at 1m	dB(A)			28		
Electric back up heater capacity	kW	3.0	6.0	3.0	6.0	9.0
Electric back up heater supply	V-ph-Hz	220-240-1-50	380-415-3N-50	220-240-1-50	380-415-3N-50	380-415-3N-50
Maximum current	A	13	13 x 2	13	13 x 2	13 x 3

ESTIA SPLIT R32 – WALL MOUNTED Physical data Sanitary Hot Water tank

Domestic hot water tank	HWS- HWT-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Outdoor unit		401 & 601	401 & 601	401 & 601
Water volume	litres	150	210	300
Load Profile		L	L	XL
DHW Energy Efficiency Class		A+	A+	A
DHW ETA _{WH} (η _{WH}) - Average Climate	%	120	106	118
COP at Air7°C (EN16147)		2.87	2.53	2.72
Material			Stainless steel	
Maximum water pressure	bar		6	
Max water temperature	°C		75	
Electric heater	kW		2.7	
Power supply	V-ph-Hz		220/240-1-50	
Height	mm	1 090	1 474	2 040
Diameter	mm		550	
Weight	Kg	31	41	60

HWS-_XWH ESTIA SPLIT S5



The Toshiba air to water heat pump split system is designed to deliver the right temperature for space heating and produce domestic sanitary hot water throughout the year. The ESTIA system has the additional advantage of providing cooling in the warmer seasons.

High Energy efficiency providing enhanced energy savings

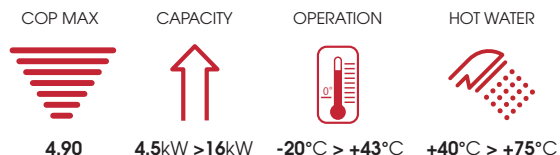
A++ / A++ energy class in space heating & combination heater. Part Load efficiency η_s up to 163% according to EF14511 & EN14825.

The Toshiba Inverter uses the new vector controlled Intelligent Power Drive Unit, which enables a wider range of compressor frequencies resulting in better temperature control.

Easy to install, easy to control

Quick and easy to install, the ESTIA hydro module unit can be placed safely in the most suitable place within the house.

Its large screen remote controller is designed to be simple, intuitive and easy to use. ESTIA is compatible with latest generations of connected thermostat.



Best in class performances:

- > Max COP 4.90 @+7°C & 3.08 @-7°C air temperature
- > Heating operation down to -20°C
- > Domestic sanitary hot water +40°C to +75°C
- > Master/Slave group control up to 8 units



R410A
with TOSHIBA



011-1W0341 → 0348



INDOOR UNITS

HWS-455XWHM3-E
HWS-805XWHM3-E
HWS-805XWHT6-E
HWS-1405XWHM3-E
HWS-1405XWHT6-E
HWS-1405XWHT9-E



OUTDOOR UNITS

HWS-455H-E
HWS-805H-E
HWS-1105H-E
HWS-1405H-E
HWS-1605H8-E



REMOTE CONTROLS

HWS-AMS54E



DOMESTIC HOT WATER TANK

HWS-1501CSHM3-E
HWS-2101CSHM3-E
HWS-3001CSHM3-E

ESTIA SPLIT S5

ESTIA SPLIT S5 Performance data

Outdoor unit				HWS-	455H-E	805H-E	1105H-E	1105H8(R)-E	1405H-E	1405H8(R)-E	1605H8(R)-E
Hydro unit combination	Air T°	Water T°		HWS-	455XWHM3-E	805XWH**E	1405XWH**E	1405XWH**E	1405XWH**E	1405XWH**E	1405XWH**E
Under floor heating	Max heating capacity	+7°C 35°C	kW	H	6.83	8.52	14.63	16.74	14.73	15.77	16.76
	Nominal heating capacity	+7°C 35°C	kW	H	4.5	7.51	10.52	10.52	13.15	13.15	14.91
	COP	+7°C 35°C	W/W	H	4.9	4.46	4.88	4.8	4.5	4.44	4.3
	Energy Efficiency Class - Low Temp (Ecodesign LOT1-2015)	35°C		H	A++	A++	A++	A++	A++	A++	A++
	Energy Efficiency Class - Low Temp (Ecodesign LOT1-Sept2019)	35°C		H	A++	A++	A++	A++	A++	A++	A++
	Seasonal space heating energy efficiency (ηs)	35°C		H	167%	161%	163%	161%	159%	157%	159%
	Seasonal space heating energy efficiency (SCOP)	35°C		H	4.28	4.12	4.17	4.12	4.08	4.02	4.07
	Max heating capacity	-7°C 35°C	kW	H	4.48	5.74	9.67	9.50	10.79	10.64	11.25
	Heating capacity ⁽¹⁾	-7°C 35°C	kW	H	4.18	5.00	8.04	8.04	8.63	8.64	9.05
	COP	-7°C 35°C	W/W	H	3.01	2.7	2.78	2.79	2.62	2.76	2.67
	Max heating capacity	-15°C 35°C	kW	H	3.61	4.47	7.52	7.29	8.34	8.16	8.63
	Heating capacity ⁽¹⁾	-15°C 35°C	kW	H	3.14	4.02	6.17	6.38	6.86	6.85	7.18
Radiators heating & DHW	COP	-15°C 35°C	W/W	H	2.45	2.68	2.5	2.63	2.47	2.6	2.52
	Max heating capacity	+7°C 45°C	kW	H	6.42	8.13	13.62	14.26	13.93	15.07	15.77
	Max heating capacity	-7°C 45°C	kW	H	4.37	5.55	9.16	9.59	9.17	10.12	10.64
	Max heating capacity	-15°C 45°C	kW	H	2.84	4.31	7.12	7.03	7.37	7.75	8.15
	Max heating capacity	+7°C 55°C	kW	H	6.25	7.93	10.98	11.67	12.56	13.64	14.12
	Max heating capacity	-7°C 55°C	kW	H	4.29	5.29	8.83	8.93	8.92	9.76	10.22
	Energy Efficiency Class - Medium Temp (Ecodesign LOT1-2015)	55°C		H	A++	A++	A++	A++	A++	A++	A++
	Energy Efficiency Class - Low Temp (Ecodesign LOT1-Sept 2019)	55°C		H	A++	A++	A++	A++	A++	A++	A++
	Seasonal space heating energy efficiency (ηs)	55°C		H	125%	127%	130%	130%	129%	129%	130%
	Seasonal space heating energy efficiency (SCOP)	55°C		H	3.22	3.27	3.35	3.34	3.31	3.31	3.33
	Nominal cooling capacity	35°C 7°C	kW	C	4.5	6	10	10	11	11	13
	EER		W/W	C	3.08	3.1	3.07	3.07	2.89	2.89	2.71

Max heating capacities are shown at peak value during operation, at max compressor operating range in accordance with EN14511

Nominal heating capacity are given at water delta T° 5°C and rated compressor operating frequency in accordance with EN14511

(1) Heating capacity at -7°C are shown at max compressor operating frequency in accordance with EN14511

Energy Efficiencies Class & Seasonal space heating energy efficiency (ηs) are provided for Average Climate conditions in accordance with EN14825

ESTIA SPLIT S5 Physical data outdoor unit

Outdoor unit		HWS-	455H-E	805H-E	1105H-E	1105H8-E	1405H-E	1405H8-E	1605H8-E
Dimensions (HxWxD)	mm		630x800x300	890x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320
Weight	kg		42	63	92	93	92	93	93
Sound pressure level (max) ⁽²⁾	dB(A)		49	50	51	51	52	52	53
Sound power level (max)	dB(A)		65	66	66	66	68	68	69
Compressor type			DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	kg		1.15	1.80	2.70	2.70	2.70	2.70	2.70
Flare connections (gas-liquid)			4/8" - 2/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"
Minimum pipe length	m		5	5	5	5	5	5	5
Maximum pipe length	m		15	30	30	30	30	30	30
Maximum height difference	m		10	30	30	30	30	30	30
Chargeless pipe length	m		15	30	30	30	30	30	30
Operating range in space heating*	°C		-20~25	-20~25	-20~25	-20~25	-20~25	-20~25	-20~25
Operating range domestic hot water	°C		-20~43	-20~43	-20~43	-20~43	-20~43	-20~43	-20~43
Operating range in cooling	°C		10~43	10~43	10~43	10~43	10~43	10~43	10~43
Bottom tape heater power	W		-	-	-	75	-	75	75
Power supply	V-ph-Hz		220/230-1-50	220/230-1-50	220/230-1-50	380/400-3N-50	220-230-1-50	380/400-3N-50	380/400-3N-50

* Depending on the conditions only back-up heater operates. ** Heater Operation in more than 35°C

(2) Measurement position : Front = 1m, Height = 1.5m

ESTIA SPLIT S5 Physical data hydro unit

Hydro unit		HWS-	455XWHM3-E	805XWHM3-E	805XWHT6-E	805XWHT9-E	1405XWHM3-E	1405XWHT6-E	1405XWHT9-E
To be used with size			45	80	80	80	110-140-160	110-140-160	110-140-160
Leaving water temperature	°C	H	20~55°C	20~55°C	20~55°C	20~55°C	20~55°C	20~55°C	20~55°C
Leaving water temperature	°C	C	7~25°C	7~25°C	7~25°C	7~25°C	7~25°C	7~25°C	7~25°C
Dimensions (HxWxD)	mm		925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg		49	49	49	49	52	52	52
Sound pressure level	dB(A)		29	29	29	29	32	32	32
Sound power level	dB(A)		41	41	41	41	43	43	43
Electric back up heater capacity	kW		3	3	6	9	3	6	9
Electric back up heater supply	V-ph-Hz		220-230-1-50	220-230-1-50	380-400-3N-50	380-400-3N-50	220-230-1-50	380-400-3N-50	380-400-3N-50
Maximum current	A		13	13	13 x 2	13 x 3	13	13 x 2	13 x 3

ESTIA SPLIT S5 Physical data sanitary hot water tank

Domestic hot water tank		HWS-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Water volume	litres		150	210	300
Max water temperature	°C		75	75	75
Electric heater	kW		2.7	2.7	2.7
Power supply	V-ph-Hz		220/230-1-50	220/230-1-50	220/230-1-50
Height	mm		1 090	1 474	2 040
Diameter	mm		550	550	550
Weight	Kg		31	41	60
Material			Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model name	Description	Functions
TCB-PCIN3E	Output signal PCB	Boiler operation output signal. Alarm output signal. Defrost output signal. Compressor operation output signal
TCB-PCMO3E	Input signal PCB	Room thermostat input. Emergency stop input
HWS-AMS54E	Wired RC	Wired Remote controller(sub)

HWS-(P)_XWH ESTIA SPLIT S5 POWERFUL



The Toshiba air to water heat pump split system is designed to deliver the right temperature for space heating and produce domestic sanitary hot water throughout the year. The ESTIA system has the additional advantage of providing cooling in the warmer seasons.

High Energy efficiency providing enhanced energy savings

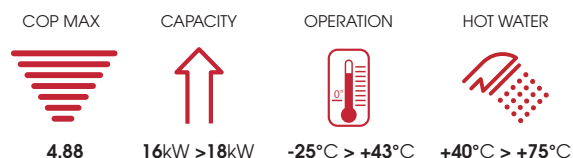
A++ / A++ energy class in space heating & combination heater. Part Load efficiency η_s up to 175% according to EF14511 & EN14825.

The Toshiba Inverter uses the new vector controlled Intelligent Power Drive Unit, which enables a wider range of compressor frequencies resulting in better temperature control.

Easy to install, easy to control

Quick and easy to install, the ESTIA hydro module unit can be placed safely in the most suitable place within the house.

Its large screen remote controller is designed to be simple, intuitive and easy to use. ESTIA is also compatible with latest generations of connected thermostat.



Best in class performances:

- > Max COP 4.88 @+7°C & COP 2.67 @-7°C air temperature
- > Maintain rated capacity down to -15°C
- > Heating operation down to -25°C
- > Domestic sanitary hot water +40°C to +75°C
- > Master/Slave group control up to 8 units



011-1W0341 → 0348



INDOOR UNITS

HWS-P805XWHM3-E
HWS-P805XWHT6-E
HWS-P805XWHT9-E
HWS-P1105XWHM3-E
HWS-P1105XWHT6-E
HWS-P1105XWHT9-E



OUTDOOR UNITS

HWS-P805H8R-E
HWS-P1105H8R-E
HWS-P1405H8R-E
HWS-P805HR-E
HWS-P1105HR-E



REMOTE CONTROLS

HWS-AMS54E



HOT WATER TANK

HWS-1501CSHM3-E
HWS-2101CSHM3-E
HWS-3001CSHM3-E

ESTIA SPLIT S5 POWERFUL

ESTIA SPLIT S5 POWERFUL Performance data

Outdoor unit				HWS-	P805HR-E	P1105HR-E	P805H8R-E	P1105H8R-E	P1405H8R-E	
Hydro unit combination		Air T°	Water T°	HWS-	P805XWH**-E	P1105XWH**-E	P805XWH**-E	P1105XWH**-E	P1105XWH**-E	
Under floor heating	Max heating capacity	+7°C	35°C	kW	H	16.92	18.05	14.67	14.95	15.1
	Nominal heating capacity	+7°C	35°C	kW	H	8.00	11.20	8.00	11.20	14.00
	COP	+7°C	35°C	W/W	H	4.76	4.88	4.68	4.8	4.44
	Energy Efficiency Class - Low Temp (Ecodesign LOT1-2015)		35°C		H	A++	A++	A++	A++	A++
	Energy Efficiency Class - Low Temp (Ecodesign LOT1-Sept2019)		35°C			A++	A+++	A++	A++	A++
	Seasonal space heating energy efficiency (ηs)		35°C		H	157%	175%	169%	173%	173%
	Seasonal space heating energy efficiency (SCOP)		35°C		H	4.01	4.48	4.31	4.43	4.43
	Max heating capacity	-7°C	35°C	kW	H	11.92	12.79	10.82	11.62	13.44
	Heating capacity ⁽¹⁾	-7°C	35°C	kW	H	9.38	9.74	9.45	10.3	12.21
	COP	-7°C	35°C	W/W	H	2.67	2.64	2.81	2.39	2.53
	Max heating capacity	-15°C	35°C	kW	H	9.37	11.23	8.18	9.26	10.7
	Heating capacity ⁽¹⁾	-15°C	35°C	kW	H	7.26	8.06	7.77	8.75	8.91
	COP	-15°C	35°C	W/W	H	2.18	2.18	2.33	2.26	2.05
	Radiators heating & DHW	Max heating capacity	+7°C	45°C	kW	H	14.00	14.74	16.32	15.32
Max heating capacity		-7°C	45°C	kW	H	10.16	10.61	9.08	10.01	11.43
Max heating capacity		-15°C	45°C	kW	H	8.04	8.13	6.82	7.71	7.96
Max heating capacity		-20°C	45°C	kW	H	6.72	7.64	5.98	7.80	8.05
Max heating capacity		+7°C	55°C	kW	H	11.08	11.43	15.04	15.69	16.97
Max heating capacity		-7°C	55°C	kW	H	8.40	8.42	9.41	10.93	12.37
Energy Efficiency Class - Medium Temp (Ecodesign LOT1-2015)			55°C		H	A++	A++	A+	A++	A++
Energy Efficiency Class - Low Temp (Ecodesign LOT1-Sept 2019)			55°C			A++	A++	A+	A++	A++
Seasonal space heating energy efficiency (ηs)			55°C		H	125%	131%	123%	130%	130%
Seasonal space heating energy efficiency (SCOP)			55°C		H	3.22	3.38	3.16	3.35	3.34
Cooling	Nominal cooling capacity	35°C	7°C	kW	C	3.22	3.38	3.16	3.35	3.34
	EER			W/W	C	3.66	3.00	3.66	3.00	2.82

Max heating capacities are shown at peak value during operation, at max compressor operating range in accordance with EN14511

Nominal heating capacity are given at water delta T° 5°C and rated compressor operating frequency in accordance with EN14511

(1) Heating capacity at -7°C are shown at max compressor operating frequency in accordance with EN14511

Energy Efficiencies Class & Seasonal space heating energy efficiency (ηs) are provided for Average Climate conditions in accordance with EN14825

ESTIA SPLIT S5 POWERFUL Physical data outdoor unit

Outdoor unit		HWS-	P805HR-E	P1105HR-E	P805H8R-E	P1105H8R-E	P1405H8R-E
Dimensions (HxWxD)	mm		1340x900x320	1340x900x320	1340x900x320	1340x900x320	1340x900x320
Weight	kg		92	92	94	94	94
Sound pressure level (max) ⁽²⁾	dB(A)		51	51	52	52	53
Sound power level (max)	dB(A)		66	66	66	67	68
Compressor type			DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary	DC Twin rotary
Refrigerant			R410A	R410A	R410A	R410A	R410A
Refrigerant charge	kg		2.70	2.70	2.70	2.70	2.70
Flare connections (gas-liquid)			5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"	5/8" - 3/8"
Minimum pipe length	m		5	5	5	5	5
Maximum pipe length	m		30	30	30	30	30
Maximum height difference	m		30	30	30	30	30
Chargeless pipe length	m		30	30	30	30	30
Operating range in space heating*	°C		-25~25	-25~25	-25~25	-25~25	-25~25
Operating range domestic hot water	°C		-25~43**	-25~43**	-25~43**	-25~43**	-25~43**
Operating range in cooling	°C		10~43	10~43	10~43	10~43	10~43
Bottom tape heater power	W		75	75	75	75	75
Power supply	V-ph-Hz		220/230-1-50	220/230-1-50	380/400-3-50	380/400-3-50	380/400-3-50

* Depending on the conditions only back-up heater operates. ** Heater Operation in more than 35°C.

(2) Measurement position : Front = 1m, Height = 1.5m

ESTIA SPLIT S5 POWERFUL Physical data hydro unit

Hydro unit		HWS-	P805XWHM3-E	P805XWHT6-E	P805XWHT9-E	P1105XWHM3-E	P1105XWHT6-E	P1105XWHT9-E
To be used with size			80	80	80	110	110	110
Leaving water temperature (heating)	°C	H	20~60°C	20~60°C	20~60°C	20~60°C	20~60°C	20~60°C
Leaving water temperature (cooling)	°C	C	7~25°C	7~25°C	7~25°C	7~25°C	7~25°C	7~25°C
Dimensions (HxWxD)	mm		925x525x355	925x525x355	925x525x355	925x525x355	925x525x355	925x525x355
Weight	Kg		49**	49**	49**	52**	52**	52**
Sound pressure level	dB(A)		29	29	29	32	32	32
Sound power level	dB(A)		41	41	41	43	43	43
Electric back up heater capacity	kW		3	6	9	3	6	9
Electric back up heater supply	V-ph-Hz		220-230-1-50	380-400-3N-50	380-400-3N-50	220-230-1-50	380-400-3N-50	380-400-3N-50
Maximum current	A		13	13 x 2	13 x 3	13	13 x 2	13 x 3

ESTIA SPLIT S5 POWERFUL Physical data sanitary hot water tank

Domestic hot water tank		HWS-	1501CSHM3-E	2101CSHM3-E	3001CSHM3-E
Water volume	litres		150	210	300
Max water temperature	°C		75	75	75
Electric heater	kW		2.7	2.7	2.7
Power supply	V-ph-Hz		220/230-1-50	220/230-1-50	220/230-1-50
Height	mm		1 090	1 474	2 040
Diameter	mm		550	550	550
Weight	Kg		31	41	60
Cylinder Material			Stainless steel	Stainless steel	Stainless steel

ACCESSORIES

Model name	Description	Functions
TCB-PCIN3E	Output signal PCB	Boiler operation output signal. Alarm output signal. Defrost output signal. Compressor operation output signal
TCB-PCMO3E	Input signal PCB	Room thermostat input. Emergency stop input
HWS-AMS54E	Wired RC	Wired Remote controller(sub)



HWS-G_CNMRE ESTIA DOMESTIC HOT WATER HEAT PUMP



The Toshiba DHW-HP is designed to provide the customer with best in class performance and energy savings, for sanitary hot water production, throughout the year. Thanks to its large operating range, high external static pressure fan and low noise operation the Toshiba DHW-HP is suitable for all types of installation.

Comfort & ease of installation

- Sanitary hot water can be produced throughout the year, using only the heat pump, thanks to the innovative design of the unit and the large operating temperature range (Air -7°C to +40°C). Installation is simplified due to the slimline chassis design (Ø603mm) and easy access to water pipe connections.

Highest efficiency for best energy savings

- The Toshiba DHW-HP provides 80% energy savings Vs traditional electric water heaters with best in class COP 3.69 (EN16147 LCIE certified). Compatible with solar systems (photovoltaic panels ready or solar built-in extra coil), and smart grid ready, makes it the best solution for increased energy savings.

Innovative & reliable

- Anti-corrosion protection with enamelled steel tank and magnesium anode. Back-up electrical heater to secure hot water production at any time.

Intuitive & adaptive control

- User friendly control with 5 operational modes AUTO, ECO, BOOST, SILENT and HOLIDAY. Flexible control solutions: Low electricity tariff mode, energy consumption display, Modbus connectivity, Air Cooling function & Floor Heating function with extra coil.

COP MAX



3.69

OPERATION



-7°C > +40°C

HOT WATER



Up to 65°C

Best in class performances:

- > Energy class A+ (ErP 2017)
- > Heat pump hot water production from -7°C to +40°C outside air temperature
- > Hot water temperature to 60°C without the use of electric heaters
- > Adjustable airflow rate (0-800m³/h)
- > Best in class fan external static pressure (up to 200Pa)
- > Low noise operation
- > Slimline chassis design (Ø603mm)
- > Flexible control options including Modbus connectivity
- > Compatible with other renewable technologies solar thermal and solar photovoltaic (advanced option only)
- > Smart Grid Ready (advanced option only)



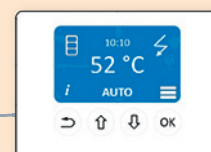
DHW-HP UNITS

HWS-G190
HWS-G260



REMOTE CONTROLS

DHW-HP
Control panel



ESTIA DOMESTIC HOT WATER HEAT PUMP

ESTIA DOMESTIC HOT WATER HEAT PUMP Performance data

Domestic Hot Water Heat Pump		HWS-G1901CNMR-E	HWS-G2601CNMR-E
Energy Class	Label	A+	A+
η_{WH}	%	146	150
COP at Air7°C W10°C-52,9°C (EN16147)		3,57	3,69
COP at Air15°C W10°C-52,9°C (EN16147)		3,90	3,87
Heat pump operating range (min/max)	°C	-7 / +40	-7 / +40
Heat up time (A7°C W10°C-53,5°C)	hr:mm	06:27	09:12
Maximum quantity of usable hot water Vmax 40 volume (W52,9°C)	liters	247	347
Cylinder volume	liters	190	260
Cylinder profile		L	XL
Maximum water temperature (heat pump & elect.heater)	°C	65	65
Maximum water temperature (heat pump only)	°C	60	60
Corrosion protection		Magnesium anode	Magnesium anode
Noise power level - Ducted (ISO12102)	dB(A)	49.0	49.0
Noise pressure level @2m - Ducted	dB(A)	32.0	32.0
Noise power level - Non ducted (ISO12102)	dB(A)	55.6	55.6
Noise pressure level @2m - Non ducted	dB(A)	38.6	38.6
Airflow rate nominal (min - max)	m³/h	450 (0 - 800)	450 (0 - 800)
Maximum fan power	W	85	85
Maximum external static pressure	Pa	200	200
Air duct connections	mm	160	160
Minimum room volume (non ducted unit)	m³	60	60
Maximum power input	W	2185	2185
Electrical heater power	W	1500	1500
Maximum compressor power	W	600	600
Auxiliary power input (Paux)	W	1.61	1.61
Standby power input (Pes)	W	17	20

ESTIA DOMESTIC HOT WATER HEAT PUMP Physical data

Domestic Hot Water Heat Pump		HWS-G1901CNMR-E	HWS-G2601CNMR-E
Dimensions (Height x Diameter)	mm	1600 x 620	1600 x 620
Required height for installation	mm	1868	2223
Weight (dry / wet)	kg	94 / 284	100/350
Refrigerant		R134A	R134A
Refrigerant charge	kg	1.2	1.28
Refrigerant charge CO ₂ equivalent	ton	1.72	1.83
Water connections (cold & hot water)	inch	3/4	3/4
Standard water connection entry angle	deg.	45	45
Condensates water connections	mm	Diam19	Diam19
Max water side operating pressure	Mpa	0.6	0.6
Power supply	V-ph-Hz	230-1-50	230-1-50

(1) Sound pressure calculation based on spherical sound propagation and infinite room (directivity factor Q=1)

ESTIA DOMESTIC HOT WATER HEAT PUMP Product configurations

Description	Model name	Functions
190l cylinder + 180°C variant water connection position	HWS-G1901CNRR-E	Alternative water connection entry position for flexible installation
190l cylinder + deluxe PCB	HWS-G1901CNXR-E	Deluxe PCB option allowing connection of: - Solar Photovoltaic - Smart Grid Ready - Additional pump / ventilation damper
190l cylinder + deluxe PCB + heating coil	HWS-G1901ENXR-E	All of the features of the deluxe PCB option with the additional benefit of connection to a solar thermal system
260l cylinder + 180°C variant water connection position	HWS-G2601CNRR-E	Alternative water connection entry position for flexible installation
260l cylinder + deluxe PCB	HWS-G2601CNXR-E	Deluxe PCB option allowing connection of: - Solar Photovoltaic - Smart Grid Ready - Additional pump / ventilation damper
260l cylinder + deluxe PCB + heating coil	HWS-G2601ENXR-E	All of the features of the deluxe PCB option with the additional benefit of connection to a solar thermal system

ON YOUR OWN AS A FAMILY IN A GROUP ON YOUR OWN



In 1981, Toshiba was the first company to incorporate inverter technology into air conditioning systems. Ever since, it has retained its technological advantage over its competitors. Its development of the new and exclusive DC hybrid inverter system has reaffirmed its ability to innovate and remain a technological leader, even in fast-growing markets. But for Toshiba, innovation also involves working alongside international institutions that carefully evaluate the impact of new technologies on our environment.

Toshiba combines technological development with concern for future generations, resulting in a range of extremely energy-efficient air conditioners, which reduce greenhouse gas emissions at the source. Toshiba's continuous research led to the development of PWM (Pulse Width Modulation) technology, which is used in combination with traditional PAM (Pulse Amplitude Modulation) control.

The application of these two distinct technologies enables total control of performance and energy use.



> RESIDENTIAL AIR-TO-AIR

AS A FAMILY IN A GROUP ON YOUR OWN AS A FAMILY

> HIGH WALLS & CONSOLES



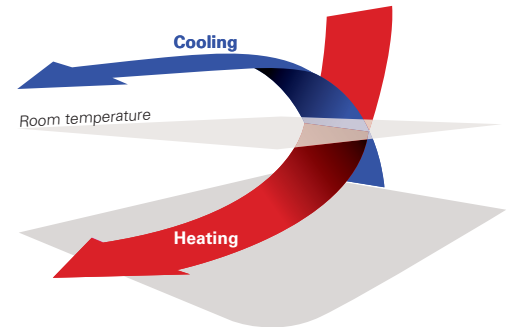
When technology meets comfort

> Innovation, efficiency, high reliability, energy savings, environmental respect ...

These are the powerful values at the heart of Toshiba's DNA. For over 50 years Toshiba has been providing its clients with the guaranteed accuracy and expertise of flawless Japanese quality. Technological, stylish, highly efficient and environmentally-friendly, the Toshiba monosplit units proudly uphold the values rooted firmly in its name.

> **The development of the new and exclusive DC hybrid inverter system** has reaffirmed this ability to innovate and maintain technological leadership in a fast-growing market. But for Toshiba, innovation also means a strong commitment to international institutions that carefully evaluate the impact of new technologies on our environment. Toshiba combines technological development with care for future generations: the result is a range of extremely energy-efficient air conditioners, reducing greenhouse gas emissions at source.

Toshiba continuous research into the development of PWM technology, which together with the traditional PAM control, allows total control of the systems performance and energy usage.



The new Hybrid Inverter features PAM (Pulse Amplitude Modulation) for the highest levels of power.



PWM (Pulse With Modulation) for energy efficiency.

The Future Is Now

> Energy efficiency by design

Toshiba products are designed to optimise energy performance at any time of year. This in turn reduces the amount of indirect CO₂ emissions generated by the electricity consumption.

> Lowest level refrigerant charge

Toshiba is committed to minimising the refrigerant charge of its products and has made this a key performance indicator for all new product developments.

> European F-GAS regulation

R32 is today the right alternative to R410A. The European F-gas regulation (517/2014) has been in force since 1 January 2015 and will progressively phase down the use of hydrofluorocarbons (HFCs) in the heating and cooling systems of the future. Toshiba already offers new heating and cooling systems operating with R32, which will be the alternative to R410A in the years ahead. The new R32 refrigerant ensures an ideal balance between energy-efficiency and respect for the environment. The quantities of HFCs that are placed on the market will be gradually reduced in a step-by-step approach, until they finally reach a minimum level by 2030.



HFC consumption related to tons of CO₂ equivalent

2018 -37%

2024 -69%

2030 -79%


DAISEIKAI 9

HAORI

SHORAI

SEIYA

CONSOLE


ADVANCED TECHNOLOGY AVAILABLE WITH R32 REFRIGERANT

> RESIDENTIAL AIR-TO-AIR

Toshiba Home AC Control

Take complete control of your comfort with the Toshiba Home AC Control App. Simple to use on your smartphone or tablet, both at home and on the move. Fully compatible, the adapter can be used with all Toshiba High-wall and Console units.





EUROPEAN UNION

RAS-B-N4KVRG-E

HAORI



HAORI, the air conditioner that respects your universe with a truly elegant design, featuring a stylish textile fabric cover. Innovation, efficiency, high reliability, energy savings, respect for the environment: these powerful values are at the heart of everything we do at Toshiba. HAORI offers energy efficient A+++ cooling and heating performances, with R32 refrigerant.

Truly elegant design featuring a stylish textile fabric cover.

High energy class A+++ / A+++

- Heating and cooling modes ensure exceptional energy savings and unparalleled comfort levels.

Ultra-quiet system

- HAORI Silent function halves the sound level of the outdoor unit down to 37 dB(A), while its Quiet function reduces noise from the indoor unit to less than 19 dB(A) for a good night's sleep.

Indoor Air Quality

- The new Toshiba Ultra Pure Filter captures up to 94% of PM2.5 (particulate matters coming from atmospheric pollution), creating healthy living spaces at home.
- Toshiba Plasma Ionizer, catches & neutralizes the contaminated particles.
- HAORI is equipped with the Magic Coil® which helps prevent water and dust from sticking to the coil.



MAX EFFICIENCY



SEER 8.7
SCOP 5.1

CAPACITY



2.5kW > 4.6kW

OPERATION



-15°C > +46°C

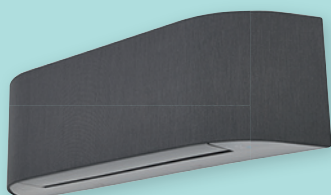
> **Silent modes** with indoor unit
Quiet mode & Silent outdoor unit function

> **Toshiba HAORI luxury remote control** features a magnetic wall mounted holder

> **Intuitive remote-control functions** with Power select and ECO modes to reduce energy bills, Hi-power for rapid cooling or heating

> **Enhance your comfort at home or away** with Toshiba Home AC app

> **HAORI features** energy monitoring and speaker voice control functions compatible with Google Home Assistant & Amazon Alexa.



INDOOR UNITS

RAS-B10N4KVRG-E
RAS-B13N4KVRG-E
RAS-B16N4KVRG-E



OUTDOOR UNITS

RAS-10J2AVSG-E1
RAS-13J2AVSG-E1
RAS-16J2AVSG-E1



REMOTE CONTROLS

Delivered with the unit

HAORI Performance data

Outdoor unit			RAS-10J2AVSG-E1	RAS-13J2AVSG-E1	RAS-16J2AVSG-E1
Indoor unit			RAS-B10N4KVRG-E	RAS-B13N4KVRG-E	RAS-B16N4KVRG-E
Cooling capacity	kW		2.5	3.5	4.6
Cooling range (min. - max.)	kW		(0.89 - 3.20)	(1.00 - 4.10)	(1.20 - 5.30)
Power input (min. - rated - max.)	kW	C	(0.19 - 0.54 - 0.79)	(0.25 - 0.80 - 1.12)	(0.34 - 1.35 - 1.72)
Pdesignc	kW		2.5	3.5	4.6
EER	W/W		4.63	4.38	3.41
SEER			8.60	8.70	7.80
Energy efficiency class		C	A+++	A+++	A++
Seasonal electricity consumption	kWh/a	C	102	142	206
Heating capacity	kW		3.2	4.2	5.5
Heating range (min. - max.)	kW		(0.90 - 4.70)	(1.00 - 5.30)	(1.10 - 6.30)
Power input (min. - rated - max.)	kW	H	(0.18 - 0.74 - 1.23)	(0.20 - 1.08 - 1.55)	(0.30 - 1.52 - 1.90)
Pdesignh	kW		2.5	3.2	4.00
COP	W/W		4.32	3.89	3.62
SCOP			5.10	5.10	4.60
Energy efficiency class		H	A+++	A+++	A++
Seasonal electricity consumption	kWh/a	H	684	876	1214

HAORI Physical data indoor

Indoor unit			RAS-B10N4KVRG-E	RAS-B13N4KVRG-E	RAS-B16N4KVRG-E
Air flow (h)	m³/h - l/s	C	600 - 166	670 - 186	690 - 180
Air flow (l)	m³/h - l/s	C	300 - 83	320 - 89	340 - 83
Sound pressure level (h/q)	dB(A)	C	41/19	43/19	45/21
Sound power level (h)	dB(A)	C	54	56	58
Air flow (h)	m³/h - l/s	H	610 - 169	680 - 189	730 - 186
Air flow (l)	m³/h - l/s	H	300 - 86	320 - 89	360 - 83
Sound pressure level (h/q)	dB(A)	H	41/19	43/19	45/22
Sound power level (h)	dB(A)	H	54	56	58
Dimensions (h x w x d)	mm		300 x 987 x 210	300 x 987 x 210	300 x 987 x 210
Weight	kg		11	11	12
Remote controller			WH-UA01UE	WH-UA01UE	WH-UA01UE

HAORI Physical data outdoor

Outdoor unit			RAS-10J2AVSG-E1	RAS-13J2AVSG-E1	RAS-16J2AVSG-E1
Air flow (max)	m³/h - l/s	C	1890 - 524	1950 - 540	2040 - 566
Sound pressure level (h)	dB(A)	C	44	46	48
Sound pressure level (Silent CDU#2)	dB(A)	C	37	39	40
Sound power level (h)	dB(A)	C	57	59	61
Sound power level ((Silent CDU#2)	dB(A)	C	50	52	53
Operating range	°C	C	-15 ~ 46	-15 ~ 46	-15 ~ 46
Air flow (max)	m³/h - l/s	H	1890 - 524	1950 - 540	2040 - 566
Sound pressure level (h)	dB(A)	H	46	48	50
Sound pressure level (Silent CDU#2)	dB(A)	H	39	43	43
Sound power level (h)	dB(A)	H	59	61	63
Sound power level ((Silent CDU#2)	dB(A)	H	52	56	56
Operating range	°C	H	-15 ~ 24	-15 ~ 24	-15 ~ 24
Dimensions (h x w x d)	mm		550 x 780 x 290	550 x 780 x 290	550 x 780 x 290
Weight	kg		26	30	33
Compressor type			DC Rotary	DC Rotary	DC Rotary
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"
Minimum pipe length	m		2	2	2
Maximum pipe length	m		20	20	20
Maximum height difference	m		12	12	12
Chargeless pipe length	m		15	15	15
Refrigerant charging (R32)	kg		0.55	0.8	0.8
Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50

C: cooling mode
H: heating mode

RAS- PKVPG-E DAISEIKAI 9



The exclusive New Daiseikai 9 is the market benchmark for high efficiency solution. Its new elegant design and higher standards in efficiency and comfort, maximize energy savings, and offer exceptional indoor air quality thanks to its exclusive filtration system.

High Energy Class A+++ / A+++

- Very high energy efficiency class, both in cooling and heating.
- Very low energy consumption in all conditions.
- Wide operating range.

Extremely silent

- Less than 20dB(A) in silent mode.

Indoor air quality with double filtration system

- The Plasma Ion Charger filtration system associated with self-cleaning coil provides a pure and healthy environment.
- The Ionizer System provides pure air by absorbing smoke and bad odors, this function can be activated anytime by pushing the "PURE" button on remote controller.

User friendly wireless remote control with weekly timer

- One-Touch User Comfort parameter pre-set.
- 8°C button for anti-frost during holiday periods.
- Comfort Sleep for extra silence mode.
- 3D airflow control with vertical & horizontal motorized louvers: pre-set directions or automatic sweeping.
- Weekly timer with 4 freely programmable settings per day and 7 different programs per week.
- Capacity booster to reach comfort set point very fast.
- Outdoor unit noise reduction at night.
- Fire place mode with constant fan speed to improve comfort in all conditions.



MAX EFFICIENCY



SEER 10.5
SCOP 5.20

CAPACITY



2.5kW > 4.5kW

OPERATION



-15°C > +46°C

> **Elegant & modern design** with discreet dimming lights changing colors with cooling and heating modes

> **100% Toshiba quality with DC Twin- Rotary inverter compressor**

> **Wifi control ready** with Wifi module accessory integrated in large High wall chassis

> **Exceptional indoor air quality**
Impurities are ionized by the plasma ion charger and absorbed by heat exchanger



INDOOR UNITS

RAS- 10PKVPG-E
RAS- 13PKVPG-E
RAS- 16PKVPG-E



OUTDOOR UNITS

RAS- 10PAVPG-E
RAS- 13PAVPG-E
RAS- 16PAVPG-E



REMOTE CONTROLS

Delivered with the unit

DAISEIKAI 9

DAISEIKAI 9 Performance data

Outdoor unit	Europe		RAS-10PAVPG-E	RAS-13PAVPG-E	RAS-16PAVPG-E
Indoor unit			RAS-10PKVPG-E	RAS-13PKVPG-E	RAS-16PKVPG-E
Cooling capacity	kW		2,5	3,5	4,5
Cooling range (min. - max.)	kW		(0.80 - 3.50)	(0.90 - 4.10)	(0.90 - 5.10)
Power input (min. - rated - max.)	kW	C	(0.15 - 0.45 - 0.82)	(0.18 - 0.75 - 1.00)	(0.18 - 1.08 - 1.38)
Pdesignc	kW		2.5	3.5	4.5
EER	W/W		5.56	4.67	4.17
SEER			10.6	9.5	8.50
Energy efficiency class		C	A+++	A+++	A+++
Seasonal electricity consumption	kWh/a	C	83	129	185
Heating capacity	kW		3.2	4.0	4.5
Heating range (min. - max.)	kW		(0.70 - 5.80)	(0.80 - 6.30)	(0.80 - 6.80)
Power input (min. - rated - max.)	kW	H	(0.15 - 0.60 - 1.55)	(0.17 - 0.80 - 2.00)	(0.17 - 1.37 - 2.05)
Pdesignh (Tbiv-10°C)	kW		3.0	3.6	4.5
COP	W/W		5.33	5.0	4.01
SCOP			5.2	5.1	4.6
Energy efficiency class		H	A+++	A+++	A++
Seasonal electricity consumption	kWh/a	H	807	988	1369

DAISEIKAI 9 Physical data indoor

Indoor unit	Europe		RAS-10PAVPG-E	RAS-13PAVPG-E	RAS-16PAVPG-E
Air Flow (h)	m³/h - l/s	C	690 - 188	710 - 197	730 - 203
Air Flow (l)	m³/h - l/s	C	300 - 83	300 - 83	310 - 86
Sound pressure level (h/q)	dB(A)	C	43/20	44/20	45/22
Sound power level (h)	dB(A)	C	58	59	60
Air Flow (h)	m³/h - l/s	H	720 - 200	720 - 200	740 - 206
Air Flow (l)	m³/h - l/s	H	310 - 83	310 - 86	330 - 91
Sound pressure level (h/q)	dB(A)	H	44/20	45/20	46/22
Sound power level (h)	dB(A)	H	59	60	61
Dimensions (h x w x d)	mm		293 x 851 x 270	293 x 851 x 270	293 x 851 x 270
Weight	kg		14	14	14

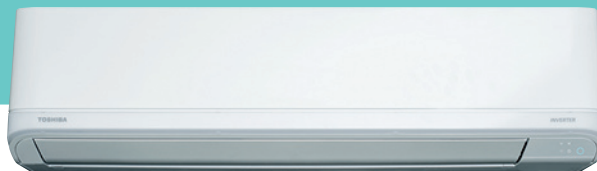
DAISEIKAI 9 Physical data outdoor

Outdoor unit	Europe		RAS-10PKVPG-E	RAS-13PKVPG-E	RAS-16PKVPG-E
Air Flow (max)	m³/h - l/s	C	2160 - 600	2160 - 600	2160 - 600
Sound pressure level (h)	dB(A)	C	46	48	49
Sound pressure level (Silent CDU#2)	dB(A)	C	43	43	44
Sound power level (h)	dB(A)	C	61	63	64
Sound power level (Silent CDU#2)	dB(A)	C	58	58	59
Operating range	°C	C	-15 ~ 46	-15 ~ 46	-15 ~ 46
Air Flow (max)	m³/h - l/s	H	2160 - 600	2160 - 600	2160 - 600
Sound pressure level (h)	dB(A)	H	47	50	50
Sound pressure level (Silent CDU#2)	dB(A)	H	42	45	45
Sound power level (h)	dB(A)	H	62	65	65
Sound power level (Silent CDU#2)	dB(A)	H	57	60	60
Operating range	°C	H	-15 ~ 24	-15 ~ 24	-15 ~ 24
Dimensions (h x w x d)	mm		630 x 800 x 300	630 x 800 x 300	630 x 800 x 300
Weight	kg		38	38	38
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"
Minimum pipe length	m		2	2	2
Maximum pipe length	m		25	25	25
Maximum height difference	m		10	10	10
Chargeless pipe length	m		15	15	15
Remote controller			WH-TA01LE	WH-TA01LE	WH-TA01LE
Refrigerant charging(R32)	kg		1,0	1,0	1,0
Power supply	V-ph-Hz		220-240/1/50	220-240/1/50	220-240/1/50

C: cooling mode
H: heating mode

RAS-J2KVRG-E

SHORAI PREMIUM



The SHORAI Premium combines elegant design and technology for higher standards in efficiency, comfort and energy savings. Benefit from exceptional indoor air quality thanks to the exclusive ionizer filtration system. SHORAI Premium high-walls are compatible with Monosplit & Multisplit outdoor units (B-code).

High energy class A++ / A++

- Very high energy efficiency class, both in heating and cooling.
- Very low energy consumption in all conditions.

Indoor air quality with the Ionizer Filter

- The Ionizer filtration system provides pure air by absorbing smoke and bad odors. This function can be activated anytime by pushing the "PURE" button on the remote controller.
- Associated with Toshiba self-cleaning coil, SHORAI Premium provides a pure and healthy environment.

User friendly wireless remote control with weekly timer

- One-Touch User Comfort parameter pre-set.
- 8°C button for anti-frost during holiday periods.
- Comfort Sleep for extra silence mode.
- 3D airflow control with vertical & horizontal motorized louvers: pre-set directions or automatic sweeping (large chassis only).
- Weekly timer with 4 freely programmable settings per day and 7 different programs per week.
- Capacity booster to reach comfort set point very fast.
- Outdoor unit noise reduction at night.
- Fire place mode with constant fan speed to improve comfort in all conditions.

MAX EFFICIENCY



SEER 7.3
SCOP 4.6

CAPACITY



2.5kW > 7.0kW

OPERATION



-15°C > +46°C

> **Elegant & modern design** with discreet dimming lights changing colors with cooling and heating modes

> **100% Toshiba quality with DC twin-rotary inverter compressor (large chassis)**

> **Wi-Fi control ready** with **Toshiba Home AC Control** adaptor integrated in large high-wall chassis

> **Exceptional indoor air quality**
Impurities are ionized by the filter and absorbed by the heat exchanger



INDOOR UNITS

RAS-B10J2KVRG-E RAS-18J2KVRG-E
RAS-B13J2KVRG-E RAS-B22J2KVRG-E
RAS-B16J2KVRG-E RAS-B24J2KVRG-E



OUTDOOR UNITS

RAS-10J2AVRG-E RAS-18J2AVRG-E
RAS-13J2AVRG-E RAS-22J2AVRG-E
RAS-16J2AVRG-E RAS-24J2AVRG-E



REMOTE CONTROLS

Delivered with the unit

SHORAI PREMIUM

SHORAI PREMIUM R32 Performance data

Outdoor unit			RAS-10J2AVRG-E	RAS-13J2AVRG-E	RAS-16J2AVRG-E	RAS-18J2AVRG-E	RAS-22J2AVRG-E	RAS-24J2AVRG-E
Indoor unit			RAS-B10J2KVRG-E	RAS-B13J2KVRG-E	RAS-B16J2KVRG-E	RAS-B18J2KVRG-E	RAS-B22J2KVRG-E	RAS-B24J2KVRG-E
Cooling capacity	kW		2.5	3.5	4.6	5.0	6.1	7.0
Cooling range (min. - max.)	kW		0.75 - 3.2	0.8 - 4.1	1.2 - 5.3	1.24 - 6.0	1.29 - 6.7	1.5 - 7.7
Power input (min. - rated - max.)	kW	C	(0.17 - 0.6 - 0.82)	(0.18 - 1.05 - 1.25)	(0.23 - 1.4 - 1.72)	(0.23 - 1.42 - 2.00)	(0.24 - 1.99 - 2.20)	(0.30 - 2.25 - 2.55)
Pdesigngc	kW		2.5	3.5	4.6	5.0	6.1	7.0
EER	W/W		4.17	3.33	3.29	3.52	3.07	3.11
SEER			6.9	6.5	6.5	7.3	6.8	6.25
Energy efficiency class		C	A++	A++	A++	A++	A++	A++
Seasonal electricity consumption	kWh/a	C	127	189	248	240	314	392
Heating capacity	kW		3.2	4.2	5.5	6.0	7.0	8.0
Heating range (min. - max.)	kW		0.9 - 4.8	0.8 - 5.3	0.9 - 6.5	0.88 - 6.5	0.93 - 7.5	1.6 - 8.8
Power input (min. - rated - max.)	kW	H	(0.17 - 0.75 - 1.40)	(0.15 - 1.08 - 1.55)	(0.17 - 1.52 - 1.82)	(0.16 - 1.60 - 1.75)	(0.19 - 1.94 - 2.10)	(0.30 - 2.41 - 2.75)
Pdesignnh	kW		2.5	3.2	4.0	4.3	4.7	6.3
COP	W/W		4.27	3.89	3.62	3.75	3.61	3.32
SCOP			4.6	4.6	4.2	4.4	4.4	4.07
Energy efficiency class		H	A++	A++	A+	A+	A+	A+
Seasonal electricity consumption	kWh/a	H	761	974	1335	1368	1495	2166

SHORAI PREMIUM Physical data indoor

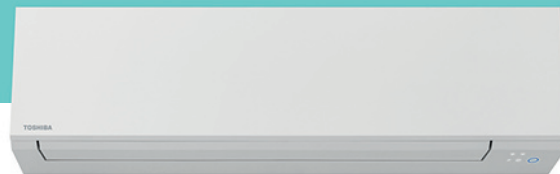
Indoor unit			RAS-B10J2KVRG-E	RAS-B13J2KVRG-E	RAS-B16J2KVRG-E	RAS-B18J2KVRG-E	RAS-B22J2KVRG-E	RAS-B24J2KVRG-E
Air Flow (h)	m³/h - l/s	C	564 - 156	624 - 173	750 - 208	950 - 264	984 - 273	1074 - 298
Air Flow (l)	m³/h - l/s	C	240 - 67	300 - 83	330 - 92	535 - 149	622 - 173	664 - 184
Sound pressure level (h/a)	dB(A)	C	38/22	39/22	43/24	44/26	45/27	47/28
Sound power level (h)	dB(A)	C	53	54	58	59	60	62
Air Flow (h)	m³/h - l/s	H	600 - 167	636 - 176	768 - 213	950 - 264	984 - 273	1128 - 313
Air Flow (l)	m³/h - l/s	H	252 - 70	320 - 89	348 - 97	499 - 139	606 - 168	738 - 205
Sound pressure level (h/a)	dB(A)	H	39/23	39/23	43/25	44/26	46/27	48/28
Sound power level (h)	dB(A)	H	54	54	58	59	61	63
Dimensions (h x w x d)	mm		293 x 798 x 241	293 x 798 x 241	293 x 798 x 241	320 x 1050 x 265	320 x 1050 x 265	320 x 1050 x 265
Weight	kg		9	9	9	15	15	15
Remote controller			WH-TB03LE	WH-TB03LE	WH-TB03LE	WH-TB01LE	WH-TB01LE	WH-TB01LE

SHORAI PREMIUM Physical data outdoor

Outdoor unit			RAS-10J2AVRG-E	RAS-13J2AVRG-E	RAS-16J2AVRG-E	RAS-18J2AVRG-E	RAS-22J2AVRG-E	RAS-24J2AVRG-E
Air Flow (max)	m³/h - l/s	C	1668 - 463	1980 - 550	2040 - 566	2076 - 576	2184 - 607	2916 - 810
Sound pressure level (h)	dB(A)	C	46	48	49	49	53	53
Sound power level (h)	dB(A)	C	61	63	64	64	68	68
Operating range	°C	C	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46
Air Flow (max)	m³/h - l/s	H	1668 - 463	1980 - 550	2160 - 600	1914 - 532	2184 - 607	2916 - 810
Sound pressure level (h)	dB(A)	H	47	50	52	50	52	53
Sound power level (h)	dB(A)	H	62	65	67	65	67	68
Operating range	°C	H	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24
Dimensions (h x w x d)	mm		550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	630 x 800 x 300
Weight	kg		28	34	34	34	34	43
Compressor type			DC Rotary	DC Rotary	DC Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"	1/2" - 1/4"	1/2" - 1/4"	1/2" - 1/4"
Minimum pipe length	m		2	2	2	2	2	2
Maximum pipe length	m		20	20	20	20	20	25
Maximum height difference	m		12	12	12	12	12	15
Chargeless pipe length	m		15	15	15	15	15	15
Refrigerant charging(R32)	kg		0.51	0.67	0.8	1.1	1.1	1.14
Power supply	V-ph-Hz		230-1-50	230-1-50	230-1-50	230-1-50	230-1-50	230-1-50

C: cooling mode
H: heating mode

RAS-J2KVSG-E SHORAI EDGE



SHORAI Edge, a fresh take on design and performance, benefits from Toshiba's latest innovative inverter and compressor technology. It is designed to deliver high performance, making everyday comfort a reality for all. SHORAI Edge offers energy efficient A+++ cooling and heating performances, with R32 refrigerant. Compatible with Monosplit & Multisplit outdoor units (B-codes).

High energy class A+++ / A+++

- Heating and cooling modes ensure exceptional energy savings and unparalleled comfort levels.

Absolute silent operation

- SHORAI Edge's Silent function halves the sound level of the outdoor unit, while its Quiet function reduces noise from the indoor unit for a good night's sleep.

Indoor Air Quality

- The new Toshiba Ultra Pure Filter captures up to 94% of PM2.5 (particulate matters coming from atmospheric pollution), creating healthy living spaces at home.
- SHORAI Edge is equipped with the Magic Coil® which helps prevent water and dust from sticking to the coil. When the air conditioning is switched off to drain the contaminated coil, the fan continues to operate to keep the coil clean and dry whilst preserving the air conditioning high energy efficiency.

User friendly wireless remote control with weekly timer

- HADA-CARE to set louver position to generate indirect air flow for better air distribution to homogenize room temperature.
- Quiet mode for Comfort Sleep operating indoor at the lowest noise level
- Silent CDU is Toshiba's unique noise reduction function of outdoor unit for neighborhood comfort.
- Hi Power capacity booster to reach comfort set point very fast.
- OFF timer provides a very convenient automatic programmable stop function.
- On-demand Defrost for manual defrost at any time in extreme conditions.

MAX EFFICIENCY



SEER 8.6
SCOP 5.1

CAPACITY



2.0kW > 8.0kW

OPERATION



-15°C > +46°C

> **Modern edge design** with discreet dimming lights

> **100% Toshiba quality with DC rotary inverter compressor**

> **Wi-Fi control ready** with **Toshiba Home AC Control** adaptor inside FCU

> **Silent modes** with indoor unit Quiet mode & Silent outdoor unit function



INDOOR UNITS

RAS-B07J2KVSG-E RAS-18J2KVSG-E
RAS-B10J2KVSG-E RAS-B22J2KVSG-E
RAS-B13J2KVSG-E RAS-B24J2KVSG-E
RAS-B16J2KVSG-E



OUTDOOR UNITS

RAS-07J2AVSG-E RAS-18J2AVSG-E
RAS-10J2AVSG-E1 RAS-22J2AVSG-E
RAS-13J2AVSG-E1 RAS-24J2AVSG-E
RAS-16J2AVSG-E1



REMOTE CONTROLS

Delivered with the unit

SHORAI EDGE R32 Performance data

Outdoor unit		RAS-07J2AVSG-E		RAS-10J2AVSG-E		RAS-13J2AVSG-E		RAS-16J2AVSG-E		RAS-18J2AVSG-E		RAS-22J2AVSG-E		RAS-24J2AVSG-E	
Indoor unit		RAS-B07J2KVSG-E		RAS-B10J2KVSG-E		RAS-B13J2KVSG-E		RAS-B16J2KVSG-E		RAS-B18J2KVSG-E		RAS-B22J2KVSG-E		RAS-B24J2KVSG-E	
Cooling capacity	kW	2,0		2,5		3,5		4,6		5,0		6,1		7,0	
Cooling range (min. - max.)	kW	(0.89 - 2.90)		(0.89 - 3.20)		(1.00 - 4.10)		(1.20 - 5.30)		(1.20 - 6.00)		(1.39 - 6.70)		(1.70 - 7.70)	
Power input (min. - rated - max.)	kW C	(0.19 - 0.39 - 0.67)		(0.19 - 0.54 - 0.79)		(0.25 - 0.90 - 1.12)		(0.34 - 1.35 - 1.72)		(0.35 - 1.42 - 2.00)		(0.36 - 1.99 - 2.20)		(0.38 - 2.25 - 2.55)	
Pdesigngc	kW	2.0		2.5		3.5		4.6		5.0		6.1		7.0	
EER	W/W	5.13		4.63		3.89		3.41		3.52		3.07		3.11	
SEER		8.5		8.6		8.6		7.8		7.3		7.3		6.3	
Energy efficiency class	C	A+++		A+++		A+++		A++		A++		A++		A++	
Seasonal electricity consumption	kWh/a C	82		102		142		206		242		292		389	
Heating capacity	kW	2.5		3.2		4.2		5.5		6.0		7.0		8.0	
Heating range (min. - max.)	kW	(0.90 - 3.60)		(0.90 - 4.80)		(1.00 - 5.30)		(1.10 - 6.50)		(1.10 - 6.50)		(1.15 - 7.50)		(1.70 - 8.80)	
Power input (min. - rated - max.)	kW H	(0.16 - 0.50 - 0.80)		(0.16 - 0.70 - 1.23)		(0.20 - 1.08 - 1.55)		(0.24 - 1.52 - 1.90)		(0.25 - 1.59 - 1.75)		(0.26 - 1.88 - 2.10)		(0.29 - 2.35 - 2.75)	
Pdesigngh	kW	2.3		2.5		3.2		4.00		4.3		4.7		6.3	
COP	W/W	5.00		4.57		3.89		3.62		3.77		3.72		3.40	
SCOP		5.1		5.1		5.1		4.6		4.6		4.6		4.1	
Energy efficiency class	H	A+++		A+++		A+++		A++		A++		A++		A+	
Seasonal electricity consumption	kWh/a H	631		686		878		1217		1309		1430		2149	

SHORAI EDGE R32 Physical data indoor

Indoor unit		RAS-B07J2KVSG-E		RAS-B10J2KVSG-E		RAS-B13J2KVSG-E		RAS-B16J2KVSG-E		RAS-B18J2KVSG-E		RAS-B22J2KVSG-E		RAS-B24J2KVSG-E	
Air flow (h)	m³/h - l/s C	660 - 183		660 - 183		732 - 203		750 - 208		990 - 274		1032 - 286		1122 - 311	
Air flow (l)	m³/h - l/s C	312 - 86		312 - 86		342 - 95		360 - 100		570 - 158		690 - 191		720 - 199	
Sound pressure level (h/a)	dB(A) C	40/19		40/19		43/19		44/21		44/26		45/27		47/28	
Sound power level (h)	dB(A) C	53		53		56		57		57		58		60	
Air flow (h)	m³/h - l/s H	660 - 183		660 - 183		732 - 203		768 - 213		990 - 274		1080 - 299		1140 - 316	
Air flow (l)	m³/h - l/s H	312 - 86		312 - 86		342 - 95		360 - 100		570 - 158		690 - 191		750 - 208	
Sound pressure level (h/a)	dB(A) H	40/19		40/19		43/19		44/22		44/26		46/27		48/28	
Sound power level (h)	dB(A) H	53		53		56		57		57		59		61	
Dimensions (hwxwd)	mm	293 x 800 x 226		293 x 800 x 226		293 x 800 x 226		293 x 800 x 226		320 x 1053 x 245		320 x 1053 x 245		320 x 1053 x 245	
Weight	kg	10		10		10		10		14		14		14	
Remote controller		WH-TA15PE		WH-TA15PE		WH-TA15PE		WH-TA15PE		WH-TA12PE		WH-TA12PE		WH-TA12PE	

SHORAI EDGE R32 Physical data outdoor

Outdoor unit		RAS-07J2AVSG-E		RAS-10J2AVSG-E		RAS-13J2AVSG-E		RAS-16J2AVSG-E		RAS-18J2AVSG-E		RAS-22J2AVSG-E		RAS-24J2AVSG-E	
Air flow (max)	m³/h - l/s C	1890 - 524		1890 - 524		1950 - 540		2040 - 566		2076 - 576		2184 - 607		2916 - 810	
Sound pressure level (h)	dB(A) C	44		44		46		48		48		49		50	
Sound pressure level (Silent CDU#2)	dB(A) C	36		37		39		40		42		43		43	
Sound power level (h)	dB(A) C	57		57		59		61		63		62		63	
Sound power level (Silent CDU#2)	dB(A) C	49		50		52		53		55		56		56	
Operating range	°C C	-15 ~ 46		-15 ~ 46		-15 ~ 46		-15 ~ 46		-15 ~ 46		-15 ~ 46		-15 ~ 46	
Air flow (max)	m³/h - l/s H	1890 - 524		1890 - 524		1950 - 540		2040 - 566		2076 - 576		2184 - 607		2916 - 810	
Sound pressure level (h)	dB(A) H	46		46		48		50		50		51		52	
Sound pressure level (Silent CDU#2)	dB(A) H	38		39		43		43		44		46		46	
Sound power level (h)	dB(A) H	59		59		61		63		63		64		65	
Sound power level (Silent CDU#2)	dB(A) H	51		52		56		56		57		59		59	
Operating range	°C H	-15 ~ 24		-15 ~ 24		-15 ~ 24		-15 ~ 24		-15 ~ 24		-15 ~ 24		-15 ~ 24	
Dimensions (hwxwd)	mm	550 x 780 x 290		550 x 780 x 290		550 x 780 x 290		550 x 780 x 290		550 x 780 x 290		550 x 780 x 290		630 x 800 x 300	
Weight	kg	26		26		30		33		34		34		42	
Compressor type		DC Rotary		DC Rotary		DC Rotary		DC Rotary		DC Twin Rotary		DC Twin Rotary		DC Twin Rotary	
Flare connections (gas-liquid)		3/8" - 1/4"		3/8" - 1/4"		3/8" - 1/4"		1/2" - 1/4"		1/2" - 1/4"		1/2" - 1/4"		1/2" - 1/4"	
Minimum pipe length	m	2		2		2		2		2		2		2	
Maximum pipe length	m	20		20		20		20		20		20		25	
Maximum height difference	m	12		12		12		12		12		12		15	
Chargeless pipe length	m	15		15		15		15		15		15		15	
Refrigerant charge (R32)	kg	0.55		0.55		0.8		0.8		1.1		1.1		1.14	
Power supply	V-ph-Hz	230-1-50		230-1-50		230-1-50		230-1-50		230-1-50		230-1-50		230-1-50	

C: cooling mode
H: heating mode

RAS-E2KVG-E

SEIYA



SEIYA, "Silent night" in Japanese, is a silent solution that uses the new Toshiba Inverter and compressor technologies with R32 to offer A++ cooling and heating performances, leading to true energy savings and year-round comfort.

Compatible with Monosplit & Multisplit outdoor units (B-codes).

High Energy Class A++ / A++

- A unique performance/price ratio that allows optimal comfort and extra-low energy consumption in both cooling and heating mode.

Extremely silent operation

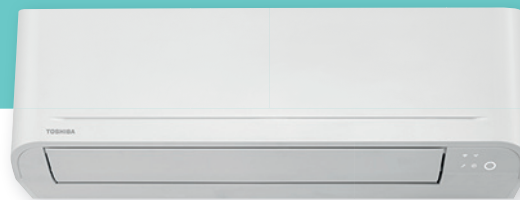
- SEIYA's Silent function halves the sound level of the outdoor unit, while its Quiet function reduces noise from the indoor unit for a good night's sleep.

Indoor Air Quality

- SEIYA is equipped with the Ultra Fresh filter® that captures up to 85% of PM2.5, protecting from atmospheric pollution and creating healthy living spaces at home.
- The Magic Coil® which helps prevent water and dust from sticking to the coil. When the air conditioning is switched off to drain the contaminated coil, the fan continues to operate to keep the coil clean and dry whilst preserving the air conditioning high energy efficiency.

User friendly remote control with weekly timer

- Quiet mode for Comfort Sleep operating indoor at the lowest noise level.
- Silent CDU is Toshiba's unique noise reduction function of outdoor unit for neighborhood comfort.
- High Power capacity booster to reach comfort set point very fast.
- ON-OFF timer provides a very convenient automatic programmable stop function.
- On-demand Defrost for manual defrost at any time in extreme conditions.



MAX EFFICIENCY



SEER 7.0
SCOP 4.6

CAPACITY



1.5kW > 6.5kW

OPERATION



-15°C > +46°C

> **Elegant & modern design** with discreet dimming lights

> **100% Toshiba quality with DC rotary inverter compressor**

> **Wi-Fi control ready with Toshiba Home AC Control** adaptor

> **Silent modes** with indoor unit Quiet mode & Silent outdoor unit function

> **Wireless function** which allows to wire the remote to the indoor unit



INDOOR UNITS

RAS-B05E2KVG-E
RAS-B07E2KVG-E
RAS-B10E2KVG-E
RAS-B13E2KVG-E
RAS-B16E2KVG-E
RAS-18E2KVG-E
RAS-24E2KVG-E



OUTDOOR UNITS

RAS-05E2AVG-E
RAS-07E2AVG-E
RAS-10E2AVG-E
RAS-13E2AVG-E
RAS-16E2AVG-E
RAS-18E2AVG-E
RAS-24E2AVG-E



REMOTE CONTROLS

Delivered with the unit



OPTIONAL RC

RB-RXS33-E
Optional weekly timer
Remote control

SEIYA- R32 Performance data

Outdoor unit	Europe	RAS-05E2AVG-E	RAS-07E2AVG-E	RAS-10E2AVG-E	RAS-13E2AVG-E	RAS-16E2AVG-E	RAS-18E2AVG-E	RAS-24E2AVG-E
Indoor unit		RAS-B05E2KVG-E	RAS-B07E2KVG-E	RAS-B10E2KVG-E	RAS-B13E2KVG-E	RAS-B16E2KVG-E	RAS-18E2KVG-E	RAS-24E2KVG-E
Cooling capacity	kW	1.5	2.0	2.5	3.3	4.2	5.0	6.5
Cooling range (min. - max.)	kW	(0.75 - 2.00)	(0.76 - 2.60)	(0.80 - 3.00)	(1.20 - 3.60)	(1.40 - 4.70)	(1.45 - 5.50)	(1.7 - 7.2)
Power input (min. -rated - max.)	kW C	(0.20 - 0.36 - 0.57)	(0.20 - 0.53 - 0.83)	(0.20 - 0.70 - 1.00)	(0.25 - 1.10 - 1.25)	(0.34 - 1.27 - 1.60)	(0.34 - 1.50 - 1.80)	(0.41 - 2.25 - 2.60)
Pdesignc	kW	1.5	2.0	2.5	3.3	4.2	5.0	6.5
EER	W/W	4.17	3.77	3.57	3.00	3.31	3.33	2.89
SEER		6.9	6.9	7.0	7.0	7.0	7.0	6.9
Energy efficiency class	C	A++	A++	A++	A++	A++	A++	A++
Seasonal electricity consumption	kWh/a C	76	101	125	165	210	250	330
Heating capacity	kW	2.0	2.5	3.2	3.6	5.0	5.4	7.0
Heating range (min. - max.)	kW	(0.8 - 3.00)	(0.82 - 3.30)	(0.95 - 3.90)	(0.97 - 4.50)	(1.30 - 6.00)	(1.35 - 6.00)	(1.5 - 8.1)
Power input (min. -rated - max.)	kW H	(0.16 - 0.47 - 0.85)	(0.16 - 0.64 - 0.94)	(0.18 - 0.86 - 1.11)	(0.18 - 0.92 - 1.25)	(0.24 - 1.34 - 1.70)	(0.26 - 1.50 - 1.80)	(0.29 - 2.10 - 2.55)
Pdesignh (Tbiv-7°C)	kW	1.6	2.0	2.4	2.7	3.6	3.8	5.4
COP	W/W	4.26	3.91	3.72	3.91	3.73	3.60	3.33
SCOP		4.6	4.6	4.6	4.6	4.6	4.4	4.3
Energy efficiency class	H	A++	A++	A++	A++	A++	A+	A+
Seasonal electricity consumption	kWh/a H	487	609	730	822	1095	1209	1757
SCOP (warm climate)		5.20	5.34	5.38	5.40	5.57	5.62	5.35
Energy efficiency class (warm climate)		A+++	A+++	A+++	A+++	A+++	A+++	A+++

SEIYA- R32 Physical data indoor

Indoor unit	Europe	RAS-B05E2KVG-E	RAS-B07E2KVG-E	RAS-B10E2KVG-E	RAS-B13E2KVG-E	RAS-B16E2KVG-E	RAS-18E2KVG-E	RAS-24E2KVG-E
Air flow (h)	m³/h - l/s C	480 - 134	500 - 140	510 - 142	540 - 152	750 - 208	790 - 222	1070 - 298
Air flow (l)	m³/h - l/s C	199 - 55	209 - 58	233 - 64	259 - 72	330 - 92	480 - 133	666 - 185
Sound pressure level (h/a)	dB(A) C	37/19	38/19	39/19	41/20	43/21	47/26	48/29
Sound power level (h)	dB(A) C	50	51	52	54	56	60	61
Air flow (h)	m³/h - l/s H	480 - 134	500 - 140	510 - 144	560 - 158	760 - 213	840 - 233	860 - 234
Air flow (l)	m³/h - l/s H	199 - 55	209 - 58	233 - 64	271 - 75	340 - 94	500 - 139	730 - 203
Sound pressure level (h/a)	dB(A) H	37/19	38/19	39/20	42/20	43/22	48/26	48/29
Sound power level (h)	dB(A) H	50	51	52	55	56	61	61
Dimensions (hwxwd)	mm	288 x 770 x 225	288 x 770 x 225	288 x 770 x 225	288 x 770 x 225	293 x 798 x 230	293 x 798 x 230	320 x 1050 x 250
Weight	kg	9	9	9	9	9	9	15

SEIYA- R32 Physical data outdoor

Outdoor unit	Europe	RAS-05E2AVG-E	RAS-07E2AVG-E	RAS-10E2AVG-E	RAS-13E2AVG-E	RAS-16E2AVG-E	RAS-18E2AVG-E	RAS-24E2AVG-E
Air flow (max)	m³/h - l/s C	1690 - 470	1800 - 500	1800 - 500	1980 - 550	2160 - 600	2160 - 600	2220 - 617
Sound pressure level (h)	dB(A) C	47	47	47	48	50	50	54
Sound pressure level (Silent CDU#2)	dB(A) C	42	42	43	43	43	44	49
Sound power level (h)	dB(A) C	60	60	60	61	63	63	67
Sound power level (Silent CDU#2)	dB(A) C	55	55	56	56	56	57	62
Operating range	°C C	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46	-15 ~ 46
Air flow (max)	m³/h - l/s H	1690 - 470	1800 - 500	1800 - 500	1980 - 550	2160 - 600	2160 - 600	2220 - 617
Sound pressure level (h)	dB(A) H	48	49	49	49	51	51	54
Sound pressure level (Silent CDU#2)	dB(A) H	42	42	43	43	46	46	49
Sound power level (h)	dB(A) H	61	62	62	62	64	64	67
Sound power level (Silent CDU#2)	dB(A) H	55	55	56	56	59	59	62
Operating range	°C H	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15-24	-15-24	-15-24
Dimensions (hwxwd)	mm	530 x 660 x 240	530 x 660 x 240	530 x 660 x 240	530 x 660 x 240	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290
Weight	kg	21	21	22	22	30	34	38
Compressor type		DC Rotary	DC Rotary	DC Rotary	DC Rotary	DC Rotary	DC Rotary	DC Twin Rotary
Flare connections (gas-liquid)		3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"	1/2" - 1/4"	1/2" - 1/4"
Minimum pipe length	m	2	2	2	2	2	2	2
Maximum pipe length	m	15	15	15	15	20	20	20
Maximum height difference	m	12	12	12	12	12	12	12
Chargeless pipe length	m	15	15	15	15	15	15	15
Remote controller		WH-TG01NE	WH-TG01NE	WH-TG01NE	WH-TG01NE	WH-TG01NE	WH-TG01NE	WH-TG01NE
Refrigerant charge (R32)	kg	0.34	0.34	0.49	0.54	0.68	0.93	1.18
Power supply	V-ph-Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50

C: cooling mode
H: heating mode

RAS-J2FVG-E CONSOLE



This innovative and compact unit has been designed to be installed on the floor and in low wall applications, fitting perfectly under the window sills or in a low ceiling attic. The Console is compatible with Monosplit & Multisplit condensing units (B-code). Compact and modern design in all three dimensions (H600 x L700 x D220 cm).

Energy efficiency class A++ / A++

- High energy efficiency class in cooling.
- Low energy consumption in all conditions.

Bi-flow air diffusion system

- This feature enables users to select the favorable air flow outlet between the two available positions at the top and bottom front of the unit.
- The unique floor heating function, allows the unit to deliver a powerful flow at floor level for a uniform and comfortable room heating.

Toshiba Indoor Air Quality filtration system

- Toshiba IAQ's technology is able to seriously inhibit the reproductive ability of harmful elements. Its deodorizing power absorbs and decomposes, smoke, food smells and bad odors.
- Toshiba's new self-cleaning function is designed to reduce the humidity that causes mould to form inside an air-conditioning unit. This advanced, efficient system reduces moisture in the coils for healthier air to breathe.

User friendly wireless remote control with weekly timer

- Child-lock function on the unit display panel.
- Brightness level control of the display unit to reduce the led light glow.
Automatic restart function in case of unexpected electricity supply line power cuts.
- Standard Toshiba functions: Weekly timer 24h, Power select, 8°C.



