

TOSHIBA Leading Innovation >>>



When technology meets comfort

RESIDENTIAL AIR CONDITIONING RANGE

RESIDENTIAL



Residential



The sum of perfection

Air conditioning plays a fundamental role in your well-being at home and at work.

In fact, it is not only important to provide the desired temperature; it is also essential to get the best indoor air quality.

Selecting the most suitable system is key to maximising performance and optimising comfort. Air treatment, low sound levels, guaranteed energy savings and easy installation of the indoor units make the Toshiba residential range the top choice for any home.

Toshiba Air Conditioning systems are recognised universally by air conditioning professionals for their total reliability. Our customers expect ultimate comfort and this is what we provide.

Comfort and well-being

The new R-410A residential products have been designed to offer the best possible comfort to users.

The air filtration systems provide clean indoor air at all times. In fact, the new high-walls provide high energy savings and unmatched indoor air quality.

Thanks to a new design, the indoor units look elegant and blend beautifully with any room interior.

Toshiba systems are silent, discreet and unobtrusive, they deliver high energy efficiency and complete air purification.





A passion for innovation

Toshiba was the first company to incorporate inverter technology into air conditioning systems in 1981 and since then it has always maintained a technological advantage over its competitors.

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.

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's continuous research developed PWM technology, which is used together with the traditional PAM control.

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



The ultimate expression of inverter technology

Toshiba DC hybrid inverter technology controls the capacity supplied by the air conditioner.

By modifying the supply current frequency or intensity, it ensures smooth linear variation of the rotation speed and capacity of the compressor – the heart of the air conditioner.

This allows the cooling and heating capacities to be matched to the actual operating conditions required.

When the room temperature is different from the set point, the air conditioner operates at maximum capacity, ensuring that a comfortable temperature will be reached quickly.

Once the desired temperature is reached, the inverter precisely adjusts the capacity to maintain a temperature close to the set point.



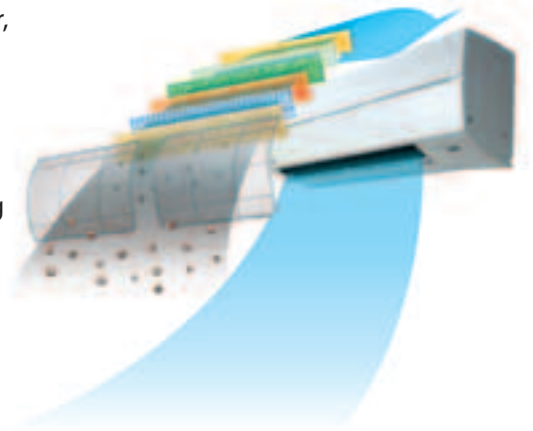
Filtration, purification, innovation: excellent indoor air quality

With Toshiba residential air conditioners air quality is guaranteed by many stages of filtration and additional functions such as pre-treatment, removal of fine particles, viruses, bacteria and allergens for total purification.

Electrostatic purification also guarantees a basic cost advantage, as there are no ongoing replacement part costs.

Thanks to this superior air filtration system, your home will have cleaner, healthier air.

The new high-walls are equipped with special filtration systems that remove odours and pollutants and prevent mould formation, providing enhanced indoor air quality, for perfect comfort at home.



Nothing escapes a Toshiba filter!

Plasma Air Purifier

It absorbs and eliminates particles and pollutants such as dust, pollen, mould spores and viruses.

It also deodorises air (removing tobacco, pet and food odours). It is extremely effective: it can collect particles as small as 0.0001 micrometer and is 10 times faster than standard filters.



Super Oxi Deo



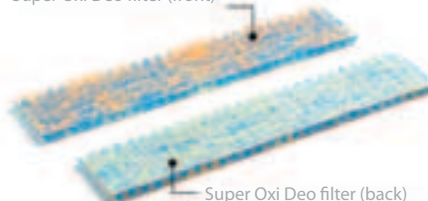
It is a combination of **coffee bean** extract, Vitamin C and Super Zeolite filters. It works as an anti-oxidant and deodoriser.

Coffee Bean has anti-ageing and anti-oxidant properties.

Vitamin C protects skin by neutralising free radicals that could harm skin and its components.

Super Zeolite (combining Zeolite and titanium dioxide) deodorises and cleans the air, removing chemicals and odours.

Super Oxi Deo filter (front)



Super Sterilizer



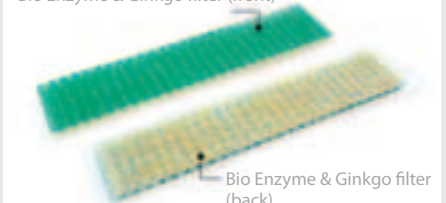
It is a complete system, composed of Super Ginkgo, Bio Enzyme and Sasa filters.

Super Ginkgo reduces agents that can cause allergic reactions.

Bio Enzyme traps and removes bacteria, viruses and mould.