MAX EFFICIENCY



SEER 7.20
SCOP 4.7

CAPACITY



2.5kW > 5.0kW

OPERATION



-15°C > +46°C

> B-code for Mono & Multi compatibility

> 100% Toshiba quality with DC Twin Rotary inverter compressor on large chassis

> Wifi control compatible

> Toshiba Indoor Air Quality filters

> Floor warming

> Silent CDU mode

> Fire place mode

> On demand defrost



INDOOR UNITS

RAS-B10J2FVG-E
RAS-B13J2FVG-E
RAS-B18J2FVG-E



OUTDOOR UNITS

RAS-10J2AVSG-E1
RAS-13J2AVSG-E1
RAS-18J2AVSG-E



REMOTE CONTROLS

WH-TA12LE
delivered with the unit

CONSOLE

CONSOLE Performance data

Outdoor unit		RAS-10J2AVSG-E1		RAS-13J2AVSG-E1		RAS-18J2AVSG-E	
Indoor unit		RAS-B10J2FVG-E		RAS-B13J2FVG-E		RAS-B18J2FVG-E	
Cooling capacity	kW	2,5		3,5		5,0	
Cooling range (min. - max.)	kW	0.95 - 3.2		1.05 - 4.1		1.2 - 5.6	
Power input (min. - rated - max.)	kW	C	0.21 - 0.59 - 0.90	0.27 - 0.87 - 1.20		0.34 - 1.68 - 2.00	
Pdesignc	kW	2.5		3.5		5.0	
EER	W/W	4.24		4.02		2.98	
SEER		7.2		7.0		6.8	
Energy efficiency class		C	A++	A++		A++	
Seasonal electricity consumption	kWh/a	C	121	174		257	
Heating capacity	kW	3.2		4.2		6.0	
Heating range (min. - max.)	kW	0.85 - 4.40		1.0 - 5.0		1.3 - 6.3	
Power input (min. - rated - max.)	kW	H	0.18 - 0.82 - 1.25	0.22 - 1.27 - 1.55		0.31 - 2.05 - 2.20	
Pdesignh	kW	2.5		3.0		4.0	
COP	W/W	3.90		3.31		2.93	
SCOP		4.7		4.7		4.6	
Energy efficiency class		H	A++	A++		A++	
Seasonal electricity consumption	kWh/a	H	744	893		1217	

CONSOLE Physical data indoor

Indoor unit		RAS-B10J2FVG-E		RAS-B13J2FVG-E		RAS-B18J2FVG-E	
Air Flow (h)	m³/h - l/s	C	492 - 136	528 - 146		600 - 166	
Air Flow (l)	m³/h - l/s	C	258 - 71	270 - 75		366 - 101	
Sound pressure level (h/q)	dB(A)	C	39/23	40/24		46/31	
Sound power level (h)	dB(A)	C	52	53		59	
Air Flow (h)	m³/h - l/s	H	492 - 136	552 - 153		660 - 183	
Air Flow (l)	m³/h - l/s	H	258 - 71	288 - 80		366 - 101	
Sound pressure level (h/q)	dB(A)	H	39/23	40/24		47/31	
Sound power level (h)	dB(A)	H	52	53		60	
Dimensions (h x w x d)	mm		600 x 700 x 220	600 x 700 x 220		600 x 700 x 220	
Weight	kg		16	16		16	

CONSOLE Physical data outdoor

Outdoor unit		RAS-10J2AVSG-E1		RAS-13J2AVSG-E1		RAS-18J2AVSG-E	
Air Flow (max)	m³/h - l/s	C	1890 - 524	1950 - 540		2076 - 576	
Sound pressure level (h)	dB(A)	C	45	47		49	
Sound pressure level (Silent CDU#2)	dB(A)	C	38	40		43	
Sound power level (h)	dB(A)	C	58	60		62	
Sound power level (Silent CDU#2)	dB(A)	C	51	53		56	
Operating range	°C	C	-15 ~ 46	-15 ~ 46		-15 ~ 46	
Air Flow (max)	m³/h - l/s	H	1890 - 524	1950 - 540		2076 - 576	
Sound pressure level (h)	dB(A)	H	47	49		51	
Sound pressure level (Silent CDU#2)	dB(A)	H	40	43		45	
Sound power level (h)	dB(A)	H	60	62		64	
Sound power level (Silent CDU#2)	dB(A)	H	53	57		58	
Operating range	°C	H	-15 ~ 24	-15 ~ 24		-15 ~ 24	
Dimensions (h x w x d)	mm		550 x 780 x 290	550 x 780 x 290		550 x 780 x 290	
Weight	kg		26	30		34	
Compressor type			DC Rotary	DC Rotary		DC Twin Rotary	
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"		1/2" - 1/4"	
Minimum pipe length	m		2	2		2	
Maximum pipe length	m		20	20		20	
Maximum height difference	m		12	12		12	
Chargeless pipe length	m		15	15		15	
Refrigerant charging(R32)	kg		0.55	0.8		1.10	
Power supply	V-ph-Hz		230-1-50	230-1-50		230-1-50	

C: cooling mode
H: heating mode

CHOOSE YOUR ADAPTED SYSTEM SOLUTION



		MULTISPLIT INDOOR UNITS							
Indoor Units sizes		05	07	10	13	16	18	22	24
Indoor Units cooling capacity		1.5 kW	2.0 kW	2.5 kW	3.5 kW	4.5 kW	5.0 kW	6.0 kW	7.0 kW
Hi-wall - DAISEIKAI 9 RAS-M**PKVPG-E/TR				●	●	●			
Hi-wall - HAORI RAS-B**N4KVRG-E/TR			●	●	●	●			
Hi-wall - SHORAI Edge RAS-B**J2KVSG-E/TR		●	●	●	●	●		●	●
Hi-wall - SEIYA RAS-B**E2KVG-E/TR		●	●	●	●	●			
Console RAS-B**J2FVG-E/TR				●	●		●		
New Compact Cassette RAS-M**U2MUVG-E/TR				●	●	●			
Ducted RAS-M**U2DVG-E1/TR			●	●	●	●		●	●

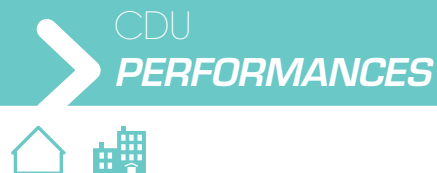
• : Indoor units available sizes

		MULTISPLIT OUTDOOR							
Outdoor Units sizes		05	07	10	13	16	18	22	24
Outdoor units Cooling capacity		1.5 kW	2.0 kW	2.5 kW	3.5 kW	4.5 kW	5.0 kW	6.0 kW	7.0 kW
2 Rooms RAS-2M10U2AVG-E/TR CDU Cooling capacity: 3.3 kW		•	•	•					
2 Rooms RAS-2M14U2AVG-E/TR CDU Cooling capacity: 4.0 kW		•	•	•	•				
2 Rooms RAS-2M18U2AVG-E/TR CDU Cooling capacity: 5.2 kW		•	•	•	•	•			
3 Rooms RAS-3M18U2AVG-E/TR CDU Cooling capacity: 5.2 kW		•	•	•	•	•			
3 Rooms RAS-3M26U2AVG-E/TR CDU Cooling capacity: 7.5 kW		•	•	•	•	•	•	•	•
4 Rooms RAS-4M27U2AVG-E/TR CDU Cooling capacity: 8.0 kW		•	•	•	•	•	•	•	•
5 Rooms RAS-5M34U2AVG-E/TR CDU Cooling capacity: 10.0 kW		•	•	•	•	•	•	•	•

• : Indoor units sizes compatibility with outdoor units

COMPATIBILITIES	2 ROOMS			3 ROOMS		4 ROOMS	5 ROOMS
	RAS-2M10U2AVG-E/TR	RAS-2M14U2AVG-E/TR	RAS-2M18U2AVG-E/TR	RAS-3M18U2AVG-E/TR	RAS-3M26U2AVG-E/TR	RAS-4M27U2AVG-E/TR	RAS-5M34U2AVG-E/TR
IDU sizes							
05	•	•	•	•	•	•	•
07	•	•	•	•	•	•	•
10	•	•	•	•	•	•	•
13		•	•	•	•	•	•
16			•	•	•	•	•
18					•	•	•
22					•	•	•
24					•	•	•

• : compatibilities



Performance data

Outdoor unit		2-room Multisplit RAS-2M10U2AVG-E RAS-2M10U2AVG-TR	2-room Multisplit RAS-2M14U2AVG-E RAS-2M14U2AVG-TR	2-room Multisplit RAS-2M18U2AVG-E RAS-2M18U2AVG-TR	3-room Multisplit RAS-3M18U2AVG-E RAS-3M18U2AVG-TR	3-room Multisplit RAS-3M26U2AVG-E RAS-3M26U2AVG-TR	4-room Multisplit RAS-4M27U2AVG-E RAS-4M27U2AVG-TR	5-room Multisplit RAS-5M34U2AVG-E RAS-5M34U2AVG-TR
Cooling capacity	kW	3.3	4.0	5.2	5.2	7.5	8.0	10.0
Cooling capacity (min. - max.)	kW	1.25 - 3.9	1.6 - 4.9	1.7 - 6.2	2.4 - 6.5	4.1 - 9.0	4.2 - 9.3	3.7 - 11.0
Power input	kW C	0.76	0.92	1.34	1.17	2.00	2.29	2.98
EER	W/W	4.35	4.35	3.88	4.44	3.75	3.50	3.36
SEER		6.73	6.73	6.90	6.8	6.19	6.11	6.31
Energy efficiency class	C	A++	A++	A++	A++	A++	A++	A++
Heating capacity	kW	4.0	4.4	5.6	6.8	9.0	9.0	12.0
Heating capacity (min. - max.)	kW	1.00 - 4.90	1.30 - 5.20	1.30 - 7.50	1.90 - 8.00	2.0 - 11.2	2.9 - 11.7	2.7 - 14.0
Power input	kW H	0.81	0.89	1.19	1.58	2.20	1.93	2.83
COP	W/W	4.94	4.94	4.71	4.30	4.09	4.67	4.24
SCOP		4.60	4.60	4.60	4.60	4.44	4.26	4.08
Energy efficiency class	H	A++	A++	A++	A++	A+	A+	A+

Physical data outdoor

Outdoor unit		2-room Multisplit RAS-2M10U2AVG-E RAS-2M10U2AVG-TR	2-room Multisplit RAS-2M14U2AVG-E RAS-2M14U2AVG-TR	2-room Multisplit RAS-2M18U2AVG-E RAS-2M18U2AVG-TR	3-room Multisplit RAS-3M18U2AVG-E RAS-3M18U2AVG-TR	3-room Multisplit RAS-3M26U2AVG-E RAS-3M26U2AVG-TR	4-room Multisplit RAS-4M27U2AVG-E RAS-4M27U2AVG-TR	5-room Multisplit RAS-5M34U2AVG-E RAS-5M34U2AVG-TR
Air flow	m³/h - l/s C	1863-517	1863-517	2107-585	2177-605	2507-696	2507-696	3245-901
Sound pressure level	dB(A) C	45	45	47	49	48	48	52
Sound power level	dB(A) C	58	58	60	62	63	63	66
Operating range	°C C	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46
Air flow	m³/h - l/s H	1863-517	1863-517	2038-566	2107-585	2507-696	2507-696	3666-1018
Sound pressure level	dB(A) H	46	46	50	50	49	49	55
Sound power level	dB(A) H	59	59	63	63	64	64	68
Operating range	°C H	-20/24	-20/24	-20/24	-20/24	-15/24	-15/24	-15/24
Dimensions (HxWxD)	mm	630 x 800 x 300	630 x 800 x 300	630 x 800 x 300	630 x 800 x 300	890 x 900 x 320	890 x 900 x 320	890 x 900 x 320
Weight	kg	38	43	45	46	72	72	78
Compressor type		DC Single Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections - gas		1/4" x 2	1/4" x 2	1/4" x 2	1/4" x 2	3/8" x 1 + 1/2"x2	3/8" x 2 + 1/2"x2	3/8" x 3 + 1/2"x2
Flare connections - liquid		3/8" x 2	3/8" x 2	3/8" x 2	3/8" x 2 + 1/2"x1	1/4" x 3	1/4" x 4	1/4" x 5
Maximum pipe length (per unit/total)	m	15/20	20/30	20/30	25/50	25/ 70	25 / 70	25 / 80
Maximum height difference	m	10	10	10	10	15	15	15
Refrigerant charge	kg	0.85	1.02	1.02	1.05	1.92	1.92	2.39
Chargeless pipe length	m	20	30	30	50	40	40	40
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

C: cooling mode
H: heating mode
E: European Union
TR: Turkey

RAS MULTI INDOOR UNITS

DAISEIKAI 9



- Toshiba indoor air quality with Plasma Air Purifier
- 3D airflow with 6 unique airflow patterns
- Silent operation outdoor unit
- Wireless remote control adaptor inside FCU
- Self-cleaning function / Weekly timer / 8°C button
- Extremely silent operation

Physical data indoor

Indoor unit			RAS-M10PKVPG-E RAS-M10PKVPG-TR	RAS-M13PKVPG-E RAS-M13PKVPG-TR	RAS-M16PKVPG-E RAS-M16PKVPG-TR
Air flow	m³/h - l/s	C	672 - 187	672 - 187	672 - 187
Sound pressure level (h/l)	dB(A)	C	42/20	43/20	44/23
Sound power level (h/l)	dB(A)	C	57	58	59
Air flow	m³/h - l/s	H	726 - 202	726 - 202	642 - 178
Sound pressure level (h/l)	dB(A)	H	44/20	44/20	45/23
Sound power level (h/l)	dB(A)	H	59	59	60
Dimensions (h x w x d)	mm		293 x 851 x 270	293 x 851 x 270	293 x 851 x 270
Weight	kg		14	14	14
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"



- Truly elegant design featuring a stylish textile fabric cover
- Toshiba Ultra Pure Filter PM 2.5 & Toshiba Plasma Ionizer
- Toshiba HAORI luxury remote control
- Wifi adaptor inside FCU
- Silent operation

Physical data indoor

Indoor unit			RAS-M07N4KVRG-E RAS-M07N4KVRG-TR	RAS-B10N4KVRG-E RAS-B10N4KVRG-TR	RAS-B13N4KVRG-E RAS-B13N4KVRG-TR	RAS-B16N4KVRG-E RAS-B16N4KVRG-TR
Air flow (h)	m³/h - l/s	C	600 - 166	600 - 166	670 - 186	690 - 180
Sound pressure level (h/q)	dB(A)	C	41/19	41/19	43/19	45/21
Sound power level (h)	dB(A)	C	54	54	56	58
Air flow (h)	m³/h - l/s	H	610 - 169	610 - 169	680 - 189	730 - 186
Sound pressure level (h/q)	dB(A)	H	41/19	41/19	43/19	45/22
Sound power level (h)	dB(A)	H	54	54	56	58
Dimensions (h x w x d)	mm		300 x 987 x 210	300 x 987 x 210	300 x 987 x 210	300 x 987 x 210
Weight	kg		11	11	11	12
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"



- Toshiba Ultra Pure Filter PM2.5
- 3D airflow with 6 unique airflow patterns (22k&24k)
- Wifi adaptor inside FCU
- HADA care flow
- Silent operation

Physical data indoor

Indoor unit		RAS-	RAS-M05J2KVSG-E RAS-M05J2KVSG-TR	RAS-B07J2KVSG-E RAS-M07J2KVSG-TR	RAS-B10J2KVSG-E RAS-M10J2KVSG-TR	RAS-B13J2KVSG-E RAS-M13J2KVSG-TR	RAS-B16J2KVSG-E RAS-M16J2KVSG-TR	RAS-B16J2KVSG-E RAS-M16J2KVSG-TR
Air flow	m³/h - l/s	C	606 - 168	660 - 183	660 - 183	732 - 203	750 - 208	750 - 208
Sound pressure level (h/l)	dB(A)	C	37/22	40/22	40/22	43/23	44/25	44/25
Sound power level (h/l)	dB(A)	C	50/35	53/35	53/35	56/36	57/38	57/38
Air flow	m³/h - l/s	H	606 - 168	660 - 183	660 - 183	732 - 203	768 - 213	768 - 213
Sound pressure level (h/l)	dB(A)	H	37/22	40/22	40/22	43/23	44/26	44/26
Sound power level (h)	dB(A)	H	50/35	53/35	53/35	56/36	57/39	57/39
Dimensions (h x w x d)	mm		293 x 800 x 226	293 x 800 x 226	293 x 800 x 226	293 x 800 x 226	293 x 800 x 226	293 x 800 x 226
Weight	kg		10	10	10	10	10	10
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"	1/2" - 1/4"



- Elegant compact design
- Toshiba Ultra Fresh Filter PM2.5
- WiFi adaptor inside FCU
- Silent operation

Physical data indoor

Indoor unit			RAS-B05E2KVG-E RAS-M05E2KVG-TR	RAS-B07E2KVG-E RAS-M07E2KVG-TR	RAS-B10E2KVG-E RAS-M10E2KVG-TR	RAS-B13E2KVG-E RAS-M13E2KVG-TR	RAS-B16E2KVG-E RAS-M16E2KVG-TR
Air flow	m³/h - l/s	C	480 - 134	500 - 140	510 - 142	540 - 150	750 - 208
Sound pressure level (h/q)	dB(A)	C	37/19	38/19	39/19	41/20	43/21
Sound power level (h)	dB(A)	C	50	51	52	54	56
Air flow	m³/h - l/s	H	480 - 134	500 - 140	510 - 144	560 - 158	760 - 212
Sound pressure level (h/q)	dB(A)	H	37/19	38/19	39/20	42/20	43/22
Sound power level (h)	dB(A)	H	50	51	52	55	56
Dimensions (h x w x d)	mm		288 x 770 x 225	288 x 770 x 225	288 x 770 x 225	288 x 770 x 225	293 x 798 x 230
Weight	kg		9	9	9	9	10
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"

C: cooling mode
H: heating mode

INDOOR UNITS

CONSOLE



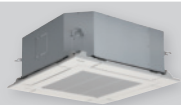
- Bi-flow air delivery system (floor heating)
- Silent operation outdoor unit
- Wireless remote control
- R32 refrigerant gas sensor accessory inside FCU (RB-I301-E)

Physical data indoor

Indoor unit			RAS-B10J2FVG-E RAS-M10J2FVG-TR	RAS-B13J2FVG-E RAS-M13J2FVG-TR	RAS-B18J2FVG-E RAS-M18J2FVG-TR
Air Flow	m³/h - l/s	C	468 - 130	510 - 142	600 - 167
Sound pressure level (h/l)	dB(A)	C	39/23	40/24	46/31
Sound power level (h/l)	dB(A)	C	54/38	55/39	60/46
Air Flow	m³/h - l/s	H	510 - 142	552 - 153	642 - 178
Sound pressure level (h/l)	dB(A)	H	39/23	40/24	46/31
Sound power level (h/l)	dB(A)	H	54/38	55/39	60/46
Dimensions (h x w x d)	mm		600 x 700 x 220	600 x 700 x 220	600 x 700 x 220
Weight	kg		16	16	16
Flare connections (gas-liquid)			3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"

C: cooling mode
H: heating mode

COMPACT CASSETTE



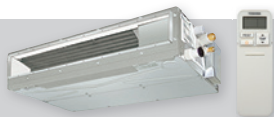
- 4 way air diffusion grille
- Elegant Flat Panel modern design & Compact dimensions to suit 600x600mm grid ceilings
- Wired or Wireless remote control / Occupancy sensor option
- Individual louver control / Dual & cycle swing
- Condensate drain pump included (up to 850mm height)

Physical data indoor

Indoor unit			RAS-M10U2MUVG-E RAS-M10U2MUVG-TR	RAS-M13U2MUVG-E RAS-M13U2MUVG-TR	RAS-M16U2MUVG-E RAS-M16U2MUVG-TR
Air flow (h/l)	m³/h	C	590/430	620/430	680/450
Sound pressure level (h/l)	dB(A)	C	37/30	38/30	41/31
Sound power level	dB(A)	C	52/45	53/45	56/46
Air flow (h/l)	m³/h	H	590/430	620/430	680/450
Sound pressure level (h/l)	dB(A)	H	37/30	38/30	41/31
Sound power level	dB(A)	H	52/45	53/45	56/46
Dimensions (h x w x d)	mm		256 x 575 x 575	256 x 575 x 575	256 x 575 x 575
Weight	kg		15	15	15
Flare connections (gas - liquid)			3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"

C: cooling mode
H: heating mode

DUCTED



- Slim unit (only 210mm height)
- Adjustable external static pressure
- Condensate drain pump included (up to 350mm height)
- Air filters in option

Indoor unit		RAS-M07U2DVG-E RAS-M07U2DVG-TR	RAS-M10U2DVG-E RAS-M10U2DVG-TR	RAS-M13U2DVG-E RAS-M13U2DVG-TR	RAS-M16U2DVG-E RAS-M16U2DVG-TR	RAS-M22U2DVG-E RAS-M22U2DVG-TR	RAS-M24U2DVG-E RAS-M24U2DVG-TR
Air flow (h/l)	m³/h C	570 / 380	570 / 380	610 / 385	780 / 420	1000/740	1060/760
Sound pressure level (h/l) *1	dB(A) C	35 / 27	35 / 27	37 / 27	35 / 24	38/32	39/33
Sound power level (h/l) *1	dB(A) C	50 / 42	50 / 42	52 / 42	50 / 39	53/47	54/48
Air flow (h/l)	m³/h - l/s H	570 / 380	570 / 380	610 / 385	780 / 450	1000/740	1060/760
Sound pressure level (h/l) *1	dB(A) H	35 / 27	35 / 27	37 / 27	35 / 25	38/32	39/33
Sound power level (h/l) *1	dB(A) H	50 / 42	50 / 42	52 / 42	50 / 40	53/47	54/48
Dimensions (h x w x d)	mm	210 x 700 x 450	210 x 700 x 450	210 x 700 x 450	210 x 900 x 450	210 x 1100 x 450	210 x 1100 x 450
Weight	kg	16	16	16	19	22	22
Flare connections (gas - liquid)		3/8" - 1/4"	3/8" - 1/4"	3/8" - 1/4"	1/2" - 1/4"	1/2" - 1/4"	1/2" - 1/4"
External static pressure (stand / middle1 / middle2 / upper)	Pa	10 / 20 / 35 / 45	10 / 20 / 35 / 45	10 / 20 / 35 / 45	10 / 20 / 35 / 45	10 / 20 / 35 / 45	10 / 20 / 35 / 45

C: cooling mode
H: heating mode
*1: Back in Take. External static pressure 35Pa.

OPTIONAL



Wireless
Weekly Remote
control

RB-RXS33-E
for SEIYA



Wall mounted
Weekly Remote control
(Cassette & Duct only)

RB-RWS21-E



RAS-2M10U2AVG-E / TR - Performances data Bi-split size 10

	Operating status	Combination		Unit capacity (kW)		Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit A	Unit B	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Pdesign	SEER	Class
Cooling, 230 V	1 room	05	-	1.50	-	1.10	1.50	1.80	-	-	-	-	-	-	-	-	-
		07	-	2.00	-	1.20	2.00	2.50	-	-	-	-	-	-	-	-	-
		10	-	2.70	-	1.20	2.70	3.20	-	-	-	-	-	-	-	-	-
	2 rooms	05	05	1.50	1.50	1.25	3.0	3.5	250	850	910	4.25	3.53	3.0	5.40	A	-
		07	05	1.89	1.41	1.25	3.3	3.6	250	800	910	4.00	4.13	3.3	6.31	A++	-
		10	05	2.12	1.18	1.25	3.3	3.8	250	790	920	3.95	4.18	3.3	6.39	A++	-
		07	07	1.65	1.65	1.25	3.3	3.7	250	780	920	3.90	4.23	3.3	6.47	A++	-
		10	07	1.90	1.40	1.25	3.3	3.8	250	770	930	3.85	4.29	3.3	6.56	A++	-
		10	10	1.65	1.65	1.25	3.3	3.9	250	750	930	3.75	4.40	3.3	6.73	A++	-
		05	10	1.50	1.50	1.25	3.0	3.5	250	850	910	4.25	3.53	3.0	5.40	A	-
		07	10	1.89	1.41	1.25	3.3	3.6	250	800	910	4.00	4.13	3.3	6.31	A++	-
Heating, 230 V	1 room	05	-	2.00	-	0.90	2.00	2.50	-	-	-	-	-	-	-	-	-
		07	-	2.70	-	0.90	2.70	3.40	-	-	-	-	-	-	-	-	-
		10	-	4.00	-	0.90	4.00	4.80	-	-	-	-	-	-	-	-	-
	2 rooms	05	05	2.00	2.00	1.0	4.0	4.4	200	860	1220	4.27	4.65	2.7	4.33	A+	-
		07	05	2.30	1.70	1.0	4.0	4.5	200	850	1200	4.22	4.71	2.7	4.38	A+	-
		10	05	2.67	1.33	1.0	4.0	4.7	200	840	1190	4.17	4.76	2.7	4.44	A+	-
		07	07	2.00	2.00	1.0	4.0	4.6	200	840	1190	4.17	4.76	2.7	4.44	A+	-
		10	07	2.39	1.61	1.0	4.0	4.8	200	820	1170	4.07	4.88	2.7	4.54	A+	-
		10	10	2.00	2.00	1.0	4.0	4.9	200	810	1150	4.02	4.94	2.7	4.60	A++	-
		05	10	2.00	2.00	1.0	4.0	4.4	200	860	1220	4.27	4.65	2.7	4.33	A+	-
		07	10	2.30	1.70	1.0	4.0	4.5	200	850	1200	4.22	4.71	2.7	4.38	A+	-

RAS-2M14U2AVG-E / TR - Performances data Bi-split size 14

	Operating status	Combination		Unit capacity (kW)		Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit A	Unit B	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Pdesign	SEER	Class
Cooling, 230 V	1 room	05	-	1.50	-	1.20	1.50	1.80	-	-	-	-	-	-	-	-	-
		07	-	2.00	-	1.30	2.00	2.50	-	-	-	-	-	-	-	-	-
		10	-	2.70	-	1.30	2.70	3.20	-	-	-	-	-	-	-	-	-
		13	-	3.70	-	1.30	3.70	4.10	-	-	-	-	-	-	-	-	-
	2 rooms	05	05	1.50	1.50	1.6	3.0	4.2	290	910	1130	4.21	3.30	3.0	5.10	A	-
		07	05	2.00	1.50	1.6	3.5	4.3	290	960	1130	4.44	3.65	3.5	5.64	A+	-
		10	05	2.57	1.43	1.6	4.0	4.4	290	1030	1130	4.87	3.88	4.0	6.01	A+	-
		13	05	2.85	1.15	1.6	4.0	4.5	290	960	1130	4.54	4.17	4.0	6.45	A++	-
		07	07	2.00	2.00	1.6	4.0	4.5	290	1030	1130	4.87	3.88	4.0	6.55	A++	-
		10	07	2.30	1.70	1.6	4.0	4.6	290	960	1130	4.54	4.17	4.0	6.58	A++	-
		13	07	2.60	1.40	1.6	4.0	4.7	290	940	1140	4.44	4.26	4.0	6.65	A++	-
		10	10	2.00	2.00	1.6	4.0	4.7	290	940	1140	4.44	4.26	4.0	6.63	A++	-
		13	10	2.31	1.69	1.6	4.0	4.8	290	930	1150	4.40	4.30	4.0	6.70	A++	-
		13	13	2.00	2.00	1.6	4.0	4.9	290	920	1150	4.35	4.35	4.0	6.73	A++	-
Heating, 230 V	1 room	05	-	2.00	-	0.90	2.00	2.50	-	-	-	-	-	-	-	-	-
		07	-	2.00	-	0.90	2.70	3.40	-	-	-	-	-	-	-	-	-
		10	-	4.00	-	0.90	4.00	4.80	-	-	-	-	-	-	-	-	-
		13	-	4.40	-	1.00	4.40	5.20	-	-	-	-	-	-	-	-	-
	2 rooms	05	05	2.00	2.00	1.3	4.0	4.7	250	920	1270	4.34	4.35	3.1	3.82	A	-
		07	05	2.53	1.87	1.3	4.4	4.8	250	960	1270	4.53	4.58	3.1	4.09	A+	-
		10	05	2.93	1.47	1.3	4.4	4.9	250	960	1270	4.53	4.58	3.1	4.09	A+	-
		13	05	3.14	1.26	1.3	4.4	5.0	250	950	1250	4.48	4.63	3.1	4.13	A+	-
		07	07	2.20	2.20	1.3	4.4	5.1	250	960	1270	4.53	4.58	3.1	4.31	A+	-
		10	07	2.63	1.77	1.3	4.4	5.1	250	950	1250	4.48	4.63	3.1	4.33	A+	-
		13	07	2.73	1.67	1.3	4.4	5.2	250	920	1250	4.34	4.78	3.1	4.37	A+	-
		10	10	2.20	2.20	1.3	4.4	5.1	250	930	1230	4.39	4.73	3.1	4.35	A+	-
		13	10	2.30	2.10	1.3	4.4	5.2	250	910	1230	4.29	4.84	3.1	4.39	A+	-
		13	13	2.20	2.20	1.3	4.4	5.2	250	890	1220	4.20	4.94	3.1	4.6	A++	-

RAS-2M18U2AVG-E / TR - Performances data Bi-split size 18

	Operating status	Combination		Unit capacity (kW)		Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit A	Unit B	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Pdesign	SEER	Class
Cooling, 230 V	1 room	05	-	1.50	-	1.20	1.50	1.80	-	-	-	-	-	-	-	-	-
		07	-	2.00	-	1.30	2.00	2.50	-	-	-	-	-	-	-	-	-
		10	-	2.70	-	1.30	2.70	3.20	-	-	-	-	-	-	-	-	-
		13	-	3.70	-	1.40	3.70	4.10	-	-	-	-	-	-	-	-	-
		16	-	4.50	-	1.50	4.50	5.30	-	-	-	-	-	-	-	-	-
	2 rooms	05	05	1.50	1.50	1.7	3.0	5.2	270	700	1840	3.31	4.29	3.0	7.48	A++	-
		07	05	2.00	1.50	1.7	3.5	5.3	270	850	1840	3.93	4.12	3.5	7.19	A++	-
		10	05	2.70	1.50	1.7	4.2	5.4	270	1100	1840	5.03	3.82	4.2	6.66	A++	-
		13	05	3.70	1.50	1.7	5.2	5.5	270	1520	1840	6.96	3.42	5.2	5.97	A+	-
		16	05	3.90	1.30	1.7	5.2	5.5	270	1490	1840	6.82	3.49	5.2	6.09	A+	-
		07	07	2.00	2.00	1.7	4.0	5.5	270	1000	1700	4.58	4.00	4.0	6.59	A++	-
		10	07	2.70	2.00	1.7	4.7	5.8	270	1260	1830	5.80	3.73	4.7	6.62	A++	-
		13	07	3.38	1.82	1.7	5.2	5.9	270	1490	1840	6.82	3.49	5.2	6.64	A++	-
		16	07	3.60	1.60	1.7	5.2	6.2	270	1390	1870	6.37	3.74	5.2	6.84	A++	-
		10	10	2.60	2.60	1.7	5.2	5.9	270	1520	1840	6.95	3.42	5.2	6.62	A++	-
		13	10	3.01	2.19	1.7	5.2	6.0	270	1480	1850	6.77	3.51	5.2	6.69	A++	-
		16	10	3.25	1.95	1.7	5.2	6.3	270	1370	1870	6.29	3.80	5.2	6.88	A++	-
		13	13	2.60	2.60	1.7	5.2	6.1	270	1430	1850	6.55	3.64	5.2	6.76	A++	-
		16	13	2.85	2.35	1.7	5.2	6.2	270	1340	1880	6.15	3.88	5.2	6.90	A++	-
		16	16	2.60	2.60	1.7	5.2	6.4	270	1300	1900	5.97	4.00	5.2	6.98	A++	-

* Note: seasonal efficiencies SEER & SCOP with highwall and/or Console combination. Minimum 2 indoor units connected.

RAS-2M18U2AVG-E / TR - Performances data Bi-split size 18

Operating status	Combination		Unit capacity (kW)		Heating capacity (kW)			Power input (W)			Operating current (A)	COP	Seasonal efficiencies*		
	Unit A	Unit B	Unit A	Unit B	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.		Pdesign	SEER	Class
1 room	05	-	2.00	-	1.00	2.00	2.50	-	-	-	-	-	-	-	-
	07	-	2.70	-	1.00	2.70	3.40	-	-	-	-	-	-	-	-
	10	-	4.00	-	1.00	4.00	4.80	-	-	-	-	-	-	-	-
	13	-	5.00	-	1.00	5.00	5.30	-	-	-	-	-	-	-	-
2 rooms	16	-	5.50	-	1.10	5.50	6.50	-	-	-	-	-	-	-	-
	05	05	2.00	2.00	1.3	4.0	6.7	240	980	2200	4.53	4.08	3.2	3.85	A
	07	05	2.70	2.00	1.3	4.7	6.8	240	1160	2200	5.37	4.05	3.2	3.82	A
	10	05	3.73	1.87	1.3	5.6	6.9	240	1380	2100	6.38	4.06	3.2	3.82	A
	13	05	4.00	1.60	1.3	5.6	7.0	240	1380	2100	6.38	4.06	3.2	3.82	A
	16	05	4.11	1.49	1.3	5.6	7.1	240	1350	2100	6.24	4.15	3.2	3.91	A
	07	07	2.70	2.70	1.3	5.0	7.2	240	1370	2240	6.34	3.65	3.2	4.19	A+
	10	07	3.34	2.26	1.3	5.6	7.2	250	1390	2200	6.37	4.03	3.2	4.21	A+
	13	07	3.64	1.96	1.3	5.6	7.5	250	1340	2250	6.15	4.18	3.2	4.32	A+
	16	07	3.76	1.84	1.3	5.6	7.5	240	1240	2090	5.71	4.52	3.2	4.57	A+
	10	10	2.80	2.80	1.3	5.6	7.3	250	1350	2160	6.20	4.15	3.2	4.31	A+
	13	10	3.11	2.49	1.3	5.6	7.5	250	1320	2210	6.06	4.24	3.2	4.33	A+
	16	10	3.24	2.36	1.3	5.6	7.5	240	1220	2070	5.62	4.59	3.2	4.59	A+
	13	13	2.80	2.80	1.3	5.6	7.5	250	1290	2170	5.93	4.34	3.2	4.36	A+
	16	13	2.93	2.67	1.3	5.6	7.5	240	1190	2020	5.48	4.71	3.2	4.6	A++
	16	16	2.80	2.80	1.3	5.6	7.5	240	1140	1910	5.26	4.91	3.2	4.63	A++

RAS-3M18U2AVG-E / TR - Performances data Tri-split size 18

Operating status	Combination			Unit capacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)	EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.		Pdesign	SEER	Class
1 room	05	-	-	1.50	-	-	1.30	1.50	1.80	-	-	-	-	-	-	-	-
	07	-	-	2.00	-	-	1.40	2.00	2.50	-	-	-	-	-	-	-	-
	10	-	-	2.70	-	-	1.40	2.70	3.20	-	-	-	-	-	-	-	-
	13	-	-	3.70	-	-	1.50	3.70	4.10	-	-	-	-	-	-	-	-
	16	-	-	4.50	-	-	1.60	4.50	5.30	-	-	-	-	-	-	-	-
2 rooms	05	05	-	1.50	1.50	-	2.4	3.0	6.0	390	620	1890	2.87	-	3.0	-	-
	07	05	-	2.00	1.50	-	2.4	3.5	6.0	390	780	1890	3.61	-	3.5	-	-
	10	05	-	2.70	1.50	-	2.4	4.2	6.0	390	1050	1890	4.86	-	4.2	-	-
	13	05	-	3.70	1.50	-	2.4	5.2	6.2	390	1550	1890	7.09	-	5.2	-	-
	16	05	-	3.90	1.30	-	2.4	5.2	6.2	390	1590	1890	7.28	-	5.2	-	-
	07	07	-	2.00	2.00	-	2.4	4.0	6.0	390	970	1890	4.50	-	4.0	-	-
	10	07	-	2.70	2.00	-	2.4	4.7	6.0	390	1290	1880	5.93	-	4.7	-	-
	13	07	-	3.38	1.82	-	2.4	5.2	6.1	390	1530	1890	6.99	-	5.2	-	-
	16	07	-	3.60	1.60	-	2.4	5.2	6.2	390	1420	1920	6.51	-	5.2	-	-
	10	10	-	2.60	2.60	-	2.4	5.2	6.1	390	1570	1890	7.17	-	5.2	-	-
	13	10	-	3.01	2.19	-	2.4	5.2	6.0	390	1520	1900	6.95	-	5.2	-	-
	16	10	-	3.25	1.95	-	2.4	5.2	6.3	390	1410	1920	6.46	-	5.2	-	-
	13	13	-	2.60	2.60	-	2.4	5.2	6.1	390	1450	1920	6.73	-	5.2	-	-
	16	13	-	2.85	2.35	-	2.4	5.2	6.2	390	1380	1930	6.33	-	5.2	-	-
	16	16	-	2.60	2.60	-	2.4	5.2	6.4	390	1340	1950	6.15	-	5.2	-	-
3 rooms	05	05	05	1.50	1.50	1.50	2.4	4.5	6.3	400	1130	1890	5.23	3.98	4.5	6.35	A++
	07	05	05	2.00	1.50	1.50	2.4	5	6.4	400	1390	1890	6.43	3.60	5	5.74	A+
	10	05	05	2.46	1.37	1.37	2.4	5.2	6.5	400	1530	1890	7.08	3.40	5.2	5.42	A
	13	05	05	2.87	1.16	1.16	2.4	5.2	6.5	400	1210	1950	5.60	4.30	5.2	6.85	A++
	16	05	05	3.12	1.04	1.04	2.4	5.2	6.5	400	1200	1950	5.55	4.33	5.2	6.91	A++
	07	07	05	1.89	1.89	1.42	2.4	5.2	6.5	400	1560	1950	7.22	3.33	5.2	5.32	A
	10	07	05	2.26	1.68	1.26	2.4	5.2	6.5	400	1220	1950	5.64	4.26	5.2	6.80	A++
	13	07	05	2.67	1.44	1.08	2.4	5.2	6.5	400	1410	1950	6.52	3.69	5.2	5.88	A+
	16	07	05	2.93	1.30	0.98	2.4	5.2	6.5	400	1190	1950	5.50	4.37	5.2	6.97	A++
	10	10	05	2.03	2.03	1.13	2.4	5.2	6.5	400	1210	1950	5.60	4.30	5.2	6.85	A++
	13	10	05	2.44	1.78	0.99	2.4	5.2	6.5	400	1200	1950	5.55	4.33	5.2	6.91	A++
	16	10	05	2.69	1.61	0.90	2.4	5.2	6.5	400	1190	1950	5.50	4.37	5.2	6.97	A++
	13	13	05	2.16	2.16	0.88	2.4	5.2	6.5	400	1180	1950	5.46	4.41	5.2	7.03	A++
	16	13	05	2.41	1.98	0.80	2.4	5.2	6.5	400	1170	1950	5.41	4.44	5.2	7.09	A++
	07	07	07	1.74	1.73	1.73	2.4	5.2	6.5	400	1220	1950	5.62	4.26	5.2	6.92	A++
	10	07	07	2.10	1.55	1.55	2.4	5.2	6.5	400	1210	1950	5.57	4.30	5.2	6.91	A++
	13	07	07	2.50	1.35	1.35	2.4	5.2	6.5	400	1200	1950	5.53	4.33	5.2	6.9	A++
	16	07	07	2.76	1.22	1.22	2.4	5.2	6.5	400	1190	1950	5.48	4.37	5.2	6.84	A++
	10	10	07	1.90	1.90	1.40	2.4	5.2	6.5	400	1200	1950	5.53	4.33	5.2	6.91	A++
	13	10	07	2.29	1.67	1.24	2.4	5.2	6.5	400	1190	1950	5.48	4.37	5.2	6.89	A++
	16	10	07	2.54	1.53	1.13	2.4	5.2	6.5	400	1180	1950	5.44	4.41	5.2	6.82	A++
	13	13	07	2.05	2.05	1.10	2.4	5.2	6.5	400	1180	1950	5.44	4.41	5.2	6.87	A++
	16	13	07	2.29	1.89	1.02	2.4	5.2	6.5	400	1170	1950	5.39	4.44	5.2	6.75	A++
	10	10	10	1.74	1.73	1.73	2.4	5.2	6.5	400	1190	1950	5.48	4.37	5.2	6.9	A++
	13	10	10	2.12	1.54	1.54	2.4	5.2	6.5	400	1180	1950	5.44	4.41	5.2	6.87	A++
	16	10	10	2.36	1.42	1.42	2.4	5.2	6.5	400	1170	1950	5.39	4.44	5.2	6.8	A++
	13	13	10	1.90	1.90	1.40	2.4	5.2	6.5	400	1170	1950	5.39	4.44	5.2	6.85	A++



RAS-3M18U2AVG-E / TR - Performances data Tri-split size 18

Operating status	Combination			Unit capacity (kW)			Heating capacity (kW)			Power input (W)			Operating current (A)		COP	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Pdesign	SEER	Class
1 room	05	-	-	2.00	-	-	1.10	2.00	2.50	-	-	-	-	-	-	-	-	-
	07	-	-	2.70	-	-	1.10	2.70	3.40	-	-	-	-	-	-	-	-	-
	10	-	-	4.00	-	-	1.10	4.00	4.80	-	-	-	-	-	-	-	-	-
	13	-	-	5.00	-	-	1.10	5.00	5.30	-	-	-	-	-	-	-	-	-
	16	-	-	5.50	-	-	1.10	5.50	6.50	-	-	-	-	-	-	-	-	-
2 rooms	05	05	-	2.00	2.00	-	1.9	4.0	6.7	390	1000	2140	4.58	-	-	3.5	-	-
	07	05	-	2.70	2.00	-	1.9	4.7	6.8	390	1270	2190	5.81	-	-	3.5	-	-
	10	05	-	4.00	2.00	-	1.9	6.0	6.9	390	1700	2250	7.78	-	-	3.5	-	-
	13	05	-	4.86	1.94	-	1.9	6.8	7.0	390	1920	2280	8.70	-	-	3.5	-	-
	16	05	-	4.99	1.81	-	1.9	6.8	7.1	390	1920	2300	8.70	-	-	3.5	-	-
	07	07	-	2.70	2.70	-	1.9	5.4	7.2	370	1410	2300	6.39	-	-	3.5	-	-
	10	07	-	4.00	2.70	-	1.9	6.7	7.2	370	1900	2260	8.61	-	-	3.5	-	-
	13	07	-	4.42	2.95	-	1.9	6.8	7.5	370	1920	2310	8.70	-	-	3.5	-	-
	16	07	-	4.56	2.24	-	1.9	6.8	7.5	350	1820	2140	8.24	-	-	3.5	-	-
	10	10	-	3.40	3.40	-	1.9	6.8	7.3	370	1920	2210	8.70	-	-	3.5	-	-
	13	10	-	3.78	3.02	-	1.9	6.8	7.5	370	1920	2260	8.70	-	-	3.5	-	-
	16	10	-	3.94	2.86	-	1.9	6.8	7.5	350	1790	2130	8.11	-	-	3.5	-	-
	13	13	-	3.40	3.40	-	1.9	6.8	7.5	370	1870	2220	8.47	-	-	3.5	-	-
	16	13	-	3.56	3.24	-	1.9	6.8	7.5	350	1730	2070	7.84	-	-	3.5	-	-
	16	16	-	3.40	3.40	-	1.9	6.8	7.5	350	1640	1960	7.43	-	-	3.5	-	-
3 rooms	05	05	05	2.00	2.00	2.00	1.9	6.0	7.9	400	1700	2250	7.78	3.53	-	3.5	3.80	A
	07	05	05	2.70	2.00	2.00	1.9	6.7	8.0	400	1900	2250	8.70	3.53	-	3.5	3.80	A
	10	05	05	3.40	1.70	1.70	1.9	6.8	8.0	400	1920	2210	8.79	3.54	-	3.5	3.82	A
	13	05	05	3.78	1.51	1.51	1.9	6.8	8.0	400	1920	2260	8.79	3.54	-	3.5	3.82	A
	16	05	05	3.94	1.43	1.43	1.9	6.8	8.0	400	1790	2130	8.19	3.80	-	3.5	4.09	A+
	07	07	05	2.48	2.48	1.84	1.9	6.8	8.0	400	1920	2300	8.79	3.54	-	3.5	3.82	A
	10	07	05	3.13	2.11	1.56	1.9	6.8	8.0	400	1690	2310	7.73	4.02	-	3.5	4.34	A+
	13	07	05	3.51	1.89	1.40	1.9	6.8	8.0	400	1670	2280	7.64	4.07	-	3.5	4.39	A+
	16	07	05w	3.67	1.80	1.33	1.9	6.8	8.0	400	1660	2260	7.60	4.10	-	3.5	4.42	A+
	10	10	05	2.72	2.72	1.36	1.9	6.8	8.0	400	1870	2220	8.56	3.64	-	3.5	3.92	A
	13	10	05	3.09	2.47	1.24	1.9	6.8	8.0	400	1650	2250	7.55	4.12	-	3.5	4.44	A+
	16	10	05	3.25	2.37	1.18	1.9	6.8	8.0	400	1640	2250	7.51	4.15	-	3.5	4.47	A+
	13	13	05	2.83	2.83	1.13	1.9	6.8	8.0	400	1630	2210	7.46	4.17	-	3.5	4.50	A+
	16	13	05	2.99	2.72	1.09	1.9	6.8	8.0	400	1620	2200	7.41	4.20	-	3.5	4.52	A+
	07	07	07	2.26	2.27	2.27	1.9	6.8	8.0	350	1700	2320	7.75	4.00	-	3.5	4.46	A+
	10	07	07	2.90	1.95	1.95	1.9	6.8	8.0	350	1680	2290	7.66	4.05	-	3.5	4.47	A+
	13	07	07	3.26	1.77	1.77	1.9	6.8	8.0	350	1650	2250	7.53	4.12	-	3.5	4.47	A+
	16	07	07	3.44	1.68	1.68	1.9	6.8	8.0	340	1600	2150	7.30	4.25	-	3.5	4.61	A++
	10	10	07	2.54	2.54	1.72	1.9	6.8	8.0	350	1660	2260	7.57	4.10	-	3.5	4.47	A+
	13	10	07	2.91	2.32	1.57	1.9	6.8	8.0	350	1640	2220	7.48	4.15	-	3.5	4.43	A+
	16	10	07	3.07	2.23	1.50	1.9	6.8	8.0	340	1590	2130	7.26	4.28	-	3.5	4.61	A++
	13	13	07	2.68	2.68	1.44	1.9	6.8	8.0	350	1620	2190	7.39	4.20	-	3.5	4.42	A+
	16	13	07	2.83	2.58	1.39	1.9	6.8	8.0	340	1580	2110	7.22	4.30	-	3.5	4.6	A++
	10	10	10	2.26	2.27	2.27	1.9	6.8	8.0	350	1650	2230	7.53	4.12	-	3.5	4.46	A+
	13	10	10	2.62	2.09	2.09	1.9	6.8	8.0	350	1620	2200	7.39	4.20	-	3.5	4.43	A+
	16	10	10	2.78	2.01	2.01	1.9	6.8	8.0	330	1580	2090	7.22	4.30	-	3.5	4.6	A++
	13	13	10	2.43	2.43	1.94	1.9	6.8	8.0	350	1620	2160	7.39	4.20	-	3.5	4.42	A+

RAS-3M26U2AVG-E / TR - Performances in Cooling mode

	Operating Status	Combination			Unit capacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Nom.	Pdc	SEER
Cooling, 230 V	1 unit operation	05	-	-	1.50	-	-	1.4	1.5	2.0	630	640	650	3.61			-	-	-
		07	-	-	2.00	-	-	1.4	2.0	2.5	640	650	700	3.67			-	-	-
		10	-	-	2.70	-	-	1.4	2.7	3.2	640	750	950	4.23			-	-	-
		13	-	-	3.70	-	-	1.4	3.7	4.4	640	1200	1520	5.93			-	-	-
		16	-	-	4.50	-	-	1.4	4.5	5.0	640	1650	2000	7.63			-	-	-
		18	-	-	5.00	-	-	1.4	5.0	5.2	640	1950	2100	8.92			-	-	-
		22	-	-	6.00	-	-	2.4	6.0	6.8	640	2020	2500	9.24			-	-	-
		24	-	-	7.10	-	-	2.4	7.1	7.2	660	2390	2960	10.94			-	-	-
	2 units operations	05	05	-	1.50	1.50	-	2.5	3.0	4.0	640	750	1000	3.43		4.00	3.0	5.69	A+
		07	05	-	2.00	1.50	-	2.5	3.5	4.5	640	850	1200	3.89		4.12	3.5	5.93	A+
		10	05	-	2.70	1.50	-	2.5	4.2	5.2	640	1100	1550	5.03		3.82	4.2	6.08	A+
		13	05	-	3.70	1.50	-	2.5	5.2	6.0	640	1450	1950	6.64		3.59	5.2	6.18	A++
		16	05	-	4.35	1.45	-	2.5	5.8	6.5	640	1700	2200	7.78		3.41	5.8	6.21	A++
		18	05	-	4.54	1.36	-	2.5	5.9	6.6	640	1740	2250	7.96		3.39	5.9	6.19	A++
		22	05	-	5.04	1.26	-	2.5	6.3	6.9	640	1900	2400	8.70		3.32	6.3	6.25	A++
		24	05	-	5.20	1.10	-	2.5	6.3	6.9	640	1900	2400	8.70		3.32	6.3	6.24	A++
		07	07	-	2.00	2.00	-	2.5	4.0	6.3	640	950	1900	4.35		4.21	4.0	6.14	A++
		10	07	-	2.70	2.00	-	2.5	4.7	6.3	640	1200	2100	5.49		3.92	4.7	6.25	A++
		13	07	-	3.70	2.00	-	2.6	5.7	6.5	660	1600	2220	7.32		3.56	5.7	6.27	A++
		16	07	-	4.08	1.82	-	2.7	5.9	6.6	660	1700	2220	7.78		3.47	5.9	6.22	A++
		18	07	-	4.50	1.80	-	2.9	6.3	6.9	670	1900	2400	8.70		3.32	6.3	6.22	A++
		22	07	-	4.73	1.58	-	2.9	6.3	7.1	670	1900	2400	8.70		3.32	6.3	6.25	A++
		24	07	-	5.31	1.49	-	3.0	6.8	7.4	690	2200	2450	10.07		3.09	6.8	6.30	A++
		10	10	-	2.70	2.70	-	2.5	5.4	6.3	640	1500	2100	6.86		3.60	5.4	6.28	A++
		13	10	-	3.41	2.49	-	2.7	5.9	6.6	660	1700	2220	7.78		3.47	5.9	6.24	A++
		16	10	-	3.94	2.36	-	2.9	6.3	6.9	670	2000	2400	9.15		3.15	6.3	6.11	A++
		18	10	-	4.09	2.21	-	2.9	6.3	7.1	670	1900	2400	8.70		3.32	6.3	6.22	A++
		22	10	-	4.69	2.11	-	3.0	6.8	7.4	690	2200	2450	10.07		3.09	6.8	6.30	A++
		24	10	-	5.22	1.98	-	3.2	7.2	7.8	700	2300	2500	10.53		3.13	7.2	6.35	A++
		13	13	-	3.15	3.15	-	2.9	6.3	7.1	670	2000	2400	9.15		3.15	6.3	6.11	A++
		16	13	-	3.73	3.07	-	3.0	6.8	7.4	690	2200	2450	10.07		3.09	6.8	6.02	A+

RAS-3M26U2AVG-E / TR - Performances in Cooling mode

Operating Status	Combination			Unit cacacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
2 units operations	18	13	-	3.91	2.89	-	3.0	6.8	7.4	690	2200	2450	10.07	3.09	6.8	6.27	A++	
	22	13	-	4.45	2.75	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.36	A++	
	24	13	-	4.73	2.47	-	3.2	7.2	8.4	700	2300	2550	10.53	3.13	7.2	6.35	A++	
	16	16	-	3.60	3.60	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.36	A++	
	18	16	-	3.79	3.41	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.33	A++	
	22	16	-	4.17	3.13	-	3.2	7.3	8.4	700	2400	2550	10.98	3.04	7.3	6.35	A++	
	24	16	-	4.47	2.83	-	3.2	7.3	8.4	700	2400	2550	10.98	3.04	7.3	6.34	A++	
	18	18	-	3.60	3.60	-	3.2	7.2	8.4	700	2300	2550	10.53	3.13	7.2	6.30	A++	
	22	18	-	4.04	3.36	-	3.2	7.4	8.4	700	2400	2550	10.98	3.08	7.4	6.34	A++	
24	18	-	4.34	3.06	-	3.2	7.4	8.4	700	2400	2550	10.98	3.08	7.4	6.33	A++		
3 units operations	05	05	05	1.50	1.50	1.50	3.8	4.5	5.5	950	1070	1390	4.90	4.21	4.5	5.30	A	
	07	05	05	2.00	1.50	1.50	3.8	5.0	6.0	950	1180	1620	5.40	4.24	5.0	5.44	A	
	10	05	05	2.70	1.50	1.50	3.8	5.7	6.7	950	1480	1940	6.77	3.85	5.7	5.58	A	
	13	05	05	3.59	1.46	1.46	3.8	6.5	8.0	950	1585	2540	7.25	4.10	6.5	5.80	A+	
	16	05	05	4.32	1.44	1.44	3.8	7.2	8.4	950	1885	2720	8.63	3.82	7.2	5.91	A+	
	18	05	05	4.63	1.39	1.39	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.89	A+	
	22	05	05	4.93	1.23	1.23	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.92	A+	
	24	05	05	5.20	1.10	1.10	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.91	A+	
	07	07	05	2.00	2.00	1.50	3.8	5.5	6.5	950	1290	1850	5.90	4.26	5.5	5.58	A	
	10	07	05	2.70	2.00	1.50	3.8	6.2	7.3	950	1480	2220	6.77	4.19	6.2	5.74	A+	
	13	07	05	3.55	1.92	1.44	3.8	6.9	8.4	950	1750	2720	8.01	3.94	6.9	5.88	A+	
	16	07	05	4.16	1.85	1.39	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.93	A+	
	18	07	05	4.35	1.74	1.31	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.89	A+	
	22	07	05	4.67	1.56	1.17	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.92	A+	
	24	07	05	4.96	1.40	1.05	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.91	A+	
	10	10	05	2.70	2.70	1.50	3.8	6.9	8.4	950	1750	2720	8.01	3.94	6.9	5.88	A+	
	13	10	05	3.47	2.53	1.41	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.93	A+	
	16	10	05	3.83	2.30	1.28	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.93	A+	
	18	10	05	4.02	2.17	1.21	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	10	05	4.35	1.96	1.09	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.92	A+	
	24	10	05	4.65	1.77	0.98	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.91	A+	
	13	13	05	3.08	3.08	1.25	3.8	7.4	8.6	950	1975	2750	9.04	3.75	7.4	5.93	A+	
	16	13	05	3.43	2.82	1.14	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.93	A+	
	18	13	05	3.63	2.68	1.09	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	13	05	3.96	2.44	0.99	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.92	A+	
	24	13	05	4.27	2.23	0.90	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.91	A+	
	16	16	05	3.17	3.17	1.06	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.93	A+	
	18	16	05	3.36	3.03	1.01	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	16	05	3.70	2.78	0.93	3.8	7.4	8.8	950	1975	2770	9.04	3.75	7.4	5.92	A+	
	24	16	05	4.06	2.58	0.86	3.8	7.5	9.0	950	2000	2800	9.15	3.75	7.5	5.93	A+	
	07	07	07	2.00	2.00	2.00	3.8	6.0	8.4	950	1400	2720	6.41	4.29	6.0	5.70	A+	
	10	07	07	2.70	2.00	2.00	3.8	6.7	8.4	950	1660	2720	7.60	4.04	6.7	5.86	A+	
	13	07	07	3.56	1.92	1.92	3.9	7.4	8.6	960	1975	2750	9.04	3.75	7.4	5.93	A+	
	16	07	07	3.92	1.74	1.74	3.9	7.4	8.6	960	1975	2750	9.04	3.75	7.4	5.93	A+	
	18	07	07	4.11	1.64	1.64	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	07	07	4.44	1.48	1.48	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.18	A++	
	24	07	07	4.73	1.33	1.33	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.17	A++	
	10	10	07	2.70	2.70	2.00	3.8	7.4	8.4	950	1850	2720	8.47	4.00	7.4	5.97	A+	
	13	10	07	3.26	2.38	1.76	3.9	7.4	8.6	960	1975	2750	9.04	3.75	7.4	5.93	A+	
	16	10	07	3.62	2.17	1.61	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.92	A+	
	18	10	07	3.81	2.06	1.53	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	10	07	4.15	1.87	1.38	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.18	A++	
	24	10	07	4.45	1.69	1.25	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.17	A++	
	13	13	07	2.91	2.91	1.57	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.92	A+	
	16	13	07	3.26	2.68	1.45	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.92	A+	
	18	13	07	3.46	2.56	1.38	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	13	07	3.79	2.34	1.26	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.18	A++	
	24	13	07	4.10	2.14	1.16	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.17	A++	
	16	16	07	3.03	3.03	1.35	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.05	A+	
	18	16	07	3.22	2.90	1.29	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.15	A++	
	22	16	07	3.60	2.70	1.20	4.1	7.5	9.0	980	2000	2800	9.15	3.75	7.5	6.18	A++	
	24	16	07	3.92	2.48	1.10	4.1	7.5	9.0	980	2000	2800	9.15	3.75	7.5	6.18	A++	
	10	10	10	2.47	2.47	2.47	3.9	7.4	8.6	960	1975	2750	9.04	3.75	7.4	5.93	A+	
	13	10	10	3.01	2.20	2.20	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.92	A+	
	16	10	10	3.36	2.02	2.02	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.92	A+	
	18	10	10	3.56	1.92	1.92	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	5.89	A+	
	22	13	10	3.63	2.24	1.63	4.1	7.5	9.0	980	2000	2800	9.15	3.75	7.5	6.18	A++	
	24	13	10	3.94	2.06	1.50	4.1	7.5	9.0	980	2000	2800	9.15	3.75	7.5	6.18	A++	
	16	16	10	2.85	2.85	1.71	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.18	A++	
	18	16	10	3.03	2.73	1.64	4.0	7.4	8.8	970	1975	2770	9.04	3.75	7.4	6.15	A++	
	22	16	10	3.41	2.56	1.53												



RAS-3M26U2AVG-E / TR - Performances in Heating mode

	Operating Status	Combination			Unit capacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)		EER Nom.	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Pdc		SEER	Class	
1 unit operation	05	-	-	-	2.00	-	-	0.8	2.0	2.7	300	600	900	3.00	-	-	-	-	
	07	-	-	-	2.70	-	-	0.8	2.7	4.8	300	900	1980	4.50	-	-	-	-	
	10	-	-	-	4.00	-	-	0.8	4.0	5.2	300	1450	1980	6.64	-	-	-	-	
	13	-	-	-	5.00	-	-	0.8	5.0	6.5	310	2050	2750	9.38	-	-	-	-	
	16	-	-	-	5.50	-	-	0.8	5.5	6.9	310	2400	3000	10.98	-	-	-	-	
	18	-	-	-	6.00	-	-	0.8	6.0	7.1	310	2630	3200	12.04	-	-	-	-	
	22	-	-	-	7.00	-	-	1.8	7.0	8.2	330	2620	3200	11.99	-	-	-	-	
	24	-	-	-	8.10	-	-	1.8	8.1	8.6	330	3080	3300	14.10	-	-	-	-	
2 units operations	05	05	-	-	2.00	2.00	-	2.0	4.0	6.4	320	850	1400	3.89	4.71	3.5	4.05	A+	
	07	05	-	-	2.70	2.00	-	2.0	4.7	6.9	320	1050	1540	4.81	4.48	4.0	4.14	A+	
	10	05	-	-	4.00	2.00	-	2.0	6.0	7.4	320	1350	1680	6.18	4.44	4.5	4.22	A+	
	13	05	-	-	5.00	2.00	-	2.0	7.0	8.9	320	1560	2120	7.14	4.49	4.5	4.22	A+	
	16	05	-	-	5.50	2.00	-	2.0	7.5	9.5	320	1700	2300	7.78	4.41	4.7	4.31	A+	
	18	05	-	-	5.70	1.90	-	2.0	7.6	9.8	320	1850	2400	8.47	4.11	4.7	4.31	A+	
	22	05	-	-	5.99	1.71	-	2.0	7.7	11.2	320	1980	2760	9.06	3.89	4.7	4.21	A+	
	24	05	-	-	6.34	1.56	-	2.0	7.9	11.2	320	1980	2770	9.06	3.99	4.7	4.21	A+	
	07	07	-	-	2.70	2.70	-	1.5	5.4	7.4	320	1400	2900	6.41	3.86	4.5	4.22	A+	
	10	07	-	-	4.00	2.70	-	1.5	6.7	8.9	320	1950	3050	8.92	3.44	4.5	4.22	A+	
	13	07	-	-	4.81	2.59	-	1.5	7.4	9.5	320	2300	3200	10.53	3.22	4.7	4.31	A+	
	16	07	-	-	5.10	2.50	-	1.5	7.6	9.5	320	2300	3200	10.53	3.30	4.7	4.31	A+	
	18	07	-	-	5.45	2.45	-	1.5	7.9	9.5	320	2450	3200	11.21	3.22	4.7	4.31	A+	
	22	07	-	-	5.70	2.20	-	1.5	7.9	9.8	320	2450	3200	11.21	3.22	4.7	4.21	A+	
	24	07	-	-	6.23	2.08	-	1.5	8.3	10.1	320	2500	3250	11.44	3.32	4.7	4.21	A+	
	10	10	-	-	3.60	3.60	-	1.5	7.2	9.5	320	2200	3200	10.07	3.27	4.7	4.31	A+	
	13	10	-	-	4.22	3.38	-	1.5	7.6	9.5	320	2300	3200	10.53	3.30	4.7	4.31	A+	
	16	10	-	-	4.57	3.33	-	1.5	7.9	9.5	320	2450	3200	11.21	3.22	4.7	4.31	A+	
	18	10	-	-	4.74	3.16	-	1.5	7.9	9.8	320	2450	3200	11.21	3.22	4.7	4.31	A+	
	22	10	-	-	5.28	3.02	-	1.5	8.3	10.1	320	2500	3250	11.44	3.32	4.7	4.21	A+	
	24	10	-	-	5.76	2.84	-	1.5	8.6	10.4	320	2550	3250	11.67	3.37	4.7	4.21	A+	
	13	13	-	-	3.95	3.95	-	1.5	7.9	9.8	320	2450	3200	11.21	3.22	4.7	4.31	A+	
	16	13	-	-	4.35	3.95	-	1.5	8.3	10.1	320	2500	3250	11.44	3.32	4.7	4.31	A+	
	18	13	-	-	4.53	3.77	-	1.5	8.3	10.1	320	2500	3250	11.44	3.32	4.7	4.31	A+	
	22	13	-	-	5.02	3.58	-	1.5	8.6	10.4	320	2550	3250	11.67	3.37	4.7	4.21	A+	
	24	13	-	-	5.32	3.28	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.21	A+	
	16	16	-	-	4.30	4.30	-	1.5	8.6	10.4	320	2550	3250	11.67	3.37	4.7	4.31	A+	
	18	16	-	-	4.49	4.11	-	1.5	8.6	10.4	320	2550	3250	11.67	3.37	4.7	4.31	A+	
	22	16	-	-	4.82	3.78	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.21	A+	
	24	16	-	-	5.12	3.48	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.21	A+	
	18	18	-	-	4.30	4.30	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.30	A+	
	22	18	-	-	4.63	3.97	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.21	A+	
24	18	-	-	4.94	3.66	-	1.5	8.6	10.8	320	2550	3250	11.67	3.37	4.7	4.21	A+		
Heating, 230 V	05	05	05	2.00	2.00	2.00	2.0	6.0	9.5	380	1220	1400	5.58	4.92	4.7	4.43	A+		
	07	05	05	2.70	2.00	2.00	2.0	6.7	10.0	380	1400	1540	6.41	4.79	4.7	4.43	A+		
	10	05	05	4.00	2.00	2.00	2.0	8.0	10.8	380	1850	1680	8.47	4.32	4.7	4.43	A+		
	13	05	05	4.94	1.98	1.98	2.0	8.9	11.2	380	2180	1790	9.98	4.08	5.2	4.44	A+		
	16	05	05	5.15	1.87	1.87	2.0	8.9	11.2	380	2180	2400	9.98	4.08	5.2	4.44	A+		
	18	05	05	4.80	1.60	1.60	2.0	8.0	10.8	380	1850	2730	8.47	4.32	5.2	4.43	A+		
	22	05	05	5.66	1.62	1.62	2.0	8.9	11.2	380	2180	2870	9.98	4.08	5.2	4.30	A+		
	24	05	05	5.96	1.47	1.47	2.0	8.9	11.2	380	2180	2770	9.98	4.08	5.2	4.30	A+		
	07	07	05	2.70	2.70	2.00	2.0	7.4	10.8	380	1600	1680	7.32	4.63	4.7	4.43	A+		
	10	07	05	4.00	2.70	2.00	2.0	8.7	11.2	380	2180	2120	9.98	3.99	5.2	4.44	A+		
	13	07	05	4.59	2.48	1.84	2.0	8.9	11.2	380	2180	2400	9.98	4.08	5.2	4.44	A+		
	16	07	05	4.80	2.36	1.75	2.0	8.9	11.2	380	2180	2730	9.98	4.08	5.2	4.44	A+		
	18	07	05	4.99	2.25	1.66	2.0	8.9	11.2	380	2180	2730	9.98	4.08	5.2	4.43	A+		
	22	07	05	5.32	2.05	1.52	2.0	8.9	11.2	380	2180	2770	9.98	4.08	5.2	4.30	A+		
	24	07	05	5.63	1.88	1.39	2.0	8.9	11.2	380	2180	2780	9.98	4.08	5.2	4.30	A+		
	10	10	05	3.56	3.56	1.78	2.0	8.9	11.2	380	2180	2730	9.98	4.08	5.2	4.44	A+		
	13	10	05	4.05	3.24	1.62	2.0	8.9	11.2	380	2180	2870	9.98	4.08	5.2	4.44	A+		
	16	10	05	4.26	3.10	1.55	2.0	8.9	11.2	380	2180	2770	9.98	4.08	5.2	4.44	A+		
	18	10	05	4.45	2.97	1.48	2.0	8.9	11.2	380	2180	2770	9.98	4.08	5.2	4.43	A+		
	22	10	05	4.79	2.74	1.37	2.0	8.9	11.2	380	2180	2780	9.98	4.08	5.2	4.30	A+		
	24	10	05	5.11	2.52	1.26	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.30	A+		
	13	13	05	3.71	3.71	1.48	2.0	8.9	11.2	380	2180	2770	9.98	4.08	5.2	4.44	A+		
	16	13	05	3.92	3.56	1.42	2.0	8.9	11.2	380	2180	2780	9.98	4.08	5.2	4.44	A+		
	18	13	05	4.11	3.42	1.37	2.0	8.9	11.2	380	2180	2780	9.98	4.08	5.2	4.43	A+		
	22	13	05	4.45	3.18	1.27	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.30	A+		
	24	13	05	4.77	2.95	1.18	2.0	8.9	11.2	380	2180	2800	9.98	4.08	5.2	4.30	A+		
	16	16	05	3.77	3.77	1.37	2.0	8.9	11.2	380	2180	2780	9.98	4.08	5.2	4.44	A+		
	18	16	05	3.96	3.63	1.32	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.43	A+		
	22	16	05	4.30	3.38	1.23	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.30	A+		
	24	16	05	4.67	3.17	1.15	2.0	9.0	11.2	380	2200	2800	10.07	4.09	5.2	4.30	A+		
	07	07	07	2.70	2.70	2.70	2.0	8.1	10.8	380	1800	2750	8.24	4.50	5.2	4.44	A+		
	10	07	07	3.53	2.38	2.38	2.0	8.3	10.8	380	1900	2750	8.70	4.37	5.2	4.44	A+		
	13	07</																	

RAS-3M26U2AVG-E / TR - Performances in Heating mode

	Operating Status	Combination			Unit cacacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit A	Unit B	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
Heating, 230 V	3 units operations	13	13	10	3.18	3.18	2.54	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.44	A+	
		16	13	10	3.38	3.07	2.46	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.44	A+	
		18	13	10	3.56	2.97	2.37	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.43	A+	
		22	13	10	3.94	2.81	2.25	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		24	13	10	4.26	2.63	2.11	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		16	16	10	3.26	3.26	2.37	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.44	A+	
		18	16	10	3.45	3.16	2.30	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.43	A+	
		22	16	10	3.82	3.00	2.18	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		24	16	10	4.14	2.81	2.05	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		13	13	13	2.97	2.97	2.97	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.44	A+	
		16	13	13	3.16	2.87	2.87	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.44	A+	
		18	13	13	3.34	2.78	2.78	2.0	8.9	11.0	380	2175	2830	9.95	4.09	5.2	4.43	A+	
		22	13	13	3.71	2.65	2.65	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		24	13	13	4.03	2.49	2.49	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		16	16	13	3.09	3.09	2.81	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.44	A+	
		18	16	13	3.27	3.00	2.73	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.43	A+	
		22	16	13	3.60	2.83	2.57	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		24	16	13	3.92	2.66	2.42	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	
		16	16	16	3.00	3.00	3.00	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.44	A+	
		18	16	16	3.18	2.91	2.91	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.43	A+	
		22	16	16	3.50	2.75	2.75	2.0	9.0	11.2	380	2200	2900	10.07	4.09	5.2	4.30	A+	