Sasa (bamboo grass) is effective in deactivating bacterial viruses that cause illness.

Bio Enzyme & Ginkgo filter (front)



The perfect answer from the experts

Toshiba has been studying, designing and creating innovative air conditioning systems for over 30 years and as a result can offer the highest performance on the market.

Toshiba creates products that provide top performance, active air purification, superior EER and exemplary energy savings.

Good news for your wallet

Quality has always been Toshiba's strength and will remain key to differentiating Toshiba air conditioners from those of our competitors.

In fact, most of Toshiba's products offer the highest performance in the market.

In addition, since energy labeling was introduced to highlight actual energy consumption, the majority of Toshiba products proudly display or exceed the highest energy label, A.

This means high energy savings to our customers and benefits to the environment!



Good news for the environment

Toshiba has anticipated legislation on the control of refrigerant emissions to the atmosphere and, to show its commitment to the environment, it is carrying out continuous research and improvements.

The residential systems use only R-410A, the high efficiency non-ozone depleting refrigerant.



Technology comes with style

Toshiba has always paid attention to aesthetics and design, most of all for the residential products. We know that the end users are looking for a sophisticated system that is reliable, efficient but also hi-tech and modern. Not only does Toshiba excel in superior design, but we also have state-of-the-art technology to match.

Toshiba has created a compact and unobtrusive range of residential indoor units that suit any room interior.

The high-wall units are very stylish and modern; the new ones present flat panels and silver details that display a touch of elegance.

The flexi unit is totally unobtrusive: it can be installed either on the floor or on the ceiling. The elegant profile makes it a perfect choice for any room.

All of Toshiba's systems incorporate inverter technology which ensures improved performance and reliability, as well as providing fast and precise

temperature control. Toshiba's inverter technology provides you with significant energy savings by reaching the required temperature 50% faster than non-inverter systems, and working more efficiently.



Minimal sound levels

We know that sound levels are very important to our customers, therefore we have ensured that all our systems are designed to operate at minimal sound levels,

achieving a relaxed and comfortable environment for the home, without any disturbance to your family or your neighbours.



Simple, effective control, at a touch

Toshiba's range of advanced remote controls offers customers a quick, simple and effective way of creating the ideal temperature at home. Toshiba's controls incorporate a number of innovative functions, including automatic mode, holiday mode, quiet mode and programmable 24-hour timer.

Extensive market research highlighted the preferred settings of our customers within Europe.

- **One Touch Personal Comfort:** the European desired temperature is automatically programmed into the control to enable fast set-up for the user. The individual still has the ability to change it, if required.
- **One Touch Preset:** the user can easily store his preferred setting (operating mode, temperature, timer, louvre, fan speed and hi-power).
- **Quiet mode:** the indoor unit will operate at ultra-low fan speed, reaching exceptionally low sound levels.
- **Auto Diagnosis:** constantly monitors functions and components and makes maintenance very easy.
- **Eco-logic:** with this function, it is possible to have comfort together with energy savings (up to 25% compared to the standard operation).
- **Hi-Power:** with extra air flow the desired temperature is quickly reached.

Super Daiseikai



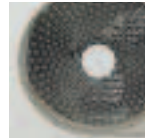
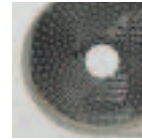
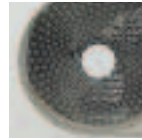
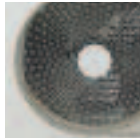
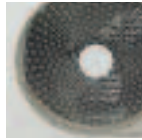
SKV Inverter high-wall







*GKP Fixed-speed high-wall
GFHP Fixed-speed flexi unit
GDV Inverter ducted unit*



OUTDOOR UNIT



sizes	10	13	16	18	24
Inverter					
	RAS-10SAVP-E RAS-B10SKVP-E	RAS-13SAVP-E RAS-B13SKVP-E	RAS-16SAVP-E RAS-B16SKVP-E		
	RAS-10SAV-E RAS-10SKV-E	RAS-13SAV-E RAS-13SKV-E	RAS-16SAV-E RAS-16SKV-E		
Fixed-speed					
	RAS-10GAH-ES2 RAS-10GKHP-ES2	RAS-13GAH-ES2 RAS-13GKHP-ES2		RAS-18GA-ES2 RAS-18GKP-ES2 RAS-18GAH-ES2 RAS-18GKHP-ES2	RAS-24GA-ES2 RAS-24GKP-ES2 RAS-24GAH-ES2 RAS-24GKHP-ES2
				RAS-18GA-ES2 RAS-18GAH-ES2 RAS-18GFHP-ES2	RAS-24GA-ES2 RAS-24GAH-ES2 RAS-24GFHP-ES2

Residential range multi-split systems

Heat pump systems

OUTDOOR UNIT:	2 rooms		3 rooms		4 rooms	
	RAS-M14GAV-E	RAS-M18GAV-E	RAS-3M18SAV-E	RAS-3M26GAV-E	RAS-4M23SAV-E	RAS-4M27GAV-E
 SKVP	sizes 10 & 13	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16
 SKV	sizes 10 & 13	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16
 GDV	sizes 10 & 13	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16
 SM_UT		sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10, 13 & 16	sizes 10*, 13* & 16*

* Liaise with your Toshiba Sales Representative for further details.