RAS-4M27U2AVG-E / TR - Performances in Cooling mode

Operating Status		Combination				Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Pdc	SEER	Class	
Cooling, 230 V	1 unit operation	05	-	-	-	1.50	-	-	-	1.4	1.5	2.0	630	640	650	3.61	-	-	-		
		07	-	-	-	2.00	-	-	-	1.4	2.0	2.5	640	650	700	3.67	-	-	-		
		10	-	-	-	2.70	-	-	-	1.4	2.7	3.2	640	750	950	4.23	-	-	-		
		13	-	-	-	3.70	-	-	-	1.4	3.7	4.4	640	1200	1520	5.93	-	-	-		
		16	-	-	-	4.50	-	-	-	1.4	4.5	5.0	640	1650	2000	7.63	-	-	-		
		18	-	-	-	5.00	-	-	-	1.4	5.0	5.2	640	1950	2100	8.92	-	-	-		
		22	-	-	-	6.00	-	-	-	2.4	6.0	6.8	640	2020	2500	9.24	-	-	-		
		24	-	-	-	7.10	-	-	-	2.4	7.1	7.2	660	2390	2960	10.94	-	-	-		
	2 units operations	18	16	05	-	3.96	3.63	1.32	-	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.43	A+	
		22	16	05	-	4.30	3.38	1.23	-	2.0	8.9	11.2	380	2180	2790	9.98	4.08	5.2	4.30	A+	
		05	05	-	-	1.50	1.50	-	-	2.5	3.0	4.0	640	750	1000	3.43	4.00	3.0	5.67	A+	
		07	05	-	-	2.00	1.50	-	-	2.5	3.5	4.5	640	850	1200	3.89	4.12	3.5	5.91	A+	
		10	05	-	-	2.70	1.50	-	-	2.5	4.2	5.2	640	1100	1550	5.03	3.82	4.2	6.06	A+	
		13	05	-	-	3.70	1.50	-	-	2.5	5.2	6.0	640	1450	1950	6.64	3.59	5.2	6.15	A++	
		16	05	-	-	4.35	1.45	-	-	2.5	5.8	6.5	640	1700	2200	7.78	3.41	5.8	6.26	A++	
		18	05	-	-	4.54	1.36	-	-	2.5	5.9	6.6	640	1740	2250	7.96	3.39	5.9	6.23	A++	
		22	05	-	-	5.04	1.26	-	-	2.5	6.3	6.9	640	1900	2400	8.70	3.32	6.3	6.31	A++	
		24	05	-	-	5.20	1.10	-	-	2.5	6.3	6.9	640	1900	2400	8.70	3.32	6.3	6.30	A++	
		07	07	-	-	2.00	2.00	-	-	2.5	4.0	6.3	640	950	1900	4.35	4.21	4.0	6.12	A++	
		10	07	-	-	2.70	2.00	-	-	2.5	4.7	6.3	640	1200	2100	5.49	3.92	4.7	6.23	A++	
		13	07	-	-	3.70	2.00	-	-	2.6	5.7	6.5	660	1600	2220	7.32	3.56	5.7	6.31	A++	
		16	07	-	-	4.08	1.82	-	-	2.7	5.9	6.6	660	1700	2220	7.78	3.47	5.9	6.27	A++	
		18	07	-	-	4.50	1.80	-	-	2.9	6.3	6.9	670	1900	2400	8.70	3.32	6.3	6.27	A++	
		22	07	-	-	4.73	1.58	-	-	2.9	6.3	7.1	670	1900	2400	8.70	3.32	6.3	6.31	A++	
		24	07	-	-	5.31	1.49	-	-	3.0	6.8	7.4	690	2200	2450	10.07	3.09	6.8	6.35	A++	
		10	10	-	-	2.70	2.70	-	-	2.5	5.4	6.3	640	1500	2100	6.86	3.60	5.4	6.26	A++	
		13	10	-	-	3.41	2.49	-	-	2.7	5.9	6.6	660	1700	2220	7.78	3.47	5.9	6.29	A++	
		16	10	-	-	3.94	2.36	-	-	2.9	6.3	6.9	670	2000	2400	9.15	3.15	6.3	6.16	A++	
		18	10	-	-	4.09	2.21	-	-	2.9	6.3	7.1	670	1900	2400	8.70	3.32	6.3	6.27	A++	
		22	10	-	-	4.69	2.11	-	-	3.0	6.8	7.4	690	2200	2450	10.07	3.09	6.8	6.36	A++	
		24	10	-	-	5.22	1.98	-	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.41	A++	
		13	13	-	-	3.15	3.15	-	-	2.9	6.3	7.1	670	2000	2400	9.15	3.15	6.3	6.16	A++	
		16	13	-	-	3.73	3.07	-	-	3.0	6.8	7.4	690	2200	2450	10.07	3.09	6.8	6.07	A+	
		18	13	-	-	3.91	2.89	-	-	3.0	6.8	7.4	690	2200	2450	10.07	3.09	6.8	6.33	A++	
		22	13	-	-	4.45	2.75	-	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.42	A++	
		24	13	-	-	4.73	2.47	-	-	3.2	7.2	8.4	700	2300	2550	10.53	3.13	7.2	6.41	A++	
		16	16	-	-	3.60	3.60	-	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.42	A++	
		18	16	-	-	3.79	3.41	-	-	3.2	7.2	7.8	700	2300	2500	10.53	3.13	7.2	6.39	A++	
		22	16	-	-	4.17	3.13	-	-	3.2	7.3	8.4	700	2400	2550	10.98	3.04	7.3	6.41	A++	
		24	16	-	-	4.47	2.83	-	-	3.2	7.3	8.4	700	2400	2550	10.98	3.04	7.3	6.40	A++	
18	18	-	-	3.60	3.60	-	-	3.2	7.2	8.4	700	2300	2550	10.53	3.13	7.2	6.35	A++			
22	18	-	-	4.04	3.36	-	-	3.2	7.4	8.4	700	2400	2550	10.98	3.08	7.4	6.39	A++			
24	18	-	-	4.34	3.06	-	-	3.2	7.4	8.4	700	2400	2550	10.98	3.08	7.4	6.39	A++			
3 units operations	05	05	05	-	1.50	1.50	1.50	-	3.8	4.5	5.5	950	1410	2150	6.45	3.19	4.5	5.18	A		
	07	05	05	-	2.00	1.50	1.50	-	3.8	5.0	6.2	950	1640	2350	7.51	3.05	5.0	5.29	A		
	10	05	05	-	2.75	1.53	1.53	-	3.8	5.8	7.2	950	2010	2635	9.20	2.89	5.8	5.45	A		
	13	05	05	-	3.59	1.46	1.46	-	3.8	6.5	8.0	950	2320	2720	10.62	2.80	6.5	5.59	A		
	16	05	05	-	4.32	1.44	1.44	-	3.8	7.2	8.2	950	2400	2720	10.98	3.00	7.2	5.77	A+		
	18	05	05	-	4.81	1.44	1.44	-	3.8	7.7	8.3	950	2410	2740	11.03	3.20	7.7	5.80	A+		
	22	05	05	-	5.13	1.28	1.28	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.84	A+		
	24	05	05	-	5.41	1.14	1.14	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.83	A+		
	07	07	05	-	2.00	2.00	1.50	-	3.8	5.5	6.8	950	1880	2530	8.60	2.93	5.5	5.39	A		
	10	07	05	-	2.70	2.00	1.50	-	3.8	6.2	7.7	950	2240	2720	10.25	2.77	6.2	5.52	A		
	13	07	05	-	3.55	1.92	1.44	-	3.8	6.9	8.2	950	2400	2720	10.98	2.88	6.9	5.70	A+		
	16	07	05	-	4.33	1.93	1.44	-	3.8	7.7	8.3	950	2410	2740	11.03	3.20	7.7	5.84	A+		
	18	07	05	-	4.53	1.81	1.36	-	3.8	7.7	8.3	950	2410	2740	11.03	3.20	7.7	5.81	A+		
	22	07	05	-	4.86	1.62	1.22	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.84	A+		
	24	07	05	-	5.22	1.47	1.10	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.03	A+		
	10	10	05	-	2.70	2.70	1.50	-	3.8	6.9	8.2	950	2400	2720	10.98	2.88	6.9	5.70	A+		
	13	10	05	-	3.61	2.63	1.46	-	3.8	7.7	8.3	950	2410	2740	11.03	3.20	7.7	5.84	A+		
	16	10	05	-	3.98	2.39	1.33	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.84	A+		
	18	10	05	-	4.18	2.26	1.26	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.81	A+		
	22	10	05	-	4.59	2.06	1.15	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.03	A+		
	24	10	05	-	4.90	1.86	1.04	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.03	A+		
	13	13	05	-	3.20	3.20	1.30	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.84	A+		
	16	13	05	-	3.57	2.94	1.19	-	3.8	7.7	8.5	950	2410	2790	11.03	3.20	7.7	5.84	A+		
	18	13	05	-	3.82	2.83	1.15	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.01	A+		
22	13	05	-	4.18	2.58	1.04	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.03	A+			
24	13	05	-	4.50	2.35	0.95	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.03	A+			
16	16	05	-	3.34	3.34	1.11	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.04	A+			
18	16	05	-	3.55	3.19	1.06	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	6.01	A+			



RAS-4M27U2AVG-E / TR - Performances in Cooling mode

	Operating Status	Combination				Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Pdc	SEER	Class	
Cooling, 230 V	3 units operations	22	16	05	-	3.95	2.96	0.99	-	3.8	7.9	8.7	950	2440	2830	11.17	3.24	7.9	6.03	A+	
		24	16	05	-	4.28	2.71	0.90	-	3.8	7.9	8.7	950	2440	2830	11.17	3.24	7.9	6.02	A+	
		18	18	05	-	3.39	3.39	1.02	-	3.8	7.8	8.6	950	2430	2810	11.12	3.21	7.8	5.98	A+	
		22	18	05	-	3.79	3.16	0.95	-	3.8	7.9	8.7	950	2440	2830	11.17	3.24	7.9	6.00	A+	
		24	18	05	-	4.12	2.90	0.87	-	3.8	7.9	8.7	950	2440	2830	11.17	3.24	7.9	6.00	A+	
		07	07	07	-	2.00	2.00	2.00	-	3.8	6.0	7.5	950	2150	2720	9.84	2.79	6.0	5.55	A	
		10	07	07	-	2.70	2.00	2.00	-	3.8	6.7	8.2	950	2400	2720	10.98	2.79	6.7	5.72	A+	
		13	07	07	-	3.65	1.97	1.97	-	3.9	7.6	8.3	960	2410	2740	11.03	3.15	7.6	5.84	A+	
		16	07	07	-	4.08	1.81	1.81	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.84	A+	
		18	07	07	-	4.28	1.71	1.71	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.80	A+	
		22	07	07	-	4.68	1.56	1.56	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.03	A+	
		24	07	07	-	4.99	1.41	1.41	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.03	A+	
		10	10	07	-	2.70	2.70	2.00	-	3.8	7.4	8.2	950	2400	2720	10.98	3.08	7.4	5.83	A+	
		13	10	07	-	3.39	2.48	1.83	-	3.9	7.7	8.3	960	2410	2740	11.03	3.20	7.7	5.84	A+	
		16	10	07	-	3.77	2.26	1.67	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.83	A+	
		18	10	07	-	3.97	2.14	1.59	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.80	A+	
		22	10	07	-	4.37	1.97	1.46	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.03	A+	
		24	10	07	-	4.69	1.78	1.32	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.03	A+	
		13	13	07	-	3.03	3.03	1.64	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.83	A+	
		16	13	07	-	3.44	2.83	1.53	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.82	A+	
		18	13	07	-	3.64	2.70	1.46	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.80	A+	
		22	13	07	-	4.00	2.47	1.33	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.03	A+	
		24	13	07	-	4.38	2.28	1.23	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		16	16	07	-	3.19	3.19	1.42	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.93	A+	
		18	16	07	-	3.39	3.05	1.36	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.01	A+	
		22	16	07	-	3.79	2.84	1.26	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		24	16	07	-	4.12	2.61	1.16	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		18	18	07	-	3.29	3.29	1.32	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.99	A+	
		22	18	07	-	3.65	3.04	1.22	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.01	A+	
		24	18	07	-	3.98	2.80	1.12	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.00	A+	
		10	10	10	-	2.53	2.53	2.53	-	3.8	7.6	8.2	950	2400	2720	10.98	3.17	7.6	5.84	A+	
		13	10	10	-	3.13	2.28	2.28	-	3.9	7.7	8.3	960	2410	2740	11.03	3.20	7.7	5.83	A+	
		16	10	10	-	3.50	2.10	2.10	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.83	A+	
		18	10	10	-	3.70	2.00	2.00	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.80	A+	
		22	10	10	-	4.16	1.87	1.87	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.04	A+	
		24	10	10	-	4.49	1.71	1.71	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		13	13	10	-	2.82	2.82	2.06	-	4.0	7.7	8.5	960	2410	2790	11.03	3.20	7.7	5.83	A+	
		16	13	10	-	3.22	2.65	1.93	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.82	A+	
		18	13	10	-	3.42	2.53	1.85	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.91	A+	
		22	13	10	-	3.82	2.36	1.72	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		24	13	10	-	4.15	2.17	1.58	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		16	16	10	-	3.04	3.04	1.82	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.04	A+	
		18	16	10	-	3.20	2.88	1.73	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	6.01	A+	
		22	16	10	-	3.64	2.73	1.64	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		24	16	10	-	3.97	2.52	1.51	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		18	18	10	-	3.11	3.11	1.68	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.99	A+	
		22	18	10	-	3.50	2.92	1.58	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.01	A+	
		24	18	10	-	3.84	2.70	1.46	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.00	A+	
		13	13	13	-	2.60	2.60	2.60	-	4.1	7.8	8.6	970	2430	2810	11.12	3.21	7.8	5.82	A+	
		16	13	13	-	2.99	2.46	2.46	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.94	A+	
		18	13	13	-	3.19	2.36	2.36	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.91	A+	
		22	13	13	-	3.58	2.21	2.21	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		24	13	13	-	3.92	2.04	2.04	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		16	16	13	-	2.80	2.80	2.30	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.03	A+	
		18	16	13	-	2.99	2.69	2.21	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	6.01	A+	
		22	16	13	-	3.38	2.54	2.08	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		24	16	13	-	3.71	2.35	1.93	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		18	18	13	-	2.88	2.88	2.13	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.98	A+	
		22	18	13	-	3.27	2.72	2.01	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.01	A+	
		16	16	16	-	2.67	2.67	2.67	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
		18	16	16	-	2.86	2.57	2.57	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.01	A+	
		22	16	16	-	3.20	2.40	2.40	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.03	A+	
4 units operations	05	05	05	05	1.50	1.50	1.50	1.50	4.0	6.0	7.0	950	1690	2170	7.73	3.55	6.0	5.78	A+		
	07	05	05	05	1.94	1.45	1.45	1.45	4.0	6.3	7.4	950	1775	2285	8.12	3.55	6.3	5.84	A+		
	10	05	05	05	2.40	1.33	1.33	1.33	4.0	6.4	8.0	950	1820	2455	8.33	3.52	6.4	5.86	A+		
	13	05	05	05	3.20	1.30	1.30	1.30	4.0	7.1	8.6	950	2030	2620	9.29	3.50	7.1	5.98	A+		
	16	05	05	05	3.75	1.25	1.25	1.25	4.0	7.5	8.7	950	21450								

RAS-4M27U2AVG-E / TR - Performances in Cooling mode

Operating Status	Combination			Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Pdc	SEER	Class
Cooling, 230 V	13	10	10	05	2.69	1.96	1.96	1.09	4.0	7.7	9.0	950	2200	2730	10.07	3.50	7.7	6.07	A+
	16	10	10	05	3.12	1.87	1.87	1.04	4.0	7.9	9.2	950	2260	2790	10.34	3.50	7.9	6.10	A++
	18	10	10	05	3.32	1.79	1.79	1.00	4.0	7.9	9.2	950	2260	2790	10.34	3.50	7.9	6.07	A+
	13	13	10	05	2.52	2.52	1.84	1.02	4.0	7.9	9.2	950	2260	2790	10.34	3.50	7.9	6.10	A++
	16	13	10	05	2.87	2.36	1.72	0.96	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.10	A++
	18	13	10	05	3.06	2.27	1.65	0.92	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.07	A+
	16	16	10	05	2.69	2.69	1.62	0.90	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.10	A++
	18	16	10	05	2.88	2.59	1.56	0.86	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.07	A+
	18	18	10	05	2.78	2.78	1.50	0.83	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.05	A+
	13	13	13	05	2.32	2.32	2.32	0.94	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.10	A++
	16	13	13	05	2.65	2.18	2.18	0.88	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.10	A++
	18	13	13	05	2.84	2.10	2.10	0.85	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.07	A+
	16	16	13	05	2.50	2.50	2.06	0.83	4.0	7.9	9.3	950	2260	2820	10.34	3.50	7.9	6.10	A++
	18	16	13	05	2.72	2.45	2.01	0.82	4.0	8.0	9.3	950	2290	2890	10.48	3.49	8.0	6.08	A+
	07	07	07	07	1.78	1.78	1.78	1.78	4.0	7.1	8.6	890	2029	2620	9.29	3.50	7.1	5.98	A+
	10	07	07	07	2.33	1.72	1.72	1.72	4.0	7.5	8.7	890	2143	2640	9.81	3.50	7.5	6.05	A+
	13	07	07	07	2.90	1.57	1.57	1.57	4.1	7.6	8.9	900	2171	2700	9.94	3.50	7.6	6.05	A+
	16	07	07	07	3.30	1.47	1.47	1.47	4.1	7.7	9.0	930	2200	2730	10.07	3.50	7.7	6.07	A+
	18	07	07	07	3.55	1.42	1.42	1.42	4.1	7.8	9.1	930	2229	2760	10.20	3.50	7.8	6.06	A+
	10	10	07	07	2.18	2.18	1.62	1.62	4.1	7.6	8.9	900	2171	2700	9.94	3.50	7.6	6.05	A+
	13	10	07	07	2.74	2.00	1.48	1.48	4.1	7.7	9.0	930	2200	2730	10.07	3.50	7.7	6.07	A+
	16	10	07	07	3.13	1.88	1.39	1.39	4.1	7.8	9.1	930	2229	2760	10.20	3.50	7.8	6.09	A+
	18	10	07	07	3.38	1.82	1.35	1.35	4.1	7.9	9.2	940	2257	2790	10.33	3.50	7.9	6.08	A+
	13	13	07	07	2.56	2.56	1.39	1.39	4.1	7.9	9.2	940	2257	2790	10.33	3.50	7.9	6.10	A++
	16	13	07	07	2.91	2.40	1.30	1.30	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	13	07	07	3.11	2.30	1.24	1.24	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	16	16	07	07	2.73	2.73	1.22	1.22	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	16	07	07	2.93	2.63	1.17	1.17	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	18	18	07	07	2.82	2.82	1.13	1.13	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.04	A+
	10	10	10	07	2.03	2.03	2.03	1.50	4.1	7.6	8.9	900	2171	2700	9.94	3.50	7.6	6.05	A+
	13	10	10	07	2.60	1.90	1.90	1.41	4.1	7.8	9.1	930	2229	2760	10.20	3.50	7.8	6.09	A+
	16	10	10	07	2.99	1.79	1.79	1.33	4.1	7.9	9.2	940	2257	2790	10.33	3.50	7.9	6.10	A++
	18	10	10	07	3.19	1.72	1.72	1.27	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	13	13	10	07	2.42	2.42	1.76	1.31	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	16	13	10	07	2.76	2.27	1.65	1.22	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	13	10	07	2.95	2.18	1.59	1.18	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	16	16	10	07	2.59	2.59	1.56	1.15	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	16	10	07	2.78	2.50	1.50	1.11	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	18	18	10	07	2.72	2.72	1.47	1.09	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.05	A+
	13	13	13	07	2.23	2.23	2.23	1.21	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	16	13	13	07	2.56	2.10	2.10	1.14	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	13	13	07	2.74	2.03	2.03	1.10	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	16	16	13	07	2.45	2.45	2.01	1.09	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.11	A++
	18	16	13	07	2.63	2.37	1.95	1.05	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.08	A+
	10	10	10	10	1.98	1.98	1.98	1.98	4.1	7.9	9.2	940	2257	2790	10.33	3.50	7.9	6.10	A++
	13	10	10	10	2.48	1.81	1.81	1.81	4.1	7.9	9.2	940	2257	2790	10.33	3.50	7.9	6.10	A++
	16	10	10	10	2.82	1.69	1.69	1.69	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	10	10	10	3.02	1.63	1.63	1.63	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	13	13	10	10	2.28	2.28	1.67	1.67	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	16	13	10	10	2.61	2.15	1.57	1.57	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	18	13	10	10	2.80	2.07	1.51	1.51	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.06	A+
	16	16	10	10	2.50	2.50	1.50	1.50	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.11	A++
	18	16	10	10	2.68	2.42	1.45	1.45	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.08	A+
	13	13	13	10	2.12	2.12	2.12	1.55	4.2	7.9	9.3	950	2257	2820	10.33	3.50	7.9	6.09	A+
	16	13	13	10	2.47	2.03	2.03	1.48	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.11	A++
	18	13	13	10	2.65	1.96	1.96	1.43	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.08	A+
	13	13	13	13	2.00	2.00	2.00	2.00	4.2	8.0	9.3	950	2286	2820	10.46	3.50	8.0	6.11	A++
	22	05*	05*	05*	4.51	1.13	1.13	1.13	4.0	7.9	9.0	950	2200	2760	10.07	3.59	7.9	6.10	A++
	24	05*	05*	05*	4.84	1.02	1.02	1.02	4.0	7.9	9.0	950	2220	2770	10.16	3.56	7.9	6.09	A+
	22	07*	05*	05*	4.31	1.44	1.08	1.08	4.0	7.9	9.3	950	2210	2760	10.11	3.57	7.9	6.10	A++
24	07*	05*	05*	4.64	1.31	0.98	0.98	4.0	7.9	9.3	950	2230	2780	10.21	3.54	7.9	6.09	A+	
22	10*	05*	05*	4.05	1.82	1.01	1.01	4.0	7.9	9.3	950	2220	2770	10.16	3.56	7.9	6.10	A++	
24	10*	05*	05*	4.38	1.67	0.93	0.93	4.0	7.9	9.3	950	2220	2770	10.16	3.56	7.9	6.09	A+	
22	13*	05*	05*	3.73	2.30	0.93	0.93	4.0	7.9	9.3	950	2220	2770	10.16	3.56	7.9	6.10	A++	
24	13*	05*	05*	4.06	2.12	0.86	0.86	4.0	7.9	9.3	950	2220	2770	10.16	3.56	7.9	6.09	A+	
22	07*	07*	05*	4.12	1.37	1.37	1.03	4.0	7.9	9.3	950	2220	2770	10.16	3.56	7.9	6.10		



RAS-4M27U2AVG-E / TR - Performances in Heating mode

	Operating Status	Combination				Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*			
		Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.		Pdc	SEER	Class	
1 unit operation	05	-	-	-	-	2.00	-	-	-	0.8	2.0	2.7	300	600	900	3.00	-	-	-	-	-	
	07	-	-	-	-	2.70	-	-	-	0.8	2.7	4.8	300	900	1980	4.50	-	-	-	-	-	
	10	-	-	-	-	4.00	-	-	-	0.8	4.0	5.2	300	1450	1980	6.64	-	-	-	-	-	
	13	-	-	-	-	5.00	-	-	-	0.8	5.0	6.5	310	2050	2750	9.38	-	-	-	-	-	
	16	-	-	-	-	5.50	-	-	-	0.8	5.5	6.9	310	2400	3000	10.98	-	-	-	-	-	
	18	-	-	-	-	6.00	-	-	-	0.8	6.0	7.1	310	2630	3200	12.04	-	-	-	-	-	
	22	-	-	-	-	7.00	-	-	-	1.8	7.0	8.2	330	2620	3200	11.99	-	-	-	-	-	
	24	-	-	-	-	8.10	-	-	-	1.8	8.1	8.6	330	3080	3300	14.10	-	-	-	-	-	
2 units operations	05	05	-	-	2.00	2.00	-	-	1.5	4.0	5.0	320	1300	1500	5.95	3.08	3.5	4.04	A+	-	-	
	07	05	-	-	2.70	2.00	-	-	1.5	4.7	6.0	320	1500	1700	6.86	3.13	4.0	4.13	A+	-	-	
	10	05	-	-	4.00	2.00	-	-	1.5	6.0	7.4	320	1800	2600	8.24	3.33	4.5	4.21	A+	-	-	
	13	05	-	-	5.00	2.00	-	-	1.5	7.0	8.9	320	2150	2700	9.84	3.26	4.5	4.21	A+	-	-	
	16	05	-	-	5.50	2.00	-	-	1.5	7.5	10.1	320	2320	2800	10.62	3.23	4.7	4.30	A+	-	-	
	18	05	-	-	6.00	2.00	-	-	1.5	8.0	10.1	320	2480	3100	11.35	3.23	4.7	4.30	A+	-	-	
	22	05	-	-	6.46	1.84	-	-	1.5	8.3	10.2	320	2700	3230	12.36	3.07	4.7	4.20	A+	-	-	
	24	05	-	-	6.66	1.64	-	-	1.5	8.3	10.2	320	2700	3230	12.36	3.07	4.7	4.20	A+	-	-	
	07	07	-	-	2.70	2.70	-	-	1.5	5.4	7.4	320	1800	2500	8.24	3.00	4.5	4.21	A+	-	-	
	10	07	-	-	4.00	2.70	-	-	1.5	6.7	8.9	320	2080	3200	9.52	3.22	4.5	4.21	A+	-	-	
	13	07	-	-	4.81	2.59	-	-	1.5	7.4	10.1	320	2320	3210	10.62	3.19	4.7	4.30	A+	-	-	
	16	07	-	-	5.10	2.50	-	-	1.5	7.6	10.1	320	2480	3230	11.35	3.06	4.7	4.30	A+	-	-	
	18	07	-	-	5.45	2.45	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	4.7	4.30	A+	-	-	
	22	07	-	-	5.70	2.20	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	4.7	4.20	A+	-	-	
	24	07	-	-	6.23	2.08	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	4.7	4.20	A+	-	-	
	10	10	-	-	3.60	3.60	-	-	1.5	7.2	10.0	320	2100	3200	9.61	3.43	4.7	4.30	A+	-	-	
	13	10	-	-	4.22	3.38	-	-	1.5	7.6	10.1	320	2320	3210	10.62	3.28	4.7	4.30	A+	-	-	
	16	10	-	-	4.57	3.33	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	4.7	4.30	A+	-	-	
	18	10	-	-	4.74	3.16	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	4.7	4.30	A+	-	-	
	22	10	-	-	5.28	3.02	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	4.7	4.20	A+	-	-	
	24	10	-	-	5.76	2.84	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.20	A+	-	-	
	13	13	-	-	3.95	3.95	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	4.7	4.30	A+	-	-	
	16	13	-	-	4.35	3.95	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	4.7	4.30	A+	-	-	
	18	13	-	-	4.53	3.77	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	4.7	4.30	A+	-	-	
	22	13	-	-	5.02	3.58	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.20	A+	-	-	
	24	13	-	-	5.32	3.28	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.20	A+	-	-	
	16	16	-	-	4.30	4.30	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.30	A+	-	-	
	18	16	-	-	4.49	4.11	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.30	A+	-	-	
	22	16	-	-	4.82	3.78	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.20	A+	-	-	
	24	16	-	-	5.12	3.48	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.20	A+	-	-	
	18	18	-	-	4.30	4.30	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.29	A+	-	-	
	22	18	-	-	4.63	3.97	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.19	A+	-	-	
	24	18	-	-	4.94	3.66	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	4.7	4.19	A+	-	-	
	3 units operations	05	05	05	-	2.00	2.00	2.00	-	2.0	6.0	9.0	380	1470	2100	6.73	4.08	4.7	4.42	A+	-	-
		07	05	05	-	2.70	2.00	2.00	-	2.0	6.7	9.5	380	1650	2400	7.55	4.06	4.7	4.42	A+	-	-
		10	05	05	-	4.00	2.00	2.00	-	2.0	8.0	10.5	380	2100	2760	9.61	3.81	4.7	4.42	A+	-	-
		13	05	05	-	4.72	1.89	1.89	-	2.0	8.5	10.5	380	2250	2760	10.30	3.78	5.2	4.42	A+	-	-
		16	05	05	-	4.92	1.79	1.79	-	2.0	8.5	10.5	380	2350	2760	10.76	3.62	5.2	4.42	A+	-	-
		18	05	05	-	5.10	1.70	1.70	-	2.0	8.5	10.5	380	2350	2760	10.76	3.62	5.2	4.42	A+	-	-
		22	05	05	-	5.60	1.60	1.60	-	2.0	8.8	10.6	380	2450	2780	11.21	3.59	5.2	4.29	A+	-	-
		24	05	05	-	5.89	1.45	1.45	-	2.0	8.8	10.6	380	2450	2780	11.21	3.59	5.2	4.28	A+	-	-
		07	07	05	-	2.70	2.70	2.00	-	2.0	7.4	10.0	380	1950	2700	8.92	3.79	4.7	4.42	A+	-	-
		10	07	05	-	4.00	2.70	2.00	-	2.0	8.7	10.5	380	2300	2760	10.53	3.78	5.2	4.42	A+	-	-
		13	07	05	-	4.48	2.42	1.79	-	2.0	8.7	10.5	380	2400	2760	10.98	3.63	5.2	4.42	A+	-	-
		16	07	05	-	4.58	2.25	1.67	-	2.0	8.5	10.5	380	2350	2760	10.76	3.62	5.2	4.42	A+	-	-
		18	07	05	-	4.77	2.14	1.59	-	2.0	8.5	10.7	380	2400	2790	10.98	3.54	5.2	4.42	A+	-	-
		22	07	05	-	5.09	1.96	1.45	-	2.0	8.5	10.7	380	2450	2790	11.21	3.47	5.2	4.29	A+	-	-
		24	07	05	-	5.51	1.84	1.36	-	2.0	8.7	10.7	380	2450	2790	11.21	3.55	5.2	4.28	A+	-	-
10		10	05	-	3.40	3.40	1.70	-	2.0	8.5	10.5	380	2350	2760	10.76	3.62	5.2	4.42	A+	-	-	
13		10	05	-	4.00	3.20	1.60	-	2.0	8.8	10.5	380	2350	2760	10.76	3.74	5.2	4.42	A+	-	-	
16		10	05	-	4.07	2.96	1.48	-	2.0	8.5	10.6	380	2350	2780	10.76	3.62	5.2	4.42	A+	-	-	
18		10	05	-	4.25	2.83	1.42	-	2.0	8.5	10.6	380	2350	2780	10.76	3.62	5.2	4.42	A+	-	-	
22		10	05	-	4.68	2.68	1.34	-	2.0	8.7	10.6	380	2350	2780	10.76	3.70	5.2	4.29	A+	-	-	
24		10	05	-	5.06	2.50	1.25	-	2.0	8.8	10.6	380	2350	2780	10.76	3.74	5.2	4.28	A+	-	-	
13		13	05	-	3.54	3.54	1.42	-	2.0	8.5	10.6	380	2350	2780	10.76	3.62	5.2	4.42	A+	-	-	
16		13	05	-	3.87	3.52	1.41	-	2.0	8.8	10.6	380	2350	2780	10.76	3.74	5.2	4.42	A+	-	-	
18		13	05	-	4.06	3.38	1.35	-	2.0	8.8	10.6	380	2350	2780	10.76	3.74	5.2	4.42				

RAS-4M27U2AVG-E / TR - Performances in Heating mode

Operating Status	Combination				Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
3 units operations	10	10	10	-	2.87	2.87	2.87	-	2.0	8.6	10.4	380	2300	2750	10.53	3.74	5.2	4.42	A+	
	13	10	10	-	3.35	2.68	2.68	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	5.2	4.42	A+	
	16	10	10	-	3.54	2.58	2.58	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	5.2	4.42	A+	
	18	10	10	-	3.73	2.49	2.49	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	5.2	4.42	A+	
	22	10	10	-	4.15	2.37	2.37	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
	24	10	10	-	4.48	2.21	2.21	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	13	13	10	-	3.11	3.11	2.49	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	5.2	4.42	A+	
	16	13	10	-	3.34	3.03	2.43	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	5.2	4.42	A+	
	18	13	10	-	3.56	2.97	2.37	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	13	10	-	3.89	2.78	2.23	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
	24	13	10	-	4.22	2.60	2.08	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	16	16	10	-	3.26	3.26	2.37	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	18	16	10	-	3.45	3.16	2.30	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	16	10	-	3.78	2.97	2.16	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
	24	16	10	-	4.10	2.78	2.02	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	18	18	10	-	3.34	3.34	2.23	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	18	10	-	3.66	3.14	2.09	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	24	18	10	-	3.98	2.95	1.97	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	13	13	13	-	2.93	2.93	2.93	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	5.2	4.42	A+	
	16	13	13	-	3.16	2.87	2.87	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	18	13	13	-	3.34	2.78	2.78	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	13	13	-	3.66	2.62	2.62	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
	24	13	13	-	3.98	2.46	2.46	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	16	16	13	-	3.06	3.06	2.78	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	18	16	13	-	3.24	2.97	2.70	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	16	13	-	3.56	2.80	2.54	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
	24	16	13	-	3.88	2.63	2.39	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	18	18	13	-	3.14	3.14	2.62	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	18	13	-	3.46	2.97	2.47	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.28	A+	
	16	16	16	-	2.97	2.97	2.97	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	18	16	16	-	3.14	2.88	2.88	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.42	A+	
	22	16	16	-	3.46	2.72	2.72	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	5.2	4.29	A+	
4 units operations	05	05	05	05	1.63	1.63	1.63	1.63	2.9	6.5	10.0	501	1400	2000	6.41	4.64	5.2	4.26	A+	
	07	05	05	05	2.33	1.72	1.72	1.72	2.9	7.5	11.0	501	1630	2300	7.46	4.60	5.2	4.26	A+	
	10	05	05	05	3.36	1.68	1.68	1.68	2.9	8.4	11.6	501	1850	2580	8.47	4.54	5.2	4.26	A+	
	13	05	05	05	4.00	1.60	1.60	1.60	2.9	8.8	11.7	501	1880	2590	8.60	4.68	5.2	4.26	A+	
	16	05	05	05	4.21	1.53	1.53	1.53	2.9	8.8	11.7	501	1890	2600	8.65	4.66	5.2	4.26	A+	
	18	05	05	05	4.40	1.47	1.47	1.47	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.25	A+	
	07	07	05	05	2.36	2.36	1.74	1.74	2.9	8.2	11.5	501	1800	2500	8.24	4.56	5.2	4.26	A+	
	10	07	05	05	3.21	2.17	1.61	1.61	2.9	8.6	11.7	501	1870	2590	8.56	4.60	5.2	4.26	A+	
	13	07	05	05	3.76	2.03	1.50	1.50	2.9	8.8	11.7	501	1900	2600	8.70	4.63	5.2	4.26	A+	
	16	07	05	05	3.97	1.95	1.44	1.44	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.26	A+	
	18	07	05	05	4.20	1.89	1.40	1.40	2.9	8.9	11.7	501	1910	2600	8.74	4.66	5.2	4.25	A+	
	10	10	05	05	2.93	2.93	1.47	1.47	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.26	A+	
	13	10	05	05	3.38	2.71	1.35	1.35	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.26	A+	
	16	10	05	05	3.63	2.64	1.32	1.32	2.9	8.9	11.7	501	1910	2600	8.74	4.66	5.2	4.26	A+	
	18	10	05	05	3.81	2.54	1.27	1.27	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.25	A+	
	13	13	05	05	3.18	3.18	1.27	1.27	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	16	13	05	05	3.38	3.07	1.23	1.23	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	18	13	05	05	3.56	2.97	1.19	1.19	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.25	A+	
	16	16	05	05	3.26	3.26	1.19	1.19	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	18	16	05	05	3.45	3.16	1.15	1.15	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.25	A+	
	18	18	05	05	3.34	3.34	1.11	1.11	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.25	A+	
	07	07	07	05	2.27	2.27	2.27	1.68	2.9	8.5	11.7	501	1850	2580	8.47	4.59	5.2	4.26	A+	
	10	07	07	05	3.09	2.08	2.08	1.54	2.9	8.8	11.7	501	1890	2590	8.65	4.66	5.2	4.26	A+	
	13	07	07	05	3.55	1.92	1.92	1.42	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.26	A+	
	16	07	07	05	3.79	1.86	1.86	1.38	2.9	8.9	11.7	501	1910	2600	8.74	4.66	5.2	4.26	A+	
	18	07	07	05	3.99	1.79	1.79	1.33	2.9	8.9	11.7	501	1910	2600	8.74	4.66	5.2	4.25	A+	
	10	10	07	05	2.77	2.77	1.87	1.39	2.9	8.8	11.7	501	1910	2600	8.74	4.61	5.2	4.26	A+	
	13	10	07	05	3.25	2.60	1.75	1.30	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	16	10	07	05	3.45	2.51	1.69	1.25	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	18	10	07	05	3.63	2.42	1.63	1.21	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.25	A+	
	13	13	07	05	3.03	3.03	1.63	1.21	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.26	A+	
	16	13	07	05	3.22	2.93	1.58	1.17	2.9	8.9	11.7	501	1930	2600	8.83	4.61	5.2	4.26	A+	
	18	13	07	05	3.40	2.83	1.53	1.13	2.9	8.9	11.7	501	1930	2600	8.83	4.61	5.2	4.25	A+	
	16	16	07	05	3.12	3.12	1.5													



RAS-4M27U2AVG-E / TR - Performances in Heating mode

Heating, 230 V

Operating Status	Combination				Unit capacity (kW)				Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit C	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
	16	10	10	07	3.02	2.20	2.20	1.48	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	10	10	07	3.20	2.13	2.13	1.44	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	13	13	10	07	2.66	2.66	2.13	1.44	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	16	13	10	07	2.85	2.59	2.07	1.40	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	13	10	07	3.02	2.51	2.01	1.36	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	16	16	10	07	2.77	2.77	2.01	1.36	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	16	10	07	2.93	2.69	1.96	1.32	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	18	18	10	07	2.89	2.89	1.93	1.30	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.25	A+	
	13	13	13	07	2.51	2.51	2.51	1.36	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	16	13	13	07	2.69	2.45	2.45	1.32	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	13	13	07	2.86	2.38	2.38	1.29	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	16	16	13	07	2.65	2.65	2.41	1.30	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.26	A+	
	18	16	13	07	2.81	2.58	2.34	1.27	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.25	A+	
	10	10	10	10	2.18	2.18	2.18	2.18	2.9	8.7	11.6	501	1869	2580	8.55	4.67	5.2	4.26	A+	
	13	10	10	10	2.62	2.09	2.09	2.09	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	16	10	10	10	2.80	2.03	2.03	2.03	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	10	10	10	2.97	1.98	1.98	1.98	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	13	13	10	10	2.47	2.47	1.98	1.98	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	16	13	10	10	2.65	2.41	1.92	1.92	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	18	13	10	10	2.81	2.34	1.87	1.87	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.25	A+	
	16	16	10	10	2.61	2.61	1.89	1.89	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.26	A+	
	18	16	10	10	2.77	2.54	1.85	1.85	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.25	A+	
	13	13	13	10	2.34	2.34	2.34	1.87	2.9	8.9	11.7	501	1905	2600	8.72	4.67	5.2	4.26	A+	
	16	13	13	10	2.54	2.31	2.31	1.85	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.26	A+	
	18	13	13	10	2.70	2.25	2.25	1.80	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.25	A+	
	13	13	13	13	2.25	2.25	2.25	2.25	2.9	9.0	11.7	501	1927	2600	8.82	4.67	5.2	4.26	A+	
	22	05*	05*	05*	4.79	1.37	1.37	1.37	2.9	8.9	11.7	501	1910	2600	8.74	4.66	5.2	4.12	A+	
	24	05*	05*	05*	5.11	1.26	1.26	1.26	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	07*	05*	05*	4.55	1.75	1.30	1.30	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	07*	05*	05*	4.87	1.62	1.20	1.20	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	10*	05*	05*	4.15	2.37	1.19	1.19	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	10*	05*	05*	4.48	2.21	1.11	1.11	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	13*	05*	05*	3.89	2.78	1.11	1.11	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	13*	05*	05*	4.22	2.60	1.04	1.04	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	07*	07*	05*	4.33	1.67	1.67	1.24	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	07*	07*	05*	4.65	1.55	1.55	1.15	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	10*	07*	05*	3.97	2.27	1.53	1.13	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	10*	07*	05*	4.29	2.12	1.43	1.06	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	13*	07*	05*	3.73	2.66	1.44	1.07	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	13*	07*	05*	4.05	2.50	1.35	1.00	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	10*	10*	05*	3.66	2.09	2.09	1.05	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	10*	10*	05*	3.98	1.97	1.97	0.98	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	13*	10*	05*	3.46	2.47	1.98	0.99	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	24	13*	10*	05*	3.77	2.33	1.86	0.93	2.9	8.9	11.7	501	1920	2600	8.79	4.64	5.2	4.12	A+	
	22	07*	07*	07*	4.13	1.59	1.59	1.59	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	24	07*	07*	07*	4.45	1.48	1.48	1.48	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	22	10*	07*	07*	3.80	2.17	1.47	1.47	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	24	10*	07*	07*	4.12	2.03	1.37	1.37	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	22	13*	07*	07*	3.58	2.56	1.38	1.38	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	24	13*	07*	07*	3.90	2.41	1.30	1.30	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	22	10*	10*	07*	3.52	2.01	2.01	1.36	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	24	10*	10*	07*	3.83	1.89	1.89	1.28	2.6	8.9	11.7	480	1905	2600	8.72	4.67	5.2	4.12	A+	
	22	13*	10*	07*	3.37	2.41	1.93	1.30	2.6	9.0	11.7	480	1927	2600	8.82	4.67	5.2	4.12	A+	
	24	13*	10*	07*	3.68	2.27	1.82	1.23	2.6	9.0	11.7	480	1927	2600	8.82	4.67	5.2	4.12	A+	
	22	10*	10*	10*	3.32	1.89	1.89	1.89	2.6	9.0	11.7	480	1927	2600	8.82	4.67	5.2	4.12	A+	
	24	10*	10*	10*	3.63	1.79	1.79	1.79	2.6	9.0	11.7	480	1927	2600	8.82	4.67	5.2	4.12	A+	

RAS-5M34U2AVG-E / TR - Performances in Cooling mode

Operating status		Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Pdc	SEER	Class	
1 unit operation	05	-	-	-	-	1.50	-	-	-	-	1.4	1.5	2.0	630	640	3.61	-	-	-	-	-		
	07	-	-	-	-	2.00	-	-	-	-	1.4	2.0	2.5	640	650	3.67	-	-	-	-	-		
	10	-	-	-	-	2.70	-	-	-	-	1.4	2.7	3.2	640	750	4.23	-	-	-	-	-		
	13	-	-	-	-	3.70	-	-	-	-	1.4	3.7	4.4	640	1200	5.93	-	-	-	-	-		
	16	-	-	-	-	4.50	-	-	-	-	1.4	4.5	5.0	640	1650	7.63	-	-	-	-	-		
	18	-	-	-	-	5.00	-	-	-	-	1.4	5.0	5.2	640	1950	8.92	-	-	-	-	-		
	22	-	-	-	-	6.00	-	-	-	-	2.4	6.0	6.8	660	2020	9.15	-	-	-	-	-		
	24	-	-	-	-	7.10	-	-	-	-	2.4	7.1	7.2	660	2390	10.82	-	-	-	-	-		
Cooling, 230 V	05	05	-	-	-	1.50	1.50	-	-	-	2.5	3.0	4.0	640	1210	1480	5.54	2.48	3.0	4.82	B		
	07	05	-	-	-	2.00	1.50	-	-	-	2.5	3.5	4.5	640	1310	1625	6.00	2.67	3.5	5.05	B		
	10	05	-	-	-	2.70	1.50	-	-	-	2.5	4.2	5.2	640	1440	1810	6.59	2.92	4.2	5.32	A		
	13	05	-	-	-	3.56	1.44	-	-	-	2.5	5.0	6.0	640	1620	1980	7.41	3.09	5.0	5.38	A		
	16	05	-	-	-	4.35	1.45	-	-	-	2.5	5.8	6.5	640	1810	2160	8.28	3.20	5.8	5.55	A		
	18	05	-	-	-	4.54	1.36	-	-	-	2.5	5.9	6.6	640	1810	2220	8.28	3.26	5.9	5.51	A		
	22	05	-	-	-	5.04	1.26	-	-	-	2.5	6.3	6.9	640	2040	2400	9.34	3.09	6.3	5.54	A		
	24	05	-	-	-	5.20	1.10	-	-	-	2.5	6.3	6.9	640	2040	2400	9.34	3.09	6.3	5.31	A		
	07	07	-	-	-	2.00	2.00	-	-	-	2.5	4.0	5.0	640	1400	1770	6.41	2.86	4.0	5.25	A		
	10	07	-	-	-	2.70	2.00	-	-	-	2.5	4.7	5.7	640	1530	1910	7.00	3.07	4.7	5.48	A		
	13	07	-	-	-	3.70	2.00	-	-	-	2.6	5.7	6.5	660	1810	2130	8.28	3.15	5.7	5.54	A		
	16	07	-	-	-	4.08	1.82	-	-	-	2.7	5.9	6.6	660	1810	2220	8.28	3.26	5.9	5.57	A		
	18	07	-	-	-	4.50	1.80	-	-	-	2.9	6.3	6.9	670	2040	2400	9.34	3.09	6.3	5.52	A		
	22	07	-	-	-	4.73	1.58	-	-	-	2.9	6.3	6.9	670	2040	2400	9.34	3.09	6.3	5.55	A		
	24	07	-	-	-	5.31	1.49	-	-	-	3.0	6.8	7.2	690	2320	2570	10.62	2.93	6.8	5.34	A		
	10	10	-	-	-	2.70	2.70	-	-	-	2.5	5.4	6.3	640	1530	2040	7.00	3.53	5.4	5.82	A+		
	13	10	-	-	-	3.41	2.49	-	-	-	2.7	5.9	6.6	660	1810	2220	8.28	3.26	5.9	5.57	A		
	16	10	-	-	-	3.94	2.36	-	-	-	2.9	6.3	6.9	670	2040	2400	9.34	3.09	6.3	5.55	A		
	18	10	-	-	-	4.09	2.21	-	-	-	2.9	6.3	6.9	670	2040	2400	9.34	3.09	6.3	5.52	A		
	22	10	-	-	-	4.69	2.11	-	-	-	3.0	6.8	7.2	690	2320	2570	10.62	2.93	6.8	5.35	A		
	24	10	-	-	-	5.22	1.98	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.56	A		
	13	13	-	-	-	3.15	3.15	-	-	-	2.9	6.3	6.9	670	2040	2400	9.34	3.09	6.3	5.55	A		
	16	13	-	-	-	3.73	3.07	-	-	-	3.0	6.8	7.2	690	2320	2570	10.62	2.93	6.8	5.35	A		
	18	13	-	-	-	3.91	2.89	-	-	-	3.0	6.8	7.2	690	2320	2570	10.62	2.93	6.8	5.33	A		
	22	13	-	-	-	4.45	2.75	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.57	A		
	24	13	-	-	-	4.73	2.47	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.56	A		
	16	16	-	-	-	3.60	3.60	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.57	A		
	18	16	-	-	-	3.79	3.41	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.55	A		
22	16	-	-	-	4.17	3.13	-	-	-	3.2	7.3	7.5	700	2550	2750	11.67	2.86	7.3	5.59	A			

RAS-5M34U2AVG-E / TR - Performances in Cooling mode

RESIDENTIAL AIR-TO-AIR

Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
2 units operations	24	16	-	-	-	4.47	2.83	-	-	-	3.2	7.3	7.5	700	2550	2750	11.67	2.86	7.3	5.58	A	
	18	18	-	-	-	3.60	3.60	-	-	-	3.2	7.2	7.5	700	2550	2750	11.67	2.82	7.2	5.52	A	
	22	18	-	-	-	4.04	3.36	-	-	-	3.2	7.4	7.5	700	2550	2750	11.67	2.90	7.4	5.58	A	
	24	18	-	-	-	4.34	3.06	-	-	-	3.2	7.4	7.5	700	2550	2750	11.67	2.90	7.4	5.58	A	
	22	22	-	-	-	4.00	4.00	-	-	-	3.2	8.0	8.3	700	2570	2770	11.64	3.11	8.0	5.97	A+	
	24	22	-	-	-	4.34	3.66	-	-	-	3.2	8.0	8.3	700	2570	2770	11.64	3.11	8.0	5.96	A+	
Cooling, 230 V	24	24	-	-	-	4.05	4.05	-	-	-	3.2	8.1	8.4	700	2600	2800	11.78	3.12	8.1	5.97	A+	
	05	05	05	-	-	1.50	1.50	1.50	-	-	3.8	4.5	5.5	950	1840	1910	8.42	2.45	4.5	5.44	A	
	07	05	05	-	-	2.00	1.50	1.50	-	-	3.8	5.0	6.0	950	1930	2060	8.83	2.59	5.0	5.51	A	
	10	05	05	-	-	2.70	1.50	1.50	-	-	3.8	5.7	6.5	950	2040	2210	9.34	2.79	5.7	5.72	A+	
	13	05	05	-	-	3.59	1.46	1.46	-	-	3.8	6.5	7.2	950	2300	2410	10.53	2.83	6.5	5.80	A+	
	16	05	05	-	-	4.32	1.44	1.44	-	-	3.8	7.2	8.2	950	2400	2660	10.98	3.00	7.2	5.92	A+	
	18	05	05	-	-	4.75	1.43	1.43	-	-	3.8	7.6	8.3	950	2410	2690	11.03	3.15	7.6	5.97	A+	
	22	05	05	-	-	5.13	1.28	1.28	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	6.00	A+	
	24	05	05	-	-	5.27	1.11	1.11	-	-	3.8	7.5	8.5	950	2410	2720	11.03	3.11	7.5	5.95	A+	
	07	07	05	-	-	2.00	2.00	1.50	-	-	3.8	5.5	6.3	950	2010	2170	9.20	2.74	5.5	5.66	A+	
	10	07	05	-	-	2.70	2.00	1.50	-	-	3.8	6.2	6.9	950	2120	2330	9.70	2.92	6.2	5.77	A+	
	13	07	05	-	-	3.55	1.92	1.44	-	-	3.8	6.9	7.8	950	2400	2230	10.98	2.88	6.9	5.88	A+	
	16	07	05	-	-	4.28	1.90	1.43	-	-	3.8	7.6	8.3	950	2410	2690	11.03	3.15	7.6	6.00	A+	
	18	07	05	-	-	4.53	1.81	1.36	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	5.99	A+	
	22	07	05	-	-	4.86	1.62	1.22	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	6.00	A+	
	24	07	05	-	-	5.22	1.47	1.10	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	10	10	05	-	-	2.70	2.70	1.50	-	-	3.8	6.9	7.8	950	2400	2230	10.98	2.88	6.9	5.88	A+	
	13	10	05	-	-	3.56	2.60	1.44	-	-	3.8	7.6	8.3	950	2410	2690	11.03	3.15	7.6	6.00	A+	
	16	10	05	-	-	3.98	2.39	1.33	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	6.02	A+	
	18	10	05	-	-	4.18	2.26	1.26	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	5.99	A+	
	22	10	05	-	-	4.59	2.06	1.15	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	24	10	05	-	-	4.90	1.86	1.04	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	13	13	05	-	-	3.20	3.20	1.30	-	-	3.8	7.7	8.5	950	2410	2720	11.03	3.20	7.7	6.02	A+	
	16	13	05	-	-	3.48	2.86	1.16	-	-	3.8	7.5	8.5	950	2410	2720	11.03	3.11	7.5	5.98	A+	
	18	13	05	-	-	3.82	2.83	1.15	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.00	A+	
	22	13	05	-	-	4.18	2.58	1.04	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	24	13	05	-	-	4.50	2.35	0.95	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	16	16	05	-	-	3.34	3.34	1.11	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.02	A+	
	18	16	05	-	-	3.55	3.19	1.06	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	6.00	A+	
	22	16	05	-	-	3.95	2.96	0.99	-	-	3.8	7.9	8.7	950	2440	2780	11.17	3.24	7.9	6.04	A+	
	24	16	05	-	-	4.28	2.71	0.90	-	-	3.8	7.9	8.7	950	2440	2780	11.17	3.24	7.9	6.04	A+	
	18	18	05	-	-	3.39	3.39	1.02	-	-	3.8	7.8	8.6	950	2430	2760	11.12	3.21	7.8	5.97	A+	
	22	18	05	-	-	3.79	3.16	0.95	-	-	3.8	7.9	8.7	950	2440	2780	11.17	3.24	7.9	6.02	A+	
	24	18	05	-	-	4.12	2.90	0.87	-	-	3.8	7.9	8.7	950	2440	2780	11.17	3.24	7.9	6.01	A+	
	22	22	05	-	-	3.51	3.51	0.88	-	-	3.8	7.9	8.7	950	2440	2780	11.17	3.24	7.9	6.04	A+	
	24	22	05	-	-	3.89	3.29	0.82	-	-	3.8	8.0	8.8	950	2450	2810	11.21	3.27	8.0	6.12	A++	
	24	24	05	-	-	3.62	3.62	0.76	-	-	3.8	8.0	8.9	950	2450	2830	11.21	3.27	8.0	6.12	A++	
	07	07	07	-	-	2.00	2.00	2.00	-	-	3.8	6.0	7.5	950	2100	2500	9.61	2.86	6.0	5.72	A+	
	10	07	07	-	-	2.70	2.00	2.00	-	-	3.8	6.7	8.2	950	2400	2660	10.98	2.79	6.7	5.83	A+	
	13	07	07	-	-	3.65	1.97	1.97	-	-	3.9	7.6	8.3	960	2410	2690	11.03	3.15	7.6	5.84	A+	
	16	07	07	-	-	4.08	1.81	1.81	-	-	4.0	7.7	8.5	960	2410	2720	11.03	3.20	7.7	5.83	A+	
	18	07	07	-	-	4.28	1.71	1.71	-	-	4.0	7.7	8.5	960	2410	2720	11.03	3.20	7.7	5.81	A+	
	22	07	07	-	-	4.68	1.56	1.56	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	6.04	A+	
	24	07	07	-	-	4.99	1.41	1.41	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	6.03	A+	
	10	10	07	-	-	2.70	2.70	2.00	-	-	3.8	7.4	8.2	950	2400	2660	10.98	3.08	7.4	5.62	A+	
	13	10	07	-	-	3.39	2.48	1.83	-	-	3.9	7.7	8.3	960	2410	2690	11.03	3.20	7.7	5.83	A+	
	16	10	07	-	-	3.77	2.26	1.67	-	-	4.0	7.7	8.5	960	2410	2720	11.03	3.20	7.7	5.83	A+	
	18	10	07	-	-	3.97	2.14	1.59	-	-	4.0	7.7	8.5	960	2410	2720	11.03	3.20	7.7	5.81	A+	
22	10	07	-	-	4.37	1.97	1.46	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	6.04	A+		
24	10	07	-	-	4.69	1.78	1.32	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	6.03	A+		
13	13	07	-	-	3.03	3.03	1.64	-	-	4.0	7.7	8.5	960	2410	2720	11.03	3.20	7.7	5.83	A+		
16	13	07	-	-	3.44	2.83	1.53	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	5.83	A+		
18	13	07	-	-	3.64	2.70	1.46	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	5.80	A+		
22	13	07	-	-	4.00	2.47	1.33	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	6.04	A+		
24	13	07	-	-	4.38	2.28	1.23	-	-	4.1	7.9	8.7	970	2440	2780	11.17	3.24	7.9	6.04	A+		
16	16	07	-	-	3.19	3.19	1.42	-	-	4.1	7.8	8.6	970	2430	2760	11.12	3.21	7.8	5.94	A+		
18	16	07	-	-	3.39	3.05	1.36	-	-	4.1	7.8	8.6	970									



RAS-5M34U2AVG-E / TR - Performances in Cooling mode

Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
3 units operations	24	16	13	-	-	3.71	2.35	1.93	-	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.06	A+	
	18	18	13	-	-	2.88	2.88	2.13	-	-	4.1	7.9	8.7	970	2440	2830	11.17	3.24	7.9	5.99	A+	
	22	18	13	-	-	3.31	2.76	2.04	-	-	4.1	8.1	9.0	970	2440	2900	11.17	3.32	8.1	6.04	A+	
	24	18	13	-	-	3.64	2.56	1.90	-	-	4.1	8.1	9.0	970	2440	2900	11.17	3.32	8.1	6.04	A+	
	16	16	16	-	-	2.67	2.67	2.67	-	-	4.3	8.0	9.0	980	2450	2900	11.21	3.27	8.0	6.06	A+	
Cooling, 230 V	05	05	05	05	-	1.50	1.50	1.50	1.50	-	4.0	6.0	7.0	930	1840	2270	8.42	3.26	6.0	5.71	A+	
	07	05	05	05	-	2.00	1.50	1.50	1.50	-	4.0	6.5	7.4	930	2020	2400	9.24	3.22	6.5	5.81	A+	
	10	05	05	05	-	2.70	1.50	1.50	1.50	-	4.0	7.2	8.0	930	2250	2580	10.30	3.20	7.2	5.89	A+	
	13	05	05	05	-	3.61	1.46	1.46	1.46	-	4.0	8.0	8.7	930	2500	2800	11.44	3.20	8.0	5.96	A+	
	16	05	05	05	-	4.20	1.40	1.40	1.40	-	4.0	8.4	8.8	930	2710	2820	12.40	3.10	8.4	6.00	A+	
	18	05	05	05	-	4.47	1.34	1.34	1.34	-	4.0	8.5	8.9	930	2720	2840	12.45	3.13	8.5	6.00	A+	
	22	05	05	05	-	4.97	1.24	1.24	1.24	-	4.0	8.7	9.1	930	2720	2850	12.45	3.20	8.7	6.06	A+	
	24	05	05	05	-	5.39	1.14	1.14	1.14	-	4.0	8.8	9.2	930	2730	2880	12.49	3.22	8.8	6.07	A+	
	07	07	05	05	-	2.00	2.00	1.50	1.50	-	4.0	7.0	7.9	930	2200	2540	10.07	3.18	7.0	5.85	A+	
	10	07	05	05	-	2.74	2.03	1.52	1.52	-	4.0	7.8	8.5	930	2460	2730	11.26	3.17	7.8	5.94	A+	
	13	07	05	05	-	3.53	1.91	1.43	1.43	-	4.0	8.3	8.8	930	2660	2810	12.17	3.12	8.3	5.99	A+	
	16	07	05	05	-	4.03	1.79	1.34	1.34	-	4.0	8.5	8.9	930	2720	2840	12.45	3.13	8.5	6.02	A+	
	18	07	05	05	-	4.30	1.72	1.29	1.29	-	4.0	8.6	9.0	930	2720	2850	12.45	3.16	8.6	6.02	A+	
	22	07	05	05	-	4.80	1.60	1.20	1.20	-	4.0	8.8	9.2	930	2730	2880	12.49	3.22	8.8	6.08	A+	
	24	07	05	05	-	5.22	1.47	1.10	1.10	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.09	A+	
	10	10	05	05	-	2.67	2.67	1.48	1.48	-	4.0	8.3	8.8	930	2660	2810	12.17	3.12	8.3	5.99	A+	
	13	10	05	05	-	3.35	2.44	1.36	1.36	-	4.0	8.5	8.9	930	2720	2840	12.45	3.13	8.5	6.02	A+	
	16	10	05	05	-	3.84	2.30	1.28	1.28	-	4.0	8.7	9.1	930	2720	2850	12.45	3.20	8.7	6.06	A+	
	18	10	05	05	-	4.11	2.22	1.23	1.23	-	4.0	8.8	9.2	930	2730	2870	12.49	3.22	8.8	6.06	A+	
	22	10	05	05	-	4.56	2.05	1.14	1.14	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.10	A++	
	24	10	05	05	-	4.99	1.90	1.05	1.05	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	13	13	05	05	-	3.10	3.10	1.25	1.25	-	4.0	8.7	9.1	930	2720	2850	12.45	3.20	8.7	6.06	A+	
	16	13	05	05	-	3.54	2.91	1.18	1.18	-	4.0	8.8	9.2	930	2730	2880	12.49	3.22	8.8	6.08	A+	
	18	13	05	05	-	3.80	2.81	1.14	1.14	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.07	A+	
	22	13	05	05	-	4.25	2.62	1.06	1.06	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	13	05	05	-	4.63	2.41	0.98	0.98	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	16	16	05	05	-	3.34	3.34	1.11	1.11	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.10	A++	
	18	16	05	05	-	3.60	3.24	1.08	1.08	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	16	05	05	-	4.00	3.00	1.00	1.00	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	05	05	-	4.38	2.77	0.92	0.92	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	05	05	-	3.46	3.46	1.04	1.04	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.07	A+	
	22	18	05	05	-	3.86	3.21	0.96	0.96	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.09	A+	
	24	18	05	05	-	4.23	2.98	0.89	0.89	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	22	05	05	-	3.60	3.60	0.90	0.90	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	07	07	07	05	-	2.00	2.00	2.00	1.50	-	4.0	7.5	8.3	930	2370	2670	10.85	3.16	7.5	5.89	A+	
	10	07	07	05	-	2.67	1.98	1.98	1.48	-	4.0	8.1	8.7	930	2600	2810	11.90	3.12	8.1	5.96	A+	
	13	07	07	05	-	3.42	1.85	1.85	1.39	-	4.0	8.5	8.9	930	2710	2830	12.40	3.14	8.5	6.02	A+	
	16	07	07	05	-	3.87	1.72	1.72	1.29	-	4.0	8.6	9.0	930	2720	2850	12.45	3.16	8.6	6.04	A+	
	18	07	07	05	-	4.14	1.66	1.66	1.24	-	4.0	8.7	9.1	930	2720	2850	12.45	3.20	8.7	6.04	A+	
	22	07	07	05	-	4.64	1.55	1.55	1.16	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.10	A++	
	24	07	07	05	-	5.07	1.43	1.43	1.07	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	10	10	07	05	-	2.58	2.58	1.91	1.43	-	4.0	8.5	8.9	930	2710	2830	12.40	3.14	8.5	6.02	A+	
	13	10	07	05	-	3.21	2.35	1.74	1.30	-	4.0	8.6	9.0	930	2720	2850	12.45	3.16	8.6	6.04	A+	
	16	10	07	05	-	3.70	2.22	1.64	1.23	-	4.0	8.8	9.2	930	2730	2870	12.49	3.22	8.8	6.08	A+	
	18	10	07	05	-	3.93	2.12	1.57	1.18	-	4.0	8.8	9.2	930	2730	2880	12.49	3.22	8.8	6.06	A+	
	22	10	07	05	-	4.43	1.99	1.48	1.11	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	10	07	05	-	4.80	1.83	1.35	1.02	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++	
	13	13	07	05	-	2.99	2.99	1.61	1.21	-	4.0	8.8	9.2	930	2730	2870	12.49	3.22	8.8	6.08	A+	
	16	13	07	05	-	3.42	2.81	1.52	1.14	-	4.0	8.9	9.3	930	2730	2880	12.49	3.26	8.9	6.10	A++	
	18	13	07	05	-	3.69	2.73	1.48	1.11	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.09	A+	
22	13	07	05	-	4.09	2.52	1.36	1.02	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++		
24	13	07	05	-	4.47	2.33	1.26	0.94	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++		
16	16	07	05	-	3.24	3.24	1.44	1.08	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.12	A++		
18	16	07	05	-	3.46	3.12	1.38	1.04	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.09	A+		
22	16	07	05	-	3.86	2.89	1.29	0.96	-	4.0	9.0	9.4	930	2740	2900	12.54	3.28	9.0	6.11	A++		
18	18	07	05	-	3.33	3.33	1.33	1.00	-													

RAS-5M34U2AVG-E / TR - Performances in Cooling mode

Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
Cooling, 230 V	22	16	07	07	-	3.72	2.79	1.24	1.24	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	07	07	-	4.10	2.60	1.15	1.15	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	07	07	-	3.21	3.21	1.29	1.29	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.07	A+	
	22	18	07	07	-	3.60	3.00	1.20	1.20	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	24	18	07	07	-	3.97	2.80	1.12	1.12	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	10	10	10	07	-	2.30	2.30	2.30	1.70	-	4.1	8.6	9.0	940	2720	2850	12.45	3.16	8.6	6.04	A+	
	13	10	10	07	-	2.93	2.14	2.14	1.59	-	4.1	8.8	9.2	940	2730	2880	12.49	3.22	8.8	6.08	A+	
	16	10	10	07	-	3.37	2.02	2.02	1.50	-	4.1	8.9	9.3	940	2730	2880	12.49	3.26	8.9	6.10	A++	
	18	10	10	07	-	3.63	1.96	1.96	1.45	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	10	10	07	-	4.03	1.81	1.81	1.34	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	10	10	07	-	4.41	1.68	1.68	1.24	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	13	13	10	07	-	2.75	2.75	2.01	1.49	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	16	13	10	07	-	3.14	2.58	1.88	1.40	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	13	10	07	-	3.36	2.49	1.81	1.34	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	13	10	07	-	3.75	2.31	1.69	1.25	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	13	10	07	-	4.12	2.15	1.57	1.16	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	16	16	10	07	-	2.96	2.96	1.77	1.31	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	16	10	07	-	3.17	2.85	1.71	1.27	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	16	10	07	-	3.55	2.66	1.60	1.18	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	10	07	-	3.92	2.48	1.49	1.10	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	10	07	-	3.06	3.06	1.65	1.22	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.07	A+	
	22	18	10	07	-	3.44	2.87	1.55	1.15	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	24	18	10	07	-	3.80	2.68	1.45	1.07	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	13	13	13	07	-	2.54	2.54	2.54	1.37	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	16	13	13	07	-	2.91	2.40	2.40	1.29	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	13	13	07	-	3.13	2.31	2.31	1.25	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	13	13	07	-	3.51	2.16	2.16	1.17	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	13	13	07	-	3.87	2.02	2.02	1.09	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	16	16	13	07	-	2.76	2.76	2.27	1.22	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	16	13	07	-	2.96	2.66	2.19	1.18	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	16	13	07	-	3.33	2.50	2.06	1.11	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	13	07	-	3.69	2.34	1.92	1.04	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	13	07	-	2.87	2.87	2.12	1.15	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.07	A+	
	22	18	13	07	-	3.23	2.69	1.99	1.08	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	24	18	13	07	-	3.59	2.53	1.87	1.01	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	10	10	10	10	-	2.18	2.18	2.18	2.18	-	4.1	8.7	9.1	940	2720	2850	12.45	3.20	8.7	6.06	A+	
	13	10	10	10	-	2.79	2.04	2.04	2.04	-	4.1	8.9	9.3	940	2730	2880	12.49	3.26	8.9	6.10	A++	
	16	10	10	10	-	3.21	1.93	1.93	1.93	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	10	10	10	-	3.44	1.85	1.85	1.85	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	10	10	10	-	3.83	1.72	1.72	1.72	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	10	10	10	-	4.20	1.60	1.60	1.60	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	13	13	10	10	-	2.60	2.60	1.90	1.90	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	16	13	10	10	-	2.98	2.45	1.79	1.79	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	13	10	10	-	3.19	2.36	1.72	1.72	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	13	10	10	-	3.58	2.21	1.61	1.61	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	13	10	10	-	3.94	2.06	1.50	1.50	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	16	16	10	10	-	2.81	2.81	1.69	1.69	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	16	10	10	-	3.02	2.72	1.63	1.63	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	16	10	10	-	3.40	2.55	1.53	1.53	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	10	10	-	3.76	2.38	1.43	1.43	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	10	10	-	2.92	2.92	1.58	1.58	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.07	A+	
	22	18	10	10	-	3.29	2.74	1.48	1.48	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	24	18	10	10	-	3.65	2.57	1.39	1.39	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	13	13	13	10	-	2.41	2.41	2.41	1.76	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	16	13	13	10	-	2.77	2.28	2.28	1.66	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	13	13	10	-	2.98	2.21	2.21	1.61	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	13	13	10	-	3.35	2.07	2.07	1.51	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	13	13	10	-	3.72	1.94	1.94	1.41	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	16	16	13	10	-	2.63	2.63	2.16	1.58	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.12	A++	
	18	16	13	10	-	2.83	2.55	2.09	1.53	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.09	A+	
	22	16	13	10	-	3.20	2.40	1.97	1.44	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	24	16	13	10	-	3.55	2.25	1.85	1.35	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.11	A++	
	18	18	13	10	-	2.74	2.74	2.03	1.48	-	4.2	9.0	9.4	950	2740	2900	12.54	3.28	9.0	6.07		



RAS-5M34U2AVG-E / TR - Performances in Cooling mode

Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
Cooling, 230 V	5 units operations	10	07	07	05	05	2.70	2.00	2.00	1.50	1.50	3.7	9.7	10.7	950	2850	3380	13.04	3.40	9.7	6.35	A++
		13	07	07	05	05	3.42	1.85	1.85	1.39	1.39	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	07	07	05	05	3.87	1.72	1.72	1.29	1.29	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	07	07	05	05	4.13	1.65	1.65	1.24	1.24	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		10	10	07	05	05	2.57	2.57	1.90	1.43	1.43	3.7	9.9	11.0	950	2946	2800	13.48	3.36	9.9	6.29	A++
		13	10	07	05	05	3.21	2.34	1.74	1.30	1.30	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	07	05	05	3.65	2.19	1.62	1.22	1.22	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	10	07	05	05	3.90	2.10	1.56	1.17	1.17	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	07	05	05	2.95	2.95	1.60	1.20	1.20	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	13	07	05	05	3.38	2.78	1.50	1.13	1.13	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	13	07	05	05	3.61	2.67	1.45	1.08	1.08	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		16	16	07	05	05	3.18	3.18	1.41	1.06	1.06	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	16	07	05	05	3.41	3.07	1.37	1.02	1.02	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		10	10	10	05	05	2.41	2.41	2.41	1.34	1.34	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	10	10	05	05	3.03	2.21	2.21	1.23	1.23	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	10	05	05	3.45	2.07	2.07	1.15	1.15	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	10	10	05	05	3.69	1.99	1.99	1.11	1.11	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	10	05	05	2.80	2.80	2.04	1.13	1.13	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		07	07	07	07	05	2.00	2.00	2.00	2.00	1.50	3.7	9.5	10.5	950	2800	3300	12.81	3.39	9.5	6.32	A++
		10	07	07	07	05	2.62	1.94	1.94	1.94	1.46	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	07	07	07	05	3.27	1.77	1.77	1.77	1.33	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	07	07	07	05	3.71	1.65	1.65	1.65	1.24	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	07	07	07	05	3.96	1.58	1.58	1.58	1.19	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		10	10	07	07	05	2.45	2.45	1.82	1.82	1.36	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	10	07	07	05	3.08	2.25	1.66	1.66	1.25	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	07	07	05	3.51	2.10	1.56	1.56	1.17	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	10	07	07	05	3.75	2.03	1.50	1.50	1.13	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	07	07	05	2.84	2.84	1.53	1.53	1.15	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	13	07	07	05	3.25	2.67	1.45	1.45	1.08	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		10	10	10	07	05	2.30	2.30	2.30	1.71	1.28	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	10	10	07	05	2.91	2.12	2.12	1.57	1.18	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	10	07	05	3.32	1.99	1.99	1.48	1.11	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		10	10	10	10	05	2.17	2.17	2.17	2.17	1.21	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++
		07	07	07	07	07	1.96	1.96	1.96	1.96	1.96	3.7	9.8	10.8	950	2917	3630	13.35	3.36	9.8	6.28	A++
		10	07	07	07	07	2.50	1.85	1.85	1.85	1.85	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	07	07	07	07	3.13	1.69	1.69	1.69	1.69	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	07	07	07	07	3.56	1.58	1.58	1.58	1.58	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	07	07	07	07	3.81	1.52	1.52	1.52	1.52	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		10	10	07	07	07	2.34	2.34	1.74	1.74	1.74	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	10	07	07	07	2.95	2.16	1.60	1.60	1.60	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	07	07	07	3.38	2.03	1.50	1.50	1.50	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	10	07	07	07	3.61	1.95	1.45	1.45	1.45	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	07	07	07	2.73	2.73	1.48	1.48	1.48	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	13	07	07	07	3.14	2.58	1.39	1.39	1.39	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	13	07	07	07	3.37	2.49	1.35	1.35	1.35	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		16	16	07	07	07	2.97	2.97	1.32	1.32	1.32	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	16	07	07	07	3.19	2.87	1.28	1.28	1.28	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		10	10	10	07	07	2.21	2.21	2.21	1.64	1.64	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		13	10	10	07	07	2.80	2.04	2.04	1.51	1.51	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	10	10	07	07	3.21	1.92	1.92	1.42	1.42	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	10	10	07	07	3.44	1.86	1.86	1.38	1.38	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	10	07	07	2.60	2.60	1.90	1.40	1.40	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	13	10	07	07	2.99	2.46	1.79	1.33	1.33	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	13	10	07	07	3.21	2.38	1.74	1.29	1.29	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		16	16	10	07	07	2.84	2.84	1.70	1.26	1.26	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	16	10	07	07	3.06	2.75	1.65	1.22	1.22	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		13	13	13	07	07	2.43	2.43	2.43	1.31	1.31	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		16	13	13	07	07	2.80	2.30	2.30	1.25	1.25	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	13	13	07	07	3.02	2.23	2.23	1.21	1.21	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.27	A++
		16	16	13	07	07	2.67	2.67	2.19	1.19	1.19	3.7	9.9	10.9	950	2946	3670	13.48	3.36	9.9	6.29	A++
		18	16	13																		

RAS-5M34U2AVG-E / TR - Performances in Cooling mode

Operating status		Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
Cooling, 230 V	5 units operations	22	*10	*05	*05	*05	4.50	2.03	1.13	1.13	1.13	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*05	*05	*05	4.92	1.87	1.04	1.04	1.04	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*05	*05	*05	4.18	2.58	1.05	1.05	1.05	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*05	*05	*05	4.59	2.39	0.97	0.97	0.97	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*07	*07	*05	*05	4.57	1.52	1.52	1.14	1.14	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*07	*07	*05	*05	4.99	1.40	1.40	1.05	1.05	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*10	*07	*05	*05	4.34	1.95	1.45	1.08	1.08	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*07	*05	*05	4.75	1.81	1.34	1.00	1.00	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*07	*05	*05	4.04	2.49	1.35	1.01	1.01	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*07	*05	*05	4.45	2.32	1.25	0.94	0.94	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*10	*10	*05	*05	4.13	1.86	1.86	1.03	1.03	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*05	*05	4.53	1.72	1.72	0.96	0.96	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*05	*05	3.86	2.38	1.74	0.96	0.96	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*10	*05	*05	4.26	2.22	1.62	0.90	0.90	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*05	*05	3.62	2.23	2.23	0.91	0.91	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*13	*05	*05	4.02	2.09	2.09	0.85	0.85	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*07	*07	*07	*05	4.40	1.47	1.47	1.47	1.10	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*07	*07	*07	*05	4.81	1.36	1.36	1.36	1.02	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*10	*07	*07	*05	4.18	1.88	1.39	1.39	1.05	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*07	*07	*05	4.59	1.75	1.29	1.29	0.97	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*07	*07	*05	3.91	2.41	1.30	1.30	0.98	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*07	*07	*05	4.31	2.25	1.21	1.21	0.91	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*10	*10	*07	*05	3.99	1.79	1.79	1.33	1.00	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*07	*05	4.39	1.67	1.67	1.24	0.93	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*07	*05	3.74	2.30	1.68	1.25	0.93	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*10	*07	*05	4.13	2.15	1.57	1.16	0.87	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*07	*05	3.51	2.17	2.17	1.17	0.88	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*13	*07	*05	3.91	2.04	2.04	1.10	0.83	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*10	*10	*10	*05	3.81	1.71	1.71	1.71	0.95	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*10	*05	4.21	1.60	1.60	1.60	0.89	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*10	*05	3.58	2.21	1.61	1.61	0.89	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*10	*10	*05	3.97	2.07	1.51	1.51	0.84	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*10	*05	3.38	2.08	2.08	1.52	0.84	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		24	*13	*13	*10	*05	3.76	1.96	1.96	1.43	0.79	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*13	*05	3.19	1.97	1.97	1.97	0.80	3.7	9.9	11.0	950	2946	3670	13.48	3.36	9.9	6.29	A++	
		22	*07	*07	*07	*07	4.24	1.41	1.41	1.41	1.41	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*07	*07	*07	*07	4.65	1.31	1.31	1.31	1.31	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*10	*07	*07	*07	4.04	1.82	1.35	1.35	1.35	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*10	*07	*07	*07	4.45	1.69	1.25	1.25	1.25	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*07	*07	*07	3.78	2.33	1.26	1.26	1.26	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*13	*07	*07	*07	4.18	2.18	1.18	1.18	1.18	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*10	*10	*07	*07	3.86	1.74	1.74	1.29	1.29	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*07	*07	4.26	1.62	1.62	1.20	1.20	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*07	*07	3.62	2.23	1.63	1.21	1.21	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*13	*10	*07	*07	4.02	2.09	1.53	1.13	1.13	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*07	*07	3.41	2.11	2.11	1.14	1.14	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*13	*13	*07	*07	3.80	1.98	1.98	1.07	1.07	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*10	*10	*10	*07	3.69	1.66	1.66	1.66	1.23	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*10	*07	4.09	1.55	1.55	1.55	1.15	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*10	*07	3.47	2.14	1.56	1.56	1.16	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*13	*10	*10	*07	3.86	2.01	1.47	1.47	1.09	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*13	*10	*07	3.31	2.04	2.04	1.49	1.10	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	
		24	*13	*13	*10	*07	3.70	1.93	1.93	1.41	1.04	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	
		22	*13	*13	*13	*07	3.14	1.94	1.94	1.94	1.05	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	
		22	*10	*10	*10	*10	3.54	1.59	1.59	1.59	1.59	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		24	*10	*10	*10	*10	3.93	1.49	1.49	1.49	1.49	3.7	9.9	11.0	950	2946	3700	13.48	3.36	9.9	6.29	A++	
		22	*13	*10	*10	*10	3.37	2.08	1.52	1.52	1.52	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	
		24	*13	*10	*10	*10	3.76	1.96	1.43	1.43	1.43	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	
		22	*13	*13	*10	*10	3.19	1.97	1.97	1.44	1.44	3.7	10.0	11.0	950	2980	3700	13.64	3.36	10.0	6.30	A++	

RESIDENTIAL AIR-TO-AIR

RAS-5M34U2AVG-E / TR - Performances in Heating mode

	Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*			
		Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class	
Heating, 230 V	1 unit operation	05	-	-	-	-	2.00	-	-	-	-	0.8	2.0	2.7	300	600	900	3.00	-	-	-	-	-	
		07	-	-	-	-	2.70	-	-	-	-	0.8	2.7	4.8	300	900	1980	4.50	-	-	-	-	-	
		10	-	-	-	-	4.00	-	-	-	-	0.8	4.0	5.2	300	1450	1980	6.64	-	-	-	-	-	
		13	-	-	-	-	5.00	-	-	-	-	0.8	5.0	6.5	310	2050	2750	9.38	-	-	-	-	-	
		16	-	-	-	-	5.50	-	-	-	-	0.8	5.5	6.9	310	2400	3000	10.98	-	-	-	-	-	
		18	-	-	-	-	6.00	-	-	-	-	0.8	6.0	7.1	310	2630	3200	12.04	-	-	-	-	-	
		22	-	-	-	-	7.00	-	-	-	-	1.8	7.0	8.2	330	2700	3600	12.23	-	-	-	-	-	
		24	-	-	-	-	8.10	-	-	-	-	1.8	8.1	8.6	330	3300	3700	14.95	-	-	-	-	-	
	2 units operations	05	05	-	-	-	2.00	2.00	-	-	-	1.5	4.0	6.0	320	1130	1260	5.17	3.54	3.0	3.90	A	-	-
		07	05	-	-	-	2.70	2.00	-	-	-	1.5	4.7	6.7	320	1340	1500	6.13	3.51	3.7	3.94	A	-	-
		10	05	-	-	-	4.00	2.00	-	-	-	1.5	6.0	8.0	320	1750	1900	8.01	3.43	5.9	4.04	A+	-	-
		13	05	-	-	-	5.00	2.00	-	-	-	1.5	7.0	10.0	320	2060	2440	9.43	3.40	5.9	4.04	A+	-	-
		16	05	-	-	-	5.50	2.00	-	-	-	1.5	7.5	10.1	320	2250	2470	10.30	3.33	5.9	4.04	A+	-	-
		18	05	-	-	-	6.00	2.00	-	-	-	1.5	8.0	10.1	320	2340	3200	10.71	3.42	5.9	4.04	A+	-	-
		22	05	-	-	-	6.46	1.84	-	-	-	1.5	8.3	10.2	320	2400	3200	10.98	3.46	5.9	4.05	A+	-	-
		24	05	-	-	-	6.66	1.64	-	-	-	1.5	8.3	10.4	320	2470	3240	11.30	3.36	5.9	4.04	A+	-	-
		07	07	-	-	-	2.70	2.70	-	-	-	1.5	5.4	7.4	320	1500	2200	6.86	3.60	5.9	4.04	A+	-	-
		10	07	-	-	-	4.00	2.70	-	-	-	1.5	6.7	8.9	320	1900	2600	8.70	3.53	5.9	4.04	A+	-	-
		13	07	-	-	-	4.81	2.59	-	-	-	1.5	7.4	10.1	320	2220	2900	10.16	3.33	5.9	4.04	A+	-	-
		16	07	-	-	-	5.10	2.50	-	-	-	1.5	7.6	10.1	320	2480	3230	11.35	3.06	5.9	4.04	A+	-	-
		18	07	-	-	-	5.45	2.45	-	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	5.9	4.04	A+	-	-
		22	07	-	-	-	5.70	2.20	-	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	5.9	4.05	A+	-	-
		24	07	-	-	-	6.23	2.08	-	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	5.9	4.04	A+	-	-
		10	10	-	-	-	3.60	3.60	-	-	-	1.5	7.2	10.0	320	2100	2950	9.61	3.43	5.9	4.04	A+	-	-
		13	10	-	-	-	4.22	3.38	-	-	-	1.5	7.6	10.1	320	2320	3210	10.62	3.28	5.9	4.04	A+	-	-
		16	10	-	-	-	4.57	3.33	-	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	5.9	4.04	A+	-	-
		18	10	-	-	-	4.74	3.16	-	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	5.9	4.04	A+	-	-
		22	10	-	-	-	5.28	3.02	-	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	5.9	4.05	A+	-	-
		24	10	-	-	-	5.76	2.84	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	-	-
		13	13	-	-	-	3.95	3.95	-	-	-	1.5	7.9	10.1	320	2480	3230	11.35	3.19	5.9	4.04	A+	-	-
16		13	-	-	-	4.35	3.95	-	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	5.9	4.04	A+	-	-	
18		13	-	-	-	4.53	3.77	-	-	-	1.5	8.3	10.2	320	2700	3240	12.36	3.07	5.9	4.04	A+	-	-	
22	13	-	-	-	5.02	3.58	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.05	A+	-	-		
24	13	-	-	-	5.32	3.28	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	-	-		



RAS-5M34U2AVG-E / TR - Performances in Heating mode

	Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
		Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
Heating, 230 V	2 units operations	16	16	-	-	-	4.30	4.30	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		18	16	-	-	-	4.49	4.11	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		22	16	-	-	-	4.82	3.78	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.05	A+	
		24	16	-	-	-	5.12	3.48	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		18	18	-	-	-	4.30	4.30	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		22	18	-	-	-	4.63	3.97	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		24	18	-	-	-	4.94	3.66	-	-	-	1.5	8.6	10.2	320	2860	3250	13.09	3.01	5.9	4.04	A+	
		22	22	-	-	-	4.50	4.50	-	-	-	1.5	9.0	10.6	320	2200	2590	9.96	4.09	5.9	4.25	A+	
		24	22	-	-	-	4.83	4.17	-	-	-	1.5	9.0	10.6	320	2200	2590	9.96	4.09	5.9	4.25	A+	
		24	24	-	-	-	4.55	4.55	-	-	-	1.5	9.1	10.7	320	2220	2610	10.05	4.10	5.9	4.25	A+	
		05	05	05	-	-	2.00	2.00	2.00	-	-	2.0	6.0	8.0	380	1700	2000	7.78	3.53	5.0	4.12	A+	
		07	05	05	-	-	2.70	2.00	2.00	-	-	2.0	6.7	8.9	380	1850	2080	8.47	3.62	5.7	4.16	A+	
		10	05	05	-	-	4.00	2.00	2.00	-	-	2.0	8.0	10.1	380	2290	2750	10.48	3.49	6.0	4.17	A+	
		13	05	05	-	-	4.94	1.98	1.98	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+	
	16	05	05	-	-	5.15	1.87	1.87	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	18	05	05	-	-	5.34	1.78	1.78	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	22	05	05	-	-	5.66	1.62	1.62	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	24	05	05	-	-	5.96	1.47	1.47	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	07	07	05	-	-	2.70	2.70	2.00	-	-	2.0	7.4	10.1	380	2000	2700	9.15	3.70	6.0	4.17	A+		
	10	07	05	-	-	4.00	2.70	2.00	-	-	2.0	8.7	10.5	380	2200	2700	10.07	3.95	6.0	4.17	A+		
	13	07	05	-	-	4.59	2.48	1.84	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	16	07	05	-	-	4.80	2.36	1.75	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	18	07	05	-	-	4.99	2.25	1.66	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	22	07	05	-	-	5.32	2.05	1.52	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	24	07	05	-	-	5.63	1.88	1.39	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	10	10	05	-	-	3.56	3.56	1.78	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	13	10	05	-	-	4.05	3.24	1.62	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	16	10	05	-	-	4.26	3.10	1.55	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	18	10	05	-	-	4.45	2.97	1.48	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	22	10	05	-	-	4.79	2.74	1.37	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	24	10	05	-	-	5.11	2.52	1.26	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	13	13	05	-	-	3.71	3.71	1.48	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	16	13	05	-	-	3.92	3.56	1.42	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	18	13	05	-	-	4.11	3.42	1.37	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	22	13	05	-	-	4.45	3.18	1.27	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	24	13	05	-	-	4.77	2.95	1.18	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	16	16	05	-	-	3.77	3.77	1.37	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	18	16	05	-	-	3.96	3.63	1.32	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.17	A+		
	22	16	05	-	-	4.30	3.38	1.23	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.06	A+		
	24	16	05	-	-	4.88	3.31	1.21	-	-	2.0	9.4	11.2	380	2370	2880	10.85	3.97	6.0	4.06	A+		
	18	18	05	-	-	3.81	3.81	1.27	-	-	2.0	8.9	10.7	380	2350	2760	10.76	3.79	6.0	4.16	A+		
	22	18	05	-	-	4.39	3.76	1.25	-	-	2.0	9.4	11.2	380	2290	2630	10.48	4.10	6.0	4.06	A+		
24	18	05	-	-	4.73	3.50	1.17	-	-	2.0	9.4	11.2	380	2290	2630	10.48	4.10	6.0	4.06	A+			
22	22	05	-	-	4.11	4.11	1.18	-	-	2.0	9.4	11.2	380	2290	2630	10.48	4.10	6.0	4.07	A+			
24	22	05	-	-	4.45	3.85	1.10	-	-	2.0	9.4	11.2	380	2290	2630	10.48	4.10	6.0	4.07	A+			
24	24	05	-	-	4.18	4.18	1.03	-	-	2.0	9.4	11.2	380	2290	2630	10.48	4.10	6.0	4.07	A+			
07	07	07	-	-	2.70	2.70	2.70	-	-	2.0	8.1	10.4	380	2290	2750	10.48	3.54	6.0	4.17	A+			
10	07	07	-	-	3.53	2.38	2.38	-	-	2.0	8.3	10.4	380	2300	2750	10.53	3.61	6.0	4.17	A+			
13	07	07	-	-	4.13	2.23	2.23	-	-	2.0	8.6	10.4	380	2300	2750	10.53	3.74	6.0	4.17	A+			
16	07	07	-	-	4.39	2.16	2.16	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
18	07	07	-	-	4.58	2.06	2.06	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
22	07	07	-	-	4.91	1.89	1.89	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.06	A+			
24	07	07	-	-	5.22	1.74	1.74	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.06	A+			
10	10	07	-	-	3.18	3.18	2.14	-	-	2.0	8.5	10.4	380	2300	2750	10.53	3.70	6.0	4.17	A+			
13	10	07	-	-	3.72	2.97	2.01	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
16	10	07	-	-	3.92	2.85	1.93	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
18	10	07	-	-	4.11	2.74	1.85	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
22	10	07	-	-	4.50	2.57	1.73	-	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	6.0	4.06	A+			
24	10	07	-	-	4.82	2.38	1.61	-	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	6.0	4.06	A+			
13	13	07	-	-	3.43	3.43	1.85	-	-	2.0	8.7	10.5	380	2350	2760	10.76	3.70	6.0	4.17	A+			
16	13	07	-	-	3.67	3.33	1.80	-	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	6.0	4.17	A+			
18	13	07	-	-	3.85	3.21	1.73	-	-	2.0	8.8	10.6	380	2400	2780	10.98	3.67	6.0	4.17	A+			
22	13	07	-	-	4.24	3.03	1.63	-	-	2.0	8.9	10.7	380	24									

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Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class
3 units operations	24	13	13	-	-	3.98	2.46	2.46	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.06	A+	
	16	16	13	-	-	3.06	3.06	2.78	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.17	A+	
	18	16	13	-	-	3.24	2.97	2.70	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.17	A+	
	22	16	13	-	-	3.56	2.80	2.54	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.06	A+	
	24	16	13	-	-	3.88	2.63	2.39	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.06	A+	
	18	18	13	-	-	3.14	3.14	2.62	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.16	A+	
	22	18	13	-	-	3.62	3.10	2.58	-	-	2.0	9.3	11.1	380	2270	2610	10.39	4.10	6.0	4.06	A+	
	24	18	13	-	-	3.94	2.92	2.43	-	-	2.0	9.3	11.1	380	2270	2610	10.39	4.10	6.0	4.06	A+	
	16	16	16	-	-	2.97	2.97	2.97	-	-	2.0	8.9	10.7	380	2450	2790	11.21	3.63	6.0	4.17	A+	
	05	05	05	05	-	2.00	2.00	2.00	2.00	-	2.2	8.0	11.4	450	1880	2830	8.60	4.26	6.0	4.14	A+	
07	05	05	05	-	2.70	2.00	2.00	2.00	-	2.2	8.7	11.4	450	2060	2830	9.43	4.22	6.0	4.14	A+		
10	05	05	05	-	3.76	1.88	1.88	1.88	-	2.2	9.4	11.4	450	2220	2830	10.16	4.23	6.0	4.14	A+		
13	05	05	05	-	4.36	1.75	1.75	1.75	-	2.2	9.6	11.5	450	2310	2850	10.57	4.16	6.0	4.14	A+		
16	05	05	05	-	4.69	1.70	1.70	1.70	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
18	05	05	05	-	4.90	1.63	1.63	1.63	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
22	05	05	05	-	5.28	1.51	1.51	1.51	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.05	A+		
24	05	05	05	-	5.63	1.39	1.39	1.39	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.05	A+		
07	07	05	05	-	2.70	2.70	2.00	2.00	-	2.2	9.4	11.2	450	2300	2800	10.53	4.09	6.0	4.14	A+		
10	07	05	05	-	3.59	2.42	1.79	1.79	-	2.2	9.6	11.5	450	2360	2850	10.80	4.07	6.0	4.14	A+		
13	07	05	05	-	4.19	2.26	1.68	1.68	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
16	07	05	05	-	4.42	2.17	1.61	1.61	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
18	07	05	05	-	4.63	2.08	1.54	1.54	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
22	07	05	05	-	5.01	1.93	1.43	1.43	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.05	A+		
24	07	05	05	-	5.47	1.82	1.35	1.35	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
10	10	05	05	-	3.27	3.27	1.63	1.63	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
13	10	05	05	-	3.77	3.02	1.51	1.51	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
16	10	05	05	-	3.99	2.90	1.45	1.45	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
18	10	05	05	-	4.20	2.80	1.40	1.40	-	2.2	9.8	11.5	450	2380	2850	10.89	4.12	6.0	4.14	A+		
22	10	05	05	-	4.67	2.67	1.33	1.33	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	10	05	05	-	5.03	2.48	1.24	1.24	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
13	13	05	05	-	3.50	3.50	1.40	1.40	-	2.2	9.8	11.5	450	2380	2900	10.89	4.12	6.0	4.14	A+		
16	13	05	05	-	3.72	3.38	1.35	1.35	-	2.2	9.8	11.5	450	2380	2900	10.89	4.12	6.0	4.14	A+		
18	13	05	05	-	4.00	3.33	1.33	1.33	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
22	13	05	05	-	4.38	3.13	1.25	1.25	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	13	05	05	-	4.74	2.92	1.17	1.17	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
16	16	05	05	-	3.67	3.67	1.33	1.33	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
18	16	05	05	-	3.87	3.55	1.29	1.29	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
22	16	05	05	-	4.24	3.33	1.21	1.21	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	16	05	05	-	4.60	3.13	1.14	1.14	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
18	18	05	05	-	3.75	3.75	1.25	1.25	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
22	18	05	05	-	4.12	3.53	1.18	1.18	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	18	05	05	-	4.48	3.31	1.10	1.10	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
22	22	05	05	-	3.89	3.89	1.11	1.11	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.06	A+		
07	07	07	05	-	2.57	2.57	2.57	1.90	-	2.2	9.6	11.5	450	2360	2850	10.80	4.07	6.0	4.14	A+		
10	07	07	05	-	3.37	2.27	2.27	1.68	-	2.2	9.6	11.5	450	2360	2850	10.80	4.07	6.0	4.14	A+		
13	07	07	05	-	3.95	2.13	2.13	1.58	-	2.2	9.8	11.7	450	2380	2900	10.89	4.12	6.0	4.14	A+		
16	07	07	05	-	4.18	2.05	2.05	1.52	-	2.2	9.8	11.7	450	2380	2900	10.89	4.12	6.0	4.14	A+		
18	07	07	05	-	4.39	1.97	1.97	1.46	-	2.2	9.8	11.7	450	2380	2900	10.89	4.12	6.0	4.14	A+		
22	07	07	05	-	4.86	1.88	1.88	1.39	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	07	07	05	-	5.23	1.74	1.74	1.29	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
10	10	07	05	-	3.09	3.09	2.08	1.54	-	2.2	9.8	11.6	450	2380	2880	10.89	4.12	6.0	4.14	A+		
13	10	07	05	-	3.58	2.86	1.93	1.43	-	2.2	9.8	11.6	450	2380	2880	10.89	4.12	6.0	4.14	A+		
16	10	07	05	-	3.80	2.76	1.86	1.38	-	2.2	9.8	11.6	450	2380	2880	10.89	4.12	6.0	4.14	A+		
18	10	07	05	-	4.08	2.72	1.84	1.36	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
22	10	07	05	-	4.46	2.55	1.72	1.27	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	10	07	05	-	4.82	2.38	1.61	1.19	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
13	13	07	05	-	3.33	3.33	1.80	1.33	-	2.2	9.8	11.6	450	2400	2880	10.98	4.08	6.0	4.14	A+		
16	13	07	05	-	3.62	3.29	1.78	1.32	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
18	13	07	05	-	3.82	3.18	1.72	1.27	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.14	A+		
22	13	07	05	-	4.19	2.99	1.62	1.20	-	2.2	10.0	11.7	450	2400	2900	10.98	4.17	6.0	4.05	A+		
24	13	07	05	-</																		



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	Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*			
		Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Nom.	Pdc	SEER	Class	
Heating, 230 V	4 units operations	24	18	10	07	-	3.89	2.88	1.92	1.30	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		13	13	13	07	-	2.82	2.82	2.82	1.53	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		16	13	13	07	-	3.02	2.75	2.75	1.48	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	13	13	07	-	3.21	2.67	2.67	1.44	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	13	13	07	-	3.55	2.54	2.54	1.37	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	13	13	07	-	3.89	2.40	2.40	1.30	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		16	16	13	07	-	2.94	2.94	2.67	1.44	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	16	13	07	-	3.13	2.86	2.60	1.41	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	16	13	07	-	3.47	2.72	2.48	1.34	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	16	13	07	-	3.80	2.58	2.35	1.27	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		18	18	13	07	-	3.05	3.05	2.54	1.37	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	18	13	07	-	3.38	2.90	2.42	1.30	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	18	13	07	-	3.72	2.75	2.29	1.24	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		10	10	10	10	-	2.43	2.43	2.43	2.43	-	2.2	9.7	11.6	470	2370	2780	10.85	4.09	6.0	4.14	A+		
		13	10	10	10	-	2.91	2.33	2.33	2.33	-	2.2	9.9	11.7	480	2390	2900	10.94	4.14	6.0	4.14	A+		
		16	10	10	10	-	3.14	2.29	2.29	2.29	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	10	10	10	-	3.33	2.22	2.22	2.22	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	10	10	10	-	3.68	2.11	2.11	2.11	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	10	10	10	-	4.03	1.99	1.99	1.99	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		13	13	10	10	-	2.78	2.78	2.22	2.22	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		16	13	10	10	-	2.97	2.70	2.16	2.16	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	13	10	10	-	3.16	2.63	2.11	2.11	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	13	10	10	-	3.50	2.50	2.00	2.00	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	13	10	10	-	3.84	2.37	1.90	1.90	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		16	16	10	10	-	2.89	2.89	2.11	2.11	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	16	10	10	-	3.08	2.82	2.05	2.05	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	16	10	10	-	3.41	2.68	1.95	1.95	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	16	10	10	-	3.75	2.55	1.85	1.85	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		18	18	10	10	-	3.00	3.00	2.00	2.00	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	18	10	10	-	3.33	2.86	1.90	1.90	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	18	10	10	-	3.67	2.71	1.81	1.81	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		13	13	13	10	-	2.63	2.63	2.63	2.11	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		16	13	13	10	-	2.82	2.56	2.56	2.05	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	13	13	10	-	3.00	2.50	2.50	2.00	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	13	13	10	-	3.33	2.38	2.38	1.90	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	13	13	10	-	3.67	2.26	2.26	1.81	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		16	16	13	10	-	2.75	2.75	2.50	2.00	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	16	13	10	-	2.93	2.68	2.44	1.95	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	16	13	10	-	3.26	2.56	2.33	1.86	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	16	13	10	-	3.58	2.43	2.21	1.77	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		18	18	13	10	-	2.86	2.86	2.38	1.90	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	18	13	10	-	3.18	2.73	2.27	1.82	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	18	13	10	-	3.51	2.60	2.16	1.73	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		13	13	13	13	-	2.50	2.50	2.50	2.50	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		16	13	13	13	-	2.68	2.44	2.44	2.44	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	13	13	13	-	2.86	2.38	2.38	2.38	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	13	13	13	-	3.18	2.27	2.27	2.27	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	13	13	13	-	3.51	2.16	2.16	2.16	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		16	16	13	13	-	2.62	2.62	2.38	2.38	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		18	16	13	13	-	2.79	2.56	2.33	2.33	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	16	13	13	-	3.11	2.44	2.22	2.22	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	16	13	13	-	3.43	2.33	2.12	2.12	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		18	18	13	13	-	2.73	2.73	2.27	2.27	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.14	A+		
		22	18	13	13	-	3.04	2.61	2.17	2.17	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
		24	18	13	13	-	3.36	2.49	2.07	2.07	-	2.2	10.0	11.7	490	2400	2900	10.98	4.17	6.0	4.05	A+		
5 units operations	05	05	05	05	05	2.00	2.00	2.00	2.00	2.00	2.7	10.0	12.0	508	2350	3160	10.76	4.26	6.8	4.08	A+			
	07	05	05	05	05	2.70	2.00	2.00	2.00	2.00	2.7	10.7	12.5	508	2520	3350	11.53	4.25	6.8	4.08	A+			
	10	05	05	05	05	3.83	1.92	1.92	1.92	1.92	2.7	11.5	13.5	508	2740	4100	12.54	4.20	6.8	4.08	A+			
	13	05	05	05	05	4.42	1.77	1.77	1.77	1.77	2.7	11.5	13.5	508	2740	4100	12.54	4.20	6.8	4.08	A+			
	16	05	05	05	05	4.77	1.																	

RAS-5M34U2AVG-E / TR - Performances in Heating mode

Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)	EER	Seasonal efficiencies*		
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.			Nom.	Nom.	Pdc
5 units operations	18	07	07	07	05	4.36	1.96	1.96	1.96	1.45	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	10	10	07	07	05	3.04	3.04	2.05	2.05	1.52	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	07	07	05	3.57	2.85	1.93	1.93	1.43	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	07	07	05	3.81	2.77	1.87	1.87	1.38	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	10	07	07	05	4.03	2.69	1.82	1.82	1.34	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	13	13	07	07	05	3.36	3.36	1.82	1.82	1.34	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	07	07	05	3.59	3.27	1.76	1.76	1.31	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	10	10	10	07	05	2.80	2.80	2.80	1.89	1.40	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	10	07	05	3.31	2.64	2.64	1.78	1.32	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	10	07	05	3.54	2.57	2.57	1.74	1.29	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	10	10	10	10	05	2.60	2.60	2.60	2.60	1.30	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	07	07	07	07	07	2.28	2.28	2.28	2.28	2.28	2.7	11.4	13.4	508	2690	4020	12.31	4.24	6.8	4.08	A+
	10	07	07	07	07	3.16	2.13	2.13	2.13	2.13	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	07	07	07	07	3.70	2.00	2.00	2.00	2.00	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	07	07	07	07	3.95	1.94	1.94	1.94	1.94	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	07	07	07	07	4.18	1.88	1.88	1.88	1.88	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	10	10	07	07	07	2.91	2.91	1.96	1.96	1.96	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	07	07	07	3.42	2.74	1.85	1.85	1.85	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	07	07	07	3.66	2.66	1.79	1.79	1.79	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	10	07	07	07	3.88	2.59	1.75	1.75	1.75	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	13	13	07	07	07	3.23	3.23	1.75	1.75	1.75	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	07	07	07	3.46	3.15	1.70	1.70	1.70	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	07	07	07	3.68	3.06	1.65	1.65	1.65	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	07	07	07	3.37	3.37	1.65	1.65	1.65	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	16	07	07	07	3.58	3.28	1.61	1.61	1.61	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	10	10	10	07	07	2.69	2.69	2.69	1.82	1.82	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	10	07	07	3.18	2.54	2.54	1.72	1.72	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	10	07	07	3.40	2.48	2.48	1.67	1.67	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	10	10	07	07	3.62	2.41	2.41	1.63	1.63	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	13	13	10	07	07	3.02	3.02	2.41	1.63	1.63	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	10	07	07	3.23	2.94	2.35	1.59	1.59	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	10	07	07	3.44	2.87	2.29	1.55	1.55	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	10	07	07	3.15	3.15	2.29	1.55	1.55	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	16	10	07	07	3.36	3.08	2.24	1.51	1.51	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	13	13	13	07	07	2.87	2.87	2.87	1.55	1.55	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	13	07	07	3.08	2.80	2.80	1.51	1.51	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	13	07	07	3.28	2.73	2.73	1.48	1.48	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	13	07	07	3.01	3.01	2.73	1.48	1.48	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	16	13	07	07	3.21	2.94	2.67	1.44	1.44	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	10	10	10	10	07	2.50	2.50	2.50	2.50	1.69	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	10	10	07	2.97	2.38	2.38	2.38	1.60	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	10	10	07	3.19	2.32	2.32	2.32	1.56	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	10	10	10	07	3.39	2.26	2.26	2.26	1.53	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	13	13	10	10	07	2.83	2.83	2.26	2.26	1.53	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	10	10	07	3.04	2.76	2.21	2.21	1.49	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	10	10	07	3.24	2.70	2.16	2.16	1.46	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	10	10	07	2.97	2.97	2.16	2.16	1.46	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	13	13	10	07	2.70	2.70	2.70	2.16	1.46	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	13	10	07	2.90	2.64	2.64	2.11	1.42	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	13	10	07	3.09	2.58	2.58	2.06	1.39	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	13	10	07	2.83	2.83	2.58	2.06	1.39	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	13	13	13	07	2.58	2.58	2.58	2.58	1.39	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	13	13	13	07	2.77	2.52	2.52	2.52	1.36	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	18	13	13	13	07	2.96	2.47	2.47	2.47	1.33	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.07	A+
	16	16	13	13	07	2.72	2.72	2.47	2.47	1.33	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	10	10	10	10	10	2.34	2.34	2.34	2.34	2.34	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	13	10	10	10	10	2.79	2.23	2.23	2.23	2.23	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	4.08	A+
	16	10	10	10	10	2.99	2.18	2.18	2.18	2.18	2.7	11.7	13.7								



RAS-5M34U2AVG-E / TR - Performances in Heating mode																							
Operating status	Combination					Unit capacity (kW)					Cooling capacity (kW)			Power input (W)			Operating current (A)		EER	Seasonal efficiencies*			
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	Min.	Nom.	Max.	Min.	Nom.	Max.	Nom.	Nom.	Pdc	SEER	Class		
Heating, 230 V	5 units operations	22	13*	07*	07*	05*	4.22	3.02	1.63	1.63	1.21	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	13*	07*	07*	05*	4.62	2.85	1.54	1.54	1.14	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	10*	10*	07*	05*	4.16	2.38	2.38	1.60	1.19	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	10*	10*	07*	05*	4.56	2.25	2.25	1.52	1.13	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	13*	10*	07*	05*	3.96	2.83	2.26	1.53	1.13	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	13*	10*	07*	05*	4.35	2.68	2.15	1.45	1.07	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	13*	13*	07*	05*	3.77	2.70	2.70	1.46	1.08	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	13*	13*	07*	05*	4.16	2.57	2.57	1.39	1.03	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	10*	10*	10*	05*	3.90	2.23	2.23	2.23	1.11	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	10*	10*	10*	05*	4.29	2.12	2.12	2.12	1.06	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	13*	10*	10*	05*	3.72	2.66	2.13	2.13	1.06	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	13*	10*	10*	05*	4.10	2.53	2.03	2.03	1.01	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	13*	13*	10*	05*	3.56	2.54	2.54	2.03	1.02	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		24	13*	13*	10*	05*	3.93	2.43	2.43	1.94	0.97	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	13*	13*	13*	05*	3.41	2.44	2.44	2.44	0.98	2.7	11.7	13.7	508	2762	4120	12.64	4.24	6.8	3.95	A	
		22	07*	07*	07*	07*	4.60	1.77	1.77	1.77	1.77	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	07*	07*	07*	07*	5.01	1.67	1.67	1.67	1.67	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	10*	07*	07*	07*	4.29	2.45	1.65	1.65	1.65	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	10*	07*	07*	07*	4.69	2.32	1.56	1.56	1.56	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	07*	07*	07*	4.07	2.91	1.57	1.57	1.57	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	13*	07*	07*	07*	4.47	2.76	1.49	1.49	1.49	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	10*	10*	07*	07*	4.01	2.29	2.29	1.55	1.55	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	10*	10*	07*	07*	4.41	2.18	2.18	1.47	1.47	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	10*	07*	07*	3.83	2.73	2.19	1.48	1.48	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	13*	10*	07*	07*	4.21	2.60	2.08	1.40	1.40	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	13*	07*	07*	3.66	2.61	2.61	1.41	1.41	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	13*	13*	07*	07*	4.03	2.49	2.49	1.34	1.34	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	10*	10*	10*	07*	3.77	2.16	2.16	2.16	1.46	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	10*	10*	10*	07*	4.16	2.05	2.05	2.05	1.39	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	10*	10*	07*	3.61	2.58	2.06	2.06	1.39	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	13*	10*	10*	07*	3.98	2.46	1.97	1.97	1.33	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	13*	10*	07*	3.54	2.53	2.53	2.03	1.37	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	
		24	13*	13*	10*	07*	3.92	2.42	2.42	1.94	1.31	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	
		22	13*	13*	13*	07*	3.40	2.43	2.43	2.43	1.31	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	
		22	10*	10*	10*	10*	3.56	2.03	2.03	2.03	2.03	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		24	10*	10*	10*	10*	3.93	1.94	1.94	1.94	1.94	2.5	11.7	14.0	487	2762	4200	12.64	4.24	6.8	3.95	A	
		22	13*	10*	10*	10*	3.50	2.50	2.00	2.00	2.00	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	
		24	13*	10*	10*	10*	3.87	2.39	1.91	1.91	1.91	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	
		22	13*	13*	10*	10*	3.36	2.40	2.40	1.92	1.92	2.5	12.0	14.0	487	2833	4200	12.97	4.24	6.8	3.95	A	

* Note : seasonal efficiencies SEER & SCOP with highwall and/or Console combination. Minimum 2 indoor units connected.

RESIDENTIAL LIGHT COMMERCIAL BUSINESS RESIDENTIAL



Solutions for professionals, by professionals

Toshiba Digital and Super Digital Inverter systems provide exceptional operating savings and extremely compact units. With state-of-the-art technologies, flexible controls and improved installation, they ensure comfort and convenience for all business installations.

A complete range of indoor units to suit all commercial applications: ceiling, cassette, ducted, suspended and high-wall. The range has been expanded with maximum cooling capacities of up to 27kW to benefit additional commercial applications with larger volumes.

> LIGHT COMMERCIAL

LIGHT COMMERCIAL BUSINESS RESIDENTIAL

INVERTER SYSTEMS



WHEN THE INVERTER BECOMES DIGITAL

Toshiba technology recreates from power supply signal the ideal wave at the right frequency to perfectly drive the compressor.

ALLIANCE OF HIGH PERFORMANCES AND LOW POWER CONSUMPTION

Digital and Super Digital inverter are able to provide strong capacity, low power consumption, best comfort and reduced energy waste whatever the conditions.

EXTREMELY FLEXIBLE

Featuring the most compact chassis, Digital and Super Digital Inverter use advanced technologies such as DC hybrid control & Twin rotary compressor to operate smoothly from -27 to 52°C no matter the ambience.

Cr��ted by Toshiba. - Inverter technology		
SEER up to 9.4	SCOP up to 5.5	11 sizes covering 2.5 to 22.5kW (Cooling) 3.4 to 27kW (Heating)
 Silent operation	CDU down to 46 dB(A)	 Available in 1Ph and 3Ph



CHOOSE YOUR ADAPTED SYSTEM SOLUTION CHOOSE A SYSTEM SOLUTION THAT SUITS YOUR NEEDS

				CAPACITY IN HP										
				1	1,5	2	3	3,5	4	5	6	8	10	W-Twin
				1Ph			1Ph & 3Ph					3Ph		W-Twin
R32 Outdoor units	Super Digital Inverter	RAV-GP***1AT(8)(W)-E/-TR				✓	✓		✓	✓	✓ (3Ph only)			Twin
	Digital Inverter and Big Digital Inverter	RAV-GM***1AT(8)(P)-E/-TR		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Twin, Triple & W-Twin
	Digital Inverter classic >NEW	RAV-GV***1AT(8)(P)-E/-TR				✓	✓		✓	✓	✓			
R32 indoor units	4-way smart cassette	RAV-HM***1UTE-E/-TR				✓	✓		✓	✓				
	4-way standard cassette	RAV-HM***1UTP-E/-TR				✓	✓	✓	✓	✓	✓			
	Compact 4-way cassette	RAV-HM***1MUT-E/-TR		✓	✓	✓								
	Standard duct	RAV-HM***1BTP-E/-TR				✓	✓	✓	✓	✓	✓			
	Slim duct	RAV-RM***1SDT-E/-TR		✓	✓	✓								
	High static duct	RAV-RM***1HTP-E/-TR										✓	✓	
	Ceiling	RAV-HM***1CTP-E/-TR			✓	✓	✓	✓	✓	✓	✓			
	High Wall	RAV-HM***1KRTP-E/-TR		✓	✓	✓	✓	✓						
	Floor standing	RAV-HM***1FT-E/-TR				✓	✓		✓	✓	✓			
	Standard DX kit	RAV-DXC010		✓	✓	✓	✓	✓	✓	✓	✓			
	0/10v DX kit	RBC-DXC031		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

> RAV SUPER DIGITAL INVERTER

Super Digital Inverter will maximize your energy savings and keep operating costs to a minimum thanks to Toshiba's legendary Twin Rotary compressors and Vector Controlled Inverter.

Benefit also from all the connectivity and flexibility you have ever dreamt of for guaranteed comfort and exceptional efficiency. Choosing Toshiba's light commercial advanced solutions is the right option for low environmental impact and outstanding durable investments

MAXIMUM EFFICIENCY

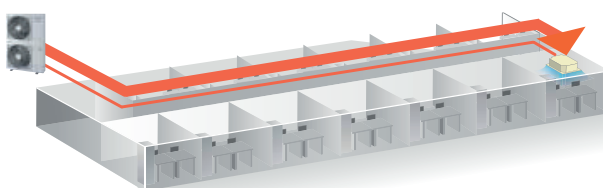
Very efficient energy consumption, keeps down operating costs : SEER of 9,40 and SCOP of 5,51 achieved by Toshiba's unrivalled Super Digital Inverter technologies and newly developed components.



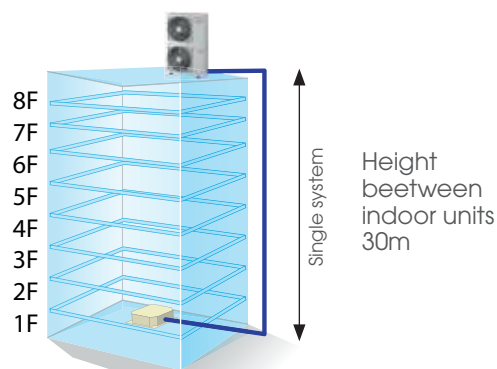
- Top class seasonal efficiency
- Lower stand-by power
- Energy monitoring
- Wider operating range

PIPING FLEXIBILITY

Super Digital Inverter leads the industry with support for height differences of up to 30 meters on a single system. That is enough height to cover an 8-storey building. Enable the outdoor unit to be installed out of sight increases installation flexibility (only 4 & 5HP).



Farthest equivalent length 75m



Calculated at 3.5 metres per floor

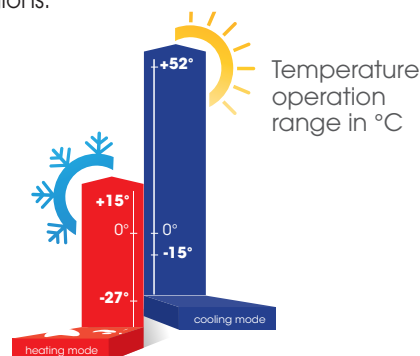
IDEAL COUPLE: DC TWIN ROTARY COMPRESSOR & VECTOR-CONTROLLED INVERTER

The benefits of inverter technology are further optimised in combination with Toshiba twin-rotary compressors. These allows excellent speed control in the capacity range from 20 to 100% capacity; this is an exclusive Toshiba benefit!



OPERATING TEMPERATURE RANGE

Heater operation is possible starting from an outdoor temperature of -27°C creates a comfortable space even during cold winters, while cooling operation is possible up to 52°C outdoor temperature. This enables wider applications and use of the system in colder regions.



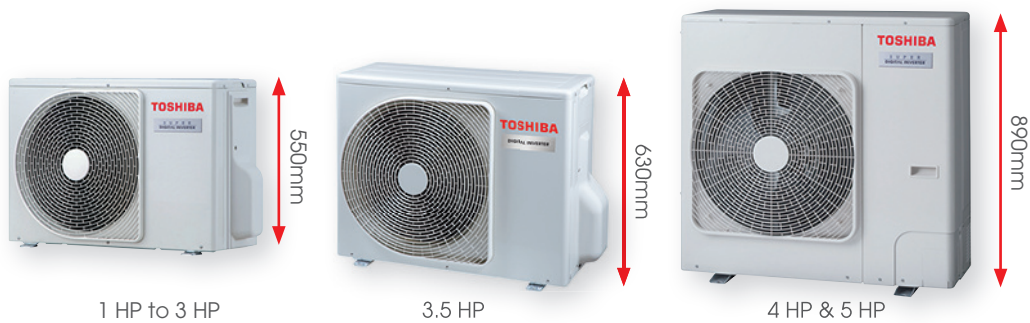
RAV DIGITAL INVERTER



Digital Inverter combines compact chassis outdoor units, unrivalled capacity range and large indoor unit line-up for perfect adaptation to any situation. This is the ultimate high efficiency solution for light commercial applications in terms of product reliability and quality.

SMALL AND LIGHT CHASSIS

Less than 900mm up to 5 HP, the Digital inverter is extremely compact and can be installed in very small places. In addition, chassis under 5 HP are less than 70kg.

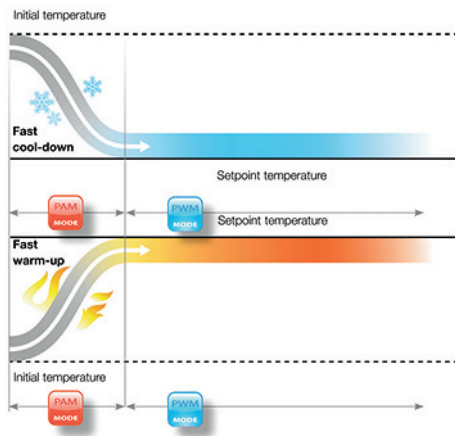


SMART INVERTER

Hybrid inverter control combines two intelligent controls mechanisms to reach the setpoint temperature as quickly as possible with maximum efficiency:

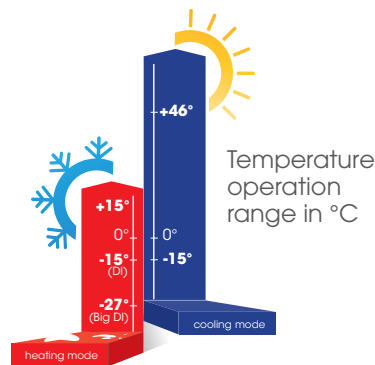
- the PAM mode, quickly achieves high capacity and desired comfort.
- the PWM mode minimises power input to maximise efficiency.

The result: high efficiency level.



OPERATING TEMPERATURE RANGE

Heater operation is possible starting from an outdoor temperature of -15°C (-27°C for Big DI), while cooling operation is possible at -15°C and up to 46°C outdoor temperature. This enables wider applications and usage of the system everywhere.



WIDE CAPACITY RANGE

9 sizes from 1 HP to 10HP with 1Ph or 3Ph electrical connections to cover every type of projects from the 15m² room to the 200m² shop in both new construction and refurbishment.

		1HP	1.5HP	2HP	3HP	3.5HP	4HP	5HP	6HP	8HP	10HP
	1Ph	✓	✓	✓	✓	✓	✓	✓	✓		
	3Ph						✓	✓	✓	✓	✓

> RAV DIGITAL INVERTER CLASSIC

> NEW

Digital Inverter Classic offers all of Toshiba expertise at an affordable cost for a wide range of light commercial applications.

COMPACT CHASSIS

With a width of less than 900mm, the Digital Inverter Classic is extremely compact and can be installed in small places.



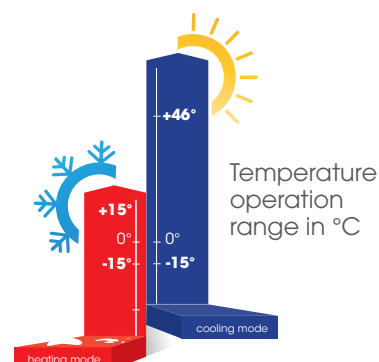
TOSHIBA EXPERTISE

Twin rotary compressor, heat exchanger or hybrid inverter demonstrate the innovative technology Toshiba has been developing since the 80's making the Digital Inverter Classic a brilliant solution.



OPERATING TEMPERATURE RANGE

Heater operation is possible starting from an outdoor temperature of -15°C, while cooling operation is possible at -15°C and up to 46°C outdoor temperature. This enables wider applications and usage of the system everywhere.



CLASSIC LINEUP

Most light commercial applications are covered thanks to a comprehensive lineup from 2 to 6HP and 1-phase or 3-phase electrical connections.

Capacity	2HP	3HP	4HP	5HP	6HP	Compatible with
Digital Inverter Classic	✓ (1Ph only)*	✓ (1Ph only)	✓ (1Ph & 3Ph)	✓ (1Ph & 3Ph)	✓ (1Ph & 3Ph)	4-way cassette, standard duct and high wall.

* Duct excl.



EUROPEAN UNION, TURKEY R32

GP_AT(8) SUPER DIGITAL INVERTER



The Toshiba Super Digital Inverter 1 series is leading energy efficiency, operating range and piping length, to offer the best solution for the majority of commercial projects and large residential applications.

Top class efficiency

- High efficiency SCOP of up to 5.51, thanks to Toshiba inverter technology.

Wide adaptability

- Operating temperature limits from -27°C (Heating) to +52°C (Cooling) allow the system to operate across a wide temperature range.
- Quiet operation.

Flexible

- Can be utilised for single, twin or triple indoor applications.

Easy to maintain

- Removable corner panels for easy access.
- Self-diagnosis function.



SCOP MAX



5.51

CAPACITY



5kW > 16kW

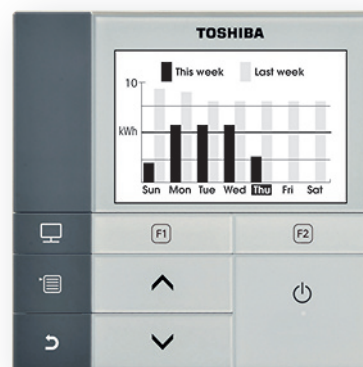
OPERATION



-27°C > +52°C

> Power consumption analysis embedded when SDI 1 series (1Ph only) is combined with the RBC-AMSU51E-ES/-EN

Power consumption (Week)



CASSETTE

RAV-HM_UT-E/TR
RAV-HM_UTP-E/TR
RAV-HM_MUT-E/TR



DUCTED

RAV-HM_BTP-E/TR
RAV-RM_SDT-E/TR



CEILING

RAV-HM_CTP-E/TR



HIGH-WALL

RAV-HM_KRTP-E/TR



FLOOR
STANDING

RAV-HM_FT-E/TR



OUTDOOR UNITS

RAV-GP561ATW-E/TR RAV-GP801ATW-E/TR RAV-GP1101AT(8)-E
RAV-GP1401AT(8)-E
RAV-GP1601AT8-E

SUPER DIGITAL INVERTER

SUPER DIGITAL INVERTER Physical data outdoor - Single phase

Outdoor unit			RAV-GP561ATW-E/TR 2 HP	RAV-GP801ATW-E/TR 3 HP	RAV-GP1101AT-E/TR 4 HP	RAV-GP1401AT-E1/TR1 5 HP
Air flow	m ³ /h - l/s		2250	3180	6960	6960
Sound pressure level	dB(A)	C	46	46	49	50
Sound power level	dB(A)	C	63	63	66	67
Operating range	°C	C	-15 / 52	-15 / 52	-15 / 52	-15 / 52
Sound pressure level	dB(A)	H	48	48	50	51
Sound power level	dB(A)	H	65	65	67	68
Operating range	°C	H	-27 / 15	-27 / 15	-27 / 15	-27 / 15
Dimensions (HxWxD)	mm		630 x 799 x 299	1050 x 1010 x 370	1550 x 1010 x 370	1550 x 1010 x 370
Weight	kg		45	74	104	104
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections						
Gas	in		1/2	5/8	5/8	5/8
Liquid	in		1/4	3/8	3/8	3/8
Minimum pipe length	m		3	3	3	3
Maximum pipe length	m		50	50	75	75
Maximum height difference	m		30	30	30	30
Chargeless pipe length	m		20	30	30	30
R32 Refrigerant	kg/TCO ₂ eq		1.35/0.91	1.9/1.28	3.1/2.09	3.1/2.09
Power supply	V-ph-Hz		220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

SUPER DIGITAL INVERTER Physical data outdoor - Three Phase

Outdoor unit			RAV-GP1101AT8-E/TR	RAV-GP1401AT8-E/TR	RAV-GP1601AT8-E/TR
			4 HP	5 HP	6 HP
Air Flow	m³/h - l/s		6060 - 1683	6180 - 1717	6180 - 1717
Sound pressure level	dB(A)	C	49	51	51
Sound power level	dB(A)	C	66	68	68
Operating range	°C	C	-15 / 46	-15 / 46	-15 / 46
Sound pressure level	dB(A)	H	50	52	53
Sound power level	dB(A)	H	67	69	70
Operating range	°C	H	-20 / 15	-20 / 15	-20 / 15
Dimensions (HxWxD)	mm		1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320
Weight	kg		95	95	95
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections					
Gas	in		5/8	5/8	5/8
Liquid	in		3/8	3/8	3/8
Minimum pipe length	m		3	3	3
Maximum pipe length	m		75	75	75
Maximum height difference	m		30	30	30
Chargeless pipe length	m		30	30	30
R32 Refrigerant	kg/TCO ₂ eq		2.6/1.75	2.6/1.75	2.6/1.75
Power supply	V-ph-Hz		380/415-3N-50	380/415-3N-50	380/415-3N-50

C: cooling mode
H: heating mode

GM_ATP(8) DIGITAL INVERTER



Toshiba Digital Inverter brings state-of-the-art inverter technology for the commercial sector, offering considerable advantages in terms of capacity, energy savings, optimised control, lower refrigerant charge and utilising the smallest physical dimensions and lightest range of outdoor units in the industry.

Light and compact

- Up to 12.8 kW in only 890mm height and 69kg.

Wide adaptability

- Compatible with a wide choice of indoor units: 4-way cassette dB(A), 4-way compact cassette, slim duct, standard duct, high wall and ceiling.
- Night operation mode to minimize the outdoor unit sound as low as 33dB (A).

Efficiency & energy savings

- The Vector Intelligent Drive Unit (IPDU) technology ensures.
- Power limitation by 1% step between 50% and 100% load for optimal capacity control.
- Energy monitoring by using RBC-AMSU51E-ES/EN wired remote controller.

Easy to maintain

- Removable corner panels for easy access.
- Auto diagnostic function.
- Self-diagnosis function.

SCOP MAX



4.51

CAPACITY



2.5kW > 16kW

OPERATION



-15°C > +46°C

Toshiba state-of-the-art compressor features a powerful magnetic rotor with great surface area to increase efficiency and reduce the operation noise.

- > Efficiency
- > Reliability
- > 100% Toshiba



CASSETTE

RAV-HM_UTP-E/TR
RAV-HM_MUT-E/TR


DUCTED

RAV-HM_BTP-E/TR
RAV-RM_SDT-E/TR


CEILING

RAV-HM_CTP-E/TR



HIGH-WALL

RAV-HM_KRTP-E/TR


FLOOR
STANDING

RAV-HM_FT-E/TR



OUTDOOR UNITS

RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM901ATP-E/TR

RAV-GM1101AT(8)P-E/TR
RAV-GM1401AT(8)P-E/TR


RAV-GM1601AT(8)P-E/TR

DIGITAL INVERTER

DIGITAL INVERTER Physical data outdoor - Single phase

Outdoor unit		RAV-GM301ATP-E/TR 1 HP	RAV-GM401ATP-E/TR 1.5 HP	RAV-GM561ATP-E/TR 2 HP	RAV-GM801ATP-E/TR 3 HP	RAV-GM901ATP-E/TR 3.5 HP	RAV-GM1101ATP-E/TR 4 HP	RAV-GM1401ATP-E/TR 5 HP	RAV-GM1601ATP-E/TR 6 HP
Air Flow	m ³ /h - l/s	1800 - 500	2200 - 611	2400 - 667	2700 - 750	2900 - 806	4080 - 1133	4200 - 1167	6900 - 1917
Sound pressure level	dB(A) C	46	49	46	48	51	54	55	53
Sound power level	dB(A) C	61	64	63	65	68	70	70	70
Operating range	°C C	-15 / 46	-15 / 46	-15 / 46	-15 / 46	-15 / 46	-15 / 46	-15 / 46	-15 / 46
Sound pressure level	dB(A) H	47	50	48	52	55	57	57	55
Sound power level	dB(A) H	62	65	65	69	72	74	74	72
Operating range	°C H	-15 / 15	-15 / 15	-15 / 15	-15 / 15	-15 / 15	-15 / 15	-15 / 15	-15 / 15
Dimensions (HxWxD)	mm	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	630 x 800 x 300	890 x 900 x 320	890 x 900 x 320	1340 x 900 x 320
Weight	kg	33	39	40	44	47	68	68	95
Compressor type		DC Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections									
Gas	in	3/8	1/2	1/2	5/8	5/8	5/8	5/8	5/8
Liquid	in	1/4	1/4	1/4	3/8	3/8	3/8	3/8	3/8
Minimum pipe length	m	2	2	5	5	5	5	5	5
Maximum pipe length	m	20	20	30	30	50	50	50	50
Maximum height difference	m	10	10	30	30	30	30	30	30
Chargeless pipe length	m	15	15	20	20	30	30	30	30
Refrigerant	Type/kg/ TeqCO ₂	R32 / 0.6 / 0.4	R32 / 0.9 / 0.6	R32 / 0.9 / 0.6	R32 / 1.3 / 0.9	R32 / 2.0 / 1.3	R32 / 2.1 / 1.4	R32 / 2.1 / 1.6	R32 / 2.4 / 5.0
Power supply	V-ph-Hz	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60	220/240-1-50, 220-1-60

DIGITAL INVERTER Physical data outdoor - Three phase

Outdoor Unit		RAV-GM1101AT8P-E/TR 4 HP	RAV-GM1401AT8P-E/TR 5 HP	RAV-GM1601AT8P-E/TR 6 HP
Air Flow	m ³ /h - l/s	4080 - 1133	4200 - 1167	6900 - 1917
Sound pressure level	dB(A) C	54	55	53
Sound power level	dB(A) C	70	70	70
Operating range	°C C	-15 / 46	-15 / 46	-15 / 46
Sound pressure level	dB(A) H	57	57	55
Sound power level	dB(A) H	74	74	72
Operating range	°C H	-15 / 15	-15 / 15	-15 / 15
Dimensions (HxWxD)	mm	890 x 900 x 320	890 x 900 x 320	1340 x 900 x 320
Weight	kg	68	68	94
Compressor type		DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections				
Gas	in	5/8	5/8	5/8
Liquid	in	3/8	3/8	3/8
Minimum pipe length	m	5	5	5
Maximum pipe length	m	50	50	50
Maximum height difference	m	30	30	30
Chargeless pipe length	m	30	30	30
Refrigerant	Type/kg	R32 / 2.1 / 1.4	R32 / 2.1 / 1.4	R32 / 2.4 / 1.6
Power supply	V-ph-Hz	380/415-3-50	380/415-3-50	380/415-3-50, 380-3-60

C: cooling mode
H: heating mode

GM_AT8 BIG DIGITAL INVERTER



Big DI combines very small footprint and all of Toshiba's expertise in terms of efficiency, reliability and connectivity to ensure energy savings as well as perfect comfort all year round.

High efficiency and energy savings

- Top class EER/COP thanks to exclusive Toshiba's inverter twin-rotary compressor.
- Wide capacity range down to 4.6kW to ensure continuous operation whatever the conditions and maximize efficiency.
- Compliance with ERP directive Lot21.

Wide adaptability

- Allows the connection of four indoor units (same type, same capacity).
- Compatible with a large choice of indoor units: 4-way cassette, 4-way compact cassette, slim duct, standard duct, high-wall & ceiling.

Safe and reliable

- Built-in leak detection system.



SCOP MAX



3.51

CAPACITY



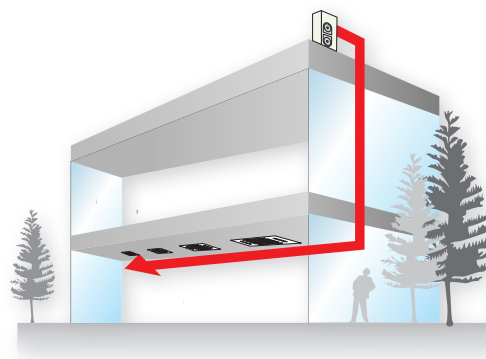
19kW > 27kW

OPERATION



-27°C > +46°C

The installation can reach up to 100 m total piping length and 30 m in elevation without additional safety measures.



INDOOR UNITS

RAV-RM-DTP-E2/TR2



OUTDOOR UNITS

RAV-GM2241 AT8-E1/TR1
RAV-GM2801 AT8-E1/TR1

BIG DIGITAL INVERTER

BIG DIGITAL INVERTER Physical data outdoor - 3Ph

Outdoor unit			RAV-GM2241AT8-E1/TR1 8 HP	RAV-GM2801AT8-E1/TR1 10 HP
Air Flow	m ³ /h - l/s		9150 - 2541	10890 - 3025
Sound pressure level	dB(A)	C	58	61
Sound power level	dB(A)	C	76	78
Operating range	°C	C	-15 / 46	-15 / 46
Sound pressure level	dB(A)	H	60	63
Sound power level	dB(A)	H	76	80
Operating range	°C	H	-27 / 15	-27 / 15
Dimensions (HxWxD)	mm		1550 x 1010 x 370	1550 x 1010 x 370
Weight	kg		142	142
Compressor type			DC Twin Rotary	DC Twin Rotary
Flare connections				
Gas	in		1 1/8	1 1/8
Liquid	in		1/2	1/2
Minimum pipe length	m		5	5
Maximum pipe length	m		100	100
Maximum height difference	m		30	30
Chargeless pipe length	m		30	30
R32 refrigerant charge	kg/ TCO _{2eq}		5/10.44	5/10.44
Power supply	V-ph-Hz		380/415-3N-50	380/415-3N-50

C: cooling mode

H: heating mode

RAV-GM2241AT8J-E Heavy Corrosion Protection

RAV-GM2801AT8J-E Heavy Corrosion Protection

GV_AT(8)P DIGITAL INVERTER CLASSIC



> NEW



The Digital Inverter Classic offers all of Toshiba expertise to provide efficient cooling and heating solutions to the commercial sector. Benefit from numerous advantages in terms of energy savings, optimised control, lower refrigerant charge, and reduced footprint.

Compact

- Full one-fan outdoor unit line-up for strong product positioning flexibility.

Wide adaptability

- Compatible with 3 types of indoor units: 4-way cassette, standard duct, and high wall.
- Available in both 1Ph and 3Ph versions, connectable to any power supply from 4HP model.

Efficient & environmental oriented

- Toshiba compressor and Toshiba Inverter for high operating efficiency.
- Optimized for R32 refrigerant.

SCOP MAX



4.20
A++

CAPACITY



5.3 kW > 16kW

OPERATION



-15°C > +46°C

Toshiba state-of-the-art compressor features a powerful magnetic rotor with a great surface area for increased efficiency and reduced operation noise.

- > Efficiency
- > Reliability
- > 100% Toshiba



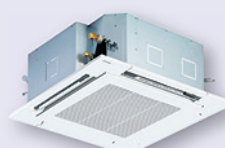
OUTDOOR UNITS

RAV-GV561ATP-E/TR
RAV-GV801ATP-E/TR

RAV-GV1101ATP-E/TR

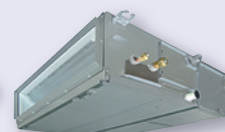
RAV-GV1101AT8P-E/TR
RAV-GV1401AT(8)P-E/TR

RAV-GV1601AT(8)P-E/TR



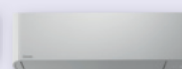
CASSETTE

RAV-HM_UTP-E/TR



DUCTED

RAV-HM_BTP-E/TR



HIGH WALL

RAV-HM_KRTP-E/TR

DIGITAL INVERTER CLASSIC

DIGITAL INVERTER CLASSIC Physical data outdoor - Single phase PRELIMINARY DATA

Outdoor unit			RAV-GV561ATP-E 2 HP	RAV-GV801ATP-E 3 HP	RAV-GV1101ATP-E 4 HP	RAV-GV1401ATP-E 5 HP	RAV-GV1601ATP-E 6 HP
Air flow	m ³ /h - l/s		2250 - 667	2700 - 750	2900 - 800	4400 - 900	4900 - 1100
Sound pressure level	dB(A)	C	46	48	49	53	55
Sound power level	dB(A)	C	63	65	66	70	72
Operating range	°C	C	-15 / 46	-15 / 46	-15 / 46	-15 / 46	-15 / 46
Sound pressure level	dB(A)	H	48	52	53	57	57
Sound power level	dB(A)	H	65	69	70	74	74
Operating range	°C	H	-15 / 15	-15 / 15	-15 / 15	-15 / 15	-15 / 15
Dimensions (HxWxD)	mm		550 x 780 x 290	550 x 780 x 290	630 x 800 x 300	710 x 900 x 320	890 x 900 x 320
Weight	kg		39	42	52	62	72
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections							
Gas	in		1/2	5/8	5/8	5/8	5/8
Liquid	in		1/4	3/8	3/8	3/8	3/8
Minimum pipe length	m		5	5	5	5	5
Maximum pipe length	m		20	20	30	30	30
Maximum height difference	m		20	20	30	30	30
Chargeless pipe length	m		20	20	30	30	30
Refrigerant	Type/kg/TeqCO ₂		R32 / 0.9 / 0.6	R32 / 1.3 / 0.9	R32 / 1.7 / 1.2	R32 / 1.7 / 1.2	R32 / 2.2 / 1.5
Power supply	V-ph-Hz		220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

DIGITAL INVERTER CLASSIC Physical data outdoor - Three phase PRELIMINARY DATA

Outdoor unit			RAV-GV1101AT8P-E 4 HP	RAV-GV1401AT8P-E 5 HP	RAV-GV1601AT8P-E 6 HP
Air flow	m ³ /h - l/s		4200 - 900	4400 - 900	4900 - 1100
Sound pressure level	dB(A)	C	53	53	55
Sound power level	dB(A)	C	70	70	72
Operating range	°C	C	-15 / 46	-15 / 46	-15 / 46
Sound pressure level	dB(A)	H	57	57	57
Sound power level	dB(A)	H	74	74	74
Operating range	°C	H	-15 / 15	-15 / 15	-15 / 15
Dimensions (HxWxD)	mm		710 x 900 x 320	710 x 900 x 320	890 x 900 x 320
Weight	kg		62	62	70
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections					
Gas	in		5/8	5/8	5/8
Liquid	in		3/8	3/8	3/8
Minimum pipe length	m		5	5	5
Maximum pipe length	m		30	30	30
Maximum height difference	m		30	30	30
Chargeless pipe length	m		30	30	30
Refrigerant	Type/kg/TeqCO ₂		R32 / 1.7 / 1.2	R32 / 1.7 / 1.2	R32 / 2.2 / 1.5
Power supply	V-ph-Hz		220/240-1-50	220/240-1-50	220/240-1-50

C: cooling mode
H: heating mode

HM_UT 4-WAY SMART CASSETTE



Dedicated for commercial application, the Toshiba Smart Cassette is the perfect mix between comfort, elegance and efficiency.

Efficiency

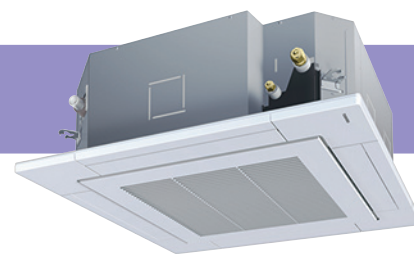
- Top class SEER and SCOP, thanks to long slit heat exchanger with magic coil treatment, high efficiency fan motor and large opening air conditioning ventilation.
- Energy saving with the occupancy sensor which will automatically switch off the unit if nobody is in the room (TCB-SIR41U-E needed).

Comfort

- Unique flap design for optimal air distribution.
- Individual setting of louver position: 3 different swing modes: standard, diagonally, opposite or turn around.
- 5 fan steps to precisely control the air flow.

Design

- Simple & elegant design fits various rooms.



SCOP MAX



5.51

CAPACITY



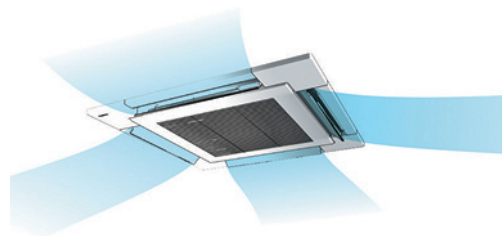
5kW > 14kW

OPERATION



-27°C > +52°C

Louver position automatically adjusts to prevent cold draught being felt by users



INDOOR UNITS

RAV-HM561UT-E/TR
RAV-HM801UT-E/TR
RAV-HM1101UT-E/TR
RAV-HM1401UT-E/TR



OUTDOOR UNITS

RAV-GP561ATW-E/TR RAV-GP801ATW-E/TR
RAV-GP1101AT-E1/TR1
RAV-GP1401AT-E/TR



REMOTE CONTROLS

RBC-AX41U-E/TR RBC-AXU31-E/TR
RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

4-WAY SMART CASSETTE

4-WAY SMART CASSETTE Performance data with Super Digital Inverter Series 1

Outdoor unit		RAV-GP561ATW-E/TR		RAV-GP801ATW-E/TR		RAV-GP1101AT-E/TR		RAV-GP1401AT-E1/TR1	
Indoor unit (Cassette)		RAV-HM561UT-E/TR		RAV-HM801UT-E/TR		RAV-HM1101UT-E/TR		RAV-HM1401UT-E/TR	
Cooling capacity	kW	5.0		7.1		10.0		12.5	
Cooling range (min. - max.)	kW	1.2 - 5.6		1.9 - 8.0		3.1 - 12.0		3.1 - 14.0	
Power input (min. - rated - max.)	kW	C	0.19 - 1.2 - 2.03	0.26 - 1.37 - 2.94		0.56 - 1.90 - 2.80		0.56 - 2.91 - 3.40	
EER			4.17	5.18		5.26		4.30	
SEER			8.17	9.40		9.25		8.87	
Energy efficiency class		C	A++	A+++		A+++		-	
Seasonal electricity consumption	kWh/a	C	214	256		378		845	
Heating capacity	kW	5.6		8.0		11.2		14.0	
Heating range (min. - max.)	kW	0.9 - 8.1		1.3 - 11.3		2.6 - 13.0		2.6 - 16.5	
Power input (min. - rated - max.)	kW	H	0.16 - 1.29 - 2.75	0.20 - 1.45 - 3.15		0.41 - 2.18 - 2.98		0.41 - 3.04 - 4.18	
COP	W/W		4.34	5.52		5.14		4.61	
SCOP			5.01	5.54		5.03		5.00	
Energy efficiency class		H	A++	A+++		A++		-	
Seasonal electricity consumption	kWh/a	H	1058	1287		2556		2685	

4-WAY SMART CASSETTE Physical data indoor

Indoor unit		RAV-HM561UT-E/TR	RAV-HM801UT-E/TR	RAV-HM1101UT-E/TR	RAV-HM1401UT-E/TR
Air flow (H/L)	m³/h - l/s	1050/750 - 291/208	1920/810 - 533/225	2250/1050 - 625/291	2250/1170 - 625/325
Sound pressure level (H-M-L)	dB(A)	32-29-26	42-35-27	48-40-31	48-41-33
Sound power level (H-M-L)	dB(A)	48-45-43	56-49-43	61-54-46	61-55-48
Dimensions (HxWxD)	mm	256 × 840 × 840	319 × 840 × 840	319 × 840 × 840	319 × 840 × 840
Weight	kg	20	25	25	25
Panel dimensions (HxWxD)	mm	30×950×950	30×950×950	30×950×950	30×950×950
Panel weight	kg	5	5	5	5

C: cooling mode
H: heating mode

HM_UTP 4-WAY CASSETTE

Compatible with
Digital Inverter Classic



> **NEW PANEL DESIGN**

4-way Cassette is designed to provide uniform air distribution and total comfort; it is the ideal solution for small commercial application.

Comfort

- Two louver shape option: straight flow louver and wide flow louver; optimum air distribution.
- Individual setting of louver position: 3 different swing modes: standard, diagonally, opposite, turn around.
- Wide air flow in all directions.
- Optionnal PM2.5 filters.

Reliability

- Self-cleaning function for anti-mould in drain cap.
- Built-in high-lift drain pump.

Easy to install

- Compact chassis with only 256mm height (sizes 5 and 8).
- Leight-weight unit, for easy and quick installation.



SCOP MAX



5.24
A+++

CAPACITY



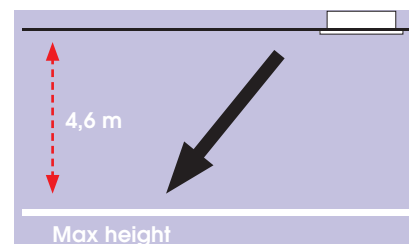
5kW > 16kW

OPERATION



-27°C > +52°C

Optimal air diffusion up to 4.6m
ceiling height!