AG+ PLASMA AIR PURIFIER

SINGLE/MULTI-SPLIT

DC HYBRID INVERTER



Super Daiseikai

The third generation of Daiseikai perfection

Saving...

With its A/A class and its 5.1 EER (size 10), this high-wall is a supreme champion in energy saving: 35% more than a standard A class inverter.

In addition, thanks to its twin rotary compressor, it can operate at very low speeds (minimum cooling capacity is 0.5 kW), consuming only 100 Watts.

purification...

This exceptional indoor unit is equipped with an Ag+ Plasma Air Purifier, a complete filtration system that deodorises air, removes bacteria and provides a pure and healthy environment.

and design!

With its compact dimensions and its modern appearance, Super Daiseikai is very discreet and unobtrusive; its exclusive silver side trim gives it an additional touch of elegance.



Technical specifications heat pump

Outdoor unit		RAS-10SAVP-E	RAS-13SAVP-E	RAS-16SAVP-E
Indoor unit		RAS-B10SKVP-E	RAS-B13SKVP-E	RAS-B16SKVP-E
Cooling capacity	kW	2.50	3.50	4.50
EER	W/W	5.10	4.12	3.33
Energy efficiency class, cooling		A	A	A
Heating capacity	kW	3.20	4.20	5.50
COP	W/W	5.08	4.42	3.69
Energy efficiency class, heating		A	A	A
Indoor unit		RAS-B10SKVP-E	RAS-B13SKVP-E	RAS-B16SKVP-E
Sound pressure level, cooling (h/l)	dB(A)	42/27	43/27	45/29
Sound power level, cooling (h/l)	dB(A)	57/42	58/42	60/44
Sound pressure level, heating (h/l)	dB(A)	43/27	44/27	45/29
Sound power level, heating (h/l)	dB(A)	58/42	59/42	60/45
Dimensions (H x L x D)	mm	250 x 790 x 208	250 x 790 x 208	250 x 790 x 208

PURE INDOOR AIR WITH 7-IN-1
FILTRATION SYSTEM

SINGLE/MULTI-SPLIT

A/A CLASS DC ROTARY
INVERTER



SKV – Inverter high-wall

High filtration and energy savings

This new inverter high-wall is the quietest indoor unit in its category; it is A class (for both sizes 10 and 13) and, with the DC rotary inverter, it provides high energy savings: 20% more than a standard A class fixed-speed model.



Purity... without compromise!

Toshiba's 7-in-1 filtration system helps prevent impurities from reaching you and your family.

With this advanced system, the air passes through several filters and becomes purer, fresher and healthier, ensuring optimised comfort in your home.



- Vitamin C neutralises free radicals that could harm skin
- Super Zeolite removes odours
- Coffee bean has anti-oxidant properties



- Super Ginkgo reduces agents that cause allergic reactions
- Bio Enzyme removes bacteria, viruses and mould
- Sasa helps deactivate bacterial viruses
- Anti-mould pre-filter prevents mould

Technical specifications heat pump

Outdoor unit		RAS-10SAV-E	RAS-13SAV-E	RAS-16SAV-E
Indoor unit		RAS-10SKV-E	RAS-13SKV-E	RAS-16SKV-E
Cooling capacity	kW	2.50	3.50	4.50
EER	W/W	3.33	3.27	2.82
Energy efficiency class, cooling		A	A	C
Heating capacity	kW	3.20	4.20	5.30
COP	W/W	3.72	3.72	3.42
Energy efficiency class, heating		A	A	B
Indoor unit		RAS-10SKV-E	RAS-13SKV-E	RAS-16SKV-E
Sound pressure level, cooling (h/l)	dB(A)	38/29	39/26	45/30
Sound power level, cooling (h/l)	dB(A)	51/42	52/39	58/43
Sound pressure level, heating (h/l)	dB(A)	40/30	40/28	45/31
Sound power level, heating (h/l)	dB(A)	53/43	53/41	58/44
Dimensions (H x L x D)	mm	250 x 740 x 195	275 x 790 x 205	275 x 790 x 205

EFFICIENT AIR FILTRATION SYSTEM

COMPACT AND ELEGANT

HI-POWER AND AUTO-DIAGNOSIS FUNCTIONS



GKP – Fixed-speed high-wall Elegant and efficient unit

This high-wall unit is compact and slim-line and complements any interior décor with its simple lines and flat panel design.

The slimmest unit in Toshiba range: 25% smaller and 30% lighter (for sizes 7 and 10). It is the ideal solution for both residential and light commercial applications.

Equipped with an advanced air filtration system, including Zeolite

Plus and Sasa filters that remove odours and deactivate bacteria and viruses. Thanks to the Vitamin C filter this high-wall unit has anti-oxidant properties that neutralise free radicals that could harm the skin.

With its low sound level and hassle-free maintenance this high-wall unit is perfectly designed to deliver comfort quietly and efficiently throughout the seasons.



Technical specifications **cooling only**

Outdoor unit		RAS-18GA-ES2	RAS-24GA-ES2
Indoor unit		RAS-18GKP-ES2	RAS-24GKP-ES2
Cooling capacity	kW	5.33	6.83
EER	W/W	2.79	2.60
Energy efficiency class		C	D

Technical specifications **heat pump**

Outdoor unit		RAS-10GAH-ES2	RAS-13GAH-ES2	RAS-18GAH-ES2	RAS-24GAH-ES2
Indoor unit		RAS-10GKHP-ES2	RAS-13GKHP-ES2	RAS-18GKHP-ES2	RAS-24GKHP-ES2
Cooling capacity	kW	2.73	3.78	5.03	6.30
EER	W/W	3.25	3.23	2.68	2.55
Energy efficiency class, cooling		A	A	D	E
Heating capacity	kW	2.94	4.23	5.50	6.85
COP	W/W	3.63	3.65	3.20	2.81
Energy efficiency class, heating		A	A	C	D

6-IN-1 FILTRATION SYSTEM

MODERN DESIGN AND
COMPACT DIMENSIONSFLEXIBLE INSTALLATION: LOW
WALL OR CEILING-SUSPENDED

GFHP – Fixed-speed flexi unit

Flexibility and style

This indoor unit represents a flexible and discreet solution for the most demanding applications.

It has a compact, simple and attractive design and is flexible for both low-wall and ceiling-suspended installations.

The unit is equipped with an advanced 6-in-1 filtration system that includes: Zeolite Plus, Sasa filters and the anti-oxidant Vitamin C filters, significantly reducing odours, pollutants and particles in the air.

Thanks to the Hi-Power function, it is possible to achieve the desired temperature faster and to obtain absolute comfort in a matter of minutes.

This stylish, lightweight and discreet unit operates very quietly, providing you with total comfort day and night.

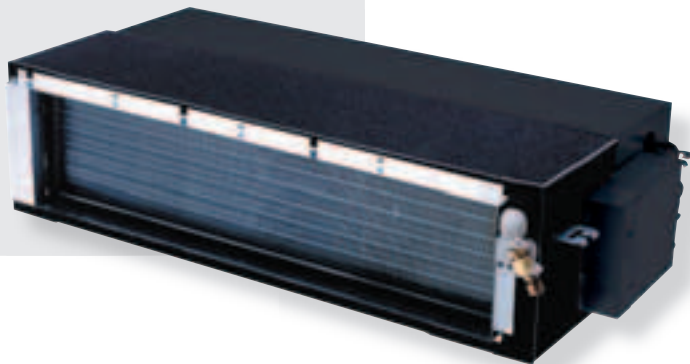
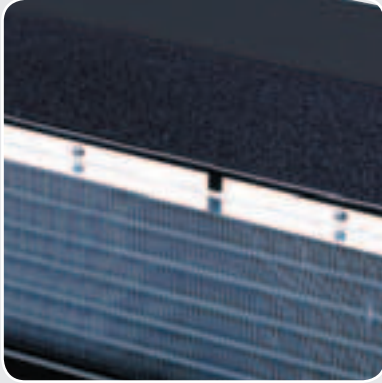
Technical specifications **heat pump**

Outdoor unit		RAS-18GAH-ES	RAS-24GAH-ES
Indoor unit		RAS-18GFHP-ES	RAS-24GFHP-ES
Cooling capacity	kW	5.05	6.25
EER	W/W	2.54	2.45
Energy efficiency class, cooling		E	E
Heating capacity	kW	5.73	7.05
COP	W/W	3.08	2.84
Energy efficiency class, heating		B	C
Indoor unit		RAS-18GFHP-ES	RAS-24GFHP-ES
Sound pressure level (h/l)	dB(A)	43/36	46/37
Sound power level (h/l)	dB(A)	56/49	59/50
Dimensions (H x L x D)	mm	633 x 1093 x 208	633 x 1093 x 208

LOW SOUND LEVELS

MULTI-SPLIT

SLIM DESIGN FOR AN EASY AND FLEXIBLE INSTALLATION



GDV – Inverter ducted

Reliable and unobtrusive solution

This ducted multi-split inverter offers reliable and controllable comfort all year round.

It is compact (only 230 mm high) and operates quietly for optimum and absolute well-being: it is the perfect solution for a wide range of residential and light commercial applications, with one outdoor unit serving up to four indoor units.

This unit has a flexible air inlet below or at the rear of the unit. A drain pump kit is also available for this unit as an optional extra.

The indoor units ensure immediate comfort and total discretion.

This unit comes with a user-friendly infra-red remote control. In addition, a wired control is available as an option.