INDOOR UNITS

RAV-HM561UTP-E/TR
RAV-HM801UTP-E/TR
RAV-HM901UTP-E/TR
RAV-HM1101UTP-E/TR
RAV-HM1401UTP-E/TR
RAV-HM1601UTP-E/TR

SDI



OUTDOOR UNITS

RAV-GP561ATW-E/TR
RAV-GP801ATW-E/TR
RAV-GP1101AT(8)-E/TR
RAV-GP1401AT(8)-E(1)/TR(1)
RAV-GP1601AT8-E/TR

DI



RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM901ATP-E/TR
RAV-GM1101AT(8)PE/TR
RAV-GM1401AT(8)P-E/TR
RAV-GM1601AT(8)P-E/TR

Dlc



RAV-GV561ATP-E/TR
RAV-GV801ATP-E/TR
RAV-GV1101AT(8)P-E/TR
RAV-GV1401AT(8)P-E/TR
RAV-GV1601AT(8)P-E/TR



REMOTE CONTROLS

RBC-U33P-E
RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

4-WAY CASSETTE

4-WAY CASSETTE

Performance data with Super Digital Inverter Series 1 1Ph & 3h

Outdoor unit	RAV-	GP561ATW-E	GP801ATW-E	GP1101AT-E	GP1401AT-E1	GP1101AT8-E	GP1401AT8-E	GP1601AT8-E
Indoor unit (Cassette)	RAV-	HM561UTP-E	HM801UTP-E	HM1101UTP-E	HM1401UTP-E	HM1101UTP-E	HM1401UTP-E	HM1601UTP-E
Cooling capacity	kW	5.0	7.1	10.0	10.0	12.5	12.5	14.0
Cooling range (min. - max.)	kW	1.2-5.6	1.9 - 8.0	3.1 - 12.0	2.6 - 12.0	3.1 - 14.0	2.6 - 14.0	2.6 - 16.0
Power input (min. - rated - max.)	kW C	0.19-1.22-1.97	0.26 - 1.58 - 3.15	0.56-1.90-2.80	0.66 -2.32- 3.60	0.53 - 3.16 - 3.55	0.66 - 3.42 - 4.40	0.66 - 4.34 - 5.70
EER		4.10	4.49	4.69	4.31	3.96	3.65	3.23
SEER		7.73	8.96	9.00	7.32	8.59	7.35	6.99
Energy efficiency class	C	A++	A+++	A+++	A++	-	-	-
Seasonal electricity consumption	kWh/a C	226	277	389	478	874	1021	1201
Heating capacity	kW	5.6	8.0	11.2	11.2	14.0	14.0	16.0
Heating range (min. - max.)	kW	0.9-8.1	1.3 - 11.3	2.6 - 13.0	2.4 - 15.6	2.6 - 16.5	2.4 - 18.0	2.4 - 19.0
Power input (min. - rated - max.)	kW H	0.16 - 1.30 - 2.76	0.20 - 1.77 - 3.47	0.41 - 2.18 - 2.98	0.53 - 2.41 - 4.30	0.40 - 3.21 - 4.38	0.53 - 3.41 - 5.50	0.53 - 4.28 - 6.51
COP	W/W	4.31	4.52	4.79	4.65	4.36	4.11	3.74
SCOP		4.98	5.24	4.76	4.38	4.75	4.38	4.38
Energy efficiency class	H	A++	A+++	A++	A+	-	-	-
Seasonal electricity consumption	kWh/a H	1069	1363	2706	3036	2832	3036	3036

4-WAY CASSETTE

Performance data with Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-	GM561ATP-E	GM801ATP-E	GM901ATP-E	GM1101AT(8)P-E	GM1401AT(8)P-E	GM1601AT(8)P-E
Indoor unit (Cassette)	RAV-	HM561UTP-E	HM801UTP-E	HM901UTP-E	HM1101UTP-E	HM1401UTP-E	HM1601UTP-E
Cooling capacity	kW	5.0	6.7	8.0	9.5	12.0	14.0
Cooling range (min. - max.)	kW	1.5 - 5.6	1.5 - 8.0	1.9 - 8.8	3.0 - 11.2	3.0 - 13.2	3.0 - 16.0
Power input (min. - rated - max.)	kW C	0.26 -1.56 - 1.86	0.26 - 2.22 - 2.60	2.42	0.60 - 2.87 - 4.10	0.60 - 4.29 - 4.71	4.49
EER		3.21	3.02	3.30	3.31	2.8	3.12
SEER		6.34	5.81	7.2	6.15	5.71	6.3
Energy efficiency class	C	A++	A+	A++	A++	A+	-
Seasonal electricity consumption	kWh/a C	276	403	389	540	736	1033
Heating capacity	kW	5.3	7.7	9.0	11.2	13.0	16.0
Heating range (min. - max.)	kW	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13.0	3.0 - 16.0	3.0 - 18.0
Power input (min. - rated - max.)	kW H	0.26 -1.36 - 2.08	0.26 - 2.13 - 3.03	2.65	0.60 - 2.93 - 4.30	0.60 - 3.46 - 4.50	4.43
COP	W/W	3.90	3.62	3.72	3.82	3.76	3.61
SCOP		4.60	4.42	4.60	4.28	4.29	4.35
Energy efficiency class	H	A++	A+	A++	A+	A+	-
Seasonal electricity consumption	kWh/a H	852	1615	1917	2615	2611	2575

4-WAY CASSETTE

Performance data with Digital Inverter Classic Series 1 1Ph & 3Ph

PRELIMINARY DATA

Outdoor unit	RAV-	GV561ATP-E	GV801ATP-E	GV1101ATP-E	GV1101AT8P-E	GV1401ATP-E	GV1401AT8P-E	GV1601AT(8)P-E
Indoor unit (4-way Cassette)	RAV-	HM561UTP-E	HM801UTP-E	HM1101UTP-E	HM1101UTP-E	HM1401UTP-E	HM1401UTP-E	HM1601UTP-E
Cooling capacity	kW	5.0	6.7	9.5	9.5	11.5	12.1	13.0
Cooling range (min. - max.)	kW	1.5 - 5.6	1.5 - 8.0	3.0 - 11.2	3.0 - 11.2	3.0 - 12.0	3.0 - 14.0	3.0 - 14.0
Power input (min. - rated - max.)	kW C	1.60	2.20	3.15	3.15	4.60	4.80	5.4
EER		3.13	3.05	3.02	3.02	2.50	2.52	2.41
SEER		6.20	6.00	6.00	6.20	5.10	5.10	5.90
Energy efficiency class	C	A++	A+	A+	A++	-	-	-
Seasonal electricity consumption	kWh/a C							
Heating capacity	kW	5.3	7.0	10.0	10.0	12.1	12.3	13.5
Heating range (min. - max.)	kW	1.5 - 6.3	1.5 - 9.0	3.0 - 13.0	3.0 - 13.0	3.0 - 16.0	3.0 - 16.0	3.0 - 18.0
Power input (min. - rated - max.)	kW H	1.40	1.90	3.10	3.00	3.90	4.10	3.9
COP	W/W	3.79	3.68	3.23	3.33	3.10	3.00	3.46
SCOP		4.20	4.15	4.00	4.10	3.90	3.90	4.20
Energy efficiency class	H	A+	A+	A+	A+	A+	0.00	0.00
Seasonal electricity consumption	kWh/a H							

4-WAY CASSETTE

Physical data indoor

Indoor unit	RAV-	HM561UTP-E	HM801UTP-E	HM901UTP-E	HM1101UTP-E	HM1401UTP-E	HM1601UTP-E
Air flow (H/L)	m³/h - l/s	1050/780 - 291/217	1230/810 - 341/225	1600/900 - 444/250	2010/1170 - 558/325	2100/1230 - 583/341	2130/1230 - 592/350
Sound pressure level (H-M-L)	dB(A)	32-29-28	35-31-28	40-36-33	43-38-33	44-38-34	45-40-36
Sound power level (H-M-L)	dB(A)	47-44-43	50-46-43	55-51-48	58-53-48	59-53-49	60-55-51
Dimensions (HxWxD)	mm	256 × 840 × 840	256 × 840 × 840	319 × 840 × 840	319 × 840 × 840	319 × 840 × 840	319 × 840 × 840
Weight	kg	20	20	24	24	24	24
Panel dimensions (HxWxD)	mm	30 × 950 × 950	30 × 950 × 950	30 × 950 × 950	30 × 950 × 950	30 × 950 × 950	30 × 950 × 950
Panel weight	kg	4.2	4.2	4.2	4.2	4.2	4.2

C: cooling mode
H: heating mode

HM_MUT COMPACT 4-WAY CASSETTE



The compact 4 way cassette has been especially designed for small commercial application where a compact efficient unit is needed.

Design

- Elegant and Flat appearance
- Fit within the T-bar of grid ceiling : 620mm X 620mm.

Comfort

- Individual setting of louver position: 3 different swing mode: standard, diagonally, opposite, turn around.
- 5 steps air flow.

Easy to install

- Compact and thin chassis with only 256mm height
- Built-in high-lift drain pump
- Light-weight unit, for easy and quick installation.

SCOP MAX



4.70
A++

CAPACITY



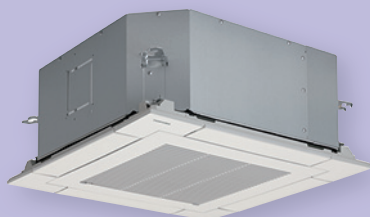
2.5kW > 6kW

OPERATION



-27°C > +52°C

Occupancy sensor switches off automatically the unit if nobody is in the room to save energy.



INDOOR UNITS

RAV-HM301MUT-E
RAV-HM401MUT-E
RAV-HM561MUT-E/TR

SDI



OUTDOOR UNITS

RAV-GP561ATW-E/TR

DI



RAV-GM301ATP-E
RAV-GM401ATP-E
RAV-GM561ATP-E/TR



REMOTE CONTROLS

RBC-AXU31UM-E
RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

COMPACT 4-WAY CASSETTE

COMPACT 4-WAY CASSETTE Performance data with Super Digital Inverter Series 1

Outdoor unit		RAV-GP561ATW-E/TR	
Indoor unit (600X600 Cassette)		RAV-HM561MUT-E/TR	
Cooling capacity	kW	5.0	
Cooling range (min. - max.)	kW	1.2 - 5.6	
Power input (min. - rated - max.)	kW C	0.19 - 1.56 - 1.97	
EER		3.21	
SEER		6.27	
Energy efficiency class	C	A++	
Seasonal electricity consumption	kWh/a C	279	
Heating capacity	kW	5.6	
Heating range (min. - max.)	kW	0.9 - 7.0	
Power input (min. - rated - max.)	kW H	0.16 - 1.60 - 2.36	
COP	W/W	3.50	
SCOP		4.32	
Energy efficiency class	H	A+	
Seasonal electricity consumption	kWh/a H	1231	

COMPACT 4-WAY CASSETTE Performance data with Digital Inverter Series 1

Outdoor unit		RAV-GM301ATP-E	RAV-GM401ATP-E	RAV-GM561ATP-E/TR
Indoor unit (600X600 Cassette)		RAV-HM301MUT-E	RAV-HM401MUT-E	RAV-HM561MUT-E/TR
Cooling capacity	kW	2.5	3.6	5.0
Cooling range (min. - max.)	kW	0.9 - 3.0	0.9 - 4.0	1.5 - 5.6
Power input (min. - rated - max.)	kW C	0.25 - 0.59 - 0.82	0.18 - 0.90 - 2.00	0.30 - 1.64 - 1.86
EER		4.24	4.00	3.05
SEER		5.94	5.76	5.69
Energy efficiency class	C	A+	A+	A+
Seasonal electricity consumption	kWh/a C	147	219	307
Heating capacity	kW	3.4	4.0	5.3
Heating range (min. - max.)	kW	0.8 - 4.5	0.8 - 5.0	1.5 - 6.3
Power input (min. - rated - max.)	kW H	0.17 - 0.76 - 1.40	0.14 - 0.95 - 1.70	0.30 - 1.47 - 2.40
COP	W/W	4.47	4.21	3.61
SCOP		4.70	4.44	4.37
Energy efficiency class	H	A++	A+	A+
Seasonal electricity consumption	kWh/a H	685	851	897

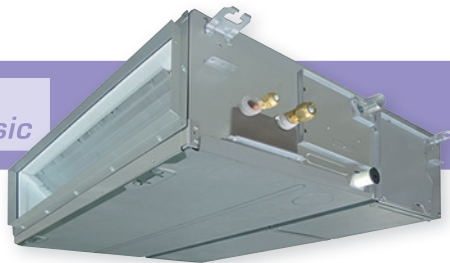
COMPACT 4-WAY CASSETTE Physical data indoor

Indoor unit		RAV-HM301MUT-E	RAV-HM401MUT-E	RAV-HM561MUT-E/TR
Air flow (H/L)	m³/h - l/s	640/440 - 177/122	660/468 - 183/130	798/546 - 221/152
Sound pressure level (H-M-L)	dB(A)	38 - 36 - 30	41 - 36 - 32	44 - 39 - 35
Sound power level (H-M-L)	dB(A)	53 - 51 - 45	56 - 51 - 47	59 - 54 - 50
Dimensions (HxWxD)	mm	256 x 575 x 575	256 x 575 x 575	256 x 575 x 575
Weight	kg	15	15	15
Panel dimensions (HxWxD)	mm	12 x 620 x 620	12 x 620 x 620	12 x 620 x 620
Panel weight	kg	2.5	2.5	2.5

C: cooling mode
H: heating mode
H-M-L: High - Medium - Low speed

HM_BTP STANDARD DUCT

Compatible with
Digital Inverter Classic



Whatever the shape of the room, this flexible model ensures a uniform temperature and air distribution for optimal end user comfort.

Adaptability

- Up to 150Pa available pressure: thanks to DC fan motor.
- Flexible design, allows the inlet air configuration to be configured between the standard rear inlet design or as an alternative, from the underside of the unit. There is also a provision for a fresh air intake supply via a pre-punched knockout hole.
- Compact and thin chassis, measuring just 275mm in height.

Easy to install

- Built-in high-lift drain pump.
- PC board panel easily accessible from the side of the unit.
- Optional air discharge spigot.

SCOP MAX



4.85
A++

CAPACITY



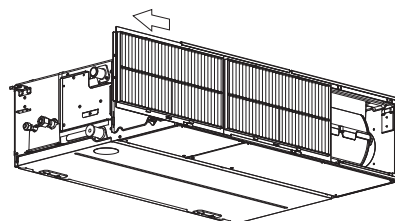
5kW > 16kW

OPERATION



-27°C > +52°C

Simplify filter maintenance with live status to know exactly when they need to be cleaned!



INDOOR UNITS

RAV-HM561BTP-E/TR
RAV-HM801BTP-E/TR
RAV-HM901BTP-E/TR
RAV-HM1101BTP-E/TR
RAV-HM1401BTP-E/TR
RAV-HM1601BTP-E/TR

SDI



OUTDOOR UNITS

RAV-GP561ATW-E/TR
RAV-GP801ATW-E/TR
RAV-GP1101AT(8)-E/TR
RAV-GP1401AT(8)-E(1)/TR(1)
RAV-GP1601AT8-E/TR

DI



RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM901ATP-E/TR
RAV-GM1101AT(8)PE/TR
RAV-GM1401AT(8)P-E/TR
RAV-GM1601AT(8)P-E/TR

Dlc



RAV-GV801ATP-E/TR
RAV-GV1101AT(8)P-E/TR
RAV-GV1401AT(8)P-E/TR
RAV-GV1601AT(8)P-E/TR



REMOTE CONTROLS

RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

STANDARD DUCT

STANDARD DUCT

Performance data with Super Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-	GP561ATW-E	GP801ATW-E	GP1101AT-E	GP1401AT-E1	GP1101AT8-E	GP1401AT8-E	GP1601AT8-E
Indoor unit (Standard Duct)	RAV-	HM561BTP-E	HM801BTP-E	HM1101BTP-E	HM1401BTP-E	HM1101BTP-E	HM1401BTP-E	HM1601BTP-E
Cooling capacity	kW	5.0	7.1	10.0	10.0	12.5	12.5	14.0
Cooling range (min. - max.)	kW	1.2 - 5.6	1.9 - 8.0	3.1 - 12.0	2.6 - 12.0	3.1 - 14.0	2.6 - 14.0	2.6 - 16.0
Power input (min. - rated - max.)	kW	C	0.19 - 1.52 - 1.99	0.26 - 1.63 - 3.20	0.65 - 2.40 - 3.63	0.66 - 2.58 - 4.01	0.65 - 3.57 - 3.97	0.66 - 3.81 - 4.89
EER			3.29	4.36	4.17	3.88	3.50	3.28
SEER			5.81	7.86	7.19	6.10	6.77	6.03
Energy efficiency class	C	A+	A++	A++	A+	-	-	-
Seasonal electricity consumption	kWh/a	C	301	316	486	574	1107	1444
Heating capacity	kW	5.6	8.0	11.2	11.2	14.0	14.0	16
Heating range (min. - max.)	kW	0.9-7.4	1.3 - 11.3	2.6 - 13.0	2.4 - 15.6	2.6 - 16.5	2.4 - 18.0	2.4 - 19.0
Power input (min. - rated - max.)	kW	H	0.16 - 1.61 - 2.76	0.20 - 1.85 - 3.55	0.47 - 2.73 - 3.38	0.53 - 2.76 - 4.42	0.47 - 3.63 - 4.43	0.53 - 3.66 - 5.71
COP	W/W		3.48	4.32	4.10	4.06	3.86	3.50
SCOP			4.27	4.85	4.30	4.19	4.29	3.99
Energy efficiency class	H	A+	A++	A+	A+	-	-	-
Seasonal electricity consumption	kWh/a	H	1245	1472	2997	3606	3133	4143

STANDARD DUCT

Performance data with Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-	GM561ATP-E	GM801ATP-E	GM901ATP-E	GM1101AT(8)P-E	GM1401AT(8)P-E	GM1601AT(8)P-E
Indoor unit (Standard Duct)	RAV-	HM561BTP-E	HM801BTP-E	GM901BTP-E	HM1101BTP-E	HM1401BTP-E	HM1601BTP-E
Cooling capacity	kW	5.0	6.7	8.0	9.5	12.1	14.0
Cooling range (min. - max.)	kW	1.5 - 5.6	1.5 - 8.0	1.9 - 8.8	3.0 - 11.2	3.0 - 13.2	3.0 - 16.0
Power input (min. - rated - max.)	kW	C	0.31 - 1.83 - 2.05	0.31 - 2.38 - 2.76	2.67	0.60 - 2.99 - 4.50	0.60 - 4.42 - 4.71
EER			2.73	2.82	3.00	3.18	2.74
SEER			5.28	5.20	6.10	5.28	5.36
Energy efficiency class	C	A	A	A++	A	-	-
Seasonal electricity consumption	kWh/a	C	332	451	459	629	-
Heating capacity	kW	5.3	7.7	9.0	11.2	13.0	16.0
Heating range (min. - max.)	kW	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13.0	3.0 - 16.0	3.0 - 18.0
Power input (min. - rated - max.)	kW	H	0.31 - 1.62 - 2.47	0.31 - 2.32 - 3.18	2.65	0.60 - 2.99 - 4.00	0.60 - 3.60 - 4.55
COP	W/W		3.27	3.32	3.40	3.75	3.61
SCOP			4.08	4.13	4.60	4.19	4.19
Energy efficiency class	H	A+	A+	A++	A+	-	-
Seasonal electricity consumption	kWh/a	H	960	1728	1917	2537	-

STANDARD DUCT

Performance data with Digital Inverter Classic Series 1 1Ph & 3Ph

PRELIMINARY DATA

Outdoor unit	RAV-	GV801ATP-E	GV1101ATP-E	GV1101AT8P-E	GV1401ATP-E	GV1401AT8P-E	GV1601AT(8)P-E
Indoor unit (Standard Duct)	RAV-	HM801BTP-E	HM1101BTP-E	HM1101BTP-E	HM1401BTP-E	HM1401BTP-E	HM1601BTP-E
Cooling capacity	kW	6.7	9.5	9.5	11.5	12.1	13.0
Cooling range (min. - max.)	kW	1.5 - 8.0	3.0 - 11.2	3.0 - 11.2	3.0 - 12.0	3.0 - 14.0	3.0 - 14.0
Power input (min. - rated - max.)	kW	C	2.30	3.20	3.10	4.70	4.90
EER			2.91	3.0	3.06	2.45	2.47
SEER			5.1	5.1	5.3	5.1	5.1
Energy efficiency class	C	A	A	A	-	-	-
Seasonal electricity consumption	kWh/a	C					
Heating capacity	kW	7.0	10.0	10.0	12.1	12.3	13.5
Heating range (min. - max.)	kW	1.5 - 9.0	3.0 - 13.0	3.0 - 13.0	3.0 - 16.0	3.0 - 16.0	3.0 - 18.0
Power input (min. - rated - max.)	kW	H	2.30	3.00	2.95	4.00	4.10
COP	W/W		3.0	3.3	3.4	3.03	3.00
SCOP			4.0	3.8	3.8	3.8	4.2
Energy efficiency class	H	A+	A	A	-	-	-
Seasonal electricity consumption	kWh/a	H					

STANDARD DUCT

Physical data indoor

Indoor unit	RAV-	HM561BTP-E	HM801BTP-E	GM901BTP-E	HM1101BTP-E	HM1401BTP-E	HM1601BTP-E
Air flow (H/L)	m³/h - l/s	800/480 - 222/133	1200/720 - 333/200	1700/1000 - 472/278	2100/1260 - 583/350	2100/1260 - 583/350	2100/1260 - 583/350
Sound pressure level (H-M-L)*	dB(A)	33-29-25	34-30-26	37-33-30	40-36-33	40-36-33	40-36-33
Sound power level (H-M-L)*	dB(A)	48-44-40	49-45-41	52-48-45	55-51-48	55-51-48	55-51-48
Dimensions (HxWxD)	mm	275 x 700 x 750	275 x 1000 x 750	275 x 1400 x 750	275 x 1400 x 750	275 x 1400 x 750	275 x 1400 x 750
Weight	kg	23	30	40	40	40	40
External static pressure (stand/upper limit)	Pa	30/150	30/150	40/150	40/150	50/150	50/150

C = cooling mode

H = heating mode

*bottom air inlet

RM_SDT SLIM DUCT



Whether installed in a ceiling void or in a false ceiling, Toshiba's slim duct offers the ultimate technology, with exceptional energy savings, high performance and easy installation.

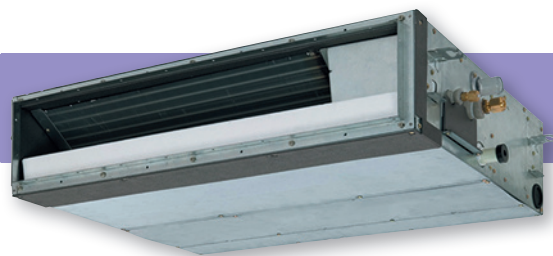
Adaptability

- Up to 50Pa available pressure with four steps set up.
- Easy to combine with different types of air diffusers.
- Flexible design, allows the inlet air configuration to be configured between the standard rear inlet design or as an alternative, from the underside of the unit.

There is also a provision for a fresh air intake supply via a pre-punched knockout hole.

Easy to install

- Slimline design, with a height of just 21cm and a weight of 22kg, gives increased flexibility when designing and installing the system.
- Natural drain discharge or built-in drain pump to manage condensates.



SCOP MAX


4.6
A++

CAPACITY



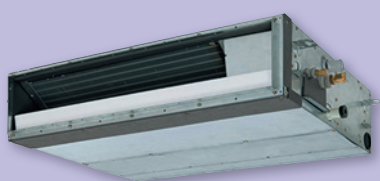
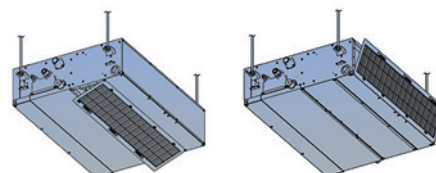
2.5kW > 6kW

OPERATION



-27°C > +52°C

Cleaned prefilter included
compatible with rear or underside
air suction.


INDOOR UNITS

RAV-RM301SDT-E
RAV-RM401SDT-E
RAV-RM561SDT-E

SDI


OUTDOOR UNITS

RAV-GP561ATW-E/TR

DI



RAV-GM301ATP-E
RAV-GM401ATP-E
RAV-GM561ATP-E


REMOTE CONTROLS

RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

SLIM DUCT

SLIM DUCT Performance data with Super Digital Inverter Series 1

Outdoor unit		RAV-GP561ATW-E	
Indoor unit (Slim duct)		RAV-RM561SDT-E	
Cooling capacity	kW	5.0	
Cooling range (min. - max.)	kW	1.2 - 5.6	
Power input (min. - rated - max.)	kW C	0.19 - 1.56 - 1.98	
EER		3.21	
SEER		5.77	
Energy efficiency class	C	A+	
Seasonal electricity consumption	kWh/a C	303	
Heating capacity	kW	5.6	
Heating range (min. - max.)	kW	0.9 - 7.0	
Power input (min. - rated - max.)	kW H	0.16 - 1.58 - 2.66	
COP	W/W	3.54	
SCOP		4.20	
Energy efficiency class	H	A+	
Seasonal electricity consumption	kWh/a H	1266	

SLIM DUCT Performance data with Digital Inverter Series 1

Outdoor unit		RAV-GM301ATP-E		RAV-GM401ATP-E		RAV-GM561ATP-E	
Indoor unit (Slim duct)		RAV- RM301SDT-E		RAV- RM401SDT-E		RAV-RM561SDT-E	
Cooling capacity	kW	2.5		3.6		5.0	
Cooling range (min. - max.)	kW	0.9 - 3.0		0.9 - 4.0		1.5 - 5.6	
Power input (min. - rated - max.)	kW C	0.25 - 0.56 - 0.82		0.18 - 0.93 - 2.00		0.32 - 1.91 - 2.75	
EER		4.46		3.87		2.62	
SEER		6.29		5.86		5.14	
Energy efficiency class	C	A++		A+		A	
Seasonal electricity consumption	kWh/a C	129		215		340	
Heating capacity	kW	3.4		4.0		5.3	
Heating range (min. - max.)	kW	0.8 - 4.5		0.8 - 5.0		1.5 - 6.3	
Power input (min. - rated - max.)	kW H	0.17 - 0.86 - 1.40		0.14 - 0.97 - 1.70		0.32 - 1.50 - 2.40	
COP	W/W	3.95		4.12		3.53	
SCOP		4.60		4.01		4.16	
Energy efficiency class	H	A++		A+		A+	
Seasonal electricity consumption	kWh/a H	907		1337		1517	

SLIM DUCT Physical data indoor

Indoor unit		RAV- RM301SDT-E		RAV- RM401SDT-E		RAV-RM561SDT-E	
Air flow (H/L)	m³/h - l/s	660/480 - 183/133		690/522 - 192/145		780/582 - 217/162	
Sound pressure level (H-M-L)*	dB(A)	39-36-33		39-36-33		45-40-36	
Sound power level (H-M-L)*	dB(A)	52-48-44		52-48-44		55-53-48	
Dimensions (HxWxD)	mm	210 x 845 x 645		210 x 845 x 645		210 x 845 x 645	
Weight	kg	22		22		22	
External static pressure (stand/upper limit)	Pa	30(45-5)		30(45-5)		30(45-5)	

C: cooling mode
H: heating mode
*bottom air inlet

> RM_DTP HIGH STATIC DUCT



Toshiba's high static pressure ducts are specially designed to air-condition large open spaces thanks to their impressive air flow characteristics.

Comfort

- 3-speed DC fan to provide correct air flow and maximise energy savings.
- Compatible with metal or textile ducts.

Adaptability

- Lightweight design for quick and easy installation.
- With 7-step settings, the static pressure of the duct can range from 52 to 250 Pa.
- Up to 5,600 m³/h air flow to efficiently blow the air into large rooms.

Easy to install

- Electronic components accessible from the outside of the unit.
- Air filter and drain pump are available as an option.



SCOP MAX



3.78

CAPACITY



19kW > 27kW

OPERATION



-27°C > +46°C

The DTP high static pressure duct is compatible with textile duct diffusion system to blow the air smoothly throughout the room.



INDOOR UNITS

RAV-RM2241DTP-E2/TR2
RAV-RM2801DTP-E2/TR2



OUTDOOR UNITS

RAV-GM2241AT8-E1/TR1
RAV-GM2801AT8-E1/TR1



REMOTE CONTROLS

RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31E
RBC-ASCU11-E

HIGH STATIC DUCT

HIGH STATIC DUCT - SERIES 1 Performance data with Big DI Inverter Series 4

Outdoor unit		RAV-GM2241AT8-E1/TR1		RAV-GM2801AT8-E1/TR1	
Indoor unit (High Static duct)		RAV-RM2241DTP-E2/TR2		RAV-RM2801DTP-E2/TR2	
Cooling capacity	kW	19.0		22.5	
Cooling range (min. - max.)	kW	4.6 - 22.4		4.6 - 27.0	
Power input (min. - rated - max.)	kW	C	1.27 - 5.35 - 9.05		1.27 - 6.76 - 11.87
EER	W/W	3.24		2.82	
SEER		5.82		5.49	
Energy efficiency class		C	-		-
Seasonal electricity consumption	kWh/a	C	2468		2928
Heating capacity	kW	22.4		27.0	
Heating range (min. - max.)	kW	4.6 - 25.0		4.6 - 31.5	
Power input (min. - rated - max.)	kW	H	1.27 - 5.71 - 10.15		1.27 - 7.52 - 13.83
COP	W/W	3.92		3.59	
SCOP		3.78		3.69	
Energy efficiency class		H	-		-
Seasonal electricity consumption	kWh/a	H	7174		8136

HIGH STATIC DUCT - SERIES 1 Physical data indoor

Indoor unit		RAV-RM2241DTP-E2/TR2		RAV-RM2801DTP-E2/TR2	
Air flow	m³/h - l/s	3800 - 1055		4800 - 1333	
Sound pressure level (back)	dB(A)	44		46	
Sound power level (back)	dB(A)	79		81	
Dimensions (HxWxD)	mm	448 x 1400 x 900		448 x 1400 x 900	
Weight	kg	97		97	
Upper limit/middle/standard	Pa	250/150/50		250/150/50	

C: cooling mode
H: heating mode

HM_CTP CEILING



The simple, yet elegant design helps to create a pleasant and relaxing environment, quickly conditioning the room air to the desired temperature.

Comfort

- Automatic louvre control for all year round comfort and efficiency.
- Low noise levels, thanks to high diameter fan and DC motor.

Reliability

- Self-cleaning function, enables the air flow to remain constant and fresh and reduces the frequency of service visits.

Easy to install and to maintain

- This design, represents the best possible solution, where there is a lack of space or absence of a ceiling void.

Adaptability

- Anti-bacterial drain point available as an option.
- Connecting kit available as an option for external I/O without local relay preparation.



SCOP MAX



5.05

CAPACITY



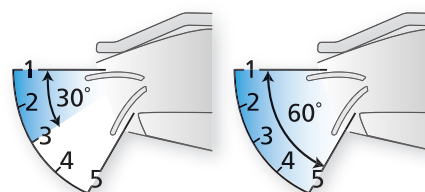
3.6kW > 16kW

OPERATION



-27°C > +52°C

The airflow angle is automatically set to the most suitable setting according to the cooling or heating needs.



INDOOR UNITS

RAV-HM401CTP-E
RAV-HM561CTP-E/TR
RAV-HM801CTP-E/TR
RAV-HM901CTP-E
RAV-HM1101CTP-E/TR
RAV-HM1401CTP-E/TR
RAV-HM1601CTP-E/HR

SDI



OUTDOOR UNITS

RAV-GP516ATW-E/TR
RAV-GP801ATW-E/TR
RAV-GP1101AT(8)-E/TR
RAV-GP1401AT(8)-E(1)/TR(1)
RAV-GP1601AT8-E/TR

DI



RAV-GM401ATP-E
RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM901ATP-E
RAV-GM1101AT(8)P-E/TR
RAV-GM1401AT(8)P-E/TR
RAV-GM1601AT(8)P-E/TR



REMOTE CONTROLS

RBC-AXU31C-E
RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

CEILING

CEILING Performance data with Super Digital Inverter Series 1 1Ph

PRELIMINARY

Outdoor unit	RAV-		GP561ATW-E	GP801ATW-E	GP1101AT-E	GP1401AT-E1
Indoor unit (Ceiling)	RAV-		HM561CTP-E	HM801CTP-E	HM1101CTP-E	HM1401CTP-E
Cooling capacity	kW		5.0	7.1	10.0	12.5
Cooling range (min. - max.)	kW		1.2-5.6	1.9 - 8.0	3.1 - 12.0	3.1 - 14.0
Power input	kW	C	0.19 - 1.37 - 1.98	0.26 - 1.60 - 3.17	0.55 - 2.23 - 3.45	0.55 - 3.58 - 3.97
EER			3.65	4.44	4.48	3.49
SEER			6.93	8.35	8.58	7.99
Energy efficiency class		C	A++	A++	A+++	-
Seasonal electricity consumption	kWh/a	C	253	298	408	939
Heating capacity	kW		5.6	8.0	11.2	14.0
Heating range (min. - max.)	kW		0.9-7.4	1.3 - 11.3	2.6 - 13.0	2.6 - 16.5
Power input (min. - rated - max.)	kW	H	0.16 - 1.39 - 2.67	0.20 - 1.80 - 3.50	0.41 - 2.38 - 3.09	0.41 - 3.59 - 4.40
COP	W/W		4.03	4.44	4.71	3.90
SCOP			4.73	5.10	4.75	4.74
Energy efficiency class		H	A++	A++	A++	-
Seasonal electricity consumption	kWh/a	H	1125	1401	2712	2838

CEILING Performance data with Super Digital Inverter Series 1 3Ph

Outdoor unit	RAV-		GP1101AT8-E	GP1401AT8-E	GP1601AT8-E
Indoor unit (Ceiling)	RAV-		HM1101CTP-E	HM1401CTP-E	HM1601CTP-E
Cooling capacity	kW		10.0	12.5	14.0
Cooling range (min. - max.)	kW		2.6 - 12.0	2.6 - 14.0	2.6 - 16.0
Power input	kW	C	0.66 - 2.56 - 3.81	0.66 - 3.68 - 4.85	0.66 - 4.60 - 6.33
EER			3.91	3.40	3.04
SEER			6.80	6.60	6.24
Energy efficiency class		C	A++	-	-
Seasonal electricity consumption	kWh/a	C	515	1137	1347
Heating capacity	kW		11.2	14.0	16.0
Heating range (min. - max.)	kW		2.4 - 14.0	2.4 - 18.0	2.4 - 19.0
Power input (min. - rated - max.)	kW	H	0.53 - 2.51 - 4.26	0.53 - 3.48 - 5.95	0.53 - 4.30 - 6.96
COP	W/W		4.46	4.02	3.72
SCOP			4.23	4.22	4.21
Energy efficiency class		H	A+	-	-
Seasonal electricity consumption	kWh/a	H	3842	3916	3988

CEILING Performance data with Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-		GM401ATP-E	GM561ATP-E	GM801ATP-E	GM901ATP-E	GM1101ATP-E	GM1401AT8P-E	GM1601ATP-E
Indoor unit (Ceiling)	RAV-		HM401CTP-E	HM561CTP-E	HM801CTP-E	GM901CTP-E	HM1101CTP-E	HM1401CTP-E	HM1601CTP-E
Cooling capacity	kW		3.6	5.0	6.9	8.0	9.5	12.1	14.0
Cooling range (min. - max.)	kW		0.9 - 4.0	1.5 - 5.6	1.5 - 7.4	1.9 - 8.8	3.0 - 11.2	3.0 - 13.2	3.0 - 16.0
Power input	kW	C	0.18 - 0.83 - 2.00	0.29 - 1.61 - 1.95	0.29 - 2.38 - 2.76	2.58	0.60 - 2.95 - 4.10	0.60 - 4.42 - 4.71	4.65
EER			4.34	3.11	2.90	3.10	3.22	2.74	3.01
SEER			6.34	5.50	5.62	6.10	5.86	5.36	5.9
Energy efficiency class		C	A++	A	A+	A++	A+	-	-
Seasonal electricity consumption	kWh/a	C	199	318	429	459	567	-	1423
Heating capacity	kW		4.0	5.3	7.7	9.0	11.2	13.0	16.0
Heating range (min. - max.)	kW		0.8 - 5.0	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13.0	3.0 - 16.0	3.0 - 18.0
Power input (min. - rated - max.)	kW	H	0.14 - 0.78 - 1.70	0.29 - 1.36 - 2.40	0.29 - 2.13 - 3.20	2.65	0.60 - 2.94 - 4.10	0.60 - 3.48 - 4.60	4.69
COP			5.13	3.90	3.62	3.40	3.81	3.73	3.9
SCOP			5.1	4.32	4.21	4.60	4.27	4.19	4.35
Energy efficiency class		H	A+++	A+	A+	A++	A+	-	-
Seasonal electricity consumption	kWh/a	H	741	908	1697	1917	2490	-	2732

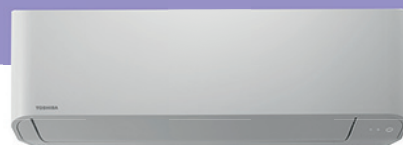
CEILING Physical data indoor

Indoor unit	RAV-		HM401CTP-E	HM561CTP-E	HM801CTP-E	GM901CTP-E	HM1101CTP-E	HM1401CTP-E	HM1601CTP-E
Air flow (H/L)	m³/h - l/s		900/540 - 250/150	900/540 - 250/150	1410/750 - 392/208	1600/900 - 444/250	1860/1020 - 517/283	2040/1200 - 567/333	2040/1260 - 567/350
Sound pressure level (H-M-L)	dB(A)		37-35-28	37-35-28	41-36-29	42-38-30	44-38-32	46-41-35	46-42-36
Sound power level (H)	dB(A)		52-50-43	52-50-43	56-51-44	57-53-45	59-53-47	61-56-50	61-57-51
Dimensions (HxWxD)	mm		235 x 950 x 690	235 x 950 x 690	235 x 1270 x 690	235 x 1586 x 690	235 x 1586 x 690	235 x 1586 x 690	235 x 1586 x 690
Weight	kg		23	23	29	37	37	37	37

C = cooling mode
H = heating mode
H-M-L = High - Medium - Low speed

HM_KRTP HIGH-WALL

Compatible with
Digital Inverter Classic



Compact, quiet with an attractive design, this high-wall is suitable for every kind of project in new construction or refurbishment.

Comfort

- Auto louver mode allows optimum and uniform air distribution.

Control

- Wireless remote control with pre-set functions accessible with dedicated buttons: hi-power mode, quiet mode, comfort sleep, eco-mode.

Healthy

- Self-cleaning feature to prevent mould formation on the heat exchanger coils.

SCOP MAX



4.42
A+

CAPACITY



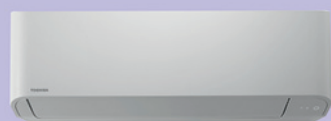
2.5kW > 11.2kW

OPERATION



-20°C > +52°C

Comfort sleep function adjusts automatically the room temperature and the fan speed.



INDOOR UNITS

RAV-HM301KRTP-E
RAV-HM401KRTP-E
RAV-HM561KRTP-E/TR
RAV-HM801KRTP-E/TR
RAV-HM901KRTP-E
RAV-HM1101KRTP-E/TR

SDI



OUTDOOR UNITS

RAV-GP561ATW-E/TR
RAV-GP801AT-E/TR
RAV-GP1101AT(8)-E/TR

DI



RAV-GM301ATP-E
RAV-GM401ATP-E
RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM901ATP-E
RAV-GM1101AT(8)P-E/TR

Dlc



RAV-GV561ATP-E/TR
RAV-GV801ATP-E/TR
RAV-GV1101AT(8)P-E/TR



REMOTE CONTROLS

IR included



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

HIGH-WALL

HIGH-WALL Performance data with Super Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-	GP561ATW-E/TR	GP801ATW-E/TR	GP1101ATP-E/TR	GP1101AT8-E/TR
Indoor unit (High-wall)	RAV-	HM561KRTP-E/TR	HM801KRTP-E/TR	GM1101KRTP-E/TR	GM1101KRTP-E/TR
Cooling capacity	kW	5.0	7.1	10.0	10.0
Cooling range (min. - max.)	kW	1.2 - 5.6	1.9 - 8.0	3.1 - 12.0	2.6 - 12.0
Power input	kW C	0.19 - 1.43 - 1.98	0.26 - 2.06 - 3.17	0.55-2.77-3.90	2.86
EER		3.50	3.45	3.61	3.50
SEER		7.84	7.56	7.36	6.53
Energy efficiency class	C	A++	A++	A++	A++
Seasonal electricity consumption	kWh/a C	223	329	475	536
Heating capacity	kW	5.6	8.0	11.2	11.2
Heating range (min. - max.)	kW	0.9 - 7.3	1.3 - 11.3	2.6 - 13.0	2.4 - 13.0
Power input (min. - rated - max.)	kW H	0.16 - 1.39 - 2.67	0.20 - 2.25 - 3.50	0.52 - 3.13 - 4.40	3.25
COP	W/W	4.03	3.56	3.58	3.45
SCOP		4.19	4.16	4.42	4.22
Energy efficiency class	H	A+	A+	A+	A+
Seasonal electricity consumption	kWh/a H	1268	1717	2911	3591

HIGH-WALL Performance data with Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit	RAV-	GM301ATP-E/TR	GM401ATP-E/TR	GM561ATP-E/TR	GM801ATP-E/TR	GM901ATP-E/TR	GM1101AT(8)P-E/TR
Indoor unit (High-wall)	RAV-	HM301KRTP-E/TR	HM401KRTP-E/TR	HM561KRTP-E/TR	HM801KRTP-E/TR	HM901KRTP-E/TR	HM1101KRTP-E/TR
Cooling capacity	kW	2.5	3.6	5.0	6.7	8.0	9.5
Cooling range (min. - max.)	kW	0.9 - 3.0	0.9 - 4.0	1.5 - 5.6	1.5 - 8.0	1.9 - 8.8	3.0 - 11.2
Power input	kW C	0.25 - 0.61 - 0.82	0.18 - 1.13 - 2.00	0.30 - 1.66 - 1.86	0.31 - 2.44 - 2.85	2.67	0.60 - 2.97 - 4.30
EER		4.10	3.19	3.01	2.75	3.00	3.20
SEER		6.36	6.12	6.19	5.73	6.10	6.10
Energy efficiency class	C	A++	A++	A++	A+	A++	A++
Seasonal electricity consumption	kWh/a C	138	206	383	409	459	545
Heating capacity	kW	3.4	4.0	5.3	7.7	9.0	11.2
Heating range (min. - max.)	kW	0.8 - 4.5	0.8 - 5.0	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13.0
Power input (min. - rated - max.)	kW H	0.17 - 0.85 - 1.40	0.14 - 1.12 - 1.70	0.30 - 1.55 - 2.40	0.31 - 2.61 - 3.30	2.9	0.60 - 3.47 - 4.70
COP	W/W	4.00	3.57	3.42	2.95	3.10	3.23
SCOP		4.10	4.22	4.00	4.01	4.10	4.20
Energy efficiency class	H	A+	A+	A+	A+	A+	A+
Seasonal electricity consumption	kWh/a H	887	895	980	1780	2151	2665

HIGH-WALL Performance data with Digital Inverter Classic Series 1 1Ph & 3Ph

PRELIMINARY DATA

Outdoor unit	RAV-	GV561ATP-E/TR	GV801ATP-E/TR	GV1101ATP-E/TR	GV1101AT8P-E/TR
Indoor unit (High-wall)	RAV-	HM561KRTP-E/TR	HM801KRTP-E/TR	HM1101KRTP-E/TR	HM1101KRTP-E/TR
Cooling capacity	kW	5.0	6.7	9.5	9.5
Cooling range (min. - max.)	kW	1.5 - 5.6	1.5 - 8.0	3.0 - 10.6	3.0 - 11.2
Power input	kW C	1.45	2.20	3.80	3.40
EER		3.45	3.05	2.50	2.79
SEER		6.20	5.75	6.00	6.10
Energy efficiency class	C	A++	A+	A+	A++
Seasonal electricity consumption	kWh/a C				
Heating capacity	kW	5.3	7.0	10.0	10.0
Heating range (min. - max.)	kW	1.5-6.3	1.5-9.0	3.0-13.0	3.0-13.0
Power input (min. - rated - max.)	kW H	1.50	2.20	3.30	3.20
COP	W/W	3.53	3.18	3.03	3.13
SCOP		3.90	3.90	4.00	4.10
Energy efficiency class	H	A	A	A+	A+
Seasonal electricity consumption	kWh/a H				

HIGH-WALL Physical data indoor

Indoor unit	RAV-	HM301KRTP-E/TR	HM401KRTP-E/TR	HM561KRTP-E/TR	HM801KRTP-E/TR	HM901KRTP-E/TR	HM1101KRTP-E/TR
Air flow (H/L)	m³/h - l/s C	670/450 - 186/125	700/450 - 229/125	960/680 - 266/189	1040/910 - 289/189	1180/ 680 - 328/189	1610/1180 - 447/328
Sound pressure level (H-M-L)	dB(A) C	40-34-29	41-36-30	42-39-35	45-41-35	47-41-35	49-45-41
Sound power level (H-M-L)	dB(A) C	55-49-44	56-51-45	57-54-50	60-56-50	62-56-50	64-60-56
Dimensions (HxWxD)	mm	293 x 798 x 230	293 x 798 x 230	320 x 1050 x 250	320 x 1050 x 250	320 x 1050 x 250	348 x 1200 x 280
Weight	kg	10	10	14	14	14	19

C: cooling mode
H: heating mode

HM_FT FLOOR STANDING



Toshiba floor standing unit combines important air flow, wide air diffusion and simplified installation to cool and heat large rooms.

Wide adaptability

- Broad capacity lineup from 2 to 6HP.
- Connectable in monosplit or twin mode.

Comfort

- Wide air flow to cool and heat large areas.
- Horizontal and vertical louvers for optimum air distribution.

Easy to install

- Directly positioned on the floor to simplify installation.
- Plug and play product with embedded link detector.



SCOP MAX



4.40
A+

CAPACITY



5kW > 16kW

OPERATION



-27°C > +52°C

Embedded leak detector linked to safety ventilation to facilitate the integration of the product in every kind of projects.



INDOOR UNITS

RAV-HM561FT-E
RAV-HM801FT-E/TR
RAV-HM1101FT-E/TR

RAV-HM1401FT-E/TR
RAV-HM1601FT-E/TR

SDI



OUTDOOR UNITS

RAV-GP561ATW-E
RAV-GP801ATW-E/TR
RAV-GP1101AT(8)-E/TR
RAV-GP1401AT(8)-E/TR
RAV-GP1601AT8-E/TR

DI



RAV-GM561ATP-E/TR
RAV-GM801ATP-E/TR
RAV-GM1101AT(8)P-E/TR
RAV-GM1401AT(8)P-E/TR



EMBEDDED REMOTE CONTROLLER

RBC-AMSU51E-ES/EN
(sold separately)

FLOOR STANDING

FLOOR STANDING Performance data with Super Digital Inverter Series 1 1Ph

Outdoor unit			RAV-GP561ATW-E	RAV-GP801ATW-E	RAV-GP1101AT-E	RAV-GP1401AT-E1/TR1
Indoor unit (High-wall)			RAV-HM561FT-E	RAV-HM801FT-E	RAV-HM1101FT-E	RAV-HM1401FT-E
Cooling capacity	kW		5.0	7.1	10	12.3
Cooling range (min. - max.)	kW		1.2 - 5.6	1.9 - 8.0	3.1 - 12.0	3.1 - 14.0
Power input	kW	C	0.19 - 1.42 - 2.0	0.26 - 2.04 - 3.32	0.6 - 2.39 - 3.65	0.6 - 3.78 - 4.07
EER			3.51	3.48	4.18	3.25
SEER			5.87	6.43	6.99	6.49
Energy efficiency class		C	A+	A++	A++	-
Seasonal electricity consumption	kWh/a	C	298	386	500	1136
Heating capacity	kW		5.6	8.0	11.2	13.2
Heating range (min. - max.)	kW		0.9 - 7.0	1.3 - 11.3	2.6 - 13.0	2.6 - 16.5
Power input (min. - rated - max.)	kW	H	0.16 - 1.65 - 2.80	0.2 - 2.37 - 3.75	0.42 - 2.76 - 3.85	0.42 - 4.40 - 4.61
COP	W/W		3.39	3.38	4.06	3.00
SCOP			4.21	4.43	4.40	4.38
Energy efficiency class		H	A+	A+	A+	-
Seasonal electricity consumption	kWh/a	H	1262	1610	2922	3061

FLOOR STANDING Performance data with Super Digital Inverter Series 1 3Ph

Outdoor unit			RAV-GP1101AT-E	RAV-GP1101AT8-E	RAV-GP1601AT8-E
Indoor unit (High-wall)			RAV-HM1101FT-E	RAV-HM1101FT-E	RAV-HM1601FT-E
Cooling capacity	kW		10	10	14.0
Cooling range (min. - max.)	kW		3.1 - 12.0	2.6 - 12.0	2.6 - 16.0
Power input	kW	C	0.6 - 2.39 - 3.65	0.66 - 2.46 - 4.1	0.66 - 4.39 - 6.5
EER			4.18	4.07	3.19
SEER			6.99	6.14	5.88
Energy efficiency class		C	A++	A++	-
Seasonal electricity consumption	kWh/a	C	500	570	1428
Heating capacity	kW		11.2	11.2	16.0
Heating range (min. - max.)	kW		2.6 - 13.0	2.4 - 14.0	2.4 - 19.0
Power input (min. - rated - max.)	kW	H	0.42 - 2.76 - 3.85	0.53 - 2.77 - 4.8	0.53 - 4.83 - 6.96
COP	W/W		4.06	4.04	3.31
SCOP			4.40	4.02	3.98
Energy efficiency class		H	A+	A+	-
Seasonal electricity consumption	kWh/a	H	2922	3752	4212

FLOOR STANDING Performance data with Digital Inverter Series 1 1Ph & 3Ph

Outdoor unit			RAV-GM561ATP-E	RAV-GM801ATP-E	RAV-GM1101AT8P-E	RAV-GM1401ATP-E
Indoor unit (High-wall)			RAV-HM561FT-E	RAV-HM801FT-E	RAV-HM1101FT-E	RAV-HM1401FT-E
Cooling capacity	kW		5	6.7	9.5	12.1
Cooling range (min. - max.)	kW		1.5 - 5.6	1.5 - 7.4	3.0 - 11.2	3.0 - 13.2
Power input	kW	C	0.30 - 1.79 - 2.34	0.31 - 3.18 - 3.31	0.60 - 3.06 - 4.30	0.60 - 4.71 - 4.83
EER			2.79	2.11	3.10	2.57
SEER			5.15	4.89	5.16	4.86
Energy efficiency class		C	A	B	A	-
Seasonal electricity consumption	kWh/a	C	340	479	644	1492
Heating capacity	kW		5.3	7.7	11.2	13
Heating range (min. - max.)	kW		1.5 - 6.3	1.5 - 9.0	3.0 - 13.0	3.0 - 16.0
Power input (min. - rated - max.)	kW	H	0.30 - 1.72 - 2.47	0.31 - 3.20 - 3.45	0.60 - 3.19 - 4.50	0.60 - 4.01 - 4.80
COP	W/W		3.08	2.41	3.51	3.24
SCOP			4.00	3.81	3.92	3.9
Energy efficiency class		H	A+	A	A	-
Seasonal electricity consumption	kWh/a	H	980	1727	2711	2727

FLOOR STANDING Physical data indoor

Indoor unit			RAV-HM561FT-E	RAV-HM801FT-E	RAV-HM1101FT-E	RAV-HM1401FT-E	RAV-HM1601FT-E
Air flow (H/L)	m³/h - l/s	C	820/600 - 228/167	930/640 - 258/178	1660/1190 - 461/331	1760/1350 - 489/375	1760/1350 - 489/375
Sound pressure level (H-M-L)	dB(A)	C	46-42-38	50-45-41	51-46-41	53-48-45	53-48-45
Sound power level (H-M-L)	dB(A)	C	60-56-52	64-60-54	65-61-55	67-62-59	67-62-59
Dimensions (HxWxD)	mm		1750 x 600 x 210	1750 x 600 x 210	1750 x 600 x 390	1750 x 600 x 390	1750 x 600 x 390
Weight	kg		44	45	59	59	59

C: cooling mode
H: heating mode

RAV-DXC STANDARD DX KIT



Enables the connection of a third-party air handling unit (with DX coil) to Toshiba LC outdoor units.

Global

- Compatible with the majority of air handling units with a DX coil fitted inside (capacity ranges from 2.5 to 27kW).
- Can operate in both heating and cooling modes, depending on end user requirements.

Control

- Control achieved using a standard Toshiba remote controller.
- Algorithm based on air suction temperature.

Easy to install

- Capacity set by DN code adjustment during installation.
- Extended 5 meters sensor leads pre-fitted to improve installation time and flexibility.
- Relay isolated inputs to prevent accidental wiring errors, damaging the PCB.



MAX AIR FLOW



Up to **5000m³/h**

CAPACITY



2.5kW > 27kW

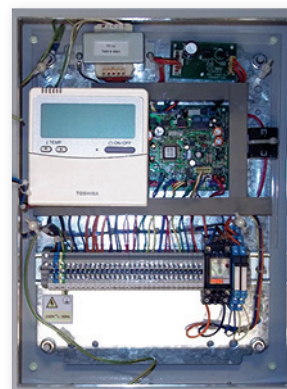
OPERATION



-27°C > +52°C

Input/output signal available:

- Operation output,
- AC fan motor output,
- Alarm output,
- External On/Off input,
- Safety-cut output.



INDOOR UNITS

RAV-DXC010

SDI



OUTDOOR UNITS

RAV-GP561ATP-E
RAV-GP801AT-E
RAV-GP1101AT(8)-E
RAV-GP1401AT(8)-E
RAV-GP1601AT8-E

DI



RAV-GM301ATP-E
RAV-GM401ATP-E
RAV-GM561ATP-E
RAV-GM801ATP-E
RAV-GM901ATP-E
RAV-GM1101AT(8)P-E
RAV-GM1401AT(8)P-E
RAV-GM1601AT(8)P-E

BIG DI



RAV-GM2241AT8-E
RAV-GM2801AT8-E



REMOTE CONTROLS

RBC-AMTU31-E

STANDARD DX KIT

STANDARD DX KIT Performances

DX Controller unit	RAV-	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010
Outdoor Unit		1 HP	1.5 HP	2 HP	3 HP	3.5HP	4 HP	5 HP	6 HP	8 HP	10 HP
Cooling Capacity RANGE	DI	RAV-GM301ATP-E	RAV-GM401ATP-E	RAV-GM561ATP-E	RAV-GM801ATP-E	RAV-GM901ATP-E	RAV-GM1101AT(8)P-E	RAV-GM1401AT(8)P-E	RAV-GM1601AT(8)P-E	RAV-GM2241AT8-E	RAV-GM2801AT8-E
	SDI			RAV-GP561ATP-E	RAV-GP801AT-E		RAV-GP1101AT(8)-E	RAV-GP1401AT(8)-E	RAV-GP1601AT8-E		
Cooling capacity (min-max) DI	kW	0.9 - 3.0	0.9 - 4.0	1.5 - 5.6	1.5 - 7.4	1.9 - 8.8	3.0 - 11.2	3.0 - 13.2	3.0 - 16.0	4.6 - 22.4	4.6 - 27.0
Cooling capacity (min-max) SDI	kW			1.2 - 5.6	1.9 - 8.0		3.1 - 12.0	3.1 - 14.0	2.6 - 16		
Heating capacity (min-max) DI	kW	0.8 - 4.5	0.8 - 5.0	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13	3.0 - 16.0	3.0 - 18.0	4.6 - 25.0	4.6 - 31.5
Heating capacity (min-max) SDI	kW			0.9 - 8.1	1.3 - 11.3		2.6 - 13	2.6 - 16.5	2.4 - 19		
Standard air volume	m³/h	570	610	900	1320	1510	1600	2100	2620	3600	4200
Coil Internal Volume (min-max)	dm³	0.5 - 0.7	0.5 - 0.7	0.8 - 1.1	1.0 - 1.4	1.3 - 1.8	1.5 - 2.1	1.7 - 2.7	2.0 - 3.2	3.0 - 4.2	3.6 - 5.4

STANDARD DX KIT Physical Data

DX Controller unit	RAV-	DXC010
Dimensions (HxWxD)	mm	400 x 300 x 150
Weight	kg	8
Operating range - Cooling coil "Air on" temp	°C	15°CWB+24°CWB
Operating range - Heating coil "Air on" temp	°C	5°CDB+28°CDB
Power supply	V-ph-Hz	220/240-1-50

C: cooling mode
H: heating mode

Cooling and heating output figures are based on calculations and "general" test data. All figures are to be taken as approximations. The properties of the third party DX Coil will have an affect on the performance of the outdoor units.

All capacity data shown is based on the following Rated Conditions:

- Cooling (Rated): Indoor air temperature 27°C db / 19°C wb, Outdoor air temperature 35°C db
- Heating (Rated): Indoor air temperature 20°C db, Outdoor air temperature 7°C db / 6°C wb.

Notes:**Cooling Mode Coil "Air On" Temp: Minimum 15°CWB (18°CDB) / Maximum 24°CWB (32°CDB)**

Air temperatures flowing across the coil below this level, can in some circumstances, cause icing and freezing issues with the coil and eventually forcing the system to shut down and also be detrimental to the outdoor unit itself.

Heating Mode Coil "Air On" Temp: Minimum 15°CDB / Maximum 28°CDB

In the reserve cycle mode when the outdoor unit is producing hot gas, the coil in the AHU is effectively the condenser. Air temperatures flowing across the coil below this level, can cause over condensing of the refrigerant.

This can result in liquid being returned to the compressor which will cause a mechanical failure of the outdoor unit.

Low air temperatures will also cause the unit to use it's defrost mode more often.

Fresh Air Intake

If you wish to use Fresh Air which in outside of these Coil "Air On" limits it has to either be pre-conditioned by other equipment, or mixed with return air (or a combination of both) so that it remains inside these limits, in order to ensure reliable operation.

Automatic Mode

Please be aware that frequent mode changes could occur when using Automatic mode.

TA sensor

The TA sensor should be positioned in the return air duct. In case, it's not representative enough of the occupants area temperature, remote temperature sensor TCB -TC21LE2 should be used in the room.

RAV-DXC 0/10V DX KIT



Enables connection and control of Toshiba LC outdoor units to a third-party air handling unit (with DX coil).

Global

- Compatible with the majority of air handling units with a DX coil fitted inside (capacity ranges from 2.5 to 27kW)

Control

- Capacity control and selection mode of the Toshiba outdoor unit directly from the AHU controller through a 0/10v signal.

Easy to install

- Capacity set by DN code during installation.
- Extended 5 meters sensor leads pre-fitted to improve installation time and flexibility.



MAX AIR FLOW



Up to
5.200m³/h

CAPACITY



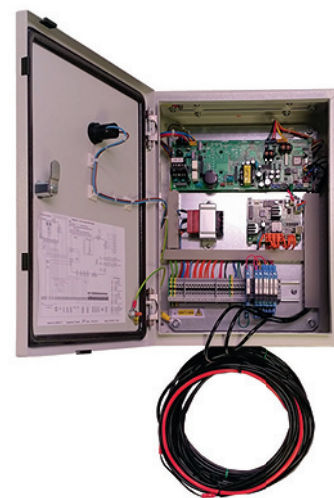
2.5kW > 27kW

OPERATION



-27°C > +52°C

Compatible with both LC and VRF systems.
(made possible via simple switch change on PCB)



INDOOR UNITS

RAV-DXC031

SDI



OUTDOOR UNITS

RAV-GP561ATP-E
RAV-GP801AT-E
RAV-GP1101AT(8)-E
RAV-GP1401AT(8)-E
RAV-GP1601AT8-E

DI



RAV-GM301ATP-E
RAV-GM401ATP-E
RAV-GM561ATP-E
RAV-GM801ATP-E
RAV-GM901ATP-E
RAV-GM1101AT(8)P-E
RAV-GM1401AT(8)P-E
RAV-GM1601AT(8)P-E

BIG DI



RAV-GM2241AT8-E
RAV-GM2801AT8-E



REMOTE CONTROLS

RBC-AMTU31-E

O/10V DX KIT

O/10V DX KIT

Performance data

DX Controller unit	RAV-	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010	DXC010
Outdoor Unit		1 HP	1.5 HP	2 HP	3 HP	3.5HP	4 HP	5 HP	6 HP	8 HP	10 HP
Cooling Capacity RANGE	DI	RAV-GM301ATP-E	RAV-GM401ATP-E	RAV-GM561ATP-E	RAV-GM801ATP-E	RAV-GM901ATP-E	RAV-GM1101AT(8)P-E	RAV-GM1401AT(8)P-E	RAV-GM1601AT(8)P-E	RAV-GM2241AT8-E	RAV-GM2801AT8-E
	SDI			RAV-GP561ATP-E	RAV-GP801AT-E		RAV-GP1101AT(8)-E	RAV-GP1401AT(8)-E	RAV-GP1601AT8-E		
Cooling capacity (min-max) DI	kW	0.9 - 3.0	0.9 - 4.0	1.5 - 5.6	1.5 - 7.4	1.9 - 8.8	3.0 - 11.2	3.0 - 13.2	3.0 - 16.0	4.6 - 22.4	4.6 - 27.0
Cooling capacity (min-max) SDI	kW			1.2 - 5.6	1.9 - 8.0		3.1 - 12.0	3.1 - 14.0	2.6 - 16		
Heating capacity (min-max) DI	kW	0.8 - 4.5	0.8 - 5.0	1.5 - 6.3	1.5 - 9.0	1.6 - 9.9	3.0 - 13	3.0 - 16.0	3.0 - 18.0	4.6 - 25.0	4.6 - 31.5
Heating capacity (min-max) SDI	kW			0.9 - 8.1	1.3 - 11.3		2.6 - 13	2.6 - 16.5	2.4 - 19		
Standard air volume	m³/h	570	610	900	1320	1510	1600	2100	2620	3600	4200
Coil Internal Volume (min-max)	dm³	0.5 - 0.7	0.5 - 0.7	0.8 - 1.1	1.0 - 1.4	1.3 - 1.8	1.5 - 2.1	1.7 - 2.7	2.0 - 3.2	3.0 - 4.2	3.6 - 5.4

O/10V DX KIT

Physical Data

LC / VRF DX Coil Controller Unit	RBC-	DXC031
Dimensions (HxWxD)	mm	400 x 300 x 150
Weight	kg	8
Standard Rating	IP	65
Operating temperature/humidity	°C / RH	5-40 / 10-90
Operating range - Cooling coil "Air on" temp	°C	15°CWB±24°CWB
Operating range - Heating coil "Air on" temp	°C	5°CDB±28°CDB
Power supply		Supplied from Outdoor unit

> SDI - DI - Dig DI TWIN +



Connect 4 indoors units on the same system to satisfy the cooling and heating requirements of larger area.

Comfort

- Precise air flow control, accurately controls the distribution of the air regardless of the room size.

Adaptability

- Twin, triple or double twin configurations.
- Compatible with every type of LC indoor units: 4-way cassette, duct, high-wall ceiling and floor standing.

Control

- One user-friendly controller for all the indoor units to simplify the control.



SCOP MAX



5.05

CAPACITY



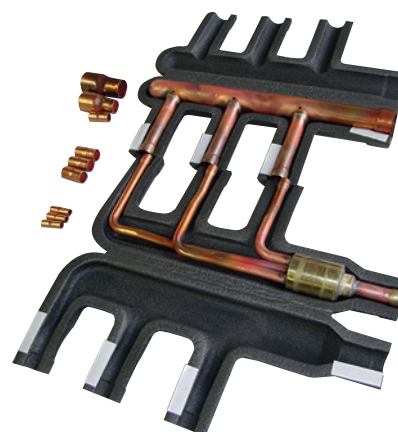
9.5kW > 27kW

OPERATION



-27°C > +52°C

Toshiba RAV simplistic piping design allows multiple indoor units to be connected via a simple branching methodology.



CASSETTE



DUCTED



CEILING



HIGH-WALL



FLOOR
STANDING

RAV-HM_UTP-E/TR RAV-HM_BTP-E/TR RAV-HM_CTP-E/TR RAV-HM_KRTP-E/TR RAV-HM_FT-E/TR
RAV-HM_MUT-E/TR RAV-HM_SDT-E/TR



OUTDOOR UNITS



RAV-GM1101AT(8)-P-E/TR
RAV-GM1401AT(8)-P-E/TR
RAV-GM1601AT(8)-P-E/TR



RAV-GM2241AT8-E1/TR1
RAV-GM2801AT8-E1/TR1



REMOTE
CONTROLS

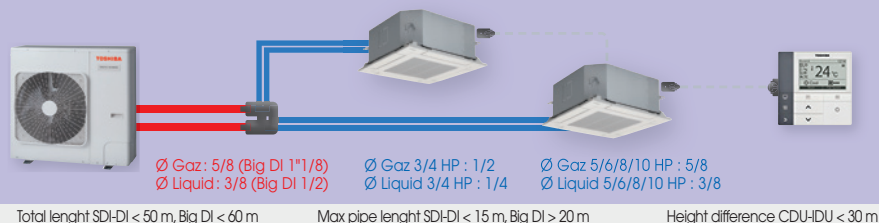
RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

SYSTEM OVERVIEW

TWIN SYSTEM - 2 indoor units connected

Outdoor unit

Digital Inverter
4/5 HP
or
Super Digital Inverter
3/4/5/6 HP
or
Big Digital Inverter
8/10 HP



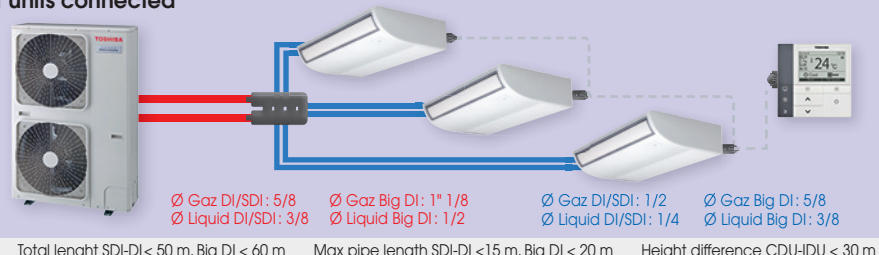
Remote

RBC-AMSU51E-ES/EN

TRIPLE SYSTEM - 3 indoor units connected

Outdoor unit

Super Digital Inverter
6 HP
or
BIG Digital Inverter
8/10 HP



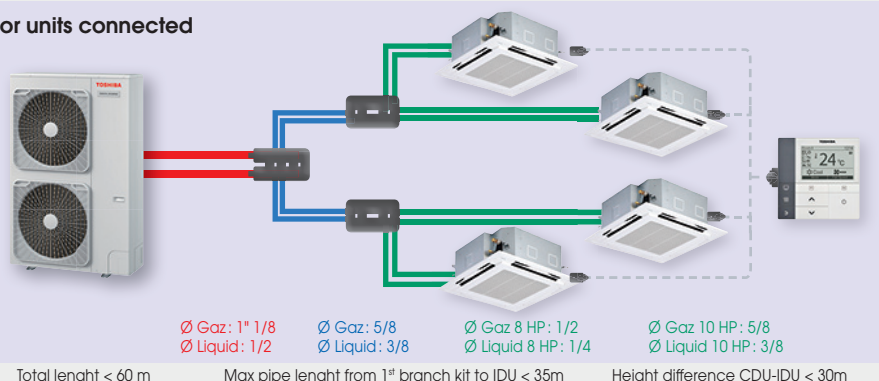
Remote

RBC-AMSU51E-ES/EN

W-TWIN SYSTEM - 4 indoor units connected

Outdoor unit

Big Digital Inverter
8/10 HP



Remote

RBC-AMSU51E-ES/EN

TWIN SDI

Cooling & heating

Indoor unit model	Outdoor unit RAV-	Indoor unit RAV-	HP	Cooling capacity nin. - nominal - max kW	Heating capacity nin. - nominal - max kW	EER	SEER	COP	SCOP	Energy class
Smart 4-way cassette	GP1101AT-E	HM561UT-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	5.26	9.15	5.14	5.03	A+++/A++
	GP1401AT-E1	HM801UT-E	5	3.1 - 12.5 - 14.0	2.6 - 14 - 16.5	4.30	8.79	4.61	5.00	-/-
4-way cassette	GP1101AT-E	HM561UTP-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	4.69	8.57	4.79	4.73	A++/A++
	GP1401AT-E1	HM801UTP-E	5	3.1 - 12.5 - 14.0	2.6 - 14.0 - 16.5	3.96	8.14	4.36	4.72	-/-
	GP1101AT8-E	HM561UTP-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 15.6	4.31	7.06	4.65	4.36	A++/A+
	GP1401AT8-E	HM801UTP-E	5	2.6 - 12.5 - 14.0	2.4 - 14.0 - 18.0	3.65	7.06	4.11	4.36	-/-
	GP1601AT8-E	HM801UTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.23	6.76	3.74	4.36	-/-
Compact 4way cassette	GP801AT-E	HM401MUT-E	3	1.9 - 7.1 - 8.0	1.3 - 8.0 - 11.3	4.10	7.91	4.40	4.87	A++/A++
	GP1101AT-E	HM561MUT-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	4.18	7.93	4.19	4.42	A++/A+
	GP1101AT8-E	HM561MUT-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 14.0	3.85	6.32	3.74	3.94	A++/A
	GP1101AT-E	HM561BTP-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	4.17	6.74	4.10	4.26	A++/A+
Ducted	GP1401AT-E1	HM801BTP-E	5	3.1 - 12.5 - 14.0	2.6 - 14.0 - 16.5	3.50	6.27	3.86	4.25	-/-
	GP1101AT8-E	HM561BTP-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 15.6	3.88	5.81	4.06	4.16	A+/A
	GP1401AT8-E	HM801BTP-E	5	2.6 - 12.5 - 14.0	2.4 - 14.0 - 18.0	3.28	5.64	3.83	3.96	-/-
	GP1601AT8-E	HM801BTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.12	5.50	3.50	3.94	-/-
Slim duct	GP801AT-E	RM401SDT-E	3	1.9 - 7.1 - 8.0	1.3 - 8.0 - 11.3	3.80	6.5	4.40	4.51	A++/A+
	GP1101AT-E	RM561SDT-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	3.91	6.65	4.19	4.00	A++/A+
	GP1101AT8-E	RM561SDT-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 14.0	3.60	5.60	4.21	3.84	A+/A
Ceiling	GP801AT-E	HM401CTP-E	3	1.9 - 7.1 - 8.0	1.3 - 8.0 - 11.3	4.44	7.82	4.44	5.05	A++/A++
	GP1101AT-E	HM561CTP-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13.0	4.48	7.97	4.71	4.71	A++/A++
	GP1401AT-E1	HM801CTP-E	5	3.1 - 12.5 - 14.0	2.6 - 14.0 - 16.5	3.49	7.34	3.90	4.7	-/-
	GP1101AT8-E	HM561CTP-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 14.0	3.91	6.54	4.46	4.21	A++/A+
	GP1401AT8-E	HM801CTP-E	5	2.6 - 12.5 - 14.0	2.4 - 14.0 - 18.0	3.40	6.17	4.02	4.19	-/-
	GP1601AT8-E	HM801CTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.04	5.89	3.72	4.19	-/-
Floor standing	GP1101AT-E	HM561FT-E	4	3.1 - 10.0 - 12.0	2.6 - 11.2 - 13	4.18	6.84	4.06	4.40	A++/A+
	GP1401AT-E1	HM801FT-E	5	3.1 - 12.5 - 14	2.6 - 14 - 16.5	3.55	6.47	3.53	4.38	-/-
	GP1101AT8-E	HM561FT-E	4	2.6 - 10 - 12	2.4 - 11.2 - 14	4.07	6.02	4.04	4.02	A+/A+
	GP1401AT8-E	HM801FT-E	5	2.6 - 12.5 - 14	2.4 - 14 - 18	3.46	6.01	3.67	4.02	-/-
High-wall	GP1601AT8-E	HM801FT-E	6	2.6 - 14 - 16	2.4 - 16 - 19	3.19	5.81	3.31	3.98	-/-
	GP1101AT-E	HM561KRTP-E	4	3.1 - 10 - 12	2.6 - 11.2 - 13	4.1	8.15	4.1	4.05	A++/A+
	GP1401AT-E1	HM801KRTP-E	5	3.1 - 12.5 - 14	2.6 - 14 - 16.5	3.45	6.69	3.66	4.37	-/-
	GP1101AT8-E	HM561KRTP-E	4	2.6 - 10.0 - 12.0	2.4 - 11.2 - 14.0	3.83	6.35	4.21	4.14	A++/A+
	GP1401AT8-E	HM801KRTP-E	5	2.6 - 12.3 - 13.5	2.4 - 14.0 - 18.0	3.30	6.10	3.70	4.11	-/-
	GP1601AT8-E	HM801KRTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.01	5.88	3.29	4.08	-/-

TRIPLE SDI**Cooling & heating**

Indoor unit model	Outdoor unit		Indoor unit HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
	RAV-	RAV-		nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GP1601AT8-E	HM561UTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.23	6.71	3.74	4.36	-/-
Compact 4-way cassette	GP1601AT8-E	HM561MUT-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.30	6.32	3.51	4.15	-/-
Ducted	GP1601AT8-E	HM561BTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.12	5.43	3.5	3.94	-/-
Slim duct	GP1601AT8-E	HM561SDT-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	2.91	5.98	3.5	4.07	-/-
Ceiling	GP1601AT8-E	HM561CTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.04	5.95	3.72	4.19	-/-
High-wall	GP1601AT8-E	HM561KRTP-E	6	2.6 - 14.0 - 16.0	2.4 - 14.0 - 19.0	3.19	5.75	3.31	3.98	-/-
Floor standing	GP1601AT8-E	HM561FT-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.19	5.55	3.31	3.96	-/-

TWIN DI**Cooling & heating**

Indoor unit model	Outdoor unit		Indoor unit HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
	RAV-	RAV-		nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GM1101AT(8)P-E	HM561UTP-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.31	5.94	3.82	4.28	A+/A+
	GM1401AT(8)P-E	HM801UTP-E	5	3.0 - 12.0 - 13.2	3.0 - 13.0 - 16.0	2.8	5.71	3.76	4.29	A+/A+
	GM1601AT(8)P-E	HM801UTP-E	6	3.0 - 14.0 - 16.0	3.0 - 16.0 - 18.0	3.12	6.3	3.61	4.35	-/-
Compact 4-way cassette	GM1101AT(8)P-E	HM561MUT-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.16	5.50	3.44	4.02	A/A+
Ducted	GM1101AT(8)P-E	HM561BTP-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.18	5.28	3.75	4.22	A/A+
	GM1401AT(8)P-E	HM801BTP-E	5	3.0 - 12.1 - 13.2	3.0 - 13.0 - 16.0	2.74	5.36	3.61	4.21	-/-
	GM1601AT(8)P-E	HM801BTP-E	6	3.0 - 14.0 - 16.0	3.0 - 16.0 - 18.0	2.73	5.30	3.41	3.47	-/-
Slim duct	GM1101AT(8)P-E	HM561SDT-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.14	5.32	3.75	4.19	A/A+
Ceiling	GM1101AT(8)P-E	HM561CTP-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.22	5.86	3.81	4.28	A+/A+
	GM1401AT(8)P-E	HM801CTP-E	5	3.0 - 12.1 - 13.2	3.0 - 13.0 - 16.0	2.74	5.36	3.74	4.19	-/-
	GM1601AT(8)P-E	HM801CTP-E	6	3.0 - 14.0 - 16.0	3.0 - 16.0 - 18.0	3.01	5.90	3.47	4.1	-/-
High-wall	GM1101AT(8)P-E	HM561KRTP-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.19	5.32	3.75	4.19	A/A+
	GM1401AT(8)P-E	HM801KRTP-E	5	3.0 - 12.1 - 13.2	3.0 - 13.0 - 16.0	2.57	5.24	3.37	4.19	-/-
	GM1601AT(8)P-E	HM801KRTP-E	6	3.0 - 14.0 - 16.0	3.0 - 16.0 - 18.0	2.75	5.1	3.21	4	-/-
Floor standing	GM1101AT(8)P-E	HM561FT-E	4	3.0 - 9.5 - 11.2	3.0 - 11.2 - 13.0	3.1	5.16	3.51	3.92	A/A
	GM1401AT(8)P-E	HM801FT-E	5	3.0 - 12.1 - 13.2	3.0 - 13.0 - 16.0	2.57	4.86	3.24	3.90	-/-

TRIPLE DI**Cooling & heating**

Indoor unit model	Outdoor unit		Indoor unit HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
	RAV-	RAV-		nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GM1601AT(8)P-E	HM561UTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.12	6.3	3.61	4.35	-/-
Compact 4-way cassette	GM1601AT(8)P-E	HM561MUT-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	2.75	5.1	3.41	4	-/-
Ducted	GM1601AT(8)P-E	HM561BTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	2.73	5.3	3.41	3.9	-/-
Slim duct	GM1601AT(8)P-E	HM561SDT-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	2.81	5.1	3.41	4	-/-
Ceiling	GM1601AT(8)P-E	HM561CTP-E	6	2.6 - 14.0 - 16.0	2.4 - 16.0 - 19.0	3.01	5.9	3.47	4.1	-/-
High-wall	GM1601AT(8)P-E	HM561KRTP-E	6	2.6 - 14.0 - 16.0	2.4 - 14.0 - 19.0	2.75	5.1	3.21	4	-/-

TWIN BIG DI



Cooling & heating

Indoor unit model	Outdoor unit	Indoor unit	HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
				nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GM2241AT8-E1	HM1101UTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.6	6.53	4.23	4.05	-/-
	GM2801AT8-E1	HM1401UTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	3	6.21	3.8	3.9	-/-
Ducted	GM2241AT8-E1	HM1101BTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.24	5.03	4.02	3.72	-/-
	GM2801AT8-E1	HM1401BTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5	3.62	3.64	-/-
Ceiling	GM2241AT8-E1	HM1101CTP-E	8	4.6 - 20.0 - 25.0	4.6 - 22.4 - 25.0	3.24	5.67	3.92	3.79	-/-
	GM2801AT8-E1	HM1401CTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.62	5.16	3.57	3.65	-/-
Floor standing	GM2241AT8-E1	HM1101FT-E	8	4.6 - 20.0 - 25.0	4.6 - 22.4 - 25.0	3.24	5.42	3.28	3.62	-/-
	GM2801AT8-E1	HM1401FT-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5.20	3.83	3.59	-/-

TRIPLE BIG DI



Cooling & heating

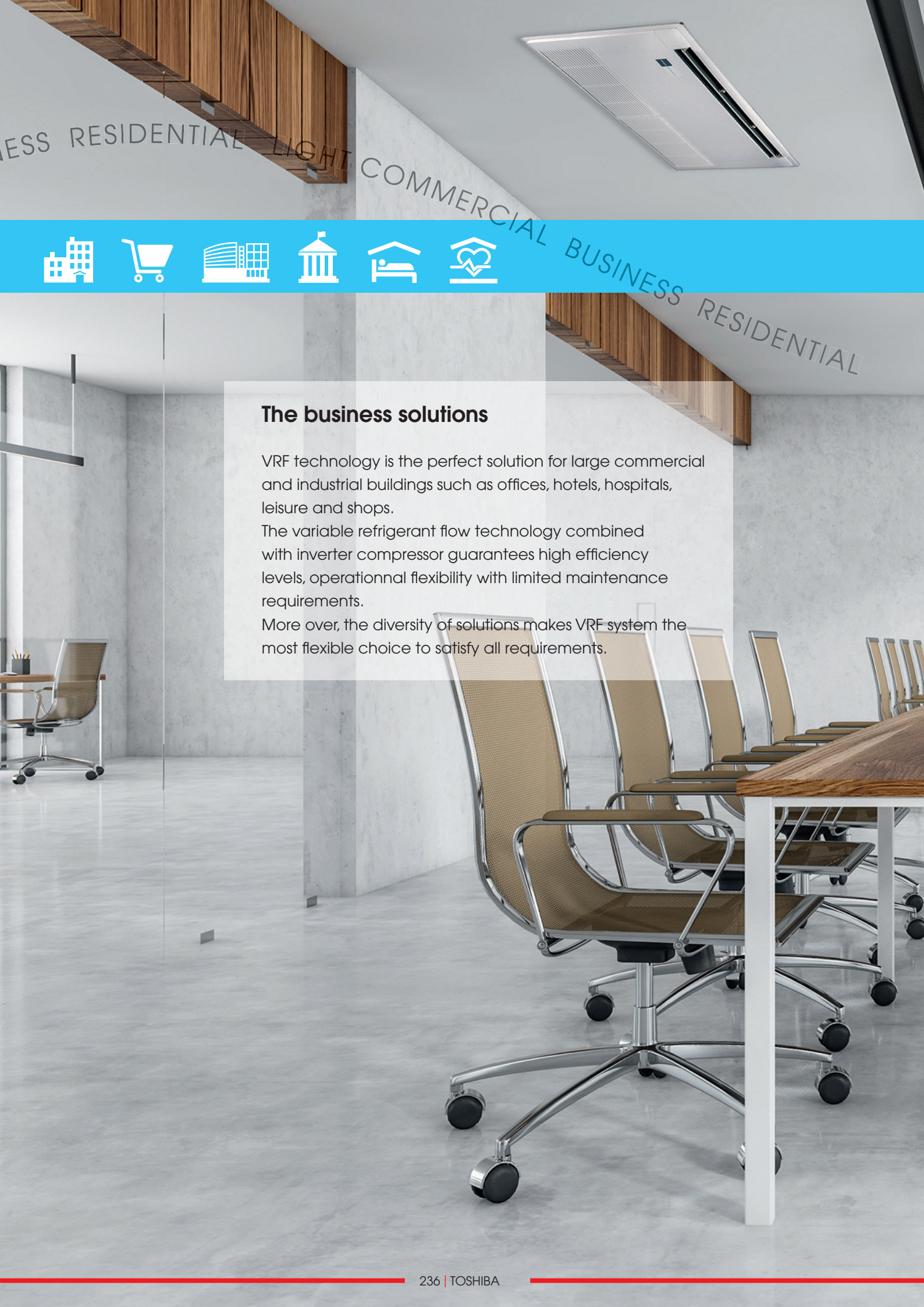
Indoor unit model	Outdoor unit	Indoor unit	HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
				nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GM2241AT8-E1	HM801UTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.60	6.57	4.23	4.05	-/-
	GM2801AT8-E1	HM801UTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	3.00	6.24	3.80	3.91	-/-
Ducted	GM2241AT8-E1	HM801BTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.24	5.23	4.02	3.73	-/-
	GM2801AT8-E1	HM801BTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5.18	3.62	3.65	-/-
Ceiling	GM2241AT8-E1	HM801CTP-E	8	4.6 - 20.0 - 25.0	4.6 - 22.4 - 25.0	3.24	5.59	3.92	3.79	-/-
	GM2801AT8-E1	HM801CTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.62	5.16	3.57	3.65	-/-
High-wall	GM2241AT8-E1	HM-801KRTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.00	5.58	3.66	3.76	-/-
	GM2801AT8-E1	HM-801KRTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.55	5.30	3.53	3.63	-/-
Floor standing	GM2241AT8-E1	HM801FT-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.24	5.36	3.98	3.62	-/-
	GM2801AT8-E1	HM801FT-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5.15	3.29	3.59	-/-

DOUBLE TWIN BIG DI



Cooling & heating

Indoor unit model	Outdoor unit	Indoor unit	HP	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Energy class
				nin. - nominal - max kW	nin. - nominal - max kW					
4-way cassette	GM2241AT8-E1	HM561UTP-E	8	9.8 - 20.0 - 22.4	9.8 - 22.4 - 25.0	3.60	6.57	4.23	4.05	-/-
	GM2801AT8-E1	HM801UTP-E	10	9.8 - 23.0 - 27.0	9.8 - 27.0 - 31.5	3.00	6.16	3.80	3.90	-/-
Compact 4-way cassette	GM2241AT8-E1	HM561MUT-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.15	6.24	3.66	4.24	-/-
Ducted	GM2241AT8-E1	HM561BTP-E	8	4.6 - 20.0 - 25.0	4.6 - 22.4 - 25.0	3.24	5.18	4.02	3.73	-/-
	GM2801AT8-E1	HM801BTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5.12	3.62	3.65	-/-
Slim duct	GM2241AT8-E1	HM561SDT-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.00	5.44	3.66	3.86	-/-
Ceiling	GM2241AT8-E1	HM561CTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.24	5.68	3.92	3.79	-/-
	GM2801AT8-E1	HM801CTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.62	5.06	3.57	3.65	-/-
High-wall	GM2241AT8-E1	HM561KRTP-E	8	4.6 - 20.0 - 22.4	4.6 - 22.4 - 25.0	3.00	5.60	3.66	3.76	-/-
	GM2801AT8-E1	HM801KRTP-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.55	5.22	3.53	3.62	-/-
Floor standing	GM2241AT8-E1	HM561FT-E	8	4.6 - 20.0 - 25.0	4.6 - 22.4 - 25.0	3.24	5.32	3.98	3.61	-/-
	GM2801AT8-E1	HM801FT-E	10	4.6 - 23.5 - 27.0	4.6 - 27.0 - 31.5	2.65	5.12	3.29	3.59	-/-



LESS RESIDENTIAL LIGHT COMMERCIAL BUSINESS RESIDENTIAL



The business solutions

VRF technology is the perfect solution for large commercial and industrial buildings such as offices, hotels, hospitals, leisure and shops.

The variable refrigerant flow technology combined with inverter compressor guarantees high efficiency levels, operational flexibility with limited maintenance requirements.

More over, the diversity of solutions makes VRF system the most flexible choice to satisfy all requirements.

> BUSINESS



EXCELLENCE IN SEASONAL EFFICIENCY

MiNi SMMS-e, SMMS-u, SHRM-e & SHRM-Advance



> CREATING BENEFITS AROUND COMFORT

> Benefits for the consultant



Our VRF offers unlimited possibilities in terms of capacity, connectivity, indoor unit lineup and control solutions, providing the correct solution for your customers needs. Toshiba selection tool will guide you through the selection process with minimal input from your side, ensuring troublefree installation and operation. All systems come with the Eurovent certification as standard.

> Benefits for the installer



Designed to perform and engineered to perfection, Toshiba VRF excels in anaging the heating, cooling, hot water and fresh air input into offices, shops, restaurants and domestic housing, with unrivalled connection flexibility. You can rely on Toshiba support, to assist you from the project phase to commissioning and troubleshooting.

> Benefits for the user

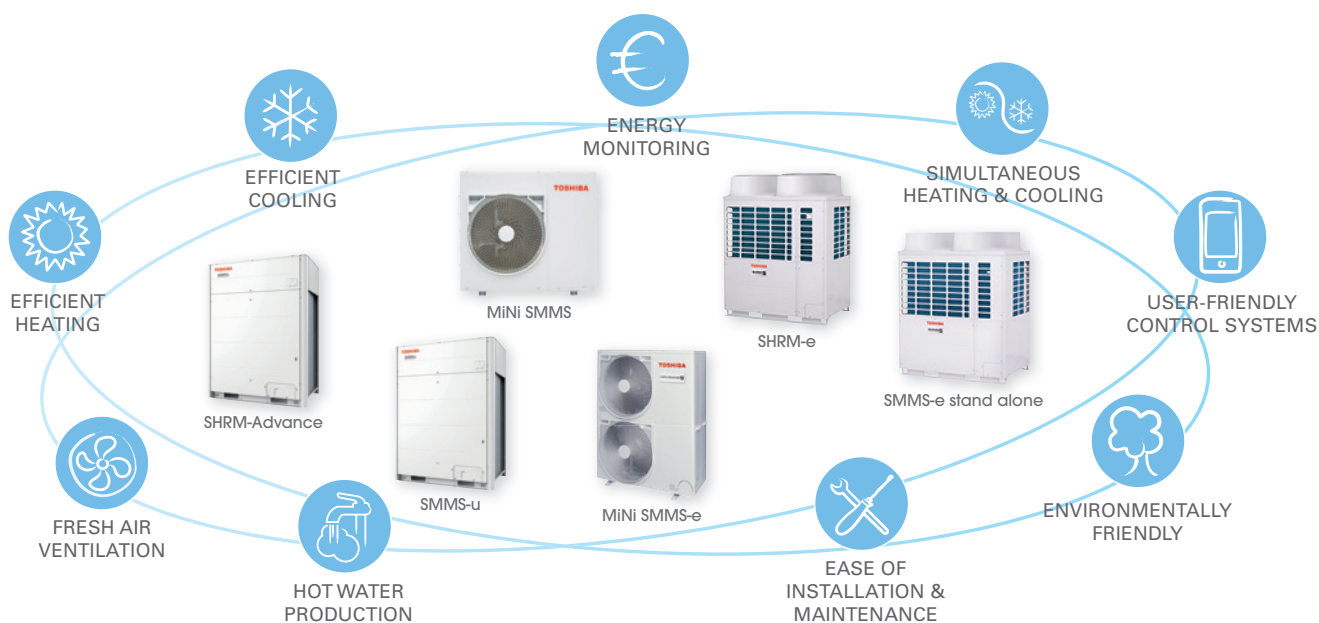


There is nothing like a comfortable place to enjoy the present moment. Full of Toshiba innovations, our VRF guarantee all year round comfort combined with superior energy management, advanced air filtration and full control solutions for maximized product usability.

> Benefits for the planet



Toshiba has an unwavering drive to make and do things that lead to a better world. After the switch to low GWP refrigerant for its residential and light commercial products, Toshiba is now one of the first to launch a top blow VRF using R32: The SHRM-Advance. Be prepared to a new green dimension in your projects and in your life.



> SHRM-Advance, the future is now

More environmental friendly and incorporating all of SMMS-u innovations, the new SHRM-Advance is the most advanced solution to provide cooling, heating and hot water for commercial applications. Be surprised by all the possibilities offered by this new solution benefiting from 40 years of inspired innovations!

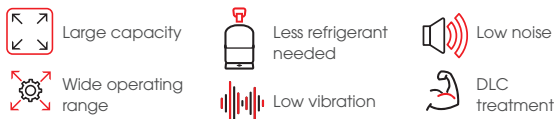


- 8 to 24HP
- 2-pipe and 3-pipe operations
- Wide indoor unit compatibility
- Ultra high efficiency up to 8,9 SEER
- EN378 compliant

> HIGH EFFICIENCY AND LOW OPERATION COSTS

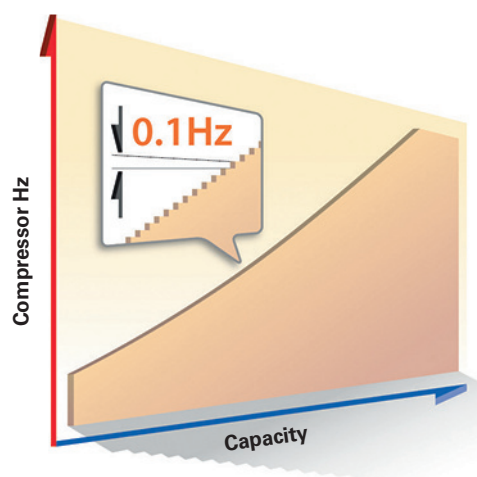
> Innovative compressor technology

Toshiba rotary compressor technology brings outstanding performances to all SMMS systems with no compromise on system reliability.



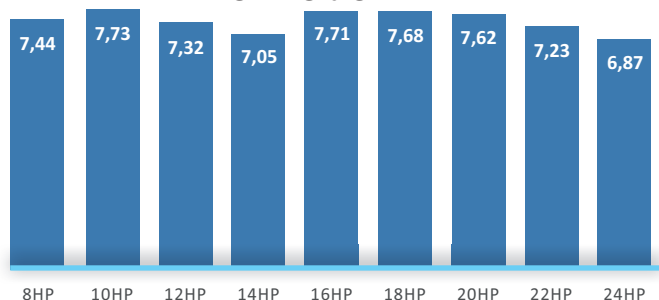
> Infinite variable control

Inverter control feature has been continually evolved and developed, since its inception by TOSHIBA engineers back in 2004 with the original SMMS system. The control has the ability to adjust the compressor rotational speed in a near seamless 0,1 Hz steps. This control when matched with TOSHIBA's newest and latest Twin Rotary compressors, allows the system to respond precisely to the capacity needs of the end user, whilst minimizing energy losses.

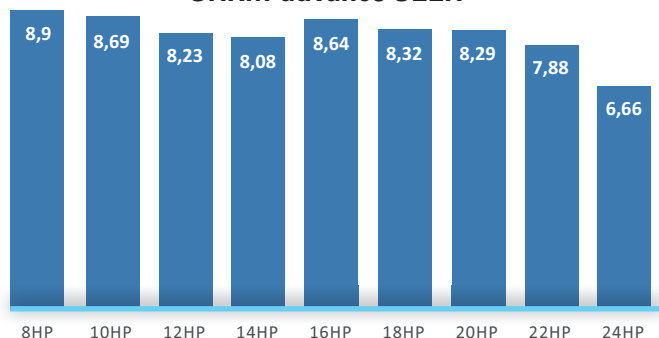


> Maximum part load and full load efficiencies

SMMS-u SEER*



SHRM-advance SEER*



*4-way cassette combinations



Thanks to Toshiba's unique twin rotary compressor, re-designed heat exchanger and "intelligent flow" technology, the Toshiba's VRF achieve a SEER of 9.68 (MiNi SMMS-e), one of the highest seasonal efficiency in the market.

Maximum efficiency is obtained under 50% part load conditions, under which VRF systems operate predominantly.

The expert use and evolution of Toshiba's core technologies have allowed the Toshiba VRF system to achieve the highest part load COP and EER in the industry.

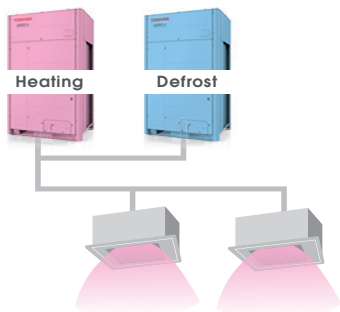
MINI SMMS-e, SMMS-u, SHRM-e & SHRM-Advance



SUPERIOR AIR COMFORT

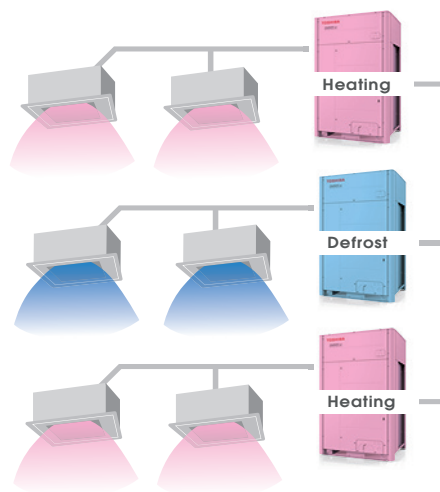
> Intelligent defrost

Individual defrost: continuous heating up to 5 hours



Kobetsu

No simultaneous defrost in combination configuration. Heating operation never stopped.



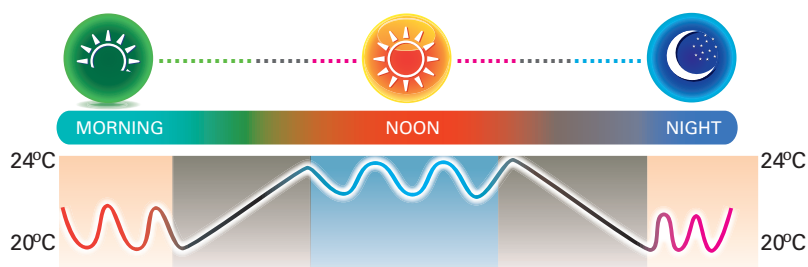
Renkey

No simultaneous defrost with multi system configuration. Heating operation never stopped.

* Applicable on SMMS-u and SHRM-Advance

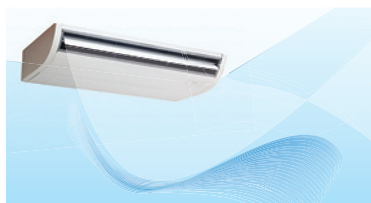
> Dual set point for more precision

The Dual Set Point increases the system's energy efficiency and reduces overall running costs, with longer periods of time in thermal off mode. Heating and cooling temperatures at which the indoor unit will begin to operate can now be individually selected giving maximum flexibility to the user.

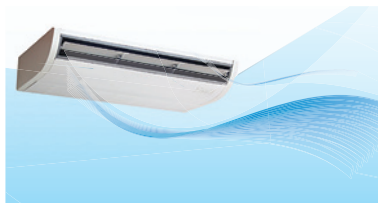


> Cool comfort with soft cooling mode

The development of the soft cooling mode provides a new level for cool comfort. You will have the freedom to personalize the air flow intensity, angle and direction directly from the remote control and enjoy the indoor environment at the right temperature without being directly exposed to the cold draft.



Standard operating mode



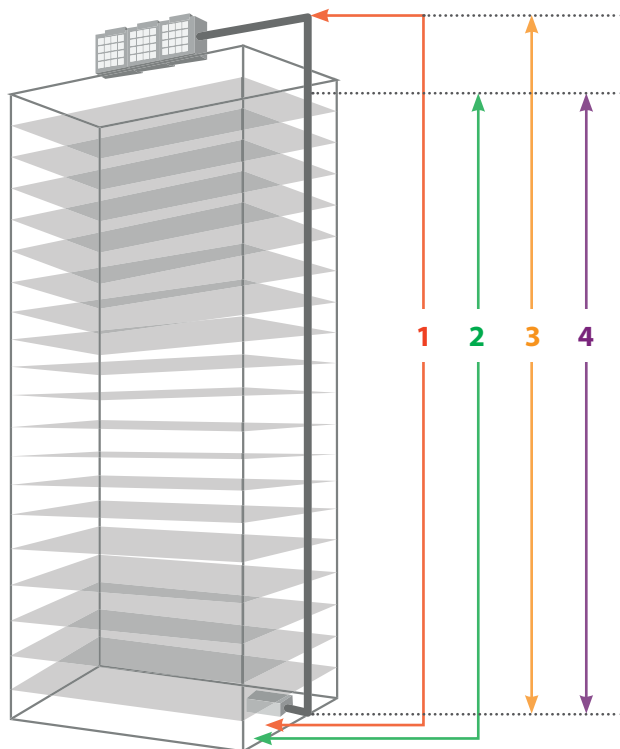
Soft cooling mode



FLEXIBLE DESIGN AND QUICK INSTALLATION

Piping design flexibility

Toshiba's piping technology makes them one of the industries leaders in system flexibility and ease of installation and with the e-series VRF system, the level of flexibility has increased further, giving more options to the contractor and installer alike.



For more details, please refer to installation manuals.

1 Total piping length

Applied with Toshiba's unique and greatly improved technology, Toshiba's VRF can reach up to 1,200 meters maximum piping length.



**Total piping length
1,200 m***

2 Farthest equivalent length

The maximum equivalent distance between the outdoor unit and the farthest indoor unit tops at 250 meters for SMMS-u and 190 meters for SHRM Advance, a best-in-class for the industry.



**Farthest equivalent length
250 m/190 m**

3 Height between outdoor unit and indoor unit

Another industry best-in-class feature is the maximum vertical distance between the outdoor and indoor units, which can extend up to 110 meters for SMMS-u & 90 meters for SHRM Advance. Toshiba's VRF enhanced piping capabilities result in more benefits for system design and installation flexibility, as well as lower installation costs.



110 m/90 m

4 Height difference FCU-FCU

Maximum vertical distance between indoor units can reach up to 40 meters, which is equal to an entire 11-storey Height difference between outdoor unit and indoor unit 40 m building.

**Height difference between
outdoor unit and indoor unit
40 m**

SMMS-u/SHRM-Advance"

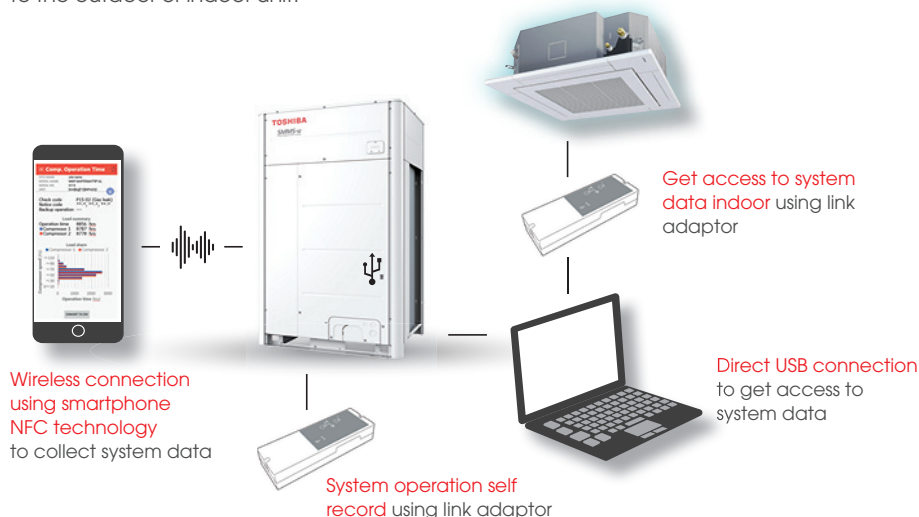
Toshiba selection tool

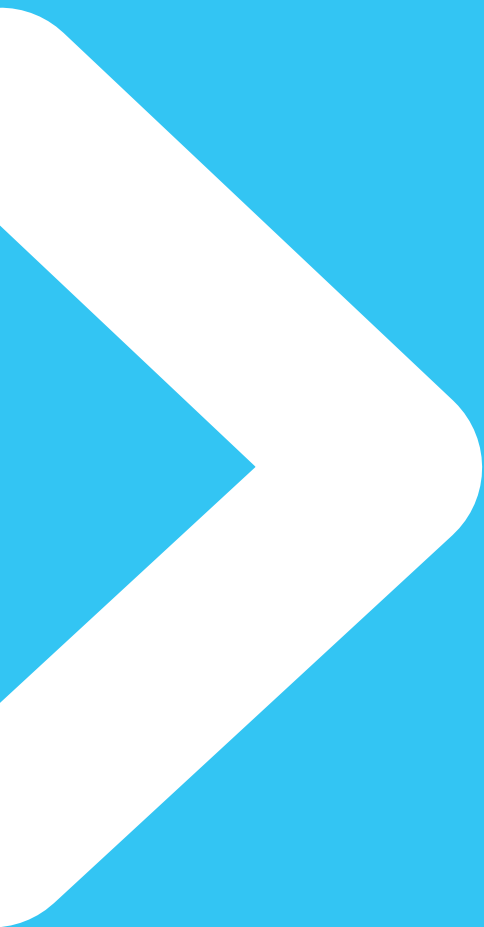
Designed for novice and expert users, Toshiba selection software creates simple, yet detailed VRF system schematics. It is highly versatile, allowing the level of detail to be tailored to suit customer requirements. Final detailed reports can be produced and sent to customers in PDF format or in more complex files, such as AutoCAD DXF, allowing simple integration into existing software packages.



Easy commissioning and maintenance

Save time during commissioning and maintenance. Choose between the "Wave Tool Advance" using Smartphone NFC connection or the link adaptor connected to the outdoor or indoor unit.





EUROPEAN UNION, TURKEY

CHOOSE YOUR ADAPTED SYSTEM SOLUTION MAPPING BY APPLICATIONS

OUTDOOR UNITS

Residential



Light commercial



Business



Reversible cooling or heating



MINI SMMS Sideblow
1 fan & 2 fans

Individual housing mainly

Up to 250 m²
per system
Max. 10 IDUs
per system

Up to 250 m² per system and max. 10 IDUs per system



1 phase electrical power supply only



MINI SMMS-e 1Ph & 3Ph

Individual housing mainly

Up to 400 m² per system
Max. 16 IDUs per system



Stand alone SMMS-e
& SMMS-u

Collective housing mainly



3-phase electrical
power supply only

Up to 6,000 m² per system
Max. 128 IDUs per system

Simultaneous cooling
& heating


SHRM-e
& SHRM Advance

Collective housing mainly



3-phase electrical
power supply only

SHRM-e : Up to 2,500 m² per system Max. 64 IDUs
per system Hot water production capability

SHRM Advance : Up to 1,200 m² per system Max 54 IDUs
per system Hot water production capability



R32 inside

INDOOR UNITS

Cassette		o (4-way standard or compact)	o (All types)	o (4-way standard or compact for lobby)	o (All types)
Duct	o (Standard duct)	o (Standard or high static pressure)	o (Slim or standard)	o (Slim for rooms & standard for lobby)	o
High-wall	o	o	o	o (For rooms - low sound version)	o
Ceiling		o			o
Console*	o (Bi-flow version)		o	o (For lobby)	o

The data provided on this page is for informational purposes only and not for the purpose of providing legal or other professional advice.

* Consoles not compatible with R32 VRF systems"

CHOOSE YOUR ADAPTED SYSTEM SOLUTION

OUTDOOR UNIT MAPPING FOR EUROPE

								
		Side Blow VRF	Mini SMMSe 1PH	Mini SMMSe 3PH	SMMSe	SMMS-u	SHRM	SHRM Advance
		R410A	R410A	R410A	R410A	R410A	R410A	R32
		MCY-MHP0_4HT-E/TR	MCY-MHP0_4HS-E/TR	MCY-MHP0_4HS8-E/TR	MMY-SAP_6HT8P-E/TR	MMY-MUP_1HT8P-E/TR	MMY-MAP_6FT8P-E/TR	MMY-SUG_1FT8P-E/TR
		Heat pump			Heat pump	Heat pump		Heat pump
					Single module / Stand alone	Single module	Standard combinations	Single module
							Combinations	Single module
4		●▼	●▼	●▼				
5		●▼	●▼	●▼				
6			●▼	●▼				
8				●▼	●▼	●▼	●▼	●▼
10				●▼	●▼	●▼	●▼	●▼
12						●▼	●▼	●▼
14						●▼	●▼	●▼
16						●▼	●▼	●▼
18						●▼	●▼	●▼
20						●▼	●▼	●▼
22						●▼		●▼
24						●▼		●▼
26							●	●
28							●	●
30							●	●
32							●	●
34							●	●
36							●	●
38							●	●
40							●	●
42							●	●
44							●	●
46							●	●
48							●	●
50							●	●
52							●	●
54							●	●
56							●	●
58							●	●
60							●	●
---							●	●
120							●	●
Fresh air solution	Fresh air duct					●	●	
	Air to Air heat exchanger + DX coil		●	(4, 5 & 6HP only)			●	●
	Standard DX Kit	●	●	●		●	●	●
	0/10v DX kit					●	●	
Hot water	Hot water module			(8 & 10HP only)		●	●	(mid temperature only)
Small capacity indoor units	0.3HP indoor unit					●	●	●
	0.6HP indoor unit		●	●	●	●	●	●
Accessories	Leak detection	●	●	●	●	●	●	●
	Shuft of valve		●	●	●		●	●

●:Heat pump - ▼:Eurovent certified



MCY-MHP_HT SIDE BLOW



Compact, efficient, adaptable, energy saver, the sideblow VRF is the solution to cool and heat small/medium size buildings.

Efficiency

- Toshiba's in-house designed twin rotary inverter controlled compressor operates precisely to match the indoor demand, providing class leading levels of performance and system efficiency.

Adaptability

- Extensive indoor model range, with various styles of indoor unit designs, including small capacity 0.6Hp models.
- Possibility to merge different styles of indoor units.

Comfort

- One user-friendly controller for all the indoor units helps to simplify the unit control.

SCOP MAX



4.21

CAPACITY



4HP > 5HP

OPERATION



-20°C > +46°C

Outdoor unit height greatly reduced (>1m) for easier integration and installation.

910 mm



SIDE BLOW Performances

Outdoor unit		HP	MCY-MHP0406HT-E	MCY-MHP0506HT-E1
			4 HP	5 HP
Cooling capacity	kW		12.1	14.0
Power input	kW	C	3.73	4.33
EER	W/W		3.24	3.23
EthasC/SEER			320.2% / 8.08	307.8% / 7.77
Running current	A	C	14.4 / 13.8 / 13.2	20.8 / 19.9 / 19
Heating capacity	kW		12.5	16.0
Power input	kW	H	2.83	4.00
COP	W/W		4.42	4.00
EthasH/SCOP			150.2% / 3.83	152.2% / 3.88
Running current	A	H	13.4 / 12.8 / 12.3	19.1 / 18.3 / 17.5
Peak demand current	A		26.5	28.0

SIDE BLOW Physical data

Outdoor unit		HP	MCY-MHP0406HT-E	MCY-MHP0506HT-E
Air flow	m³/h - l/s		4020 - 1116	4260 - 1183
Sound pressure level	dB(A)	C/H	54/57	54/58
Max indoor connectivity			8	10
Dimensions (HxWxD)	mm		910 x 990 x 390	910 x 990 x 390
Weight	kg		100	100
Compressor type			Twin Rotary	Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		3.3/6.9	3.3/6.9
Gas line type - diameter			Flare - 5/8"	Flare - 5/8"
Liquid line type - diameter			Flare - 3/8"	Flare - 3/8"
Discharge line connection type - diameter				
Maximum equivalent length separation*	m		60	60
Maximum actual piping separation*	m		50	50
Maximum total pipe length*	m		90	90
Maximum lift (indoor unit above/below)	m		15/15	15/15
Operating range - db	°C	C	-5/46	-5/46
Operating range - wb	°C	H	-20/15	-20/15
Power supply	V-ph-Hz		220 / 230 / 240-1-50	220 / 230 / 240-1-50

* when PMV Kit is used: Maximum equivalent length separation (50 m); Maximum actual piping separation (40 m); Maximum total pipe length (75 m)

C: cooling mode
H: heating mode

MCY-MHP_HS MiNi SMMS-e 1Ph



Incorporating all of Toshiba's VRF experience and knowledge into a system that measures no more than 1.2m high, results in a perfect solution for all small to medium building heating and cooling requirements.

Technology

- Toshiba's in-house designed twin rotary inverter controlled compressor operates precisely to match the indoor demand, providing class leading levels of performance and system efficiency.
- Precise refrigerant control ensures each indoor unit receives the right amount of refrigerant.

Connectivity

- With 180m total (125m equivalent) piping length, ensures the MiNi SMMS-e system is adaptable for all types of projects.
- Extensive indoor model range, with various styles of indoor unit designs, including small capacity (0.6Hp) and air-to-air heat exchanger models.

SCOP MAX



4.37

CAPACITY



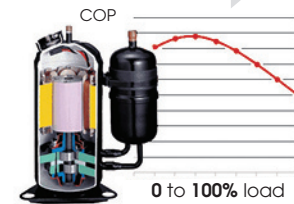
4HP > 6HP

OPERATION



-20°C > +46°C

Toshiba's in-house designed twin rotary inverter controlled compressor operates precisely to match the indoor demand, providing class leading levels of performance and system efficiency.



MiNi SMMS-e 1Ph Performances

Outdoor unit	HP		MCY-MHP0404HS-E	MCY-MHP0504HS-E	MCY-MHP0604HS-E
			4 HP	5 HP	6 HP
Cooling capacity	kW		12.1	14.0	15.5
Power input	kW	C	2.83	3.50	4.29
EER	W/W		4.28	4.00	3.61
EthasC/SEER			373.8% / 9.42	366.2% / 9.23	384.2% / 9.68
Running current	A	C	13.5 / 13.0 / 12.4	16.6 / 15.9 / 15.2	20.1 / 19.2 / 18.4
Heating capacity	kW		12.5	16.0	18.0
Power input	kW	H	2.59	3.75	4.31
COP	W/W		4.83	4.27	4.18
EthasH/SCOP			163.8% / 4.17	166.6% / 4.24	171.8% / 4.37
Running current	A	H	12.5 / 12.0 / 11.5	17.8 / 19.3 / 18.5	20.2 / 19.3 / 18.5

MiNi SMMS-e 1Ph Physical data

Outdoor unit	HP		MCY-MHP0404HS-E	MCY-MHP0504HS-E	MCY-MHP0604HS-E
Air flow	m³/h - l/s		5660 - 1572	5820 - 1617	6050 - 1681
Sound pressure level	dB(A)	C/H	49/52	50/53	51/54
Max indoor connectivity			8	10	13
Dimensions (HxWxD)	mm		1235 x 990 x 390	1235 x 990 x 390	1235 x 990 x 390
Weight	kg		127	127	127
Compressor type			Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		6.4 / 13.4	6.4 / 13.4	6.4 / 13.4
Gas line type - diameter			Flare - 5/8"	Flare - 5/8"	Flare - 3/4"
Liquid line type - diameter			Flare - 3/8"	Flare - 3/8"	Flare - 3/8"
Discharge line connection type - diameter					
Maximum equivalent length separation*	m		125	125	125
Maximum actual piping separation*	m		100	100	100
Maximum total pipe length*	m		180	180	180
Maximum lift (indoor unit above/below)	m		20/30	20/30	20/30
Operating range - db	°C	C	-5/46	-5/46	-5/46
Operating range - wb	°C	H	-20.0 / 15.0	-20.0 / 15.0	-20.0 / 15.0
Power supply	V-ph-Hz		220 / 230 / 240-1-50	220 / 230 / 240-1-50	220 / 230 / 240-1-50

* when PMV Kit is used: Maximum equivalent length separation (80 m); Maximum actual piping separation (65 m); Maximum total pipe length (150 m)

Note: Use engineering Data Book for specific details.

C: cooling mode - H: heating mode

MCY-MHP_HS8

MiNi SMMS-e 3Ph



Incorporating all of Toshiba's VRF experience and knowledge into a system that measures no more than 1.2m high, results in a perfect solution for all small to medium building heating and cooling requirements.

Technology

- Toshiba's in-house designed twin rotary inverter controlled compressor operates precisely to match the indoor demand, providing class leading levels of performance and system efficiency.
- Precise refrigerant control ensures each indoor unit receives the right amount of refrigerant.

Connectivity

- With 180m total piping length, ensures the MiNi SMMS-e system is adaptable to all types of projects.
- Extensive indoor model range, with various styles of indoor unit designs, including small capacity (0.6Hp) and air-to-water heat exchanger models.
- 3Ph power supply.

SCOP MAX



4.38

CAPACITY



4HP > 10HP

OPERATION



-20°C > +46°C

With 30Pa available pressure, the MiNi SMMS-e can be installed indoor behind a transfer grid.



MiNi SMMS-e 3Ph Performances

Outdoor unit		HP	MCY-MHP0404HS8-E	MCY-MHP0504HS8-E	MCY-MHP0604HS8-E	MCY-MHP0806HS8-E	MCY-MHP1006HS8-E
			4 HP	5 HP	6 HP	8 HP	10 HP
Cooling capacity	kW		12.1	14.0	15.5	22.4	28
Power input	kW	C	2.82	3.47	4.25	6.67	9.34
EER	W/W		4.29	4.03	3.65	3.36	3.00
EthasC/SEER	W/W		375.8% / 9.47	368.6% / 9.29	386.6% / 9.74	320.6% / 8.09	293.0% / 7.40
Running current	A	C	4.8 / 4.5 / 4.4	5.7 / 5.4 / 5.2	7.0 / 6.7 / 6.4	11.1 / 10.6 / 10.2	15.3 / 14.5 / 14.0
Heating capacity	kW		12.5	16.0	18.0	22.4	28.0
Power input	kW	H	2.57	3.72	4.27	5.20	7.00
COP	W/W		4.86	4.30	4.22	4.31	4.00
EthasH/SCOP			164.6% / 4.19	167.0% / 4.25	172.2% / 4.38	177.0% / 4.50	173.8% / 4.42
Running current	A	H	4.4 / 4.2 / 4.0	6.1 / 5.8 / 5.6	7.0 / 6.6 / 6.4	8.7 / 8.2 / 7.9	11.4 / 10.9 / 10.5

MiNi SMMS-e 3Ph Physical data

Outdoor unit		HP	MCY-MHP0404HS8-E	MCY-MHP0504HS8-E	MCY-MHP0604HS8-E	MCY-MHP0804HS8-E	MCY-MHP1004HS8-E
Air Flow	m³/h - l/s		5660 - 1572	5820 - 1617	6050 - 1681	8460-2350	8820-2450
Sound pressure level	dB(A)	C/H	49 / 52	50 / 53	51 / 54	58 / 59	59 / 60
Dimensions (HxWxD)	mm		1235 x 990 x 390	1235 x 990 x 390	1235 x 990 x 390	1740 x 990 x 390	1740 x 990 x 390
Weight	kg		125	125	125	147	147
Compressor type			Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		6.4 / 13.4	6.4 / 13.4	6.4 / 13.4	4.4 / 9.2	4.4 / 9.2
Gas line type - diameter			Flare - 5/8"	Flare - 5/8"	Flare - 3/4"	Flare 3/4	Flare 3/4
Liquid line type - diameter			Flare - 3/8"	Flare - 3/8"	Flare - 3/8"	Flare 3/8"(*2)	Flare 3/8"(*2)
Discharge line connection type - diameter							
Maximum equivalent length separation*	m		125	125	125	180	180
Maximum actual piping separation*	m		100	100	100	150	150
Maximum total pipe length*	m		180	180	180	300	300
Maximum lift (indoor unit above/below)	m		20/30	20/30	20/30	30/50	30/50
Operating range - db	°C	C	-5/46	-5/46	-5/46	-5/46	-5/46
Operating range - wb	°C	H	-20.0 / 15.0	-20.0 / 15.0	-20.0 / 15.0	-20.0 / 15.0	-20.0 / 15.0
Power supply	V-ph-Hz		380 / 400 / 415-3-50	380 / 400 / 415-3-50	380 / 400 / 415-3-50	380 / 400 / 415-3-50	380 / 400 / 415-3-50

* when PMV Kit is used: Maximum equivalent length separation (80 m); Maximum actual piping separation (65 m); Maximum total pipe length (150 m)

*2 Need to expand to 1/2" under certain condition.

C: cooling mode - H: heating mode

MMY-SAP_HT8P SMMS-E STAND ALONE



Keep all benefits of Toshiba SMMS-e with 50% less pre-charge refrigerant: new intelligent and innovative features that maximise end user comfort and system efficiencies.

Excellence

- Toshiba's in-house designed DC twin rotary compressor offers outstanding capacity, efficiency and comfort even under part load conditions.
- Incorporating Toshiba's latest inverter control for compressor precise regulation, maximum performance and energy savings.
- Outstanding 4-side heat exchanger + sub cooling heat exchanger for optimized efficiency
- Precise refrigerant control to ensure that each indoor unit receives exactly the right amount of refrigerant.

Expansion

- A wide choice of indoor unit styles and capacity ranges to match customer needs and room configurations.

Enhancement

- With up to 235 m in equivalent length, 90 m from the first branch kit to the farthest indoor unit and 70 m height difference, the system is fully adaptable to all project types.

MAX EFFICIENCY



3.81

CAPACITY



8HP > 10HP

OPERATION



-25°C > +46°C

For maximum peace of mind should a compressor failure occur, backup operation is available.

The ALL inverter control can be adjusted to compensate for a failed compressor.

SMMS-E STAND ALONE Performances

Outdoor unit	HP	MMY-	SAP0806HT8P-E 8 HP	SAP1006HT8P-E 10 HP
Cooling capacity ¹	kW		22.4	28.0
Power input	kW	C	5.54	7.69
EER	W/W		4.04	3.64
EthasC/SEER			249.8% / 6.32	244.2% / 6.18
Running current	A	C	8.8	12.4
Heating capacity ¹	kW		25.0	31.5
Power input	kW	H	5.43	7.41
COP	W/W		4.52	4.25
EthasH/SCOP			148.6% / 3.79	149.4% / 3.81
Running current	A	H	8.77	11.6
Maximum overcurrent protection ³	A		25	25

SMMS-E STAND ALONE Physical data

Outdoor unit	HP	MMY-	SAP0806HT8P-E	SAP1006HT8P-E
Air Flow	m ³ /h		9700	9700
Air Flow	l/s		2694	2694
Sound Power Level	dB(A)	H	74	74
Sound pressure level	dB(A)	H	56	58
Sound Power Level	dB(A)	C	74	74
Sound pressure level	dB(A)	C	55	57
External Static pressure available	Pa		60	60
Dimensions (h x w x d)	mm		1830 x 990 x 780	1830 x 990 x 780
Weight	kg	HP	227	227
Compressor type			Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg/TCO ₂ eq		5.7 / 11.9	5.7 / 11.9
Gas line type - diameter			Brazed - 3/4"	Brazed - 7/8"
Liquid line type - diameter			Flare - 1/2"	Flare - 1/2"
Farthest piping equivalent length	m		235	235
Farthest piping actual length	m		190	190
Maximum pipe length ⁴	m		300	300
Maximum lift (indoor unit above/below) ^{5,2}	m		40 / 70	40 / 70
Operating range - db ^{3,4}	°C	C	-10 / 46	-10 / 46
Operating range - wb ^{7,5,6}	°C	H	-25 / 15.5	-25 / 15.5
Power supply	V-ph-Hz		380 / 415-3-50	380 / 415-3-50

1) Rated conditions

Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb , Outdoor 35 degC Dry Bulb. Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC Wet Bulb. Based on equivalent piping length of 7.5m and piping height difference of 0m. 2) Indoor above condition: If the height difference between indoor units exceeds 3 m, set 30 m or less. Indoor below condition: If the height difference between indoor units exceeds 3 m, set 50 m or less. Also Extension up till 90m is possible. Be sure to refer the Engineering Databook for details of these conditions and requirements.

3) The unit operates down to an outdoor temperature of -10°C, however cooling performance may decline considerably when total operating capacity of indoor units is less than 4HP while ambient temperature is below -5°C. Consider installation location/surroundings and system design when expected to operate below -5°C. 4) Low ambient cooling (-5 deg C or less) is limited to application.

5) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C. 6) Low ambient heating (-20degC or less) for extended periods of time is not allowed.

C: cooling mode - H: heating mode

MMY-MUP_1HT8P

SMMS-u



SMMS-u, the latest generation of Toshiba VRF engineered in Japan, integrates a totally new redesigned chassis, a new compressor and a new heat exchanger to achieve unrivalled efficiency, outstanding comfort level and low environmental footprint.

Unrivalled

- Space efficient chassis design to ease product integration with no compromise on efficiency.
- Exclusive Toshiba Triple rotary compressor offering high capacity, outstanding performances with less refrigerant.
- Super efficient heat exchanger covering full product height to maximize energy exchange.
- Intelligent VRF control ensures exact quantity of refrigerant to be delivered to the indoor units to avoid waste of energy.
- KO-BE-TSU and Renkey new defrost solution for constant comfort level.

Universal

- Up to 24HP in single module and max 120HP in combination, enter into a new dimension!
- Up to 1,200m piping length max to cover the full building without splitting systems.
- Less constraints with 128 indoor units maximum per system.
- -25 to +52°C operating range to cover all climates over Europe.

Usability

- Ease commissioning and maintenance with direct USB connection, Wave Tool advance and Link adaptor.
- Trust into the new TU2C link protocol offering faster and stronger data transfer.

SCOP MAX



4.79

CAPACITY



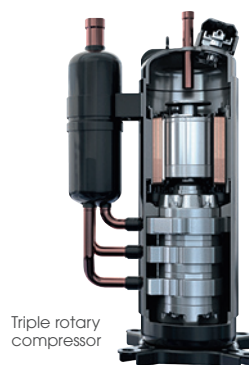
8HP > 24HP

OPERATION



-25°C > +52°C

The exclusive Toshiba triple rotary compressor brings outstanding performances to the SMMS-u with no compromise on system reliability.



SMMS-u Physical data

Outdoor unit		MMY-MUP0801HT8P-E	MUP1001HT8P-E	MUP1201HT8P-E	MUP1401HT8P-E	MUP1601HT8P-E	MUP1801HT8P-E	MUP2001HT8P-E	MUP2201HT8P-E	MUP2401HT8P-E
Air Flow	m³/h	9900	10500	11700	11880	15300	16800	15900	16500	16500
Sound Power Level	dB(A) C	75	77	79	79	83	84	86	86	86
Sound pressure level	dB(A) C	53	55	58	58	60	61	63	63	63
Sound Power Level	dB(A) H	76	77	81	82	86	89	90	90	90
Sound pressure level	dB(A) H	56	58	62	62	63	67	67	67	67
External Static pressure available	Pa	80	80	80	80	80	80	80	80	80
Dimensions (h x w x d)	mm	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780
Weight	kg	228	228	228	228	312	312	334	356	356
Compressor type		Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Triple Rotary	Hermetic Triple Rotary	Hermetic Triple Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg	6.0	6.0	6.0	6.0	9.0	9.0	9.0	9.0	9.0
	TCO2eq	12.5	12.5	12.5	12.5	18.8	18.8	18.8	18.8	18.8
Gas line type - diameter		Brazed - 3/4"	Brazed - 7/8"	Brazed - 1 1/8"	Brazed - 1 1/8"	Brazed - 1 1/8"	Brazed - 1 1/8"	Brazed - 1 1/8"	Brazed - 1 1/8"	Brazed - 1 3/8"
Liquid line type - diameter		Brazed - 1/2"	Brazed - 1/2"	Brazed - 1/2"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 5/8"	Brazed - 3/4"	Brazed - 3/4"
Farthest piping equivalent length	m	250	250	250	250	250	250	250	250	250
Farthest piping actual length	m	210	210	210	210	210	210	210	210	210
Maximum pipe length ⁵	m	500	500	500	500	500	500	500	500	500
Maximum lift (indoor unit above/below) ⁴	m	70/40	70/40	70/40	70/40	70/40	70/40	70/40	70/40	70/40
Operating range - db ^{5,6}	°C C	-10/52	-10/52	-10/52	-10/52	-10/52	-10/52	-10/52	-10/52	-10/52
Operating range - wb ^{7,8}	°C H	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5
Power supply	V-ph-Hz	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50

Models for Turkey : MMY-MUP_1HT8P-TR

SMMS-u Performances

Outdoor unit		MMY- MUP0801HT8P-E		MUP1001HT8P-E		MUP1201HT8P-E		MUP1401HT8P-E		MUP1601HT8P-E		MUP1801HT8P-E		MUP2001HT8P-E		MUP2201HT8P-E		MUP2401HT8P-E	
		8 HP		10 HP		12 HP		14 HP		16 HP		18 HP		20 HP		22 HP		24HP	
Cooling capacity ¹	kW	22.40		28.00		33.50		40.00		45.00		50.40		56.00		61.50		67.00	
Power input	kW C	5.64		8.36		10.34		14.55		14.06		15.90		18.01		20.43		24.19	
EER	W/W	3.97		3.35		3.24		2.75		3.20		3.17		3.11		3.01		2.77	
EthasC/SEER	W/W	294.6%/7.44		306.2%/7.73		289.8%/7.32		279.0%/7.05		305.4%/7.71		304.2%/7.68		301.8%/7.62		286.2%/7.23		271.8%/6.87	
Running current	A C	9.15		13.40		16.00		22.60		21.60		24.40		27.70		31.40		37.10	
Heating capacity rated/max	kW	22.4/25		28/31.5		33.5/37.5		40/45		45/50		50.4/56		56/63		61.5/69		67/70	
Power input (rated)	kW H	5.28		7.20		7.77		10.00		11.94		12.54		14.93		16.18		18.98	
COP	W/W	4.24		3.89		4.31		4.00		3.77		4.02		3.75		3.80		3.53	
EthasH/SCOP		177.0%/4.5		188.2%/4.78		187.0%/4.75		181.0%/4.6		188.6%/4.79		187.0%/4.75		174.2%/4.43		174.6%/4.44		163.8%/4.17	
Running current	A H	8.56		11.50		12.10		15.50		18.30		19.30		22.90		24.80		29.10	
Maximum overcurrent protection ²	A	20.00		32.00		32.00		40		40		50		50.00		63		80.00	

1) Rated conditions : Cooling : Indoor 27 degC Dry Bulb /19 degC Wet Bulb , Outdoor 35 degC Dry Bulb. Heating : Indoor 20 degC Dry Bulb, Outdoor 7 degC Dry Bulb / 6 degC WetBulb. Based on equivalent piping length of 7.5m and piping height difference of 0m. 2) If outdoor units are combined, refer to the installation manual. 3) Multiple outdoor systems : 1200m. Total charging refrigerant is 140kg or less. 4) Indoor above/below condition: If the height difference between indoor units exceeds 3 m, set 30 m. Also Extension up till 90m is possible. Be sure to refer the Engineering Databook for details of these conditions and requirements. 5) The unit operates down to an outdoor temperature of -10°C, however cooling performance may decline considerably when total operating capacity of indoor units is less than 4HP while ambient temperature is below -5°C. Consider installation location/ surroundings and system design when expected to operate below -5°C. On single outdoor unit only. No height difference between units. 6) Low ambient cooling (-5 deg C or less) is limited to application. 7) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C. 8) Low ambient heating (-20degC or less) for extended periods of time is not allowed. C = cooling mode. H = heating mode

SMMS-u Capacity table - Standard model

Capacity		Combination	Modèle	EER/SEER	COP/SCOP	Max indoor connectivity	
HP	Cooling/Heating in kW						
8	22.4/22.4	8	MMY-MUP0801HT8P-E/TR	3.97/7.44	4.24/4.5	18	
10	28/28	10	MMY-MUP1001HT8P-E/TR	3.35/7.73	3.89/4.78	22	
12	33.5/33.5	12	MMY-MUP1201HT8P-E/TR	3.24/7.32	4.31/4.75	27	
14	40/40	14	MMY-MUP1401HT8P-E/TR	2.75/7.05	4/4.6	31	
16	45/45	16	MMY-MUP1601HT8P-E/TR	3.27/7.71	3.77/4.79	36	
18	50.4/40.5	18	MMY-MUP1801HT8P-E/TR	3.17/7.68	4.02/4.75	40	
20	56/56	20	MMY-MUP2001HT8P-E/TR	3.11/7.62	3.75/4.43	45	
22	61.5/61.5	22	MMY-MUP2201HT8P-E/TR	3.01/7.23	3.8/4.44	49	
24	67/67	24	MMY-MUP2401HT8P-E/TR	2.77/6.87	3.53/4.17	52	
26	73.5/73.5	14 + 12	MMY-UP2611HT8P-E/TR	2.95/4.17	4.14/4.67	58	
28	80/80	14 + 14	MMY-UP2811HT8P-E/TR	2.75/7.05	4/4.6	63	
30	83.9/83.9	18 + 12	MMY-UP3011HT8P-E/TR	3.27/7.52	4.13/4.75	64	
32	89.5/89.5	20 + 12	MMY-UP3211HT8P-E/TR	3.16/7.5	3.94/4.55	65	
34	96/96	20 + 14	MMY-UP3411HT8P-E/TR	2.95/7.35	3.85/4.5	66	
36	100.5/100.5	24 + 12	MMY-UP3611HT8P-E/TR	2.91/7.01	3.76/4.38	67	
38	107/107	24 + 14	MMY-UP3811HT8P-E/TR	2.76/6.93	3.69/4.33	68	
40	112/112	20 + 20	MMY-UP4011HT8P-E/TR	3.11/7.62	3.75/4.43	69	
42	117.4/117.4	24 + 18	MMY-UP4211HT8P-E/TR	2.93/7.22	3.72/4.43	70	
44	123/123	24 + 20	MMY-UP4411HT8P-E/TR	2.91/7.21	3.63/4.3	71	
46	128.5/128.5	24 + 22	MMY-UP4611HT8P-E/TR	2.88/7.04	3.65/4.31	72	
48	134/134	24 + 24	MMY-UP4811HT8P-E/TR	2.77/6.87	3.53/4.17	73	
50	140.5/140.5	24 + 14 + 12	MMY-UP5011HT8P-E/TR	2.86/7.02	3.82/4.44	74	
52	147/147	24 + 14 + 14	MMY-UP5211HT8P-E/TR	2.76/6.96	3.77/4.41	75	
54	152/152	20 + 20 + 14	MMY-UP5411HT8P-E/TR	3.01/7.49	3.81/4.47	76	
56	156.5/156.5	24 + 20 + 12	MMY-UP5611HT8P-E/TR	2.98/7.23	3.75/4.41	77	
58	163/163	24 + 20 + 14	MMY-UP5811HT8P-E/TR	2.87/7.19	3.71/4.37	78	
60	167.5/167.5	24 + 24 + 12	MMY-UP6011HT8P-E/TR	2.85/6.95	3.66/4.3	79	
62	174/174	24 + 24 + 14	MMY-UP6211HT8P-E/TR	2.76/6.92	3.63/4.27	80	
64	179/179	24 + 20 + 20	MMY-UP6411HT8P-E/TR	2.97/7.34	3.67/4.34	81	
66	184.5/184.5	24 + 22 + 20	MMY-UP6611HT8P-E/TR	2.95/7.21	3.68/4.35	82	
68	190/190	24 + 24 + 20	MMY-UP6811HT8P-E/TR	2.86/7.09	3.59/4.26	83	
70	195.5/195.5	24 + 24 + 22	MMY-UP7011HT8P-E/TR	2.84/6.98	3.61/4.26	84	
72	201/201	24 + 24 + 24	MMY-UP7211HT8P-E/TR	2.77/6.87	3.53/4.17	85	
74	207.5/207.5	24 + 24 + 14 + 12	MMY-UP7411HT8P-E/TR	2.83/6.97	3.72/4.36	86	
76	214/214	24 + 24 + 14 + 14	MMY-UP7611HT8P-E/TR	2.76/6.93	3.69/4.33	87	
78	219/219	24 + 20 + 20 + 14	MMY-UP7811HT8P-E/TR	2.93/7.3	3.72/4.39	88	
80	223.5/223.5	24 + 24 + 20 + 12	MMY-UP8011HT8P-E/TR	2.91/7.14	3.68/4.34	90	
82	230/230	24 + 24 + 20 + 14	MMY-UP8211HT8P-E/TR	2.84/7.1	3.66/4.32	92	
84	234.5/234.5	24 + 24 + 24 + 12	MMY-UP8411HT8P-E/TR	2.83/6.95	3.62/4.26	94	
86	241/241	24 + 24 + 24 + 14	MMY-UP8611HT8P-E/TR	2.77/6.91	3.6/4.25	96	
88	246/246	24 + 24 + 20 + 20	MMY-UP8811HT8P-E/TR	2.91/7.21	3.63/4.3	98	
90	251.5/251.5	24 + 24 + 22 + 20	MMY-UP9011HT8P-E/TR	2.97/7.12	3.64/4.3	100	
92	257/257	24 + 24 + 24 + 20	MMY-UP9211HT8P-E/TR	2.84/7.03	3.58/4.24	102	
94	262.5/262.5	24 + 24 + 24 + 22	MMY-UP9411HT8P-E/TR	2.82/6.95	3.59/4.24	104	
96	268/268	24 + 24 + 24 + 24	MMY-UP9611HT8P-E/TR	2.77/6.87	3.53/4.17	106	
98	274.5/274.5	24 + 24 + 24 + 14 + 12	MMY-UP9811HT8P-E/TR	2.82/6.95	3.67/4.31	108	
100	281/281	24 + 24 + 24 + 14 + 14	MMY-UP10011HT8P-E/TR	2.76/6.94	3.65/4.3	110	
102	286/286	24 + 24 + 20 + 20 + 14	MMY-UP10211HT8P-E/TR	2.89/7.2	3.68/4.34	112	
104	290.5/290.5	24 + 24 + 24 + 20 + 12	MMY-UP10411HT8P-E/TR	2.88/7.08	3.65/4.3	114	
106	297/297	24 + 24 + 24 + 20 + 14	MMY-UP10611HT8P-E/TR	2.83/7.04	3.63/4.29	116	
108	301.5/301.5	24 + 24 + 24 + 24 + 12	MMY-UP10811HT8P-E/TR	2.82/6.93	3.6/4.24	118	
110	308/308	24 + 24 + 24 + 24 + 14	MMY-UP11011HT8P-E/TR	2.77/6.9	3.58/4.23	120	
112	313/313	24 + 24 + 24 + 20 + 20	MMY-UP11211HT8P-E/TR	2.88/7.13	3.61/4.28	122	
114	318.5/318.5	24 + 24 + 24 + 22 + 20	MMY-UP11411HT8P-E/TR	2.87/7.07	3.62/4.28	124	
116	324/324	24 + 24 + 24 + 24 + 20	MMY-UP11611HT8P-E/TR	2.82/7	3.57/4.22	126	
118	329.5/329.5	24 + 24 + 24 + 24 + 22	MMY-UP11811HT8P-E/TR	2.81/6.93	3.58/4.23	128	
120	335/335	24 + 24 + 24 + 24 + 24	MMY-UP12011HT8P-E/TR	2.77/6.87	3.53/4.17	128	

Models for Turkey : MMY-MUP_1HT8P-TR

MMY-SUG_1FT8P SHRM Advance



NEW



Using the same chassis as of SMMS-u, SHRM Advance is the latest generation of Toshiba VRF. It pushes the boundaries of VRF system featuring low environmental profile, wide flexibility and top-class efficiency as always.

Advanced concept

- Anticipate the future and move your projects to low GWP refrigerant VRF systems.
- Make your life easier with Toshiba's VRF packaged solutions!

One product two possibilities:

- 2-pipe heating or cooling.
- 3-pipe heating & cooling with heat recovery.

Advanced specification

- Up to 24HP in a single module, never experienced before with R32 refrigerant!
- Up to 54 indoor units per system for maximum flexibility.
- Up to 12 output flow selectors opening new piping design perspectives.
- Low footprint chassis that gives the possibility to install the outdoor unit either on the roof, on the ground or inside the building (80PA available pressure).

Advanced features

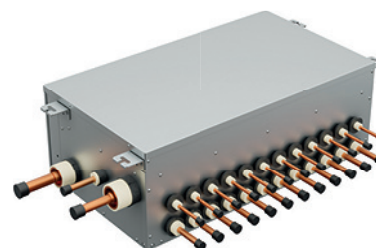
- Super efficient heat exchanger covering full product height to maximize energy exchange.
- Intelligent VRF control ensuring exact quantity of refrigerant to be delivered to the indoor units to avoid waste of energy.
- KO-BE-TSU and Renkey new defrost solution for constant comfort level.

Advanced service

- Easy commissioning and maintenance with direct USB connection, Wave Tool advance and Link adaptor.
- Trust the TU2C link protocol that offers faster and stronger data transfers.

SCOP MAX	CAPACITY	OPERATION
4.67	8HP > 24HP	-25°C > +52°C

Increased integration flexibility with the new generation of flow selectors 1, 4, 8 or 12 outputs, with embedded shut-off valves.



SHRM Advance Performances

PRELIMINARY DATA

Outdoor unit	MMY-	SUG0801MT8P-E	SUG1001MT8P-E	SUG1201MT8P-E	SUG1401MT8P-E	SUG1601MT8P-E	SUG1801MT8P-E	SUG2001MT8P-E	SUG2201MT8P-E	SUG2401MT8P-E
		8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24HP
Cooling capacity ¹	kW	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	67.0
Power input	kW C	5.13	6.83	8.88	12.0	12.2	14.8	15.5	18.2	24.3
EER	W/W	4.37	4.10	3.77	3.32	3.70	3.41	3.62	3.38	2.76
EthasC/SEER	W/W	353.0%/8.90	344.6%/8.69	326.2%/8.23	320.2%/8.08	342.6%/8.64	329.8%/8.32	328.6%/8.29	312.2%/7.88	263.4%/6.66
Running current	A C	9.14	11.5	14.2	18.9	21.1	24.8	25.4	29.2	38.1
Heating capacity rated/max	kW	22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	67.0
Power input (rated)	kW H	4.96	6.22	7.64	10.3	11.1	14.0	14.3	16.1	19.5
COP	W/W	4.52	4.50	4.38	3.89	4.07	3.60	3.93	3.82	3.44
EthasH/SCOP		174.6%/4.44	183.8%/4.67	181.8%/4.62	169%/4.30	183%/4.65	176.6%/4.49	168.6%/4.29	167.4%/4.26	158.6%/4.04
Running current	A H	8.95	10.6	12.5	16.3	19.9	23.8	23.6	26.1	30.9
Maximum overcurrent protection ²	A	20	32	32	40	40	50	50	63	80

SHRM Advance

SHRM Advance Physical data

Outdoor unit	MMY-	SUG0801MT8P-E	SUG1001MT8P-E	SUG1201MT8P-E	SUG1401MT8P-E	SUG1601MT8P-E	SUG1801MT8P-E	SUG2001MT8P-E	SUG2201MT8P-E	SUG2401MT8P-E
Air flow	m ³ /h	9900	10500	11700	11880	15300	16800	15900	16500	16800
Sound Power Level	dB(A) H	77.0	78.0	82.0	84.0	87.0	89.0	89.0	90.0	90.0
Sound pressure level	dB(A) H	56.0	58.0	62.0	63.0	64.0	67.0	67.0	67.0	69.0
Sound Power Level	dB(A) C	74.0	75.0	79.0	79.0	83.0	84.0	85.0	86.0	86.0
Sound pressure level	dB(A) C	53.0	55.0	58.0	58.0	60.0	61.0	63.0	64.0	64.0
External Static pressure available	Pa	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Dimensions (h x w x d)	mm	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 990 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780	1690 x 1290 x 780
Weight	kg	232	232	232	232	329	329	361	361	361
Compressor type		Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R32	kg	6.0	6.0	6.0	6.0	9.0	9.0	9.0	9.0	9.0
	TCO2eq	4.1	4.1	4.1	4.1	6.1	6.1	6.1	6.1	6.1
Gas line type - diameter for 2-pipe		φ19.1	φ22.2	φ22.2	φ28.6	φ28.6	φ28.6	φ28.6	φ28.6	φ28.6
Liquid line type - diameter for 2-pipe		φ12.7	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9
Suction line type - Diameter for 3-pipe		φ19.1	φ22.2	φ22.2	φ28.6	φ28.6	φ28.6	φ28.6	φ28.6	φ28.6
LP/HP gas line type - Diameter for 3-pipe		φ15.9	φ19.1	φ19.1	φ19.1	φ22.2	φ22.2	φ22.2	φ22.2	φ22.2
Liquid line type - diameter for 3-pipe		φ12.7	φ12.7	φ12.7	φ12.7	φ15.9	φ15.9	φ15.9	φ15.9	φ15.9
Farthest piping equivalent length for 2-pipe	m	215	215	215	215	215	215	215	215	215
Farthest piping actual length for 2-pipe	m	190	190	190	190	190	190	190	190	190
Farthest piping equivalent length for 3-pipe	m	190	190	190	190	190	190	190	190	190
Farthest piping actual length for 3-pipe	m	165	165	165	165	165	165	165	165	165
Maximum pipe length ²	m	500	500	500	500	500	500	500	500	500
Maximum lift for 3-pipe (indoor unit above/below) ³	m	40/90	40/90	40/90	40/90	40/90	40/90	40/90	40/90	40/90
Operating range - db ^{4,5}	°C C	-15 to 50	-15 to 50	-15 to 50	-15 to 50	-15 to 50	-15 to 50	-15 to 50	-15 to 50	-15 to 50
Operating range - wb ^{6,7}	°C H	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5	-25 to 15.5
Power supply	V-ph-Hz	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50

1) Rated conditions

Cooling : Indoor 27 degC Dry Bulb / 19 degC Wet Bulb . Outdoor 35 degC Dry Bulb . Heating : Indoor 20 degC Dry Bulb . Outdoor 7 degC Dry Bulb / 6 degC Wet Bulb.

Based on equivalent piping length of 7.5m and piping height difference of 0m.

2) The total amount of system refrigerant should be 63.8kg or less.

3) Indoor below condition:

If the height difference between indoor units exceeds 3 m, set 50 m or less.

Also Extension up till 90m is possible. Be sure to refer the Engineering Databook for details of these conditions and requirements.

4) The unit operates down to an outdoor temperature of -10°C, however cooling performance may decline considerably when total operating capacity of indoor units is less than 4HP while ambient temperature is below -5°C.

Consider installation location/surroundings and system design when expected to operate below -5°C.

On single outdoor unit only.

No height difference between units.

5) Low ambient cooling (-5 deg C or less) is limited to application.

6) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C.