Technical specifications heat pump

Indoor unit		RAS-M10GDV-E	RAS-M13GDV-E	RAS-M16GDV-E
Cooling capacity	kW	2,7	3,7	4,5
Heating capacity	kW	4,0	5,0	5,5
Indoor unit		RAS-M10GDV-E	RAS-M13GDV-E	RAS-M16GDV-E
Sound pressure level, cooling (h/l)	dB(A)	31/23	32/24	33/25
Sound power level, cooling (h/l)	dB(A)	44/36	45/37	46/38
Sound pressure level, heating (h/l)	dB(A)	32/24	33/25	34/26
Sound power level, heating (h/l)	dB(A)	45/37	46/33	47/34
Dimensions (H x L x D)	mm	230 x 750 x 440	230 x 750 x 440	230 x 750 x 440

STYLISH DESIGN AND COMPACT DIMENSIONS, TO SUIT ALL STANDARD CEILING GRIDS

MULTI-SPLIT

EASY MAINTENANCE



SM_UV – New inverter cassette

A new addition to the multi-split family

This new four-way cassette has been designed to suit all the standard 600 × 600 mm grid ceilings, for easy installation and maintenance.

This cassette has simple access to the electrical box by removing the suction grille.

Its compact and stylish panel is designed to make this unit discreet and unobtrusive, for any kind of application.

These units are ideal for both new and refurbishment projects.

Up to four indoor units can be linked to the same outdoor unit. This is an energy-efficient, cost-saving way of heating your home with the added benefit of only having one outdoor unit that can easily be disguised and saves space.

The cassette is also equipped with infra-red remote control, as standard.



Technical specifications heat pump

Indoor unit		RAS-M10SMUV-E	RAS-M13SMUV-E	RAS-M16SMUV-E
Air flow, cooling/heating (h/l)	m ³ /h – l/s	588 – 163	618 – 172	660 – 183
Sound pressure level, cooling/heating (h/l)	dB(A)	37/30	38/30	40/31
Sound power level, cooling/heating (h/l)	dB(A)	52/45	53/45	55/46
Dimensions (H x L x D)	mm	268 × 575 × 575	268 × 575 × 575	268 × 575 × 575
Weight	kg	17	17	17

Technology in multi-split systems



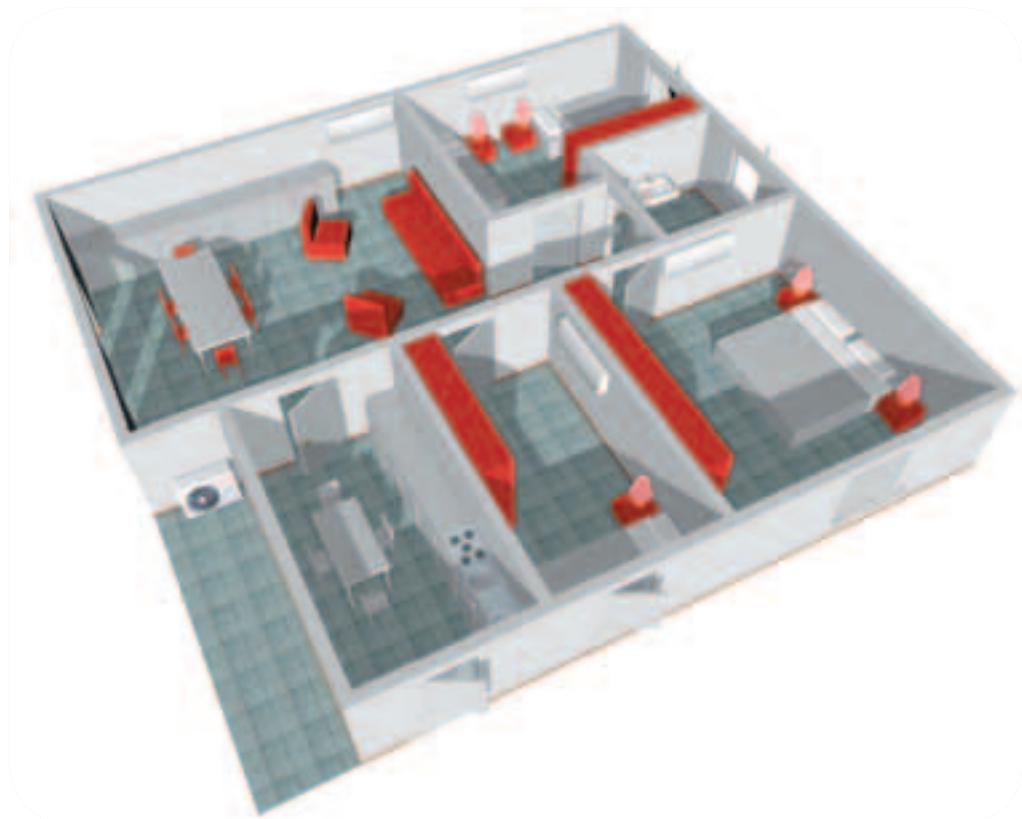
For premises that require air conditioning in more than one room, the Toshiba multi-split system is the perfect solution.

One outdoor unit is capable of operating 2, 3 or 4 indoor units. They are compact, elegant and designed to blend in with any room interior.

Toshiba offers a wide range of possibilities to create all the comfort you desire.

The full range of indoor units can satisfy every kind of need: it includes discreet ducted units and modern high-walls, that provide hi-tech, sophisticated design and complete air filtration at the same time.

The efficient inverter systems are composed of high-quality components: control electronics, motor, compressor - Toshiba solutions are universally recognised by air conditioning professionals for their total reliability.



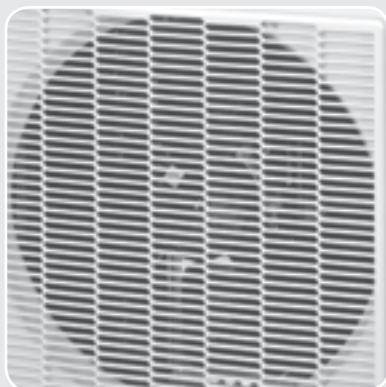
R-410A

DC HYBRID INVERTER

MULTI-SPLIT

GAV/SAV Multi-split outdoor unit

Multiplied technology and comfort



Toshiba multi-split outdoor units incorporate the Toshiba DC hybrid inverter, an enhanced feature that ensures improved performance and reliability.

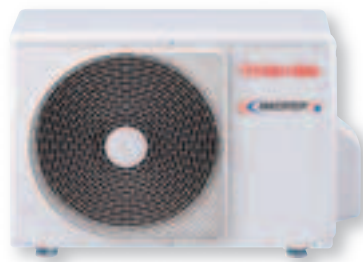
This stylish and compact outdoor unit provides you with maximum efficiency.

Thanks to the efficient DC compressors contained in the outdoor unit, these units provide fast and precise temperature management, with

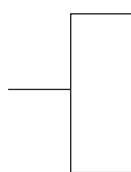
energy savings of 40-50% compared to fixed-speed systems.

The condensing units can be matched with a wide range of indoor units: high-walls (including the new Super Daiseikai), ducted units and the new 600 × 600 mm cassettes.

Toshiba's outdoor multi-split units are capable of operating up to four indoor units simultaneously, saving you money and space, as only one outdoor unit is required.



2 Rooms

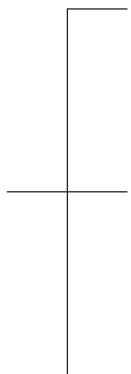


Super Daiseikai SKVP



Super Daiseikai SKVP

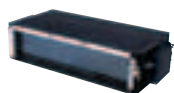
3 Rooms



Super Daiseikai SKVP

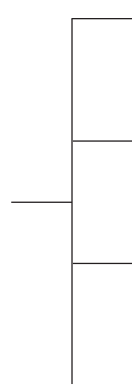


SKV



GDV (Ducted)