7) Low ambient heating (-20degC or less) for extended periods of time is not allowed

SHRM Advance FS Boxes

PRELIMINARY DATA

Model name	Specification	Picture	Number of outputs	Max piping length FSBox/IDU	Max nb of IDUs per port	Max capacity per port	Dimensions (h"l"d)	Weight	Power supply	Comment
RBM-Y1121FUPE	Single port flow selector box		1	50m	5	<4HP	206 x 385 x 282	11	Separate	Embedded shut off valve
RBM-Y1801FUPE			1	50m	10	4HP ≤ P < 6.4HP		11	Separate	
RBM-Y2801FUPE			1	50m	10	6.4HP ≤ P < 10HP		11	Separate	
RBM-Y1801FU4PE	Multi port flow selector box		4	50m	10	<6.4HP	293 x 338 x 468	22	Separate	Embedded shut off valve
RBM-Y1801FU8PE			8	50m	10			36	Separate	
RBM-Y1801F12PE			12	50m	10			50	Separate	

SHRM Advance Shut of valve box

PRELIMINARY DATA

Model name	Specification	Picture	Number of outputs	Max capacity per port	Dimensions (h"l"d)	Weight	Power supply	Comment
RBM-SV1121HUPE	Shut of valve kit		1	<4HP	206 x 385 x 282	10	Separate	Dedicated for 2 pipes applications
RBM-SV1801HUPE			1	4HP ≤ P < 6.4HP	206 x 385 x 282	10	Separate	
RBM-SV6701HUPE			1	6.4HP ≤ P < 32.4HP	216 x 385 x 282	12	Separate	

SHRM Advance Leak detection

PRELIMINARY DATA

Model name	Specification	Picture	Dimensions (h"l"d)	Weight	Power supply	Comment
TCB-LD1UPE	Leak sensor		86 x 86 x 25	80g	Powered by the remote	For R32 VRF

SHRM Advance Other accessories

PRELIMINARY DATA

Model name	Specification	Picture	Dimensions (h"l"d)	Weight	Power supply	Comment
TCB-BT1UPE	Battery kit for flow selector and shut of valve		51 x 176 x 72	0.7kg	Using FSbox/Shut of valve box power supply	For FS Boxes and shut of valves

MMY-MAP_FT8P

SHRM-e



The SHRM-e, full Inverter heat recovery 3-pipe VRF, is the ultimate simultaneous heating & cooling solution for business applications.

Excellence

- Toshiba's in-house designed DC twin rotary compressor with outstanding capacity under partial load driven to improve efficiency and comfort.
- Incorporating Toshiba's latest inverter control, enables the precise modulation of the compressor, ensuring maximum performance and energy savings.
- 2 heat exchangers: outstanding 4-side heat exchanger + sub cooling heat exchanger to optimized efficiency.
- Precise refrigerant control ensures each indoor unit receives the right amount of refrigerant.

Expansion

- A complete range of indoor unit styles and capacity ranges, meets the demands of the customer and the room configuration.
- 7 outdoor unit model line-up from 8 to 20HP that can be installed in a variety of combinations, of up to a capacity of 54HP.

Enhancement

- With up to 1km of total pipe work, an equivalent piping length of 200m, and a maximum height separation of up to 70m, results in a system that is fully adaptable for all types of projects.
- Revolutionary hands-free Wave Tool technology that allows contactless commissioning and diagnoses to be carried out using a smartphone application.



SCOP MAX



3.71

CAPACITY



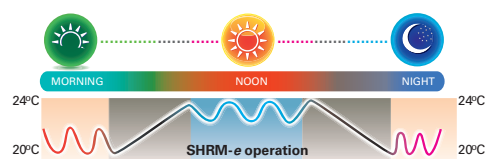
8HP > 54HP

OPERATION



-25°C > +46°C

The Dual Set Point increases the system's energy efficiency and reduces overall running costs, with longer periods of time in thermal off mode. Heating and cooling temperatures at which the indoor unit will begin to operate can now be individually selected giving maximum flexibility to the user.



SHRM-e Performances

Outdoor unit	HP	MMY-	MAP080FT8P-E/TR	MAP1006FT8P-E/TR	MAP1206FT8P-E/TR	MAP1406FT8P-E/TR	MAP1606FT8P-E/TR	MAP1806FT8P-E/TR	MAP2006FT8P-E/TR
			8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
Cooling capacity ¹	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	C	5.95	7.96	9.75	12.70	13.90	16.00	18.60
EER	W/W		3.76	3.51	3.43	3.14	3.23	3.15	3.01
EthasC/SEER	W/W		239.8% / 6.07	238.2% / 6.03	234.6% / 5.94	221.4% / 5.61	225.8% / 5.72	232.6% / 5.89	222.6% / 5.64
Running current	A	C	9.44	12.49	15.46	19.92	21.81	25.10	29.18
Heating capacity ²	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	H	5.40	7.05	8.70	10.50	12.20	13.70	15.90
COP	W/W		4.14	3.97	3.85	3.80	3.68	3.67	3.52
EthasH/SCOP			142.6% / 3.64	138.2% / 3.53	145.4% / 3.71	139.8% / 3.57	137% / 3.5	140.6% / 3.59	140.6% / 3.59
Running current	A	H	8.57	11.06	13.80	16.47	19.14	21.49	24.68
Maximum overcurrent protection ³	A		25.0	32.0	40.0	50.0	50.0	50.0	63.0

SHRM-e Physical data

Outdoor unit	HP	MMY-	MAP0806FT8P-E/TR	MAP1006FT8P-E/TR	MAP1206FT8P-E/TR	MAP1406FT8P-E/TR	MAP1606FT8P-E/TR	MAP1806FT8P-E/TR	MAP2006FT8P-E/TR
Air flow	m³/h		9 700	9 700	12 200	12 200	17 300	17 300	17 900
Air flow	l/s		2 694	2 694	3 389	3 389	4 806	4 806	4 972
Sound Power Level	dB(A)	H	82.0	82.0	82.0	83.0	84	84	84
Sound pressure level	dB(A)	H	61.0	61.0	62.0	64.0	62	62	62
Sound Power Level	dB(A)	C	80.0	80.0	80.0	81.0	83	83	83
Sound pressure level	dB(A)	C	59.0	59.0	60.0	62.0	61	61	61
External Static pressure available	Pa		60	50	50	40	40	40	40
Dimensions (h x w x d)	mm		1830x990x780	1830x990x780	1830x1210x780	1830x1210x780	1830x1600x780	1830x1600x780	1830x1600x780
Weight	kg		263	263	316	316	377	377	377
Compressor type			Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23
Suction line type - diameter			Brazed - 7/8"	Brazed - 7/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"
Liquid line type - diameter			Flare - 1/2"	Flare - 1/2"	Flare - 1/2"	Flare - 5/8"	Flare - 3/4"	Flare - 3/4"	Flare - 3/4"
Discharge line connection type - diameter			Flare - 3/4"	Flare - 3/4"	Flare - 3/4"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"
Farthest piping equivalent length ⁴	m		200	200	200	200	200	200	200
Farthest piping actual length	m		180	180	180	180	180	180	180
Maximum pipe length ⁵	m		1000	1000	1000	1000	1000	1000	1000
Maximum lift (indoor unit above/below) ⁶	m		30/70	30/70	30/70	30/70	30/70	30/70	30/70
Operating range - db ⁷	°C	C	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46	-10/46
Operating range - wb ⁸	°C	H	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5	-25/15.5
Power supply	V-ph-Hz		380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50	380/415-3-50

1) based on an indoor air temperature of 27°C db/19°C wb and an outdoor air temperature of 35°C db. 2) based on an indoor air temperature of 20°C db and an outdoor air temperature of 7°C db/6°C wb. 3) If outdoor units are combined, refer to the installation manual. 4) Allowable values for length equivalent to furthest pipe are shown following and they vary according to performance rank of outdoor unit. (22.4 to 56.0: 180m, 61.5 to 112:195m, 120:200m.). 5) Less than 34HP: 300m. Total charging refrigerant is 140 kg or less. 6) Indoor above condition: 40m is possible for a system that uses only the flow selector unit (single port long piping type and multi port type), whose all the indoor units are 3HP or higher, and working ambient temperature is 0°C or higher. Indoor below condition: If the height difference between indoor units exceed 3 m, set 50 m or less. Also Extension up till 90m is possible. Be sure to refer the Engineering Databook for details of these conditions and requirements. 7) Low ambient cooling (-5degC or less) 1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures. 2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling. 8) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C.

SHRM-e Capacity table - Standard model

Capacity	Combination	Modèle	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Max indoor connectivity
8 HP	8	MMY-MAP0806FT8P-E/TR	22.4	25	3.76	6.19	4.14	3.64	18
10 HP	10	MMY-MAP1006FT8P-E/TR	28	31.5	3.51	6.13	3.97	3.54	22
12 HP	12	MMY-MAP1206FT8P-E/TR	33.5	37.5	3.43	6.02	3.85	3.71	27
14 HP	14	MMY-MAP1406FT8P-E/TR	40	45	3.14	5.67	3.8	3.57	31
16 HP	16	MMY-MAP1606FT8P-E/TR	45	50	3.26	5.78	3.68	3.51	36
18 HP	18	MMY-MAP1806FT8P-E/TR	50.4	56.5	3.15	5.94	3.67	3.59	40
20 HP	20	MMY-MAP2006FT8P-E/TR	56	58	3.01	5.68	6.52	3.6	41
22 HP	12 + 10	MMY-AP2216FT8P-E/TR	61.5	69	3.47	6.07	3.9	3.64	49
24 HP	14 + 10	MMY-AP2416FT8P-E/TR	68	76.5	3.29	5.88	3.8	3.56	51
26 HP	14 + 12	MMY-AP2616FT8P-E/TR	73.5	82.5	3.27	5.84	3.83	3.64	58
28 HP	14 + 14	MMY-AP2816FT8P-E/TR	80	90	3.15	5.67	3.81	3.57	63
30 HP	16 + 14	MMY-AP3016FT8P-E/TR	85	95	3.2	5.72	3.74	3.54	64
32 HP	18 + 14	MMY-AP3216FT8P-E/TR	90.4	101.5	3.15	5.82	3.1	3.59	64
34 HP	18 + 16	MMY-AP3416FT8P-E/TR	95.4	106.5	3.19	5.86	3.68	3.55	64
36 HP	18 + 18	MMY-AP3616FT8P-E/TR	100.8	113	3.15	5.94	3.68	3.59	64
38 HP	20 + 18	MMY-AP3816FT8P-E/TR	106.4	114.5	3.08	5.81	3.59	3.6	64
40 HP	20 + 20	MMY-AP4016FT8P-E/TR	112	116	3.01	5.68	3.52	3.6	64
42 HP	14 + 14 + 14	MMY-AP4216FT8P-E/TR	120	135	3.15	5.67	3.81	3.57	64
44 HP	16 + 14 + 14	MMY-AP4416FT8P-E/TR	125	140	3.18	5.71	3.77	3.55	64
46 HP	18 + 14 + 14	MMY-AP4616FT8P-E/TR	130.4	146.5	3.15	5.78	3.76	3.58	64
48 HP	18 + 16 + 14	MMY-AP4816FT8P-E/TR	135.4	151.5	3.25	5.83	3.7	3.57	64
50 HP	18 + 18 + 14	MMY-AP5016FT8P-E/TR	140.8	158	3.21	5.88	3.7	3.59	64
52 HP	18 + 18 + 16	MMY-AP5216FT8P-E/TR	145.8	163	3.18	5.89	3.68	3.57	64
54 HP	18 + 18 + 18	MMY-AP5416FT8P-E/TR	152.1	169.5	3.15	5.94	3.68	3.59	64

MMY-MAP_FT8P

SHRM-e



The SHRM-e, full Inverter heat recovery 3-pipe VRF, is the ultimate simultaneous heating & cooling solution for business applications.

Excellence

- Toshiba's in-house designed DC twin rotary compressor with outstanding capacity under partial load driven to improve efficiency and comfort.
- Incorporating Toshiba's latest inverter control, enables the precise modulation of the compressor, ensuring maximum performance and energy savings.
- 2 heat exchangers: outstanding 4-side heat exchanger + sub cooling heat exchanger to optimized efficiency.
- Precise refrigerant control ensures each indoor unit receives precisely the right amount of refrigerant.

Expansion

- 7 outdoor unit model line-up from 8 to 20HP that can be installed in a variety of combinations, of up to a capacity of 42HP.
- A complete range of indoor unit styles and capacity ranges, meets the demands of the customer and the room configuration.

Enhancement

- Up to 1km total piping length; 200m in equivalent length and 70m of height difference.
- Revolutionary hands-free Wave Tool technology that allows contactless commissioning and diagnoses to be carried out using a smartphone application.

SCOP MAX



3.71

CAPACITY



8HP > 42HP

OPERATION



-25°C > +46°C

In addition to the existing 3 series and new 4 series single port flow selector, Toshiba is proud to release the all new 4 and 6 port multi box, that enables multiple indoor unit connection, increasing the design flexibility and ease of installation.



SHRM-e Performances

Outdoor unit	HP	MMY-	MAP0806FT8P-UK	MAP1006FT8P-UK	MAP1206FT8P-UK	MAP1406FT8P-UK	MAP1606FT8P-UK	MAP1806FT8P-UK	MAP2006FT8P-UK
			8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
Cooling capacity ¹	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	C	5.95	7.96	9.75	12.70	13.90	16.00	18.60
EER	W/W		3.76	3.51	3.43	3.14	3.23	3.15	3.01
EthasC/SEER	W/W		239.8% / 6.07	238.2% / 6.03	234.6% / 5.94	221.4% / 5.61	225.8% / 5.72	232.6% / 5.89	222.6% / 5.64
Running current	A	C	9.44	12.49	15.46	19.92	21.81	25.10	29.18
Heating capacity ²	kW		22.4	28.0	33.5	40.0	45.0	50.4	56.0
Power input	kW	H	5.40	7.05	8.70	10.50	12.20	13.70	15.90
COP	W/W		4.14	3.97	3.85	3.80	3.68	3.67	3.52
EthasH/SCOP			142.6% / 3.64	138.2% / 3.53	145.4% / 3.71	139.8% / 3.57	137% / 3.5	140.6% / 3.59	140.6% / 3.59
Running current	A	H	8.57	11.06	13.80	16.47	19.14	21.49	24.68
Maximum overcurrent protection ³	A		25.0	32.0	40.0	50.0	50.0	50.0	63.0

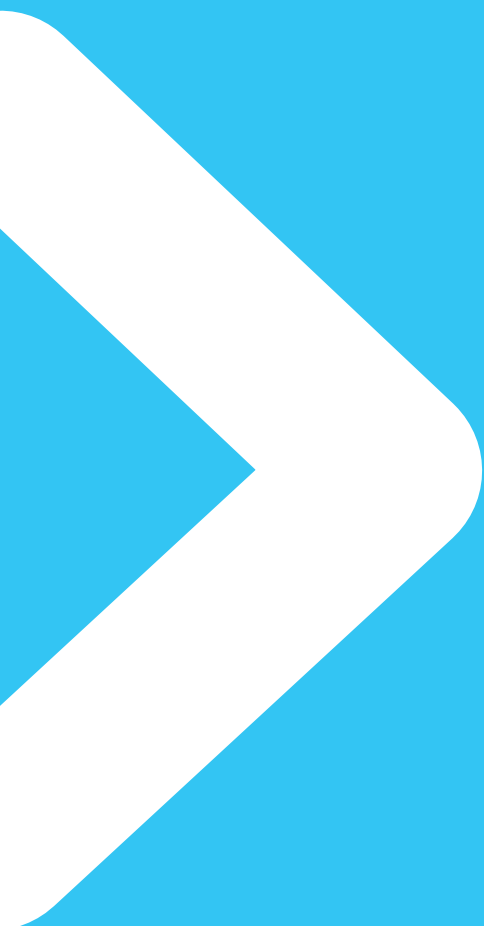
SHRM-e Physical data

Outdoor unit	HP	MMY-	MAP0806FT8P-UK	MAP1006FT8P-UK	MAP1206FT8P-UK	MAP1406FT8P-UK	MAP1606FT8P-UK	MAP1806FT8P-UK	MAP2006FT8P-UK
Air flow	m ³ /h		9 700	9 700	12 200	12 200	17 300	17 300	17 900
Air flow	l/s		2 694	2 694	3 389	3 389	4 806	4 806	4 972
Sound Power Level	dB(A)	H	82.0	82.0	82.0	83.0	84	84	84
Sound pressure level	dB(A)	H	61.0	61.0	62.0	64.0	62	62	62
Sound Power Level	dB(A)	C	80.0	80.0	80.0	81.0	83	83	83
Sound pressure level	dB(A)	C	59.0	59.0	60.0	62.0	61	61	61
External Static pressure available	Pa		60	50	50	40	40	40	40
Dimensions (h x w x d)	mm		1830 x 990 x 780	1830 x 990 x 780	1830 x 1210 x 780	1830 x 1210 x 780	1830 x 1600 x 780	1830 x 1600 x 780	1830 x 1600 x 780
Weight	kg		263	263	316	316	377	377	377
Compressor type			Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary	Hermetic Twin Rotary
Refrigerant charge R410A	kg/TCO2eq		11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23	11 / 23
Suction line type - diameter			Brazed - 7/8"	Brazed - 7/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"	Brazed - 1-1/8"
Liquid line type - diameter			Flare - 1/2"	Flare - 1/2"	Flare - 1/2"	Flare - 5/8"	Flare - 3/4"	Flare - 3/4"	Flare - 3/4"
Discharge line connection type - diameter			Flare - 3/4"	Flare - 3/4"	Flare - 3/4"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"	Flare - 7/8"
Farthest piping equivalent length ⁴	m		200	200	200	200	200	200	200
Farthest piping actual length	m		180	180	180	180	180	180	180
Maximum pipe length ⁵	m		1000	1000	1000	1000	1000	1000	1000
Maximum lift (indoor unit above/below) ⁶	m		30/70	30/70	30/70	30/70	30/70	30/70	30/70
Operating range - db ⁷	°C	C	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46	-10 / 46
Operating range - wb ⁸	°C	H	-25 / 15.5	-25 / 15.5	-25 / 15.5	-25 / 15.5	-25 / 15.5	-25 / 15.5	-25 / 15.5
Power supply	V-ph-Hz		380 / 415-3-50	380 / 415-3-50	380 / 415-3-50	380 / 415-3-50	380 / 415-3-50	380 / 415-3-50	380 / 415-3-50

1) based on an indoor air temperature of 27°C db/19°C wb and an outdoor air temperature of 35°C db. 2) based on an indoor air temperature of 20°C db and an outdoor air temperature of 7°C db/6°C wb. 3) If outdoor units are combined, refer to the installation manual. 4) Allowable values for length equivalent to furthest pipe are shown following and they vary according to performance rank of outdoor unit. (22.4 to 56.0: 180m, 61.5 to 112:195m, 120:200m.). 5) Less than 34HP: 300m. Total charging refrigerant is 140 kg or less. 6) Indoor above condition: 40m is possible for a system that uses only the flow selector unit (single port long piping type and multi port type), whose all the indoor units are 3HP or higher, and working ambient temperature is 0°C or higher. Indoor below condition: If the height difference between indoor units exceed 3 m, set 50 m or less. Also Extension up till 90m is possible. Be sure to refer the Engineering Databook for details of these conditions and requirements. 7) Low ambient cooling (-5degC or less). 1. Not suitable for applications, which require precise room temperature control, due to increased risk of indoor ON/OFF control and potential low air off temperatures. 2. For areas that do demand a precise room temperature control, we would recommend the installation of a secondary system, which has been designed solely for the purpose of low ambient cooling. 8) The unit operates down to an outdoor temperature of -25°C, however considerable performance decrease will be expected below -20°C. Consider installation location/surroundings and system design when expected to operate between -20°C and -25°C.

SHRM-e Capacity table - Standard model

Capacity	Combination	Modèle	Cooling capacity	Heating capacity	EER	SEER	COP	SCOP	Max indoor connectivity
8 HP	8	MMY-MAP0806FT8P-UK	22.4	25	3.76	6.19	4.14	3.64	18
10 HP	10	MMY-MAP1006FT8P-UK	28	31.5	3.51	6.13	3.97	3.54	22
12 HP	12	MMY-MAP1206FT8P-UK	33.5	37.5	3.43	6.02	3.85	3.71	27
14 HP	14	MMY-MAP1406FT8P-UK	40	45	3.14	5.67	3.8	3.57	31
16 HP	16	MMY-MAP1606FT8P-UK	45	50	3.26	5.78	3.68	3.51	36
18 HP	18	MMY-MAP1806FT8P-UK	50.4	56.5	3.15	5.94	3.67	3.59	40
20 HP	20	MMY-MAP2006FT8P-UK	56	58	3.01	5.68	6.52	3.6	41
22 HP	12 + 10	MMY-AP2216FT8P-UK	61.5	69	3.47	6.07	3.9	3.64	49
24 HP	14 + 10	MMY-AP2416FT8P-UK	68	76.5	3.29	5.88	3.8	3.56	51
26 HP	14 + 12	MMY-AP2616FT8P-UK	73.5	82.5	3.27	5.84	3.83	3.64	58
28 HP	14 + 14	MMY-AP2816FT8P-UK	80	90	3.15	5.67	3.81	3.57	63
30 HP	16 + 14	MMY-AP3016FT8P-UK	85	95	3.2	5.72	3.74	3.54	64
32 HP	18 + 14	MMY-AP3216FT8P-UK	90.4	101.5	3.15	5.82	3.1	3.59	64
34 HP	18 + 16	MMY-AP3416FT8P-UK	95.4	106.5	3.19	5.86	3.68	3.55	64
36 HP	18 + 18	MMY-AP3616FT8P-UK	100.8	113	3.15	5.94	3.68	3.59	64
38 HP	20 + 18	MMY-AP3816FT8P-UK	106.4	114.5	3.08	5.81	3.59	3.6	64
40 HP	20 + 20	MMY-AP4016FT8P-UK	112	116	3.01	5.68	3.52	3.6	64
42 HP	14 + 14 + 14	MMY-AP4216FT8P-UK	120	135	3.15	5.67	3.81	3.57	64
34 HP	18 + 16	MMY-AP3416FT8P-UK	95.4	106.5	7.95	3.19	3.68	5.14	64
36 HP	18 + 18	MMY-AP3616FT8P-UK	100.8	113	7.86	3.15	3.68	5.4	64
38 HP	20 + 18	MMY-AP3816FT8P-UK	106.4	114.5	7.35	3.08	3.59	4.88	64
40 HP	20 + 20	MMY-AP4016FT8P-UK	112	116	7.1	3.01	3.52	4.78	64
42 HP	14 + 14 + 14	MMY-AP4216FT8P-UK	120	135	7.3	3.15	3.81	5.61	64



EUROPEAN UNION, TURKEY & MIDDLE EAST

**CE Mark
indoor units**

CHOOSE YOUR ADAPTED SYSTEM SOLUTION

INDOOR UNITS, HOT WATER & FRESH AIR SOLUTIONS

			Basic specifications																	
FOR EUROPE	Model type	Class	003	005	007	009	012	015	018	024	027	030	036	048	056	072	096	112	128	SHRM-Advance compatibility
		Cooling/Heating capacity in kW	0.9 /1.1	1.7 /1.9	2.2 /2.5	2.8 /3.2	3.6 /4	4.5 /5	5.6 /6.3	7.1 /8	8.0 /9	9.0 /10	11.2/ 12.5	14.0 /16	16.0 /18	22.4 / 25	28.0 / 31.5	33.5 / 20.8	40 / 25.2	
		Cooling/Heating capacity in HP	0,3*	0,6	0,8	1	1,25	1,7	2	2,5	3	3,2	4	5	6	8	10	12	14	
	Compact 4-way discharge cassette	MMU-UP***1MH-E		●	●	●	●	●	●											●
	Smart 4-way discharge cassette	MMU-UP***H-E				●	●	●	●	●	●	●	●	●						●
	4-way discharge cassette	MMU-UP***1HP-E				●	●	●	●	●	●	●	●	●	●					●
	2-way discharge cassette	MMU-UP***1WH-E			●	●	●	●	●	●	●	●	●	●	●					●
	1-way discharge cassette	MMU-UP***1YHP-E	●	●	●	●	●	●	●	●										●
	Slim duct	MMD-UP***1SPHY-E	●	●	●	●	●	●	●	●										●
	Concealed duct	MMD-UP***1BHP-E		●	●	●	●	●	●	●	●	●	●	●	●					●
	Concealed duct high static	MMD-UP***1HP-E							●	●	●		●	●	●	●	●			●
	Ceiling suspended	MMC-UP***1HP-E						●	●	●	●		●	●	●					●
	Floor-standing concealed	MML-UP***1BH-E			●	●	●	●	●	●										
	Floor-standing cabinet	MML-UP***1H-E			●	●	●	●	●	●										
	Bi-flow console	MML-UP***1NH-E			●	●	●	●	●											
	Floor standing	MMF-UP***1H-E						●	●	●	●		●	●	●					
	High wall (With & without PMV)	MMK-UP***1HP-E MMK-UP***1HPL-E	●	●	●	●	●	●	●	●	●	●	●							●
	Mid temperature Hot Water module	MMW-UP***1LQ-E									●				●					●
	High temperature Hot Water module	MMW-AP***1CHQ-E												●						
	AHU DX kit (TA/TF/0-10v)	TCB-IFDM*01UP-E RBM-A*01UPVA-E	From 8 to 120HP capacity																	
	EMEA AHU DX Kit (std version)	MM-DXC010 + MM-DXV***							●	●	●		●	●		●	●			
	EMEA AHU DX Kit (0/10v version)	RBC-DXC031 + MM-DXV***													●	●	●			
	Fresh air intake indoor unit	MMD-UP***1HFP-E												●		●	●	●	●	

AIR TO AIR HEAT EXCHANGER

			Basic specifications								
FOR EUROPE	Model type	Air flow in m³/h	150	250	350	500	650	800	1000	1500	2000
		Cooling/Heating capacity in kW for models with DX coil				4.5/5		6.5/8.6	8.2/10.9		
	Air-to-air heat exchanger	VN-M**0HE	●	●	●	●	●	●	●	●	●
	A2A heat exchanger + DXcoil or + Dxcoil & Humidifier	MMD-VN***2HEXE MMD-VNK***2HEXE				●		●	●		

•:Heat pump

* Only compatible with SMMS-u & SHRM Advance

MMU-UP_MH COMPACT 4-WAY CASSETTE



The compact 4-way cassette has been especially designed for business office applications, where a compact and efficient solution is required.

Design

- Smart flat-panel design with clean lines that will complement any decorative style.
- Fit within the T-bar of grid ceiling: 620mm X 620mm.

Comfort

- A user programmable 5-step flow with individual louvre swing control, plus a new "cycle-swing" harmonised louvre setting
- The occupancy motion sensor can be configured to switch the unit into standby mode or completely switched off, when no movement is detected, minimising the energy usage of the system.

Easy to install

- Only 256mm height, this compact chassis is perfectly suited to confined spaces.
- Built-in high-lift drain pump.
- Lightweight unit, for easy and quick installation.

CAPACITY



1.7kW > 6.3kW

SOUND PRESSURE LEVEL



29dB(A)

OUTDOOR UNITS

Side Blow
& MINI SMMS-eSMMS-u
& SHRM AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS

RBC-AXU31UM-E
RBC-AXU31-ERBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

COMPACT 4-WAY CASSETTE Performances

Indoor unit	MMU-	UP0051MH-E/TR	UP0071MH-E/TR	UP0091MH-E/TR	UP0121MH-E/TR	UP0151MH-E/TR	UP0181MH-E/TR
Cooling capacity	kW	1,7	2,2	2,8	3,6	4,5	5,6
Heating capacity	kW	1,9	2,5	3,2	4,0	5,0	6,3
Power consumption	kW	0.016	0.023	0.025	0.027	0.030	0.052
Running current	A	0.16	0.23	0.24	0.25	0.28	0.46
Starting current	A	0.28	0.41	0.43	0.44	0.50	0.80

COMPACT 4-WAY CASSETTE Physical data

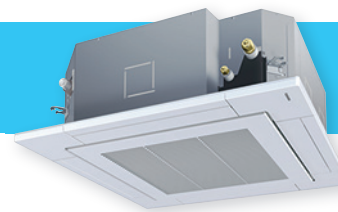
Indoor unit	MMU-	UP0051MH-E/TR	UP0071MH-E/TR	UP0091MH-E/TR	UP0121MH-E/TR	UP0151MH-E/TR	UP0181MH-E/TR
Air Flow (h/m+/m/l+/l)	m³/h	430/415/400/385/365	552/500/462/395/378	570/520/468/395/378	594/550/504/420/402	660/600/552/480/468	840/740/642/540/522
Air Flow (h/m+/m/l+/l)	l/s	119/115/111/107/101	153/139/128/110/105	158/144/130/110/105	165/153/140/117/112	183/167/153/133/130	233/206/178/150/145
Sound pressure level (h/m+/m/l+/l)	dB(A)	32/31/30/29/29	37/34/33/30/29	38/35/33/30/29	38/36/34/31/30	40/37/35/32/31	47/43/39/36/34
Sound power level (h/m+/m/l+/l)	dB(A)	47/46/45/44/44	52/49/48/45/44	53/50/48/45/44	53/51/49/46/45	55/52/50/47/46	62/58/54/51/49
Dimensions (HxWxD)	mm	256x575x575	256x575x575	256x575x575	256x575x575	256x575x575	256x575x575
Weight	kg	15	15	15	15	15	15
Panel	RBC-UM21PG(W)-E						
Panel dimensions (HxWxD)	mm	12x620x620	12x620x620	12x620x620	12x620x620	12x620x620	12x620x620
Panel weight	kg	2.5	2.5	2.5	2.5	2.5	2.5
Connecting pipe, gas	in	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"
Connecting pipe, liquid	in	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Drain port diameter	mm	20	20	20	20	20	20
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMU-UP_H

4-WAY SMART CASSETTE



> NEW



The 4-way cassette is designed to provide uniform air distribution and total user comfort making this unit the ideal solution for small commercial applications. Combining all the expertise of Toshiba, the Smart Cassette is the perfect mix between comfort, elegance and efficiency.

Comfort

- Unique flap design for optimal air distribution.
- Louvre position individual setting: 3 different swing modes from standard, diagonally, opposite to turn around.
- 5-step fan to precisely control the air flow.
- Low noise level thanks to large air suction opening.

Reliability

- Built-in high-lift drain pump.

Savings

- Optional motion sensor for automatic operation.
- High efficiency DC fan motor to maximize heat exchange with limited power consumption.

CAPACITY



2.8kW > 18kW

SOUND PRESSURE LEVEL



26dB(A)

OUTDOOR UNITSSide Blow
& Mini SMMS-eSMMS-u
& SHRM AdvanceSMMS-e
& SHRM-e**LOCAL CONTROLS**

RBC-AXU41U-E

RBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E**4-WAY SMART CASSETTE Performances**

Indoor unit	MMU-	UP0091H-E/TR	UP0121H-E/TR	UP0151H-E/TR	UP0181H-E/TR	UP0241H-E/TR	UP0271H-E/TR	UP0301H-E/TR	UP0361H-E/TR	UP0481H-E/TR	UP0561H-E/TR
Capacity code	hp	1	1.25	1.7	2	2.5	3	3.2	4	5	6
Cooling	kW	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
Heating	kW	3.2	4.0	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0
Running current		0.18	0.18	0.2	0.26	0.38	0.48	0.6	0.94	0.96	0.97
Power consumption	W	20	20	18	26	42	54	68	125	135	137
Starting current	A	0.27	0.27	0.30	0.39	0.57	0.72	0.90	1.41	1.44	1.46

4-WAY SMART CASSETTE Physical data

Indoor unit			MMU-	UP0091H-E/TR	UP0121H-E/TR	UP0151H-E/TR	UP0181H-E/TR	UP0241H-E/TR	UP0271H-E/TR	UP0301H-E/TR	UP0361H-E/TR	UP0481H-E/TR	UP0561H-E/TR
Standard air flow	H/M+/M/L+/L	m³/h	846/792/768/738/708	846/792/768/738/708	1060/960/920/860/800	1260/1160/1100/1040/940	1580/1440/1300/1210/1120	1770/1590/1380/1320/1250	1940/1770/1520/1450/1400	2184/1848/1596/1356/1260	2262/1998/1740/1470/1368	2262/2034/1782/1512/1404	
Sound pressure level	H/M/L	dB(A)	30/29/28/27/26	30/29/28/27/26	32/30/30/29/28	36/34/33/32/31	41/39/37/35/35	42/40/37/36/35	44/42/39/38/37	45/41/38/36/32	46/43/39/37/33	46/43/40/38/35	
Sound power level	H/M+/M/L+/L	dB(A)	45/44/43/42/42	45/44/43/42/42	46/45/44/43/42	50/48/47/46/45	55/53/51/49/48	56/54/51/50/49	58/56/53/52/51	60/56/53/50/48	61/57/54/52/49	61/58/55/53/51	
Outer dimension	Main unit	H x L x P	mm	256 x 840 x 840	256 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840	
	Ceiling panel	H x L x P	mm	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	30 x 950 x 950	
Total weight	Main unit	kg	18	18	25	25	25	25	25	25	25	25	
	Ceiling panel	kg	5	5	5	5	5	5	5	5	5	5	
Appearance	Main unit		Heat-insulating material attached Zinc hot dipping steel plate										
	Ceiling panel	Model	RBC-U41PG(W)-E										
		Panel color	White (2.5GY9.0/0.5)										
Connecting pipe	Gas pipe	inch	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	
	Liquid pipe	inch	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	
	Drain port (Outside dia.)	mm	25 (Polyvinyl chloride tube)										
Power supply		1 phase 50Hz 230V(220V-240V) - Separate power supply for indoor units is required.											

MMU-UP_HP 4-WAY CASSETTE



> NEW PANEL DESIGN

The 4-way cassette is designed to provide uniform air distribution and total user comfort making this unit the ideal solution for small commercial applications.

Comfort

- Possibility to set three different swing modes providing individual control to maximise end user comfort.
- Wide air flow in all directions.
- Optimal air diffusion up to 4.6m ceiling height!
- Automatic operation by using optional motion sensor.
- PM2.5 filter available as an option (TCB-PLFC1UP80-PE & TCB-PLFC2UP120-PE).

Reliability

- Heat exchanger self-cleaning function.
- Built-in high-lift drain pump.

Easy to install

- Compact chassis with only 256mm height (up to size 30).
- Lightweight unit, for easy and quick installation.

CAPACITY



2.8kW > 18kW

SOUND PRESSURE LEVEL



27dB(A)

OUTDOOR UNITS



Side Blow
& MINI SMMS-e



SMMS-u
& SHRM Advance



SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU33UP-E
RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

4-WAY CASSETTE Performances

Indoor unit	MMU-	UP0091HP-E/TR	UP0121HP-E/TR	UP0151HP-E/TR	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0301HP-E/TR	UP0361HP-E/TR	UP0481HP-E/TR	UP0561HP-E/TR
Cooling capacity	kW	2,8	3,6	4,5	5,6	7,1	8,0	9,0	11,2	14,0	16,0
Heating capacity	kW	3,2	4,0	5,0	6,3	8,0	9,0	10,0	12,5	16,0	18,0
Power consumption	kW	0,021	0,021	0,023	0,026	0,036	0,036	0,043	0,088	0,112	0,112
Running current	A	0,23	0,23	0,27	0,29	0,38	0,38	0,43	0,78	0,88	0,88
Starting current	A	0,30	0,30	0,33	0,36	0,42	0,42	0,59	0,87	1,23	1,26

4-WAY CASSETTE Physical data

Indoor unit	MMU-	UP0091HP-E/TR	UP0121HP-E/TR	UP0151HP-E/TR	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0301HP-E/TR	UP0361HP-E/TR	UP0481HP-E/TR	UP0561HP-E/TR
Air Flow (h/m/l)	m³/h	800/730/680	800/730/680	930/830/790	1050/920/800	1290/920/800	1290/920/800	1320/1100/850	1970/1430/1070	2130/1430/1130	2130/1520/1230
Air Flow (h/m/l)	l/s	222/203/189	222/203/189	258/231/219	292/256/222	358/256/222	358/256/222	367/306/236	547/397/297	592/397/314	592/422/342
Sound pressure level (h/m/l)	dB(A)	30/29/27	30/29/27	31/29/27	32/29/27	35/31/28	35/31/28	38/33/30	43/38/32	46/38/33	46/40/33
Sound power level (h)	dB(A)	45	45	46	47	50	50	53	58	61	61
Dimensions (HxWxD)	mm	256x840x840	256x840x840	256x840x840	256x840x840	256x840x840	256x840x840	256x840x840	319x840x840	319x840x840	319x840x840
Weight	kg	18	18	20	20	20	20	20	25	25	25
Panel	RBC-U33P-E										
Panel dimensions (HxWxD)	mm	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950
Panel weight	kg	4	4	4	4	4	4	4	4	4	4
Connecting pipe, gas		3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Drain port diameter	mm	25	25	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMU-UP_WH 2-WAY CASSETTE



Slim, compact and lightweight, the 2-way cassette has been designed to fit easily and discretely into any room interior.

Comfort

- Unique air flow control, provides a balanced flow of air in two opposite directions, maximising air flow distribution. This feature when combined with the units fresh air intake ability helps to provide a perfect solution all year round.
- Enhanced indoor air quality with standard long-life filters with a wide bended surface to effectively collect dust particles.

Design

- The elegant white decoration panel allows the unit to be installed seamlessly into any room.

Easy to install

- Minimal weight (19kg) for units up to 4.5kw.
- Compact dimensions (height 295mm).
- Built-in drain pump.

CAPACITY



2.2kW > 18kW

SOUND PRESSURE LEVEL



30dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM-AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS



TCB-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

2-WAY CASSETTE Performances

Indoor unit	MMU-	UP0071WH-E/TR	UP0091WH-E/TR	UP0121WH-E/TR	UP0151WH-E/TR	UP0181WH-E/TR	UP0241WH-E/TR	UP0271WH-E/TR	UP0301WH-E/TR	UP0361WH-E/TR	UP0481WH-E/TR	UP0561WH-E/TR
Cooling capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1	8,0	9,0	11,2	14,0	16,0
Heating capacity	kW	2,5	3,2	4,0	5,0	6,3	8,0	9,0	10,0	12,5	16,0	18,0
Power consumption	kW	0,029	0,029	0,029	0,030	0,044	0,054	0,054	0,064	0,073	0,088	0,117
Running current	A	0,23	0,23	0,23	0,24	0,32	0,39	0,39	0,46	0,48	0,57	0,75
Starting current	A	0,35	0,35	0,35	0,36	0,48	0,59	0,59	0,69	0,72	0,86	1,13

2-WAY CASSETTE Physical data

Indoor unit	MMU-	UP0071WH-E/TR	UP0091WH-E/TR	UP0121WH-E/TR	UP0151WH-E/TR	UP0181WH-E/TR	UP0241WH-E/TR	UP0271WH-E/TR	UP0301WH-E/TR	UP0361WH-E/TR	UP0481WH-E/TR	UP0561WH-E/TR
Air Flow (h/m/l)	m³/h	558/498/450	558/498/450	558/498/450	600/534/450	900/750/618	1050/840/738	1050/840/738	1260/900/780	1740/1434/1182	1800/1482/1230	2040/1578/1320
Air Flow (h/m/l)	l/s	155/138/125	155/138/125	155/138/125	167/148/125	250/208/172	291/233/205	291/233/205	350/250/217	483/398/328	500/412/342	567/438/367
Sound pressure level (h/m/l)	dB(A)	34/32/30	34/32/30	34/32/30	35/33/30	35/33/30	38/35/33	38/35/33	40/37/34	42/39/36	43/40/37	46/42/39
Sound power level (h)	dB(A)	49	49	49	50	50	53	53	55	57	58	61
Dimensions (HxWxD)	mm	295x815x570	295x815x570	295x815x570	295x815x570	345x1180x570	345x1180x570	345x1180x570	345x1180x570	345x1600x570	345x1600x570	345x1600x570
Weight	kg	19	19	19	19	26	26	26	26	36	36	36
Panel		RBC-UW283PG(W)-E					RBC-UW803PG(W)-E			RBC-UW1403PG(W)-E		
Panel dimensions (HxWxD)	mm	20x1050x680	20x1050x680	20x1050x680	20x1050x680	20x1415x680	20x1415x680	20x1415x680	20x1415x680	20x1835x680	20x1835x680	20x1835x680
Panel weight	kg	10	10	10	10	14	14	14	14	14	14	14
Connecting pipe, gas		3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Drain port diameter	mm	25	25	25	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMU-UP_YHP 1-WAY CASSETTE

> NEW SIZES



Toshiba's innovative slim-line 1-way cassette is simple to install and suitable for small areas, such as hotels, offices and reception rooms.

Design

- New white elegant panel design to match all types of interiors.

Flexibility

- 150mm chassis height adapted to low suspended ceilings conditions.
- Capacity from 0.3HP for high efficiency buildings.

Comfort

- Low noise level down to 25 dB(A) for quiet operation.
- 5-speed fan operation for perfect air flow management.
- Air purifier available as an option to keep a fresh and clean environment.

CAPACITY



0.9kW > 8kW

SOUND PRESSURE LEVEL



25dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS

RBC-AX33UYP-E
RBC-AXU31-ERBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E

1-WAY CASSETTE Performances

Indoor unit	MMU-	UP0031YHP-E	UP0051YHP-E	UP0071YHP-E	UP0091YHP-E	UP0121YHP-E	UP0151YHP-E	UP0181YHP-E	UP0241YHP-E	UP0271YHP-E
Cooling capacity	kW	0.9	1.7	2.2	2.8	3.6	4.5	5.6	7.1	8
Heating capacity	kW	1.3	1.9	2.5	3.2	4	5	6.3	8	9
Power consumption	kW	0.015	0.015	0.017	0.018	0.018	0.025	0.027	0.042	0.05
Running current	A	0.15	0.15	0.18	0.19	0.2	0.24	0.26	0.34	0.41
Starting current	A	0.19	0.19	0.22	0.23	0.24	0.28	0.3	0.38	0.45

1-WAY CASSETTE Physical data

Indoor unit	MMU-	UP0031YHP-E	UP0051YHP-E	UP0071YHP-E	UP0091YHP-E	UP0121YHP-E	UP0151YHP-E	UP0181YHP-E	UP0241YHP-E	UP0271YHP-E
Air flow (h/l)	m³/h	480/370/270	480/370/270	500/390/270	520/410/290	540/420/290	750/630/500	800/650/500	940/760/600	1000/860/720
Air flow (h/l)	l/s	133/103/75	133/103/75	150/133/117	150/133/117	150/133/117	208/175/139	222/181/139	261/211/167	278/239/200
Sound pressure level (h/m/l)	dB(A)	37/33/25	37/33/25	38/34/25	39/35/26	40/36/26	39/36/33	40/37/33	46/42/37	47/44/41
Dimensions (HxWxD)	mm	150 x 990 x 450	150 x 990 x 450	150 x 990 x 450	150 x 990 x 450	150 x 990 x 450	150 x 1180 x 450	150 x 1180 x 450	150 x 1180 x 450	150 x 1180 x 450
Weight	kg	14	14	14	14	14	15	15	15	15
Panel		RBC-UY32P-E				RBC-UY42P-E				
Panel dimensions (HxWxD)	mm	30 x 1220 x 530	30 x 1220 x 530	30 x 1220 x 530	30 x 1220 x 530	30 x 1220 x 530	30 x 1410 x 530	30 x 1410 x 530	30 x 1410 x 530	30 x 1410 x 530
Panel weight	kg	4	4	4	4	4				
Connecting pipe, gas	in	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"
Connecting pipe, liquid	in	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"
Drain port diameter	mm	25	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMD-UP_BHP STANDARD DUCT



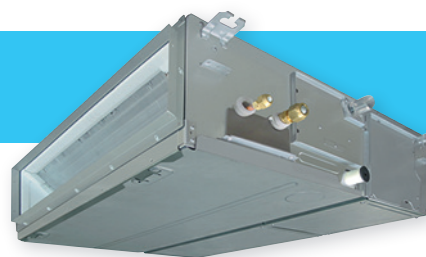
Whatever the shape of the room, this flexible model ensures a uniform temperature and air distribution for optimal end user comfort.

Hidden

- Slimline design, with a depth of just 275mm helps to simplify the installation, even when space is limited.
- Superior low noise operation. Noise output at low fan equates to just 23 dB(A).

Customizable

- External static pressure can be raised up to 150 Pa for extensive ducting.
- Possible to connect a fresh air inlet duct to the unit, to maximise air quality and room air quality.
- Flexible design, allows the inlet air configuration to be configured between the standard rear inlet design or, from the underside of the unit.
- Built-in high-lift drain pump.
- Air discharge spigot available as an option (TCB-SF***C6BPE).



CAPACITY



1.7kW > 18kW

SOUND PRESSURE LEVEL



23dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM-AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

STANDARD DUCT Performances

Indoor unit	MMD-	UP0051BHP-E/TR	UP0071BHP-E/TR	UP0091BHP-E/TR	UP0121BHP-E/TR	UP0151BHP-E/TR	UP0181BHP-E/TR	UP0241BHP-E/TR	UP0271BHP-E/TR	UP0301BHP-E/TR	UP0361BHP-E/TR	UP0481BHP-E/TR	UP0561BHP-E/TR
Cooling capacity	kW	1,7	2,2	2,8	3,6	4,5	5,6	7,1	8,0	9,0	11,2	14,0	16,0
Heating capacity	kW	1,9	2,5	3,2	4,0	5,0	6,3	8,0	9,0	10,0	12,5	16,0	18,0
Power consumption	kW	0,055	0,055	0,060	0,060	0,110	0,110	0,135	0,135	0,160	0,220	0,290	0,290
Running current	A	0,35	0,35	0,38	0,38	0,70	0,70	0,80	0,80	0,95	1,29	1,70	1,70
Starting current	A	0,75	0,75	0,64	0,64	1,24	1,24	1,58	1,58	1,78	2,19	2,66	2,66

STANDARD DUCT Physical data

Indoor unit	MMD-	UP0051BHP-E/TR	UP0071BHP-E/TR	UP0091BHP-E/TR	UP0121BHP-E/TR	UP0151BHP-E/TR	UP0181BHP-E/TR	UP0241BHP-E/TR	UP0271BHP-E/TR	UP0301BHP-E/TR	UP0361BHP-E/TR	UP0481BHP-E/TR	UP0561BHP-E/TR
Air Flow (h/m/l)	m³/h	540/450/360	540/450/360	570/480/390	570/480/390	920/660/540	920/660/540	1320/1090/870	1320/1090/870	1450/1200/960	1920/1620/1380	2350/1920/1500	2350/1920/1500
Air Flow (h/m/l)	l/s	150/125/100	150/125/100	158/133/108	158/133/108	256/183/150	256/183/150	367/303/242	367/303/242	403/333/267	533/450/383	653/533/417	653/533/417
Sound pressure level (h/m/l)	dB(A)	29/26/23	29/26/23	30/26/23	30/26/23	33/29/25	33/29/25	33/30/27	33/30/27	36/31/27	36/34/31	40/36/33	40/36/33
Sound power level (h)	dB(A)	51	51	52	52	55	55	58	58	58	63	63	63
Dimensions (HxWxD)	mm	275x700x750	275x700x750	275x700x750	275x700x750	275x700x750	275x700x750	275x1000x750	275x1000x750	275x1000x750	275x1400x750	275x1400x750	275x1400x750
Weight	kg	23	23	23	23	23	23	30	30	30	40	40	40
External static pressure	Pa	30	30	30	30	30	30	40	40	40	50	50	50
Max external static pressure	Pa	150	150	150	150	150	150	150	150	150	150	150	150
Connecting pipe, gas	in	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Connecting pipe, liquid	in	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Drain port diameter	mm	25	25	25	25	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMD-UP_HP HIGH STATIC PRESSURE DUCT



This is Toshiba's most powerful ducted unit delivering air flows up to 4800m³/h with an external static pressure up to 250 Pa.

Comfort

- This ultra-flexible, invisible and silent unit creates a pleasant and comfortable environment for a wide range of applications, such as hotels, offices and shops.
- Diffuser design flexibility to select the right layout for the room shape and end user requirements.

Adaptability

- Unobtrusive, flexible and compact (298mm depth), it can be installed easily and discretely into any interior, making it the ideal solution for both new and refurbishing projects.
- Static pressure can be set to 7 levels from 50 to 250Pa.

Healthy

- Renewal of indoor ambient air with the constant fresh air supply via the field installed fresh air intake connection.
- Long-life filter and air discharge spigot available as an option.
- Built-in high-lift drain pump (sizes 18 to 56).

sizes 18 to 56



sizes 72 & 96



CAPACITY



5.6kW >31.5kW

SOUND PRESSURE LEVEL



37dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM-AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31
RBC-ASCU11-E

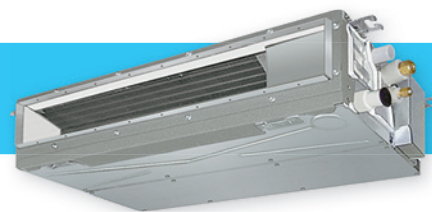
HIGH STATIC PRESSURE DUCT Performances

Indoor unit	MMD-	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0361HP-E/TR	UP0481HP-E/TR	UP0561HP-E/TR	UP0721HP-E1/TR1	UP0961HP-E1/TR1
Cooling capacity	kW	5.6	7.1	8.0	11.2	14.0	16.0	22.4	28.0
Heating capacity	kW	6.3	8.0	9.0	12.5	16.0	18.0	25.0	31.5
Power consumption	kW	0.125	0.140	0.190	0.230	0.300	0.400	0.540	0.790
Running current	A	0.82	0.92	1.16	1.39	1.81	2.48	2.83	3.77
Starting current	A	1.43	1.55	1.86	2.02	2.57	3.25	4.90	6.74

HIGH STATIC PRESSURE DUCT Physical data

Indoor unit	MMD-	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0361HP-E/TR	UP0481HP-E/TR	UP0561HP-E/TR	UP0721HP-E1/TR1	UP0961HP-E1/TR1
Air Flow (h/m/l)	m ³ /h	1100/990/900	1200/1050/960	1500/1350/1200	1920/1560/1340	2340/1980/1695	2760/2340/1920	3800/3200/2500	4800/4200/3500
Air Flow (h/m/l)	l/s	306/275/250	333/292/267	417/375/333	533/433/372	650/550/471	767/650/533	1056/889/694	1333/1167/972
Sound pressure level (h/m/l)	dB(A)	37/33/31	38/34/31	43/41/38	41/37/34	44/41/38	46/44/41	44/40/36	46/42/38
Sound power level (h/m/l)	dB(A)	60/54/50	60/55/51	60/55/51	62/57/53	65/62/54	68/64/56	79	81
Dimensions (HxWxD)	mm	298x1000x750	298x1000x750	298x1000x750	298x1400x750	298x1400x750	298x1400x750	448x1400x900	448x1400x900
Weight	kg	34	34	34	43	43	43	97	97
External static pressure	Pa	100	100	100	100	100	100	150	150
Max external static pressure	Pa	200	200	200	200	200	200	250	250
Connecting pipe, gas	in	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"
Connecting pipe, liquid	in	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"
Drain port diameter	mm	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMD-UP_SPHY SLIM DUCT



> NEW AIR DIFFUSION ACCESSORY

Whatever installed in a ceiling void or suspended ceiling, Toshiba slim duct offers the best compromise between sound level, air flow and chassis dimensions.

Flexibility

- Compact chassis with 210mm height and 450mm depth whatever the capacity, for integration in most projects.
- Capacity from 0.3HP for high efficiency buildings.
- Static pressure up to 50Pa set directly on the duct or by using a wired remote controller.

Comfort

- Quiet operation with a noise level down to 25 dB(A) perfect for bedrooms.
- 5-speed fan operation for perfect air flow adaptation.

Easy installation

- Built-in drain pump.
- Air suction from rear or bottom.

CAPACITY



0.9kW > 8kW

SOUND PRESSURE LEVEL



25dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM-AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E

RBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E

SLIM DUCT Performances

Indoor unit		MMD-	UP0031SPHY-E	UP0051SPHY-E	UP0071SPHY-E	UP0091SPHY-E	UP0121SPHY-E	UP0151SPHY-E	UP0181SPHY-E	UP0241SPHY-E	UP0271SPHY-E
Cooling capacity		kW	0,9	1,7	2,2	2,8	3,6	4,5	5,6	7,1	8,0
Heating capacity		kW	1	1,9	2,5	3,2	4,0	5,0	6,3	8,0	9,0
Factory setting	Power consumption	kW	0.018 / 0.018	0.020 / 0.020	0.026 / 0.026	0.029 / 0.029	0.031 / 0.031	0.035 / 0.035	0.044 / 0.044	0.067 / 0.067	0.072 / 0.072
	Running current	A	0.34 / 0.36	0.36 / 0.37	0.40 / 0.42	0.42 / 0.44	0.44 / 0.46	0.47 / 0.49	0.53 / 0.56	0.69 / 0.73	0.74 / 0.78
	Starting current	A	0.60 / 0.63	0.62 / 0.65	0.69 / 0.73	0.73 / 0.77	0.77 / 0.81	0.82 / 0.86	0.92 / 0.97	1.21 / 1.27	1.30 / 1.36
Standard ESP UP003-018:30Pa, UP024-027:40Pa	Power consumption	kW	0.024 / 0.024	0.026 / 0.026	0.035 / 0.035	0.038 / 0.038	0.043 / 0.043	0.046 / 0.046	0.054 / 0.054	0.086 / 0.086	0.092 / 0.092
	Running current	A	0.37 / 0.39	0.40 / 0.41	0.46 / 0.48	0.48 / 0.50	0.52 / 0.54	0.54 / 0.57	0.60 / 0.63	0.83 / 0.87	0.88 / 0.93
	Starting current	A	0.65 / 0.69	0.69 / 0.73	0.81 / 0.85	0.84 / 0.88	0.90 / 0.95	0.95 / 0.99	1.04 / 1.10	1.45 / 1.53	1.54 / 1.62

SLIM DUCT Physical data

Indoor unit	MMD-	UP0031SPHY-E	UP0051SPHY-E	UP0071SPHY-E	UP0091SPHY-E	UP0121SPHY-E	UP0151SPHY-E	UP0181SPHY-E	UP0241SPHY-E	UP0271SPHY-E
Air Flow (H/M+/M/L+/L)	m³/h	410/390/370/ 360/350	450/430/410/ 390/380	540/500/460/ 430/400	570/530/500/ 450/420	600/550/520/ 470/440	690/660/640/ 590/550	780/760/730/ 690/650	1080/1010/950/ 900/860	1140/1060/980/ 940/910
Air Flow (H/M+/M/L+/L)	l/s	114/108/103/ 100/97	125/119/114/ 108/106	150/139/128/ 119/111	158/147/139/ 125/117	167/153/144/ 131/122	192/183/178/ 164/153	217/211/203/ 192/181	300/281/264/ 250/239	317/294/272/ 261/253
Sound pressure level*, rear suction (H/M+/M/L+/L)	dB(A)	29/28/27/26/25	30/29/28/27/26	31/30/29/28/26	32/31/29/28/26	33/32/30/29/27	33/31/30/29/28	34/33/32/31/29	36/35/33/32/30	37/36/34/33/32
Sound pressure level*, bottom suction (H/M+/M/L+/L)	dB(A)	37/36/35/34/32	39/38/37/35/34	41/40/39/38/35	42/41/40/38/36	44/42/40/39/37	42/40/39/38/37	44/43/42/41/39	47/46/44/43/41	48/47/45/44/43
Sound power level* (H/M+/M/L+/L)		46/45/44/43/42	49/47/46/45/44	52/51/49/47/45	54/52/50/48/46	54/51/50/48/46	52/51/50/49/46	56/55/54/52/51	60/58/56/55/53	61/59/58/56/55
Dimensions (HxWxD)	mm	210x700x450					210x900x450		210x1110x450	
Weight	kg	16					18		21	
External static pressure	Pa	10	10	10	10	10	10	10	10	10
Max external static pressure	Pa	50	50	50	50	50	50	50	50	50
Connecting pipe, gas		3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"
Drain port diameter	mm	25	25	25	25	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

* Factory setting (10Pa)

SLIM DUCT

3DW DIFFUSOR FOR SLIM DUCT

> NEW ACCESSORY

Enhanced your Slim Duct installation with Toshiba's motorized 3DW diffuser for a nice design and an optimized air diffusion.

Increased comfort

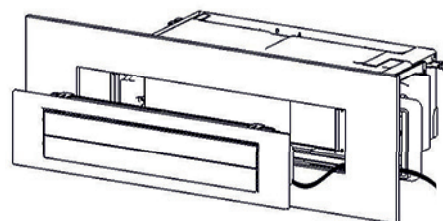
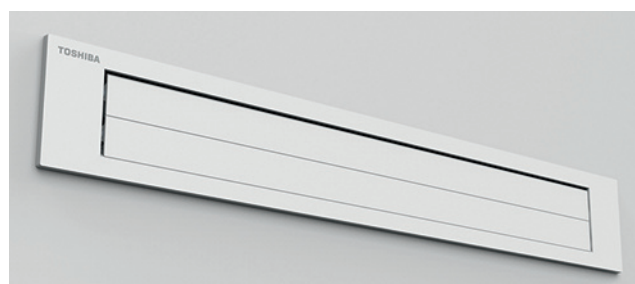
- Motorized horizontal and vertical louvers to perfectly orientate the air flow.
- Optimized air diffusion with swing mode.
- 5Pa pressure drop to not disturb the air flow.

Elegant

- A color that perfectly fits any type of interiors.
- A sleek design with 2 louvers for sophisticated interiors.

Adaptable

- 3 sizes to cover the full slim duct lineup.
- Maximum 1m duct between the louver and the unit for full adaption to every installation conditions.
- Directly wired to indoor units.



> RESIDENTIAL AIR-TO-AIR

3DW DIFFUSOR Physical data

Model name		TCB-TDL0141SDY-E	TCB-TDL0181SDY-E	TCB-TDL0271SDY-E
Description		Motorized horizontal louver for slim duct		
Compatible with slim duct size	MMD-UP0xxx1SPHY-E	003 to 012	015 & 018	024 & 027
Dimensions (H x L x D) *: from panel surface	mm	180 x 810 x 88 (*99)	180 x 1010 x 88 (*99)	180 x 1210 x 88 (*99)
Distance from duct to louver	min		91mm	
	max		1000mm	
Pressure lost	Pa		5	
Color	Mansell		5PB9/1	
	RAL (approximation)		250 92 05	
Remote controller needed to operate	Horizontal louver	RBC-ASCU11-E, RBC-AMTU31-E, RBC-AMSU51E/ES/EN		

MMC-UP_HP UNDER CEILING



The simple, yet elegant design helps to create a pleasant and relaxing environment, quickly conditioning the room air to the desired temperature.

Comfort

- Optimum louver control: Air flow angle is automatically set to the most suitable setting according to your cooling or heating needs, and an automatic swing mode enables air flow to reach all areas in the room.
- High air flow distance up to 8m.
- Low noise levels, thanks to high diameter fan and DC motor.

Adaptability

- This design, represents the best possible solution, where there is a lack of space or absence of a ceiling void.
- The simplicity of the design and the installations of the unit, make it suited for a wide range of applications, but particularly refurbishment projects.

Reliability

- Self-cleaning function, enables the air flow to remain constant as well as fresh and reduces the frequency of service visits.
- Drain pump available as an option.



CAPACITY



4.5kW > 18kW

SOUND PRESSURE LEVEL



28dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-eSMMS-u
& SHRM AdvanceSMMS-e
& SHRM-e

LOCAL CONTROLS

RBC-AXU31C-E
RBC-AXU31-ERBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

UNDER CEILING Performances

Indoor unit	MMC-	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E
Cooling capacity	kW	4,5	5,6	7,1	8,0	11,2	14,0	16,0
Heating capacity	kW	5,0	6,3	8,0	9,0	12,5	16,0	18,0
Power consumption	kW	0,033	0,034	0,067	0,067	0,083	0,083	0,111
Running current	A	0,38	0,39	0,68	0,68	0,80	0,80	1,03
Starting current	A	0,54	0,55	0,97	0,97	1,16	1,16	1,49

UNDER CEILING Physical data

Indoor unit	MMC-	UP0151HP-E	UP0181HP-E	UP0241HP-E	UP0271HP-E	UP0361HP-E	UP0481HP-E	UP0561HP-E
Air Flow (h/m/l)	m³/h	840/690/540	960/720/540	1440/1020/750	1440/1020/750	1860/1350/1020	1860/1530/1200	2040/1650/1260
Air Flow (h/m/l)	l/s	233/192/150	267/200/150	400/283/208	400/283/208	517/375/283	517/425/333	567/458/350
Sound pressure level (h/m/l)	dB(A)	36/34/28	37/35/28	41/36/29	41/36/29	44/38/32	44/41/35	46/42/36
Sound power level (h)	dB(A)	51	52	56	56	59	59	61
Dimensions (HxWxD)	mm	235x950x690	235x950x690	235x1270x690	235x1270x690	235x1586x690	235x1586x690	235x1586x690
Weight	kg	24	24	30	30	39	39	39
Connecting pipe, gas	in	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"
Connecting pipe, liquid	in	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"
Drain port diameter	mm	20	20	20	20	20	20	20
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MML-AP_NH BI-FLOW CONSOLE



Innovative and compact unit to be installed on the floor and in low wall applications, fits perfectly under the window sills or in a low ceiling attic.

Comfort

- Unique floor heating function to deliver a powerful flow at floor level for a uniform and comfortable room heating
- Compact and modern design in all three dimensions (60x70x22cm); single size for all range capacities.
- Bi-flow. Two outlets for complete personalized flow: flow intensity and air direction control.

Healty

- Toshiba IAQ filter filtration system, includes extremely powerful components and deodorizing effects.
- Ultra pure filter (818F0050) available as an option to ensure healthy and pleasant atmosphere.

Control

- Brightness level control of the display unit to reduce the led light glow.
- Wireless remote control with a pre-set function and a unique hi-power button for immediate and fast air delivery.

CAPACITY



2.2kW > 6.3kW

SOUND PRESSURE LEVEL



26dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-e

SMMS-u

SMMS-e
& SHRM-e

LOCAL CONTROLS

IR control
(included)RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

BI-FLOW CONSOLE Performances

Indoor unit	MML-	UP0071NHP-E/TR	UP0091NHP-E/TR	UP0121NHP-E/TR	UP0151NHP-E/TR	UP0181NHP-E/TR
Cooling capacity	kW	2,2	2,8	3,6	4,5	5,6
Heating capacity	kW	2,5	3,2	4,0	5,0	6,3
Power consumption	kW	0,021	0,021	0,025	0,034	0,052
Running current	A	0,20	0,20	0,23	0,29	0,42
Starting current	A	0,26	0,26	0,30	0,38	0,55

BI-FLOW CONSOLE Physical data

Indoor unit	MML-	UP0071NHP-E/TR	UP0091NHP-E/TR	UP0121NHP-E/TR	UP0151NHP-E/TR	UP0181NHP-E/TR
Air Flow (h/m/l)	m³/h	510/366/282	510/366/282	552/408/324	624/468/384	726/528/426
Air Flow (h/m/l)	l/s	142/102/78	142/102/78	153/113/90	173/130/107	202/147/118
Sound pressure level (h/m/l)	dB(A)	38/32/26	38/32/26	40/34/29	43/37/31	47/40/34
Sound power level (h/m/l)	dB(A)	53/47/41	53/47/41	55/49/44	58/52/46	62/55/49
Dimensions (HxWxD)	mm	600x700x220	600x700x220	600x700x220	600x700x220	600x700x220
Weight	kg	17	17	17	17	17
Connecting pipe, gas		3/8"	3/8"	3/8"	1/2"	1/2"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"
Drain port diameter	mm	16	16	16	16	16
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MML-UP_H CONSOLE



The simple design of this unit represents the perfect choice, for refurbishment projects, where the available space is limited, or where neither the walls nor ceiling are able to house the unit.

Comfort

- The units have as standard the ability to flow air in a horizontal direction, however with a simple change during the installation process, the unit can be configured, so that the air flow goes in the upward direction, maximising the flexibility of the design.

Adaptability

- With just one single cabinet size, for all capacity models, allows a single model range to be installed within a building, giving the installation a uniform and clean look.
- Minimum space required for installation and servicing.
- Refrigerant and drain piping with four installation possibilities: top, rear, left or right hand of the unit.



CAPACITY



2.2kW > 8kW

SOUND PRESSURE LEVEL



35dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-e

SMMS-u

SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

CONSOLE Performances

Indoor unit	MML-	UP0071H-E/TR	UP0091H-E/TR	UP0121H-E/TR	UP0151H-E/TR	UP0181H-E/TR	UP0241H-E/TR
Cooling capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1
Heating capacity	kW	2,5	3,2	4,0	5,0	6,3	8,0
Power consumption	kW	0,056	0,056	0,092	0,092	0,102	0,102
Running current	A	0,26	0,26	0,43	0,43	0,47	0,47
Starting current	A	0,60	0,60	0,80	0,80	1,10	1,10

CONSOLE Physical data

Indoor unit	MML-	UP0071H-E/TR	UP0091H-E/TR	UP0121H-E/TR	UP0151H-E/TR	UP0181H-E/TR	UP0241H-E/TR
Air Flow (h/m/l)	m³/h	480/420/360	480/420/360	900/780/650	900/780/650	1080/930/780	1080/930/780
Air Flow (h/m/l)	l/s	133/117/100	133/117/100	250/217/181	250/217/181	300/258/217	300/258/217
Sound pressure level (h/m/l)	dB(A)	39/37/35	39/37/35	45/41/38	45/41/38	49/44/39	49/44/39
Sound power level (h)	dB(A)	54	54	60	60	64	64
Dimensions (HxWxD)	mm	630x950x230	630x950x230	630x950x230	630x950x230	630x950x230	630x950x230
Weight	kg	37	37	37	37	40	40
Connecting pipe, gas		3/8"	3/8"	3/8"	1/2"	1/2"	5/8"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"	3/8"
Drain port diameter	mm	20	20	20	20	20	20
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MML-UP_BH CONCEALED CONSOLE



This unit has been designed to be fitted easily into a compact space behind a decorative panel, allowing the unit to blend into any room interior. This chassis is compact and slim, it is very easy to install and to conceal behind a decorative panel to blend with any room interior.

Specialized

- Not only is this unit ideal for office and other commercial buildings, it fits perfectly for specialist applications such as a library or hospital building.

Easy to hidden

- Very compact design, which can be installed under a window sill, that is only 600mm in height.
- With its limited depth of only 200mm, the unit can be installed along the wall ensuring maximum space saving.

Accessibility

- Removable split front panel with immediate access to the main components.

CAPACITY



2.2kW > 8kW

SOUND PRESSURE LEVEL



32dB(A)

OUTDOOR UNITS



Side Blow
& Mini SMMS-e



SMMS-u



SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

CONCEALED CONSOLE Performances

Indoor unit	MML-	UP0071BH-E/TR	UP0091BH-E/TR	UP0121BH-E/TR	UP0151BH-E/TR	UP0181BH-E/TR	UP0241BH-E/TR
Cooling capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1
Heating capacity	kW	2,5	3,2	4,0	5,0	6,3	8,0
Power consumption	kW	0.056	0.056	0.056	0.090	0.090	0.095
Running current	A	0.25	0.25	0.25	0.45	0.45	0.46
Starting current	A	0.60	0.60	0.60	0.80	0.80	1.00

CONCEALED CONSOLE Physical data

Indoor unit	MML-	UP0071BH-E/TR	UP0091BH-E/TR	UP0121BH-E/TR	UP0151BH-E/TR	UP0181BH-E/TR	UP0241BH-E/TR
Air Flow (h/m/l)	m³/h	460/400/300	460/400/300	460/400/300	740/600/490	740/600/490	950/790/640
Air Flow (h/m/l)	l/s	128/111/83	128/111/83	128/111/83	206/167/136	206/167/136	264/219/178
Sound pressure level (h/m/l)	dB(A)	36/34/32	36/34/32	36/34/32	36/34/32	36/34/32	42/37/33
Sound power level (h)	dB(A)	54	54	54	54	54	60
Dimensions (HxWxD)	mm	600x745x220	600x745x220	600x745x220	600x1045x220	600x1045x220	600x1045x220
Weight	kg	21	21	21	29	29	29
Connecting pipe, gas		3/8"	3/8"	3/8"	1/2"	1/2"	5/8"
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"	3/8"
Drain port diameter	mm	20	20	20	20	20	20
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

MMF-UP_H FLOOR STANDING



This system is particularly suitable to air condition large rooms like shops or showrooms or with low ceilings like restaurants or lofts.

Optimized air flow

- The unit has been designed to have particularly high air flow rates, which correspond into superior air throw values.
- The wide and automatic vertical and horizontal air distribution angles, allow the air flow distribution to reach all areas, even when installed into large rooms.
- High air flows: from 180 l/s to 600 l/s (660 m³/h to 2160 m³/h).
- Wide air distribution angle: up to 150°.

Wide range

- Large capacity range: cooling capacities from 4.5 kW to 16 kW and heating capacities from 5 kW to 18 kW.

Installation everywhere

- The unit can be installed in the corner of the room, in this case the automatic swing angle can be fixed to deliver the air only where it is needed.
- Very small footprint: 0.128 m² up to 8 kW and 0.243 m² up to 16 kW.



CAPACITY

SOUND PRESSURE LEVEL



4.5kW > 18kW



37dB(A)

OUTDOOR UNITS

Side Blow
& MINI SMMS-e

SMMS-u

SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AXU31-E

RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCTU1-E

FLOOR STANDING Performances

Indoor unit	MMF-	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0361H-E	UP0481H-E	UP0561H-E
Cooling capacity	kW	4.5	5.6	7.1	8.0	11.2	14.0	16.0
Heating capacity	kW	5.0	6.3	8.0	9.0	12.5	16.0	18.0
Power consumption	kW	0.053 / 0.053	0.053 / 0.053	0.087 / 0.087	0.087 / 0.087	0.133 / 0.133	0.158 / 0.158	0.158 / 0.158
Running current	A	0.37 / 0.38	0.37 / 0.38	0.55 / 0.58	0.55 / 0.58	0.82 / 0.86	0.97 / 1.02	0.97 / 1.02
Starting current	A	0.48 / 0.50	0.48 / 0.50	0.71 / 0.75	0.71 / 0.75	1.06 / 1.11	1.27 / 1.33	1.27 / 1.33

FLOOR STANDING Physical data

Indoor unit	MMF-	UP0151H-E	UP0181H-E	UP0241H-E	UP0271H-E	UP0361H-E	UP0481H-E	UP0561H-E
Air flow (h/l)	m ³ /h	820/700/600	820/700/600	930/770/640	930/770/640	1660/1420/1170	1760/1480/1350	1760/1480/1350
Air flow (h/l)	l/s	228/194/167	228/194/167	258/214/178	258/214/178	461/394/325	489/411/375	489/411/375
Sound pressure level (h/l)	dB(A)	46/42/38	46/42/38	50/45/41	50/45/41	51/46/41	53/48/45	53/48/45
Dimensions (HxWxD)	mm	1750 x 600 x 210	1750 x 600 x 210	1750 x 600 x 210	1750 x 600 x 210	1750 x 600 x 390	1750 x 600 x 390	1750 x 600 x 390
Weight	kg	46	46	47	47	61	61	61
Connecting pipe, gas	in	1/2" φ12.7	1/2" φ12.7	1/2" φ15.9	1/2" φ15.9	1/2" φ15.9	1/2" φ15.9	1/2" φ15.9
Connecting pipe, liquid	in	1/4" φ6.4	1/4" φ6.4	3/8" φ9.5	3/8" φ9.5	3/8" φ9.5	3/8" φ9.5	3/8" φ9.5
Drain port diameter	mm	20	20	20	20	20	20	20
Power supply	V-ph-Hz	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60	220-240-1-50 / 208-230-1-60

MMK-UP_HP(L) HIGH-WALL (STD & WITHOUT PMV)



Particularly compact, this high-wall is perfect for limited spaces, such as offices or small shops.