4 Rooms



Super Daiseikai SKVP



Super Daiseikai SKVP



SKV



Four-way cassette SM_UV

Combination ratings cooling only

Cooling, 230 V

Size	Operating status	Combination		Unit capacity (kW)		Cooling capacity (kW)			Power input (W)			Operating current (A)					
		Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.			
14	1 unit operation	10	-	2.50	-	1.1	2.5	3.2	170	570	880	1.06	2.92	4.11			
		13	-	3.50	-	1.1	3.5	3.8	170	1100	1280	1.06	5.03	5.80			
	2 unit operation	10	10	1.95	1.95	1.4	3.9	4.4	230	1070	1290	1.43	4.90	5.84			
		13	10	2.33	1.67	1.4	4.0	4.5	230	1080	1300	1.43	4.94	5.89			
Outdoor unit:		RAS-M14GACV-E				Indoor units:		RAS-M10SKCVP-E, RAS-M13SKCVP-E, RAS-M10SKCV-E, RAS-M13SKCV-E, RAS-M10GDCV-E, RAS-M13GDCV-E									
18	2 unit operation	10	10	2.55	2.55	1.4	5.1	6.1	260	1550	2150	1.61	6.88	9.54			
		13	10	2.85	2.35	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63			
		13	13	2.60	2.60	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63			
		16	10	3.25	1.95	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63			
Outdoor unit:		RAS-M18GACV-E				Indoor units:		RAS-M10SKCVP-E, RAS-M13SKCVP-E, RAS-M16SKCVP-E, RAS-M10SKCV-E, RAS-M13SKCV-E, RAS-M16SKCV-E, RAS-M10SMUCV-E, RAS-M13SMUCV-E, RAS-M16SMUCV-E, RAS-M10GDCV-E, RAS-M13GDCV-E, RAS-M16GDCV-E									
18	3 unit operation	10	10	10	1.70	1.70	1.70	2.2	5.1	6.3	420	1340	1970	2.40	6.07	8.74	
		13	10	10	2.14	1.53	1.53	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32	
		16	10	10	2.46	1.37	1.37	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32	
		13	13	10	1.92	1.92	1.37	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32	
Outdoor unit:		RAS-3M18SACV-E				Indoor units:		RAS-M10SKCVP-E, RAS-M13SKCVP-E, RAS-M16SKCVP-E, RAS-M10SKCV-E, RAS-M13SKCV-E, RAS-M16SKCV-E, RAS-M10SMUCV-E, RAS-M13SMUCV-E, RAS-M16SMUCV-E, RAS-M10GDCV-E, RAS-M13GDCV-E, RAS-M16GDCV-E									
23	3 unit operation	10	10	10	2.13	2.13	2.13	2.2	6.4	7.0	420	1880	2300	2.61	8.60	10.53	
		10	10	13	1.99	1.99	2.72	2.2	6.7	7.0	420	2150	2300	2.61	9.84	10.53	
		10	13	13	1.80	2.45	2.45	2.2	6.7	7.0	420	2150	2300	2.61	9.84	10.53	
		10	10	16	1.83	1.83	3.04	2.2	6.7	7.0	420	2150	2300	2.61	9.84	10.53	
Outdoor unit:		RAS-3M23GACV-E				Indoor units:		RAS-M10SKCVP-E, RAS-M13SKCVP-E, RAS-M16SKCVP-E, RAS-M10SKCV-E, RAS-M13SKCV-E, RAS-M16SKCV-E, RAS-M10SMUCV-E, RAS-M13SMUCV-E, RAS-M16SMUCV-E, RAS-M10GDCV-E, RAS-M13GDCV-E, RAS-M16GDCV-E									
23	4 unit operation	10	10	10	10	1.70	1.70	1.70	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		13	10	10	10	2.16	1.55	1.55	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		16	10	10	10	1.75	1.68	1.68	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		13	13	10	10	1.98	1.98	1.42	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
Outdoor unit:		RAS-4M23SACV-E				Indoor units:		RAS-M10SKCVP-E, RAS-M13SKCVP-E, RAS-M16SKCVP-E, RAS-M10SKCV-E, RAS-M13SKCV-E, RAS-M16SKCV-E, RAS-M10SMUCV-E, RAS-M13SMUCV-E, RAS-M16SMUCV-E, RAS-M10GDCV-E, RAS-M13GDCV-E, RAS-M16GDCV-E									
27	4 unit operation	10	10	10	10	1.98	1.98	1.98	4.0	7.9	8.7	930	2450	2800	4.49	10.87	12.42
		13	10	10	10	2.48	1.81	1.81	4.1	7.9	8.8	940	2450	2820	4.54	10.87	12.51
		16	10	10	10	2.86	1.71	1.71	4.1	8.0	9.0	940	2500	2860	4.54	11.09	12.69
		13	13	10	10	2.31	2.31	1.69	4.1	8.0	9.0	940	2500	2860	4.54	11.09	12.69
		16	13	10	10	2.65	2.18	1.59	4.2	8.0	9.1	950	2500	2880	4.59	11.09	12.78
		13	13	13	10	2.14	2.14	2.14	4.2	8.0	9.1	950	2500	2880	4.59	11.09	12.78
		16	13	13	10	2.47	2.03	2.03	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87
		13	13	13	13	2.00	2.00	2.00	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87
16	16	10	10	2.50	2.50	1.50	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87		
Outdoor unit:		RAS-4M27GACV-E				Indoor units:		RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10GDV-E, RAS-M13GDV-E, RAS-M16GDV-E (RAS-M10SMUV-E, RAS-M13SMUV-E, RAS-M16SMUV-E) ... Permitted with condition									

Combination ratings heat pump

Cooling, 230 V

Size	Operating status	Combination		Unit capacity (kW)		Cooling capacity (kW)			Power input (W)			Operating current (A)		
		Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
14	1 unit operation	10	-	2.50	-	1.1	2.5	3.2	170	570	880	1.06	2.92	4.11
		13	-	3.50	-	1.1	3.5	3.8	170	1100	1280	1.06	5.03	5.80
	2 unit operation	10	10	1.95	1.95	1.4	3.9	4.4	230	1070	1290	1.43	4.90	5.84
		13	10	2.33	1.67	1.4	4.0	4.5	230	1080	1300	1.43	4.94	5.89

Heating, 230 V

Size	Operating status	Combination		Unit capacity (kW)		Heating capacity (kW)			Power input (W)			Operating current (A)		
		Unit A	Unit B	Unit A	Unit B	Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
14	1 unit operation	10	-	3.20	-	0.7	3.2	4.0	130	850	1280	0.81	3.89	6.41
		13	-	4.20	-	0.7	4.2	4.4	130	1250	1350	0.81	5.60	6.86
	2 unit operation	10	10	2.15	2.15	0.9	4.3	4.6	170	980	1230	1.06	4.39	5.51
		13	10	2.50	1.90	0.9	4.4	4.7	170	1010	1250	1.06	4.53	5.60
Outdoor unit:		RAS-M14GAV-E				Indoor units:		RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M10GDV-E, RAS-M13GDV-E						