Compact and design

- The unit is compact and lightweight, it is perfect for installation above the doors or in narrow corridors.
- New appearance, simple, elegant with nice led display.

Healthy

- Special fin coating for Healthy & Fresh air.
- Ultra pure filter (818F0050) available as an option to ensure healthy and pleasant atmosphere.

Easy to use

- Remote controller for easy access to the preferred setting.
- Filters for dust collection can be easily removed by lifting the front panel and can be cleaned easily washing them under running water.

CAPACITY



1.7kW > 11.2kW

SOUND PRESSURE LEVEL



25dB(A)

OUTDOOR UNITS



Side Blow
& Mini SMMS-e



SMMS-u
& SHRM Advance



SMMS-e
& SHRM-e

LOCAL CONTROLS



IR control
(included)



RBC-AMSU51E-ES(EN)
RBC-AMTU31-E
RBC-ASCU11-E

HIGH-WALL Performances

Indoor unit	With PMV	MMK-	UP0031HP-E/TR	UP0051HP-E/TR	UP0071HP-E/TR	UP0091HP-E/TR	UP0121HP-E/TR	UP0151HP-E/TR	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0301HP-E/TR	UP0361HP-E/TR
	Without PMV*	MMK-	UP0031HPL-E/TR	UP0051HPL-E/TR	UP0071HPL-E/TR	UP0091HPL-E/TR	UP0121HPL-E/TR	UP0151HPL-E/TR	UP0181HPL-E/TR	UP0241HPL-E/TR			
Cooling capacity	kW	0.9	1.7	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9	10	
Heating capacity	kW	1.3	1.9	2.5	3.2	4.0	5.0	6.3	8.0	9.0	10	11.2	
Power consumption	kW	0.013	0.013	0.015	0.016	0.017	0.028	0.032	0.050	0.034	0.054	0.066	
Running current	A	0.15	0.15	0.16	0.17	0.18	0.26	0.29	0.40	0.030	0.05	0.06	
Starting current	A	0.19	0.19	0.20	0.21	0.22	0.35	0.38	0.50	0.34	0.50	0.60	

HIGH-WALL Physical data

Indoor unit	With PMV	MMK-	UP0031HP-E/TR	UP0051HP-E/TR	UP0071HP-E/TR	UP0091HP-E/TR	UP0121HP-E/TR	UP0151HP-E/TR	UP0181HP-E/TR	UP0241HP-E/TR	UP0271HP-E/TR	UP0301HP-E/TR	UP0361HP-E/TR
	Without PMV*	MMK-	UP0031HPL-E/TR	UP0051HPL-E/TR	UP0071HPL-E/TR	UP0091HPL-E/TR	UP0121HPL-E/TR	UP0151HPL-E/TR	UP0181HPL-E/TR	UP0241HPL-E/TR			
Air Flow (h/m/l)	m ³ /h	455/370/270	455/370/270	480/385/270	510/395/270	540/410/270	840/690/550	900/720/550	1200/900/600	1200/1000/800	1450/1300/1100	1650/1350/1250	
Air Flow (h/m/l)	l/s	126/103/75	126/103/75	133/107/75	141/110/75	150/114/75	233/192/153	250/200/153	333/250/167	333/277/222	403/361/305	458/375/347	
Sound pressure level (h/m/l)	dB(A)	33/29/25	33/29/25	35/33/30/28/25	36/34/31/28/25	37/35/32/28/25	40/38/36/34/32	41/39/37/35/32	45/42/39/36/33	45/41/39	48/44/41	50/45/43	
Sound power level (h)	dB(A)	48	48	50	51	52	55	56	60	60	63	65	
Dimensions (HxWxD)	mm	293 x 798 x 230	293 x 798 x 230	293 x 798 x 230	293 x 798 x 230	293 x 798 x 230	320 x 1050 x 250	320 x 1050 x 250	320 x 1050 x 250	348 x 1200 x 280	348 x 1200 x 280	348 x 1200 x 280	
Weight	kg	11	11	11	11	11	16	16	16	21	21	21	
Connecting pipe, gas		3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	
Connecting pipe, liquid		1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	3/8"	
Drain port diameter	mm	16	16	16	16	16	16	16	16	16	16	16	
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	

*Optional PMV-Kit needed.
Size 0.3HP compatible with SMMS-u and SHRM-Advance.

VN-M_HE AIR-TO-AIR HEAT EXCHANGER



Toshiba's VN model uses exhaust air to pre-condition the incoming air, thus reducing the cooling or heating load on the system. This allows the overall capacity size of the system to be reduced.

Energy savings

- Recovers air suction heat and humidity up to 75% and transfers them to the outdoor fresh air.
- The unit has the ability to automatically change operation mode of the air flow between heat exchanger mode (energy recovery) to normal standard ventilation mode (free cooling), based on the outdoor temperatures.
- Free cooling - Provides fresh outdoor cool air to reduce the indoor air temperature, when the outdoor temperature is lower than the indoor air conditioned temperature.

Multi-application

- 9 models available with air flow ranges from 150 to 2000 m³/h.
- Air balance volume rate can be varied to suit the usage environment and location.
- Horizontal or upside down installations.

Fully integrated

- Air conditioners and heat exchangers are controlled with the same main bus system (TCC-LINK).

AIR FLOW

150m³/h > 2000m³/h

SOUND PRESSURE LEVEL



20dB(A)

OUTDOOR UNITS

Side Blow
& Mini SMMS-e

SMMS-u

SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AMTU31-E

AIR-TO-AIR HEAT EXCHANGER Performance and physical data

Model		VN-M150HE	VN-M250HE	VN-M350HE	VN-M500HE	VN-M650HE	VN-M800HE	VN-M1000HE1	VN-M1500HE1	VN-M2000HE1
Air volume	(EH/H/L) m ³ /h	150/150/110	250/250/155	350/350/210	500/500/390	650/650/520	800/800/700	1000/1000/700	1500/1500/1200	2000/2000/1400
Temp. exchange efficiency	(EH/H/L) %	81.5/81.5/83	78/78/81.5	74.5/74.5/79.5	76.5/76.5/78	75/75/76.5	76.5/76.5/77.5	73.5/73.5/77	76.5/76.5/79	73.5/73.5/77.5
Enthalpy exchange efficiency (Heating)	(EH/H/L) %	74.5/74.5/76	70/70/74	65/65/71.5	72/72/73.5	69.5/69.5/71.5	71/71/71.5	68.5/68.5/71.5	71/71/73.5	68.5/68.5/72
Enthalpy exchange efficiency (Cooling)	(EH/H/L) %	69.5/69.5/71	65/65/69	60.5/60.5/67	64.5/64.5/66.5	61.5/61.5/64	64/64/65.5	60.5/60.5/64.5	64/64/67	60.5/60.5/65.5
Sound pressure level**	EH dB(A)	26-28	29.5-30	34-35	32.5-34	34-36	37-38.5	40.5	41.5	42.5
Sound pressure level**	H dB(A)	24-25.5	25-27	30-32	29.5-31	33-34	35.5-37	39.5	40	41.5
Sound pressure level*	L dB(A)	20-22	21-22	27-29	26-29	31-32.5	33.5-35	34.5	36	36.5
Power consumption**	EH (W)	68-78	123-138	165-182	214-238	262-290	360-383	396	590	792
Power consumption**	H (W)	59-67	99-111	135-145	176-192	240-258	339-353	374	500	748
Power consumption**	L (W)	42-47	52-59	82-88	128-142	178-191	286-300	220	310	440
External static pressure**	EH Pa	82-102	80-98	114-125	134-150	91-107	142-158	105	140	105
External static pressure**	H Pa	52-78	34-65	56-83	69-99	58-82	102-132	80	110	80
External static pressure**	L Pa	47-64	28-40	65-94	62-92	61-96	76-112	70	80	70
Dimensions (HxWxD)	mm	290x900x900	290x900x900	290x900x900	350x1140x1140	350x1140x1140	400x1189x1189	400x1189x1189	810x1189x1189	810x1189x1189
Weight	kg	36	36	38	53	53	70	58	130	130
Duct diameter	indoor side mm	100	150	150	200	200	250	250	250	250
Power supply	V-ph-Hz	220-240 - 1 - 50								
Operating range	Around unit	-10 / 40°C . RH ≤80%								
	Outdoor Air (OA)	-15 / 43°C . RH ≤80%								
	Return Air (RA)	5 / 40°C . RH ≤80%								

* Sound pressure level is measured 1.5m below the center of the unit.

** Sound pressure level, power consumption and external static pressure values at 220 - 240 V.

MMD-VN(K)

AIR-TO-AIR HEAT EXCHANGER WITH DX COIL



MMD-VN(K) ventilation products are using exhaust air + DX coil to pre-condition the incoming air, thus reducing the cooling or heating load and the overall size of the required air conditioning system.

Energy savings

- Recovers incoming heat and humidity up to 75% and transfers them to the outdoor fresh air.
- Up to 10kW coil capacity to reach intake air temperature close to ambient temperature: no extra load on the heating and cooling system
- Unit has the ability to automatically change operation mode of the air flow between heat exchanger mode (energy recovery) to normal standard ventilation mode (free cooling), based on the outdoor temperatures.
- Free cooling - Provides fresh outdoor cool air to reduce the indoor air temperature, when the outdoor temperature is lower than the indoor air conditioned temperature.

Multi-application

- 9 models available with air flow ranges from 150 to 2000 m³/h.
- Air balance volume rate can be varied to suit the usage environment and location.
- Version with humidifier is available for applications where humidity levels need to be controlled.

Fully integrated

- Air conditioners and heat exchangers are controlled with the same main bus system (TCC-LINK).

CAPACITY



4.1kW > 10.9kW

SOUND PRESSURE LEVEL



34dB(A)

AIR FLOW

500m³/h > 1000m³/h

OUTDOOR UNITS



MINI SMMS-e



SMMS-e



SHRM-e

LOCAL CONTROLS



RBC-AMTU31-E

AIR-TO-AIR HEAT EXCHANGER WITH DX COIL / WITH HUMIDIFIER

Performance and physical data

Model	MMD-		VN502HEX1E/TR	VN802HEX1E/TR	VN1002HEX1E/TR	VNK502HEX1E/TR	VNK802HEX1E/TR	VNK1002HEX1E/TR
Fresh air conditioning capacity	CO	kW	4.10 (1.30)	6.56 (2.06)	8.25 (2.32)	4.10 (1.30)	6.56 (2.06)	8.25 (2.32)
Fresh air conditioning capacity	HP	kW	5.53 (2.33)	8.61 (3.61)	10.92 (4.32)	5.53 (2.33)	8.61 (3.61)	10.92 (4.32)
Air volume	(EH/H/L)	m³/h	500/500/440	800/800/640	950/950/820	500/500/440	800/800/640	950/950/820
Temperature exchange efficiency	(EH/H/L)	%	70.5/70.5/71.5	70/70/72.5	65.5/65.5/67.5	70.5/70.5/71.5	70/70/72.5	65.5/65.5/67.5
Enthalpy exchange efficiency (Heating)	(EH/H/L)	%	68.5/68.5/69	70/70/73	66/66/68.5	68.5/68.5/69	70/70/73	66/66/68.5
Enthalpy exchange efficiency (Cooling)	(EH/H/L)	%	56.5/56.5/57.5	56/56/59	52/52/54.0	56.5/56.5/57.5	56/56/59	52/52/54.5
Sound pressure level' ***	(EH/H/L)	dB(A)	37.5/36.5/34.5	41/40/38	43/42/40	36.5/35.5/33.5	40/39/38	42/41/39
Power consumption***	(EH/H/L)	W	300/280/235	505/465/335	550/545/485	305/285/240	530/485/350	575/565/520
External static pressure***	(EH/H/L)	Pa	120/105/115	120/100/100	135/120/105	95/85/95	105/85/90	110/90/115
Heat exchanger			Finned tube - R410A			Finned tube - R410A		
Gas line diameter		mm	9.5	12.7	12.7	9.5	12.7	12.7
liquid line diameter		mm	6.4	6.4	6.4	6.4	6.4	6.4
Drain port diameter		mm	25	25	25	25	25	25
Humidifier technology						Permeable film humidifier		
water pressure			0.02 to 0.49					
water flow			3					

* Sound pressure level is measured 1.5m below the center of the unit. *** Sound pressure level, power consumption and external static pressure values at 230 V. Cooling and heating capacities are based on the following conditions: Cooling capacities are based on: indoor temperature: 27°CDB/19°CWB, Outdoor temperature: 35°CDB. Heating capacities are based on: indoor temperature: 20°CDB, Outdoor temperature: 7 °CDB/6°CWB. The figures in () indicate the heat reclaimed from the heat recovery ventilator.
EH/H/L = extra-high/high/low. C: cooling mode. H: heating mode

MMD-UP_HFP FRESH AIR DUCT



This indoor unit manages and treats the fresh air intake before it will be distributed into the building.

AHU alternative

- Ideal solution for all buildings that require fresh air ventilation.
- Air flow up to 3,060m³/h.
- Up to 200Pa available pressure, enough to create long pipe work.

Comfort

- Constant 20°C fresh air delivery from -10 to +46°C air suction temperature.
- 5-speed fan operation for perfect air flow adaptation.
- Filters available as an option.

Integration flexibility

- Make your choice between VRF 1:1 connection or mix with other indoor unit types.



CAPACITY



8.9kW > 40kW

AIR FLOW


1,080m³/h > 3,060m³/h

SOUND PRESSURE LEVEL



31dB

OUTDOOR UNITS



SMMS-e



SMMS-u

LOCAL CONTROLS



RBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E

FRESH AIR INTAKE Performance

Indoor unit	MMD-	UP0481HFP-E/TR	UP0721HFP-E/TR	UP0961HFP-E/TR	UP1121HFP-E/TR	UP1281HFP-E/TR
Cooling capacity	kW	14,0	22,4	28,0	33,5	40,0
Heating capacity	kW	8,9	13,9	17,4	20,8	25,2
Power consumption	kW	0,110	0,160	0,200	0,250	0,330
Running current	A	0,77	0,86	1,07	1,30	1,83
Starting current	A	2,01	7,80	7,80	7,80	7,80

FRESH AIR INTAKE Physical data

Indoor unit	MMD-	UP0481HFP-E/TR	UP0721HFP-E/TR	UP0961HFP-E/TR	UP1121HFP-E/TR	UP1281HFP-E/TR
Air flow (h)	m ³ /h	1080/990/930/840/760	1680/1560/1440/1320/1200	2100/1950/1800/1620/1470	2520/2340/2130/1950/1770	3060/2820/2580/2370/2130
Air flow (h)	l/s	300/275/258/233/211	466/433/400/366/333	583/542/500/450/408	700/650/592/542/492	850/783/717/658/592
Sound pressure level	dB(A)	38/37/35/32/31	38/37/36/35/33	39/38/36/35/33	40/39/37/36/34	42/40/38/37/35
Dimensions (HxWxD)	mm	327x1430x750	477x1430x900	477x1430x900	477x1430x900	477x1430x900
Weight	kg	44	99	99	99	99
External static pressure	Pa			50/75/111/125/150/175/200		
External static pressure - factory setting	Pa	100	100	100	100	100
Connecting pipe, gas	in	5/8"	7/8"	7/8"	1"1/8	1"1/8
Connecting pipe, liquid	in	3/8"	1/2"	1/2"	1/2"	5/8"
Drain port diameter	mm	25	25	25	25	25
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50
Operation range for SMMS-u	Cooling (*2) °C			+5/+46 (Note 4)		
	Heating (*3) °C			-10/46		
Operation range for SMMS-e	Cooling (*2) °C			+5/+43		
	Heating (*3) °C			-5/43		

* The setting temperature is 13 - 25°C (standard FCU.. 18 - 30 °C).

* Height difference between Fresh Air Intake Indoor units must be within 5 m.

Note 1: Rated conditions. Cooling : Outdoor air temperature 33°C DB/28°C WB setting 18°C. Heating : Outdoor air temperature 0°C DB/-2.9°C WB setting temperature 25°C.

Note 2: When supply air temperature is "setting temperature + 3°C" or less, Fresh Air Intake unit operates as FAN mode.

Note 3: When supply air temperature is "setting temperature -3°C" or over, Fresh Air Intake unit operates as FAN mode.

Note 4: 46-52°C is also available but temporary operable.

TCB-IFDM TA/TF/O-10V DX KIT

> NEW



Expand the connexion capabilities between an AHU and the SMMS-u to provide the most advanced fresh air solution.

New concept

- One control kit compatible with discharge temperature, suction temperature or capacity control.
- 2PMV kits available: 8 to 12 & 14 to 20HP

Advanced technology

- The latest generation of PMV.
- New boundaries: Up to 120HP equal to 60,000m³/h thanks to Twin Connections.
- All SMMS-u benefits (Rotation drive, auto backup and alternative defrost) applicable when using DX kit system.

Simplified installation

- Controller available with embedded relays to save time during installation.
- Control box delivered with 7.5m temperature sensor.



CAPACITY



8HP < 120HP

AIR FLOW

Up to 60,000m³/h

OUTDOOR UNITS



SMMS-u

SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AMSU51E-ES/EN

DX KIT Physical data

DX Controller unit		TCB-IFDMX01UP-E All simple terminal block	TCB-IFDMR01UP-E With relay terminal blocks for 6 DO
Dimensions (HxWxD)	mm	420 x 330 x 120	420 x 330 x 120
Weight	kg	4	4,1
Operating temperature/humidity	°C / RH	5-40 / 10-80	5-40 / 10-80
Operating range - Cooling coil "Air on" temp	°C	15°CWB±24°CWB	15°CWB±24°CWB
Operating range - Heating coil "Air on" temp	°C	15°CDB±28°CDB	15°CDB±28°CDB
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50
Integrated components		- TC1 sensor(φ4) x1 ; 7.500 mm - TC2/TCJ sensor(φ6) x2 ; 7.500 mm - TA/TF sensor(Resin) x1 ; 7.500 mm	

DX KIT Physical data

DX valve kit		RBM-A101UPVA-E 8/10/12HP	RBM-A201UPVA-E 14/16/18/20HP
Nominal capacity		8/10/12HP	14/16/18/20HP
Dimensions	mm	360 x 209 x 80	360 x 209 x 80
Weight	kg	2,3	2,4
Integrated components		- Holders and plates for sensors - Heat insulation	

Note :
Connection available with SMMS-e (TA, DDC) & SHRM-e (TA).
8/10HP only.

RBC-DXC 0/10V DX KIT



Control the capacity of the VRF Toshiba system directly from the air handling unit controller to maintain constant fresh air temperature intake inside the building: the ultimate fresh air solution.

Third party control

- 0/10v input for capacity and mode control: the AHU drives Toshiba VRF system.
- Output signal for defrost and failures: the AHU knows when Toshiba system is in trouble to avoid any troubles.

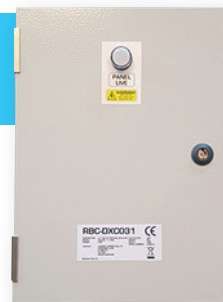
All year round comfort

- Air temperature control using AHU sensor to enlarge air stream temperature control possibilities.
- Operate in both cooling and heating modes.

Packaged solution

- DX kit composed of two parts: controller and valve kit.
- Delivered with temperature sensors.

Only compatible with SMMSe 8 and 10HP in 1:1 configuration!



CAPACITY



16kW > 31.5kW

AIR FLOW



Up to 6000m³/h

OUTDOOR UNITS



SMMSe

LOCAL CONTROLS



RBC-AMTU31-E

0/10V DX KIT

LC / VRF DX Coil Controller Unit VRF DX PMV valve unit	RBC- MM-	DXC031 DXV141	DXC031 DXV281	DXC031 DXV281
Cooling capacity	kW	16.0	22.4	28.0
Heating capacity	kW	18.0	25.0	31.5
Power code	HP	6.0	8.0	10.0

0/10V DX KIT Physical data

LC / VRF DX Coil Controller Unit	RBC-	DXC031	DXC031	DXC031
Minimum air flow rate	m³/h	2310	3010	3500
Maximum air flow rate	m³/h	3960	5160	6000
Dimensions (HxWxD)	mm	400x300x165	400x300x165	400x300x165
Weight	kg	8	8	8
Cable Max Length (Analogue Input) (Screened cable: 0.5 ~ 1.0 mm²)	m	200	200	200
Cable Max Length (Digital Input) (Non screened cable: 1.5 ~ 2.5 mm²)	m	100	100	100
Cable Max Length (Digital Output) (Non screened cable: 1.5 ~ 2.5 mm²)	m	500	500	500
Cable Max Length (TCC Link) (Screened cable: 1.5 ~ 2.5 mm²)	m	1000	1000	1000
Standard Rating	IP	65	65	65
Operating temperature/humidity	°C / RH	5-40 / 10-90	5-40 / 10-90	5-40 / 10-90
Operating range - Cooling coil "Air on" temp	°C	15°CWB±24°CWB	15°CWB±24°CWB	15°CWB±24°CWB
Operating range - Heating coil "Air on" temp	°C	12°CDB±28°CDB	12°CDB±28°CDB	12°CDB±28°CDB
System Diversity	%	75 - 100	75 - 100	75 - 100
Outdoor Unit		8HP SMMSe Only	8HP or 10HP SMMSe Only	10HP SMMSe Only
Power supply		220 - 240V AC 50Hz	220 - 240V AC 50Hz	220 - 240V AC 50Hz

MM-DXC STANDARD DX KIT



Built an efficient and reliable ventilation system managed by Toshiba remote controller mixing third party AHU, DX coil and Toshiba VRF system.

Full Toshiba control

- On/Off fan, temperature control and safety cut managed by Toshiba system.
- Air temperature control achieved using TA sensor positioned in return air stream (set with remote controller).

High capacity, high air flow

- Up to 60HP capacity (master/slave DX kits), up to 30000 m³/h to be suitable for every type of project.

Packaged solution

- DX kit composed of two parts: controller and valve kit.
- Delivered with temperature sensors.



CAPACITY



5kW > 168kW

AIR FLOW

Up to 30000m³/h

OUTDOOR UNITS



MINI SMMS-e



SMMS-e



SHRM-e

LOCAL CONTROLS



BC-AMTU31-E

STANDARD DX KIT Physical data

DX Controller unit	MM-	DXC010 VRF DX COIL CONTROLLER (Individual / Header)	DXC012 VRF DX COIL CONTROLLER (Follower)
Dimensions (HxWxD)	mm	400x300x150	400x300x150
Weight	kg	8	7.6
Standard rating	IP	65	65
Operating temperature/humidity	°C / RH	5-40 / 10-90	5-40 / 10-90
Operating range - Cooling coil "Air on" temp	°C	15°CWB+24°CWB	15°CWB+24°CWB
Operating range - Heating coil "Air on" temp	°C	15°CDB+28°CDB	15°CDB+28°CDB
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50

STANDARD DX KIT Physical data

DX valve kit	MM-	DXV080	DXV140	DXV280
Nominal capacity		5.6kW, 7.1kW, 8.0kW 1.7 - 3.2 HP	11.2kW, 14.0kW, 16.0kW 4 - 6HP	22.4kW, 28.0kW 8 - 10 HP
Dimensions	mm	155x155x185		
Weight	kg	0.9kg		
Integrated components		TA, TC1, TC & TCJ sensors, PMV, sensor holder 4 & 6 mm, fix plate, strainer and clamp (for TA)		

MMW HOT WATER MODULE



With the mid temperature hot water module, produce hot water in addition of cooling and heating.

Hot water

- Designed to produce hot water from 25°C up to 50°C outlet water temperature, whilst still maintaining the performance and efficiency levels of the rest of the system.
- Compatible with both space heating and domestic hot water applications, making the unit particularly suited to small shops and residential apartments where both space heating and hot water production is required.

Adaptability

- Up to 200% diversity indoor units & hot water module
- Operating range from -20°C WB to 19°C WB.
- Compatible with 4 series FS box & SHRM Advance FS box.

Installation

- Light and compact chassis to simplify the handling and the project integration.



CAPACITY



8kW > 16kW

HOT WATER



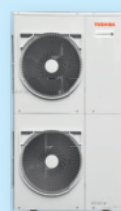
Max 50°C

SOUND PRESSURE LEVEL



25dB(A)

OUTDOOR UNITS



Mini SMMS-e
8/10HP



SMMS-u
& SHRM Advance



SMMS-e
& SHRM-e

LOCAL CONTROLS



RBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E

HOT WATER MODULE Performance

Indoor unit	MMW-	UP0271LQ-E/TR	UP0561LQ-E/TR
Cooling capacity	kW	-	-
Heating capacity	kW	8	16
Power consumption	kW	0.014	0.014
Running current	A	0.08	0.08
Starting current	A	-	-

HOT WATER MODULE Physical data

Indoor unit	MMW-	UP0271LQ-E/TR	UP0561LQ-E/TR
Water flow	m³/h	1.374	2.748
Water flow	l/min	22.9	45.8
Sound pressure level	dB(A)	25	27
Dimensions (hwxwd)	mm	580x400x250	580x400x250
Weight	kg	17.8	20.3
Gas	in	5/8"	5/8"
Liquid	in	3/8"	3/8"
Drain port diameter	mm	R1	R1
Water Inlet	mm	R1 - 1/4"	R1 - 1/4"
Water Outlet	mm	R1 - 1/4"	R1 - 1/4"
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50

MMW-AP_CHQ

HIGH TEMPERATURE HOT WATER MODULE



In addition to the standard simultaneous heating and cooling function of the SHRM-e system, it is now possible with the new Toshiba high temperature hot water module, to produce hot water up to 82°C, whilst still retaining the comfort operation of the indoor units.

High temperature

- Designed to produce hot water from 50°C up to 82°C outlet water temperature, whilst still maintaining the performance and efficiency levels of the rest of the system.
- Particularly suited for hot water sanitary production for residential and business applications.

All year round hot water

- All season hot water even when the other indoor units are operate in cooling.
- Operating range from -25°C WD to +40°C DB ambient condition.

CAPACITY



5HP

HOT WATER



82°C

OUTDOOR UNITS

SHRM-e

LOCAL CONTROLS

RBC-AMSU51E-ES/EN
RBC-AMTU31-E
RBC-ASCU11-E

HOT WATER MODULE Performance**PRELIMINARY DATA**

Indoor unit	MMW-	AP0481CHQ-E
Cooling capacity	kW	-
Heating capacity	kW	14
Power consumption	kW	4.15
Running current	A	17.5
Starting current	A	-

HOT WATER MODULE Physical data**PRELIMINARY DATA**

Indoor unit	MMW-	AP0481CHQ-E
Water flow	m³/h	2.400
Water flow	l/min	40
Sound pressure level	dB(A)	44
Dimensions (h x w x d)	mm	700 x 900 x 320
Weight	kg	100
Gas	in	5/8
Liquid	in	3/8
Drain port diameter	mm	15
Water Inlet	mm	R1 - 1/4"
Water Outlet	mm	R1 - 1/4"
Power supply	V-ph-Hz	220/240-1-50

ON YOUR OWN AS A FAMILY



IN A GROUP ON

Take control of your comfort !

Toshiba offers various control solutions to meet users' and designers' expectations. From local individual control and settings to computer-based TCC link/TU2C link networks, all indoor units can be programmed and set to suit your operational needs. Remote control systems offer a wide range of features including schedule timers, diagnostic functions, power meters and input/output signals, to name just a few. Toshiba VRF units are compatible with industry standards and can be connected to all the main building management software systems in use. TCC link is Toshiba's dedicated Central Control Network which can be used with VRF and light commercial units either directly or by means of a specially-designed network adapter.

> CONTROLS

YOUR OWN AS A FAMILY IN A GROUP ON YOUR OWN



RAS INDIVIDUAL REMOTE CONTROLLER

> INFRARED CONTROL

Compatible with		Functions																	Luminous buttons	Backlight display	Wired connectable
		Plasma ion purifier / Ionizer	3D air flow	Silent outdoor unit	Fire place mode	On demand defrost	On touch my comfort	Comfort sleep	Preset	Hi power	Eco logic	Fix or Swing louvers	Powerfull fan speed	Floor warming	Quiet	Power select	8°C	Off timer	Weekly timer		
Daiseikai 9 WH-TA01LE <i>Included</i>		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	
HAORI WH-TB03LE <i>Included</i>		•	•	•	•	•				•	•	•	•		•	•	•	•		•	
SHORAI Edge WH-TA15PE WH-TA12PE <i>Included</i>			•	•	•	•		•	•	•	•	•			•	•	•	•	•	•	•
SHORAI Nordic WH-TA04LE <i>Included</i>				•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	
SEIYA WH-TG01NE <i>Included</i>				•		•		•	•	•	•	•			•		•	•			•
Console WH-TA12LE <i>Included</i>				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
IR for 4way cassette RBC-AX32UM(W)-E <i>Option</i>								•	•	•	•	•			•	•	•	•			
Wired for : 4way cassette & Duct RB-RWS21-E <i>Option</i>								•	•	•	•	•			•	•	•		•	•	•
Seiya RB-RXS33-E <i>Option</i>				•	•	•		•	•	•	•	•			•	•	•	•	•	•	

> WIRED CONTROL

Remote for multisplit cassette and duct



RB-RWS21E

- Large backlit screen
- Multilanguage menu
- Integrated weekly timer
- Enables ambient temperature sensor
- Quick access to standard functions (mode, fan speed & set point)
- Wired connection

> WIFI CONTROL

Toshiba Home AC Control Toshiba Wi-Fi control solution for RAS units

Multiple units, one app

- 1 user can control up to 10 AC units
- 1 AC unit can be controlled by up to 5 users

Easy grouping

- Make control simple by grouping your AC units in up to 3 zones

Secure connections

- Password & login
- Child lock function

Compatible Products

- DAISEIKAI 9, SHORAI, Console, SEIYA. (Jan'19)

Download YOUR APP

- Toshiba AC Control App for your Android and iOS smartphone from Google Play or the App Store



Toshiba Home AC CONTROL

> DO YOU WANT A SMART SOLUTION TO GIVE YOUR FAMILY GREATER COMFORT WHILST EASILY MANAGING YOUR ENERGY SAVINGS?

• MULTIPLE UNITS, ONE APP

- 1 user can control up to 10 AC units
- 1 AC unit can be controlled by up to 5 users

• EASY GROUPING

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• SECURE CONNECTIONS

- Password & login
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• COMPATIBLE PRODUCTS

- DAISEIKAI 9, SHORAI, Console, SEIYA. (Jan'19)

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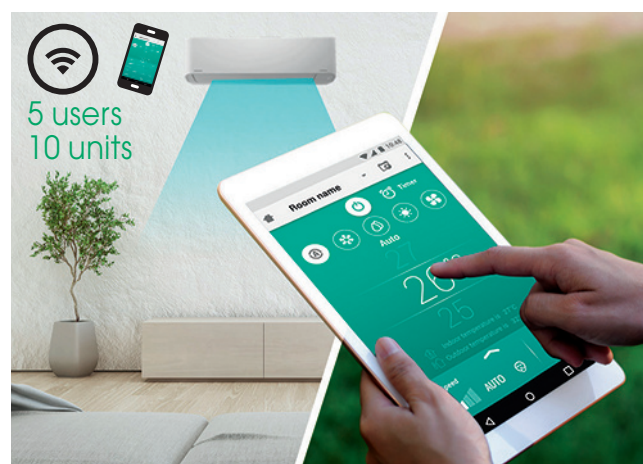


Take complete control of your comfort with the Toshiba Home AC Control App. Simple to use on your smartphone or tablet, both at home and on the move. Fully compatible, the adapter can be used with all Toshiba High-walls and Console units.



Enhance your comfort, at home or away

Customise your comfort, finding the perfect cooling or heating level for your family at any time, no matter where you are. When at home, simply replace your infrared remote control with the intuitive smart app. This also gives you easy access to your air conditioner on the move, allowing you to adapt your comfort to your lifestyle!



Smart & efficient

- Want to go home and immediately enjoy an ideal temperature? Simply use the app to check the status, quickly and easily, adjust your comfort, no matter where you are.
- Match your AC schedule to your family's routine to optimise running time, and enjoy savings on your energy bill.



Modern app

• This user-friendly app is available in 5 languages, and boasts a host of intuitive features. With a different colour for each different mode, and the main functions accessible in just one touch.

• Toshiba premium features enable you to enjoy all the benefits of your AC systems at home. Simply swipe up on the main app screen on your smartphone or tablet to access additional Toshiba-specific features.

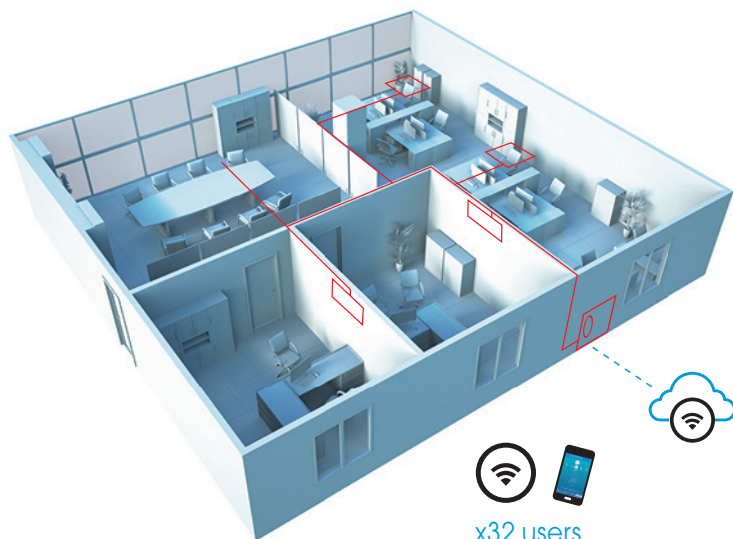
FLOOR

8°C	Holiday frost protection mode		Silent CDU to reduce the outdoor unit noise level
Hi POWER	Boost mode		Plasma & ionizer filters
	Fireplace mode		Floor function for Consoles

Toshiba AC CONTROL

> “DO YOU WANT FULL CONTROL OF YOUR AC SYSTEM IN ONE TOUCH, WHEREVER YOU ARE?”

Designed for commercial applications, the Toshiba AC Control App is your one-stop solution for managing up to 32 indoor units via an Android or iOS smartphone, with all main functions accessible in a single touch.



x32 users
x1 administrator



BMS-IWF0320E

Solutions wherever you are

Toshiba technology you can trust, fully committed to providing creative building management solutions, designed to enhance your sustainable lifestyle.

Make it your own

With different access levels for different users, this app can be used by everyone from facilities managers to standard users to manage all of the unit's functions. For an enhanced level of security, a user name and password is needed to log in.

Everything you need in one app

All of the indoor unit's functions can be accessed in an instant, allowing you to enjoy the full advantages of the AC system at work. The entire system is simple to manage, even remotely.

• QUICK AND EASY

- Simplified installation with direct connection to the TCC link bus line

• DESIGNED FOR YOU

- Up to 32 users for control of a maximum of 32 assigned indoor units
- Administrator mode for control of the entire system via a single app

• EVERYTHING UNDER CONTROL

- Optimise the management of your facilities without compromising comfort

• COMPATIBLE PRODUCTS

- Mini SMMS-e, SMMS-e, SHRM-e and RAV systems

• DOWNLOAD YOUR APP

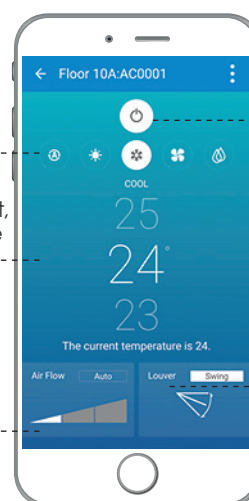
- Toshiba AC Control App for your Android and iOS smartphone from Google Play or the App Store



Mode
(heating, cooling, ventilation, dry, auto)

Temperature set point,
ambient temperature
information

Fan speed
(auto or manual)



On/Off

Louver
setting
(auto or
manual)

Administrator-specific functions:

- Group control with on/off function for all devices
- User access restriction management & advanced mode

RAV/VRF INDIVIDUAL REMOTE CONTROLLER

> INFRARED REMOTE CONTROLLER

One remote compatible with every LC/VRF indoor units



Included with
bi-flow console



Included with
LC/VRF higwall



RBC-AX41U(W)-E

- Smart cassette panel corner receiver



RBC-AX33UY-P

- 1 way cassette panel corner receiver (compatible with YHP 1-way cassette)



RBC-AX31UC-E

- Ceiling panel receiver



RBC-AXU33UP-E

- Standard cassette panel corner receiver



RBC-AXU31UM-E

- Panel corner receiver (compatible with compact 4-Way cassette)



RBC-AXU31-E

- Easy to use remote controller with direct access to every function
- In addition of standard function, HI power, Quiet and Comfort sleep mode
- 2 steps timer mode

- Stand alone receiver (compatible with all indoor units)

> WIRED REMOTE CONTROLLER

One solution for every projects



RBC-ASCU11-E

Back to basics with this new remote offering all the standard functionalities with compact dimensions and large screen.

Functions:

On/Off, operation mode, temperature setting, fan speed, louvres fault codes & unit setup.



RBC-AMTU31-E

The standard remote to control an individual indoor unit or a group of 8 indoor units

Functions:

On/Off, operation mode, temperature setting, fan speed, louvres, fault codes, unit setup and button restrictions



RBC-AMSU51E-ES/EN

The ultimate in local remote controller with built-in 7-Day timer, large screen and menu

Functions:

On/Off, operation mode, dual set point, fan speed, louvres, return back, energy savings, frost protection, auto summer/winter clock, soft cooling, leak detection, fault codes, unit setup and button restrictions

> SPECIFIC REMOTE CONTROLLER

Ventilation control



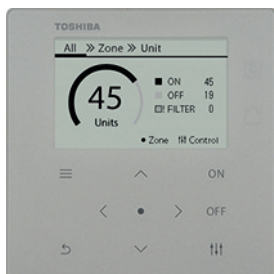
NRC-01HE

- Dedicated remote controller for Air-to-Air heat exchanger
- Integrated functions: fan speed, freecooling, air balance volume rate, temperature management and timer

A2W/RAV/VRF CENTRAL CONTROL

> UP TO 64 INDOOR UNITS

64 central controller



TCB-SC640U-E

64 central controller is now able to control Estia R32 products.

- Full control of max 64 LC & VRF indoor units + Estia R32 air to water systems
- Individual indoor unit, group (up to 10 groups) or full installation control
- Simple and intuitive interface with user friendly menus
- Large bbacklight display
- Touch-sensitive keys
- Standard features (On/Off, mode, temperature setting, fan speed, louvers)
- + permit/prohibit functions + Estia R32 functions accessibility
- Embedded digital outputs
- Compatible with TCC link and TU2C Link

Centralized Touch Screen Controller



TCB-TSC640-PY

- Centralized control of max 64 indoor units
- 7-inch color touch screen
- User friendly interface (indoor unit and room naming)
- One by one FCU or global system control: On/Off, mode, fan speed, louvers, set point and prohibit mode
- Daily, weekly, monthly and annually timer with Winter/Summer differentiation: up to 32 schedules
- Fault code acces
- Multilangage interface
- Compatible with TCC link

> UP TO 128 INDOOR UNITS

Smart Manager

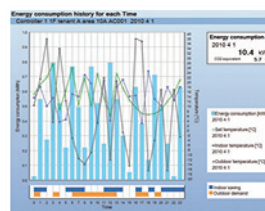


BMS-SM1281ETLE

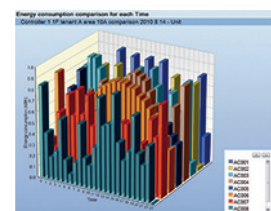
The Smart Manager has the same hardware control function as the Compliant Manager, but also has the ability of control from a Local Area Network with dedicated interface accessible from every Web Browser. Energy Monitoring and Data Analyser function is included and brings to the user strong tool to analyse power consumption day by day, hour by hour and finally save energy. Compatible with TCC link



This controller is ideal where advanced control, Energy Monitoring, advanced scheduling or acces to individual Air Conditionners is required from networked computer systems



Energy consumption history



Energy consumption comparison

RAV/VRF CENTRAL CONTROL

> UP TO 256 INDOOR UNITS

Touch Screen Smart Manager



BMS-CT2560U-E

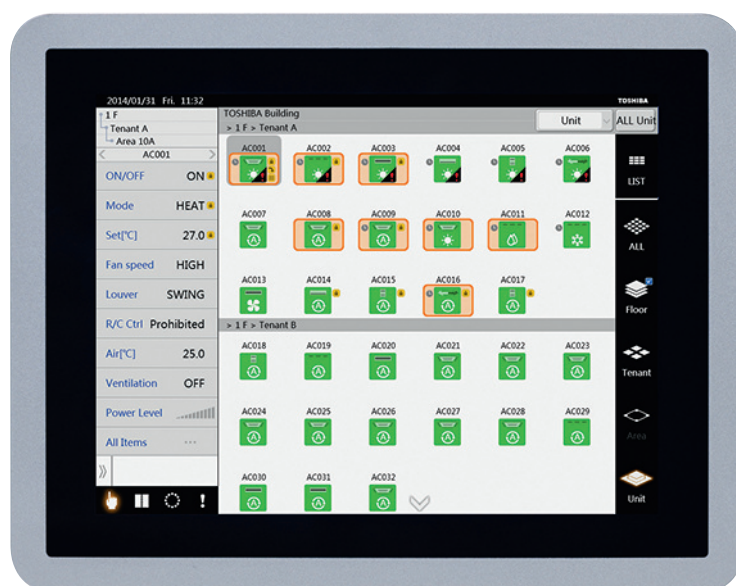


- Full control of max 256 indoor units
- 7" color touchscreen
- Nice looking menu with intuitive navigation to enhance control experience
- Advanced scheduling of indoor and outdoor units to maximize comfort & save energy
- Energy monitoring with or without power meter thanks to Data Analyser software
- Webserver to keep control in any circumstances
- Embedded input and output to enlarge control or interact with other equipment
- Dedicated fault code menu with Email transfer capability
- Compatible with TCC link & TU2C link



> UP TO 512 INDOOR UNITS

Centralized Touch Screen Controller



BMS-CT5121E

- Full control of max 512 indoor units: on/off, mode, set point, fan speed, louver management and prohibit mode
- 12.1 large screens
- Quick and accurate view of indoor unit status through dedicated logo
- Floor, building, tenant and system overview with possibility to integrate plan
- Built in web server for control through web browser
- Weekly timer with up to 20 steps per day
- Energy monitoring with graph, to view operating hours, set point, inside/outside temperature, and power consumption
- Email alert in case of troubles
- Compatible with TCC link



VRF LEAK MANAGEMENT

The comprehensive answer to IEC 60335-2-40/EN378 safety requirements for all Toshiba VRF systems

> MINI SMMS-E, SMMS-E AND SHRM-E

R410A refrigerant

> Make your choice between 3 possibilities to manage toxicity constraints :

A - Leak detection only.

B- Leak detection
+ indoor unit isolation.

C- Leak detection
+ isolation
+ refrigerant pump down (SMMS-e & SHRM-e).

> SHRM ADVANCE

R32 refrigerant

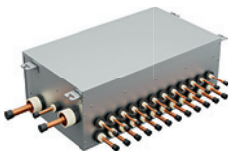
> With SHRM-Advance, Toshiba has developed different solutions to comply with the European safety regulation related to toxicity and flammability limitations.

A - Pump down and system shutdown. Recommended
for office buildings.

B- Individual isolation allowing continuous operation.
Recommended for hotel applications.

C- Refrigerant dilution with continuous operation. Adapted
to small systems.

Model	Picture	Description	A	B	C
TCB-LDS1		Leak detector with plastic cover	✓	✓	✓
TCB-LDS2		Leak detector with metal cover	✓	✓	✓
TCB-AW1786*		Shut off valve		✓	✓
TCB-LD1		Control box		✓	
TCB-LD2		Control box			✓
TCB-LDSBB1		Flush mounting for leak detector (dry lining)			
TCB-LDSBB2		Flush mounting for leak detector (concrete)			

Model	Picture	Description	A	B	C
TCB-LD1UPE		R32 leak sensor (audible and visual alarm)	✓	✓	✓
RBM-Y_1FUxP-E		Shut-off valve included into FS Box for 3-pipe SHRM Advance operations.	✓	✓	
RBM-SV_1HUP-E		Shut-off valve for 2 pipe SHRM Advance operations.	✓	✓	
TCB-BT1UPE		Battery kit to secure Shut-off valve operations in case of power failure.	✓	✓	

> Additionnal PCB

> DEDICATED TO OUTDOOR UNITS

Outdoor units advanced functions

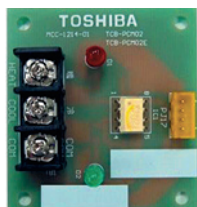
> POWER PEAK CUT CONTROL BOARD SENSOR



TCB-PCDM4E

- Limits capacity of the VRF outdoor unit at 85%, 80%, 75% and 60% load or stop it.
- Compatible with all VRF outdoor units.

> EXTERNAL MASTER ON/OFF CONTROL SENSOR



TCB-PCMO4E

- External master On/Off control board, night mode and mode priority selection.
- Compatible with all VRF outdoor units.

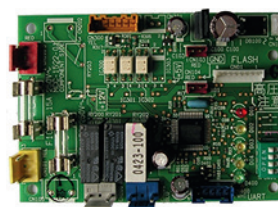
> CONTROL OPERATION BOARD SENSOR



TCB-PCIN4E

- Error/Individual compressor operation output control board.
- Compatible with all VRF outdoor units.

> APPLICATION CONTROL SENSOR KIT



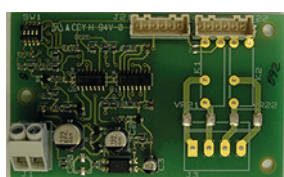
TCB-PCOS1E2

- Enables night operation control, demand control and operation monitoring.
- Compatible with DI.

> DEDICATED FOR INDOOR UNITS

Indoor units advanced functions

> WINDOWS SWITCH SENSOR



TCB-IFCB5PE

- Ensures the indoor unit not operate when outside window is open or for door entry systems.
- RAS, RAV and VRF indoor units.

> MULTI-TENANT



TCB-PSMT1E

- For multi tenant application, this PCB maintains low voltage power supply during tenant absence when the main power supply for the FCU is shut down.
- Compatible with VRF indoor units.

> OPTIONAL CONNECTION KIT



TCB-PCUC2E

- Extends control capability of light commercial and VRF indoor units with third party equipment.
- Compatible with RAV and VRF indoor units.

> TCC LINK INTERFACE



TCB-PCNT30TLE2

- Allows DI/SDI indoor units & AHU DX kits to be connected to TCC link network.

RAV/VRF/ESTIA GATEWAY

> MODBUS® RTU

Reliable and easy to use



TCB-IFMB1280U-E

Directly connect up to 128 Toshiba Air Conditioning indoor units to a Modbus® Building Management System. Maximum 15 Modbus I/F can be connected per Modbus Master Device. Compatible with TCC Link & TU2C Link protocols.

Individual gateway

BMS-IFMB0UCW-E (RAV/VRF)
BMS-IFMB0UEW-E (Estia)

Connect easily one indoor unit or a group of 8 indoor units to a Modbus Building Management Control System.

> LONWORKS®

12 input network variables



TCB-IFLN642TLE

Directly connect up to 64 Toshiba Air Conditioning indoor units and up to 16 outdoor units to a Lonworks® Building Management Control System. Compatible with RBC-WP1-PE Lonworks Control software.

> KNX®

ETS configuration

TO-AC-KNX-64 (RAV/VRF - TCC Link)
TO-AC-KNX-16 (RAV/VRF - TCC Link)
BMS-IFKX0UCW-E (RAV/VRF)
BMS-IFKX0UEW-E (Estia)

Directly connect up to 64, 16 or only one Toshiba Air Conditioning indoor units to a KNX® Building Management Control System.

> BACNET® IP

Standard gateway

BMS-IFBN1280U-E
(Estia R32, SMMS-u &
SHRM-Advance compatibility)

Directly connect up to 128 Toshiba Air Conditioning indoor units to a BACnet® Building management Control System.

Network adaptor TCB-PCNT30TLE2 required for connection of DI/SDI Indoor Units (1 per Master Indoor Unit)

RAV/VRF INTERFACES

> ANALOGUE INTERFACE

Analogue 0/10V control



TCB-IFCB640TLE

The Analogue Relay Interface is a device that can be connected directly to the TCC-Link Central Control network to provide Analogue & Digital Inputs & Outputs for control over Toshiba Air Conditioner products from non-Toshiba control systems.

> GENERAL PURPOSE RELAY INTERFACE

Toshiba equipment control



TCB-IFCG1TLE

The General Purpose Relay Interface is a device that can be connected directly to the TCC-Link Central Control Network and addressed on the TCC-Link Network in order to provide control of non-Toshiba equipment from a Toshiba control system, and control of the Toshiba Air Conditioner from Digital & Analogue Inputs.

> GSM INTERFACE

Control any time anywhere...



TCB-IFGSM1E

The TCB-IFGSM1E Interface is a device that allows control of the Toshiba Air Conditioning Equipment from a remote location using standard GSM (Global system for Mobile communications) Mobile phone SMS text messages.

VRF CONTROL

Model number	Reference	TCC-Link	TU2C-Link	Description	Used with
BMS-CT1256U-E	7" Touch Screen Controller	●	●	Enables full control of up to 256 indoor units	
BMS-CT5121E	12" Touch Screen Controller	●		Enables full control of up to 512 indoor units with electric billing, ML	
BMS-IFBN1280U-E	BacNet Interface	●	●	BACnet Interface for Estia R32, LC & VRF	
BMS-IFBN640TLE	BacNet Interface	●		BACnet Interface for LC & VRF	Enables integration with BACnet
BMS-IFDD03E	Digital I/O relay interface	●		Digital I/O relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-IFKX0UCW-E	1:1 KNX interface		●	Connect RAV/VRF system to a KNX Building Management System	Remote Control wiring
BMS-IFKX0UEW-E	1:1 KNX interface		●	Connect Estia R32 system to a KNX Building Management System	
BMS-IFLSV4E	TCS-Net Relay Interface	●		Relay for integration to TCS-Net	Bacnet gateway, Touch-screens & Web based controller
BMS-IFMB0UCW-E	1:1 Modbus interface		●	Connect LC & VRF systems to a Modbus Building Management System.	Remote Control wiring
BMS-IFMB0UEW-E	1:1 Modbus interface		●	Connect Estia R32 system to a Modbus Building Management System.	
BMS-IFWH5E	Energy monitoring relay interface	●		Energy monitoring relay interface	Touch screen controller, Compliant manager, Web based controller, Smart Manager
BMS-WF0320E	Smart Device Control Interface	●		Enables full control of up to 32 indoor units by use Toshiba AC app (Smart phone & Tablet)	
BMS-SM1281ETLE	Smart BMS Manager with data analyzer	●		Enables full control of up to 128 indoor units with Energy Monitoring and Advanced Control Options	network 1:1 model connection interface required for DI/SDI (Excluding high-wall type)
NRB-1HE	Remote ON/OFF adapter	●		Allows ON/OFF control	All Air-to-air heat exchangers
NRC-01HE	Wired Remote Controller	●		Air-to-air heat exchanger remote controller, including with DX coil and humidifiers models	Air-to-air heat exchangers and Air-to-air heat exchangers with DX coil
RBC-AMSU51E-EN/ES	Design remote Controller with schedule timer	●	●	Multi-Language LCD display, a built-in 7-Day timer, Energy Saving options and return back function, Dual set points, and Soft cooling. EN = English, Italian, Polish, Greek, Russian, Turkish. ES = English, Spanish, Portuguese, French, Dutch, German	
RBC-AMTU31-E	Wired Remote Controller	●	●	Main wired remote controller	
RBC-ASC11U-E	Wired Remote Controller	●	●	Main wired remote controller	
RBC-AX33UY-P-E	Infra-red Remote Kit	●	●	Wireless remote controller	One-way cassettes (YHP series)
RBC-AXU31C-E	Infra-red Remote Kit	●	●	Wireless remote controller	All ceiling units and one-way cassettes (SH series)
RBC-AXU31-E	Infra-red Remote Kit	●	●	Wireless remote controller	All units
RBC-AXU33UP-E	Wireless remote unit kit	●	●	Wireless remote controller	4 way cassette series 4 & RBC-U33P-E panel
TCB-IFCB-4E2	Remote location On/Off Control Box	●		Enables remote location On/Off control	
TCB-IFCB5-PE	Window Switch & Remote on/off	●		Ensure the indoor unit not operate when outside window is open or for Door Entry systems	
TCB-IFCB640TLE	Analog interface	●		Control & monitoring up to 64 IU on TCC-link	Combination with TCB-IFCG1TLE
TCB-IFCG1TLE	General purpose interface	●		enables control of A/C by the DI/DO and AI/AO	Combination with TCB-IFCB640TLE
TCB-IFLN642TLE	LN interface	●		Allows control of 64 indoor units from a Lonworks based BMS	
TCB-IFMB1280U-E	Modbus interface box	●	●	Connect LC & VRF systems to a Modbus Building Management System.	
TCB-KBCN32VEE	Connectors	●		For CN32	
TCB-KBCN60OPE	Connectors	●		For CN60	
TCB-KBCN61HAE	Connectors	●		For CN61	
TCB-KBCN70OAE	Connectors	●		For CN70	
TCB-KBCN73DEE	Connectors	●		For CN73	
TCB-KBCN80EXE	Connectors	●		For CN80	
TCB-PCDM4E	Application Control PC Board	●		Power Peak Cut Control	
TCB-PCIN4E	Application Control PC Board	●		Error/Individual compressor Operation Output Control Board	
TCB-PCMO4E	Application Control PC Board	●		External Master ON/OFF Control Board	
TCB-PCUC2E	Optional connection kit	●			
TCB-PSMT1E	Optional connector kit	●		Multi-Tenant Kit for VRF Systems	SMMS-e, SHRM-e and Mini-SMMS Indoor Units (refer to I/M for more details of connectable Indoor units)
TCB-PX100-PE	Enclosure for the Window Switch / Remote On/Off	●		For use when the Window Switch / Remote On/Off Accessory cannot fit within the AC unit, eg. High Walls	For use with TCB-IFCB5-PE
TCB-PX30MUE	E-Box Extension Enclosure	●		For 1:1 Model connection I/F and Window Switch / Remote On/Off PCB	4-Way Cassettes only & TCB-IFCB5-PE
TCB-PX40MUE	E-Box Extension Enclosure	●		For 1:1 Model connection I/F and Window Switch / Remote On/Off PCB	4-Way Compact Cassettes only & TCB-IFCB5-PE
TCB-SC640U-E	Centralized remote controller	●	●	Up to 64 indoor units	
TCB-TC41U-E	Remote temperature sensor	●	●	Remote temperature sensor for cassette & duct	

LIGHT COMMERCIAL ACCESSORIES

Indoor unit type			Required accessory	
Smart 4-way Air Discharge cassette type	Standard panel	RBC-U41PG(W)-E		
	Motion Sensor	TCB-SIR41U-E		
	Fresh air and filter chamber	TCB-GFC1603UE		
	Fresh air inlet box	TCB-GB1602UE	For fresh air inlet box	
	Auxiliary fresh air flange	TCB-FF101URE2	For fresh air intake by using the knockout hole of Fresh air and filter chamber. (dia.=100 mm)	Use with TCB-GFC1603UE
	Spacer for height adjustment	TCB-SP1603UE	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Air discharge direction kit	TCB-BC1603UE	height 50 mm	
	MTO straight, white color panel	RBC-U33P-E	Air direction change by cutting off air discharge port (3 pcs.)	
4-way Air Discharge cassette type	Motion Sensor	TCB-SIR33UP-E		
	Fresh air and filter chamber	TCB-GFC1602UE		
	Fresh air inlet box	TCB-GB1602UE	For fresh air inlet box	
	Auxiliary fresh air flange	TCB-FF101URE2	For fresh air intake by using the knockout hole of Fresh air and filter chamber. (dia.=100 mm)	Use with TCB-GFC1602UE
	Spacer for height adjustment	TCB-SP1602UE	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Air discharge direction kit	TCB-BC1602UE	height 50 mm	
	PM2.5 filters	TCB-PLFC1UPE-120	Air direction change by cutting off air discharge port (3 pcs.)	
		TCB-PLFC2UPE-80	Before pre filter	
Compact 4-way cassette type	Standard panel	RBC-UM21PG(W)-E	After pre filter	
	Motion Sensor	TCB-SIR41UM-E	Required accessory	Wireless remote controller kit (RBC-AX32UM(W)-E) and Occupancy sensor cannot be used on the same indoor unit.
Slim duct type	Auxiliary fresh air flange	TCB-FF101URE2	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
Concealed duct type	Spigot shaped flange	TCB-SF56C6BE	RAV-HM561BTP-E	
		TCB-SF80C6BE	RAV-HM801BTP-E	
		TCB-SF160C6BE	RAV-HM1**1BTP-E	
Ceiling-suspended type	Drain pump kit	TCB-DP31CE	RAV-HM***1CTP-E	Lift up to 600 mm
	Elbow Piping Kit	TCB-KP13CE	RAV-HM401CTP & RAV-HM501CTP-E	Needed when drain pump kit is used
		TCB-KP23CE	RAV-HM801CTP-E & RAV-HM1**1CTP-E	
Concealed Duct high static pressure type	Long life filter kit	TCB-LK2801DP-E	RAV-RM***DTP-E	
	Drain Pump kit	TCB-DP40DPE		

Code	Description	Capacities
RBC-TWP30E2	Twin-branch kit for DI & SDI	1.5 HP + 1.5 HP
RBC-TWP50E2	Twin-branch kit for DI & SDI	2 HP + 2 HP
RBC-TWP101E	Twin-branch kit for BigDI	3 HP + 3 HP
		4 HP + 4 HP
		5 HP + 5 HP
RBC-TRP100E	Triple-branch kit for DI & Big DI	2 HP + 2 HP + 2 HP
		3 HP + 3 HP + 3 HP
RBC-DTWP101E	Double-twin branch kit for Big DI	2 HP + 2 HP + 2 HP + 2HP
		3 HP + 3 HP + 3 HP + 3HP

BUSINESS REFRIGERANT ACCESSORIES

Compatible Mini SMMS, Mini SMMS-e & SMMS-e	Model Name	Compatible SHRM-e	Comaptible SHRM Advance	Specification	Picture	Total capacity codes
RBM-BY55E		RBM-BY55FE		Branching joint		under 6.4hp
RBM-BY105E		RBM-BY105FE				from 6.4 to 14.2hp
RBM-BY205E		RBM-BY205FE				from 14.2 to 25.2hp
RBM-BY305E	RBM-BY305FE					from 25.2 to 61.2hp
RBM-BY405E						61.2hp or more
RBM-HY1043E		RBM-HY1043FE		Headers branching four-way		< 14.2 HP
RBM-HY2043E		RBM-HY2043FE				< 14.2 - 25.2 HP
RBM-HY1083E		RBM-HY1083FE		Headers branching eight-way		< 14.2 HP
RBM-HY2083E		RBM-HY2083FE				< 14.2 - 25.2 HP
RBM-BT14E	RBM-BT14FE			Joints for connection of outdoor units		< 26 HP system capacity
RBM-BT24E	RBM-BT24FE					>26 <46 HP system capacity
RBM-BT34E						>44 HP system capacity
	RBM-Y1123FE			Flow selector unit		< 4.0 HP indoor units
	RBM-Y1803FE					< 4.0 - 6.4 HP indoor units
	RBM-Y2803FE					< 6.4 - 10.0 HP indoor units
	RBM-Y1124FE	RBM-Y1121FUPE*		Flow selector unit long piping		< 4.0 HP indoor units
	RBM-Y1804FE	RBM-Y1801FUPE*				< 4.0 - 6.4 HP indoor units
	RBM-Y2804FE	RBM-Y2801FUPE*				< 6.4 - 10.0 HP indoor units
	RBM-Y1801F4PE	RBM-Y1801FU4PE*		Multi-port flow selector unit		< 6.4 HP indoor units x 4 port
	RBM-Y1801F6PE					< 6.4 HP indoor units x 6 port
		RBM-Y1801FU8PE*				< 6.4 HP indoor units x 8 port
		RBM-Y1801FU12PE*		Shut off valve unit		< 6.4 HP indoor units x 12 port
		RBM-SV1121HUPE				< 4.0 HP indoor units
		RBM-SV1801HUPE				< 4.0 - 6.4 HP indoor units
		BM-SV6701HUPE				< 6.4 - 24 HP indoor units

* Embedded shut off valve

VRF ACCESSORIES

Indoor unit type	Parts name	Model name	Comply with VRF FCU	Notes	Remarks
4-way Air Discharge Smart cassette type	Standard panel	RBC-U41PG(W)-E	MMU-UP***1H-E/TR	Required accessory	
	Fresh air and filter chamber	TCB-GFC1603UE		For fresh air inlet box	
	Auxiliary fresh air flange	TCB-FF101URE2	MMU-UP***1H-E/TR	For easy fresh air intake by using the knockout hole of indoor unit. (dia.=100mm)	
	Spacer for height adjustment	TCB-SP1603UE		height 50 mm	
	Air discharge direction kit	TCB-BC1603UE		Air direction change by cutting off air discharge port (3 pcs.)	
4-way Air Discharge cassette type	Standard panel	RBC-U33P-E		Required accessory	
	PM2.5 filters	TCB-PLFC1UPE-120	MMU-UP***1HP-E/TR	Before pre filter	
		TCB-PLFC2UPE-80		After pre filter	
Compact 4-way cassette type	Decoration panel	RBC-UM21PG(W)-E	MMU-UP***1MH-E/TR	Required accessory	
2-way cassette type	Decoration panel	RBC-UW283PG(W)-E	MMU-UP0071WH-E/TR to MMU-UP0151WH-E/TR		
		RBC-UW803PG(W)-E	MMU-UP0181WH-E/TR to MMU-UP0301WH-E/TR	Required accessory	
		RBC-UW1403PG(W)-E	MMU-UP0361WH-E/TR to MMU-UP0561WH-E/TR		
	Auxiliary fresh air flange	TCB-FF151US-E	MMU-UP***1WH-E/TR	For easy fresh air intake by using the knockout hole of indoor unit	
	Filter chamber	TCB-FC283UW-E	MMU-UP0071WH-E/TR to MMU-UP0151WH-E/TR		
		TCB-FC803UW-E	MMU-UP0181WH-E/TR to MMU-UP0301WH-E/TR		
		TCB-FC1403UW-E	MMU-UP0361WH-E/TR to MMU-UP0561WH-E/TR		
	Super Long life filter	TCB-LF283UW-E	MMU-UP0071WH-E/TR to MMU-UP0151WH-E/TR		Use with TCB-FC283UW-E
		TCB-LF803UW-E	MMU-UP0181WH-E/TR to MMU-UP0301WH-E/TR	For use with filter chamber	Use with TCB-FC803UW-E
TCB-LF1403UW-E		MMU-UP0361WH-E/TR to MMU-UP0561WH-E/TR		Use with TCB-LF1403UW-E	
1-way cassette type	Decoration panel	RBC-UY32P-E	MMU-UP0031YHP-E/TR to MMU-UP0121YHP-E/TR	Required accessory	
		RBC-UY42P-E	MMU-UP0151YHP-E/TR to MMU-UP0271YHP-E/TR		
	Air purifier kit	TCB-EAPC1UYHP-E	MMU-UP-1YHP-E/TR	Set of Plasma Air Purifier, Dust sensor, Air quality indicator and Wireless receiver	
Slim duct type	3DW Louvers	TCB-TDL0141SDY-E	MMD-UP0031SPHY-E/TR to MMD-UP0121SPHY-E/TR		
		TCB-TDL0181SDY-E	MMD-UP0151SPHY-E/TR to MMD-UP0181SPHY-E/TR	Horizontal, veritcla motorized louver for slim duct	RBC-AMSU51E-ES/EN needed
		TCB-TDL0271SDY-E	MMD-UP0201SPHY-E/TR to MMD-UP0271SPHY-E/TR		
Concealed duct type	Spigot shaped flange	TCB-SF56C6BE	MMD-UP0071BHP-E/TR to MMD-UP0181BHP-E/TR		
		TCB-SF80C6BE	MMD-UP0241BHP-E/TR to MMD-UP0301BHP-E/TR		
		TCB-SF160C6BE	MMD-UP0361BHP-E/TR to MMD-UP0561BHP-E/TR		
Concealed Duct high static pressure type	Long life filter kit	TCB-LK801D-E	MMD-UP0181HP-E/TR to MMD-UP0271HP-E/TR		
		TCB-LK1401D-E	MMD-UP0361HP-E/TR to MMD-UP0561HP-E/TR		
		TCB-LK2801DP-E	MMD-UP0721/0961HP-E/TR		
	Spigot shaped flange	TCB-SF56C6BPE	MMD-UP0181HP-E/TR to MMD-UP0271HP-E/TR		
		TCB-SF80C6BE	MMD-UP0361HP-E/TR to MMD-UP0561HP-E/TR		
		TCB-SF160C6BE	MMD-UP0721HP-E/TR to MMD-UP0961HP-E/TR		
	Auxiliary fresh air flange	TCB-FF151US-E	MMD-UP***1HP-E/TR		
	Drain Pump kit	TCB-DP40DPE	MMD-UP***1HP-E/TR		
High Wall	PMV Kit	RBM-PMV0361U-E		For FCU capacity 0.3-1.3HP	Suitable for high wall 1 serie with o
		RBM-PMV0901U-E		For FCU capacity 1.7-2.5HP	without embedded PMV
Ceiling-suspended type	Drain pump kit	TCB-DP31CE	MMC-UP***1HP-E/TR	Lift up to 600 mm	Use TCB-KP13, 23CE
	Elbow Piping kit	TCB-KP14CPE	MMC-UP0151/0181HP-E/TR		
Fresh air intake type	High-efficiency filter 65	TCB-KP24CPE	MMC-UP0241HP-E/TR to MMC-UP0561HP-E/TR		
		TCB-UFM0481D-E	MMD-UP0481HF-E/TR	Dust collecting effect: 65% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
	High-efficiency filter 90	TCB-UFM1281D-E	MMD-UP0721HF-E/TR to MMD-UP1281HF-E/TR		Use with TCB-FC1281DF-E
		TCB-UFH0481D-E	MMD-UP0481HF-E/TR	Dust collecting effect: 90% (NBS Colorimetric method)	Use with TCB-FC0481DF-E
	Long life prefilter	TCB-UFH1281D-E	MMD-UP0721HF-E/TR to MMD-UP1281HF-E/TR		Use with TCB-FC1281DF-E
	Filter chamber	TCK-PF1281DF-E	MMD-UP0721HF-E/TR to MMD-UP1281HF-E/TR		Use with TCB-FC1281DF-E
		TCB-FC0481DF-E	MMD-UP0481HF-E/TR	For high efficiency filter or long life prefilter	
	TCB-FC1281DF-E	MMD-UP0721HF-E/TR to MMD-UP1281HF-E/TR			
Air-to-air heat exchanger with DX coil	Drain pump kit	TCB-DP40DFP-E	All models	Lift up to 330 mm	
		TCB-DP31HEXE	MMD-VN502/802/1002HEXE & MMD-VNK502/802/1002HEXE	Lift up to 330 mm	

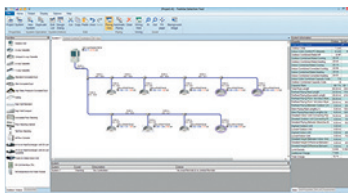
SOFTWARE

SELECTION TOOL

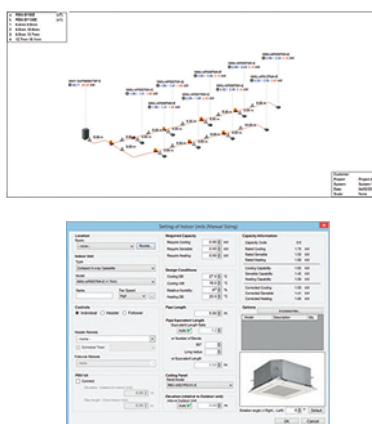


Toshiba Selection software has been fully designed, with a user-friendly interface allowing novice and expert users alike to create simple, yet detailed VRF system schematics. It is highly versatile, allowing the level of detail to be tailored to suit customer requirements. The software also allows the user to specify pricing strategy and create additional interim reports, including any diagrams and schematics required. Final detailed reports can then be produced and sent to customers in PDF format or in more complex files, such as AutoCAD DXF, allowing simple integration into their existing software packages.

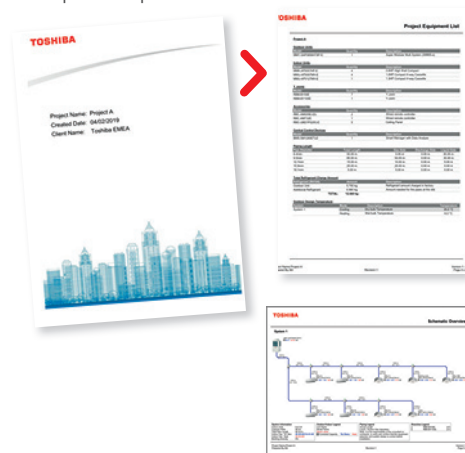
Software main screen



Project fully customizable

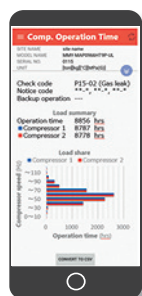
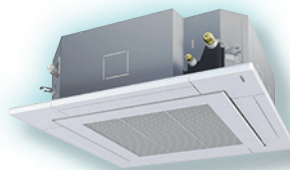


Complete report

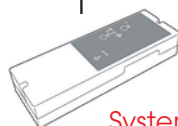


SERVICE TOOL

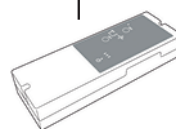
Save time during commissioning and maintenance. Choose between the "Wave Tool Advance" using Smartphone NFC connection or the link adaptor connected to the outdoor or indoor unit.



Wireless connection using smartphone NFC technology to collect system data



System operation self record using link adaptor



Get access to system data indoor using link adaptor



Direct USB connection to get access to system data

* Please contact Toshiba for iOS® & Android® phone compatibility list.

Wave tool compatible with SMMS- u, SMMS- e, SHRM- Advance and SHRM- e. Service tool compatible with SMMS- u & SHRM- Advance. Please, use Dyna Doctor for MINI SMMS- e, SMMS- e & SHRM- e.

➤ INSTALLATION AND USE OF REFRIGERANTS NOT SPECIFIED BY TOSHIBA CARRIER CORPORATION

Toshiba Air Conditioning products are designed and manufactured on the assumption that each product is used with the specific refrigerant specified for that product.

The use of incorrect refrigerant may cause mechanical defects, malfunctions or failures which, in some cases, could result in a serious safety issue. For this reason Toshiba Carrier Corporation requires that only the specified refrigerant for a product should be used.

The type of refrigerant specified for a product is stated in the accompanying owners manual for a product, or on the label attached to the product itself.

Toshiba Carrier Corporation shall not assume any liability for failures, malfunctions or safety issues on any product if incorrect refrigerant is used in that product.

➤ TESTING CONDITIONS BASED ON EUROVENT REQUIREMENTS

Cooling mode

Indoor air temperature: 27°CDB / 19°CWB

Outdoor temperature: 35°CDB / 24°CWB

Heating mode

Indoor air temperature: 20°CDB

Outdoor temperature: 7°CDB / 6°CWB

Certified data accessible on Eurovent website

Seasonal data accessible on Toshiba Ecodesign website



Better Air Solutions

Through our commitment to world-class **efficiency**, versatile **scalability** and leading **quality**, Toshiba Air Conditioning advances leading-edge technologies to find the most forward-thinking solutions possible for your world.