Cooling, 230 V

18	2 unit operation	10	10	2.55	2.55	1.4	5.1	6.1	260	1550	2150	1.61	6.88	9.54
		13	10	3.01	2.19	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63
		13	13	2.60	2.60	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63
		16	10	3.25	1.95	1.4	5.2	6.2	260	1600	2170	1.61	7.10	9.63

Heating, 230 V

18	2 unit operation	10	10	3.20	3.20	0.9	6.4	8.3	200	1800	2390	1.24	7.99	10.60
		13	10	3.72	2.98	0.9	6.7	8.7	200	1850	2450	1.24	8.21	10.87
		13	13	3.35	3.35	0.9	6.7	8.7	200	1850	2450	1.24	8.21	10.87
		16	10	3.88	2.82	0.9	6.7	8.7	200	1850	2450	1.24	8.21	10.87
Outdoor unit:		RAS-M18GAV-E				Indoor units:		RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10SMUV-E, RAS-M13SMUV-E, RAS-M16SMUV-E, RAS-M10GDV-E, RAS-M13GDV-E, RAS-M16GDV-E						

Combination ratings heat pump

Cooling, 230 V

Size	Operating status	Combination			Unit capacity (kW)			Cooling capacity (kW)			Power input (W)			Operating current (A)		
								Min.	Rated	Max.	Min.	Rated	Max.	Min.	Rated	Max.
18	3 unit operation	10	10	10	1.70	1.70	1.70	2.2	5.1	6.3	420	1340	1970	2.40	6.07	8.74
		13	10	10	2.14	1.53	1.53	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32
		16	10	10	2.46	1.37	1.37	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32
		13	13	10	1.92	1.92	1.37	2.2	5.2	6.5	420	1340	2100	2.40	6.07	9.32

Heating, 230 V

18	3 unit operation	10	10	10	2.23	2.23	2.23	2.2	6.7	7.5	420	1580	1950	2.40	7.16	8.74
		13	10	10	2.63	2.08	2.08	2.2	6.8	7.7	420	1600	2030	2.40	7.25	9.01
		16	10	10	2.95	1.93	1.93	2.2	6.8	7.7	420	1600	2030	2.40	7.25	9.01
		13	13	10	2.44	2.44	1.93	2.2	6.8	7.7	420	1600	2030	2.40	7.25	9.01

Outdoor unit: RAS-3M18SAV-E

Indoor units: RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10SMUV-E, RAS-M13SMUV-E, RAS-M16SMUV-E, RAS-M10GDV-E, RAS-M13GDV-E, RAS-M16GDV-E

Cooling, 230 V

26	3 unit operation	10	10	10	2.47	2.47	2.47	3.6	7.4	8.2	950	2230	2720	4.59	9.89	12.07
		13	10	10	3.01	2.20	2.20	3.9	7.4	8.3	950	2230	2750	4.59	9.89	12.20
		16	10	10	3.36	2.02	2.02	4.0	7.4	8.5	950	2230	2820	4.59	9.89	12.51
		13	13	10	2.71	2.71	1.98	4.0	7.4	8.5	950	2230	2820	4.59	9.89	12.51
		16	13	10	3.10	2.55	1.86	4.0	7.5	8.6	980	2250	2850	4.73	9.98	12.64
		13	13	13	2.50	2.50	2.50	4.0	7.5	8.6	980	2250	2850	4.73	9.98	12.64
		16	16	10	2.88	2.88	1.73	4.1	7.5	8.8	980	2250	2920	4.73	9.98	12.95
		16	13	13	2.84	2.33	2.33	4.1	7.5	8.8	980	2250	2920	4.73	9.98	12.95
		16	16	13	2.66	2.66	2.19	4.2	7.5	8.9	980	2250	2950	4.73	9.98	13.09

Heating, 230 V

26	3 unit operation	10	10	10	2.87	2.87	2.87	2.0	8.6	10.4	380	2300	2750	2.07	10.20	12.20
		13	10	10	3.35	2.68	2.68	2.0	8.7	10.5	380	2360	2760	2.07	10.47	12.24
		16	10	10	3.59	2.61	2.61	2.0	8.8	10.6	380	2430	2780	2.07	10.78	12.33
		13	13	10	3.14	3.14	2.51	2.0	8.8	10.6	380	2430	2780	2.07	10.78	12.33
		16	13	10	3.34	3.03	2.43	2.0	8.8	10.6	380	2430	2780	2.07	10.78	12.33
		13	13	13	2.93	2.93	2.93	2.0	8.8	10.6	380	2430	2780	2.07	10.78	12.33
		16	16	10	3.26	3.26	2.37	2.0	8.9	10.7	380	2490	2790	2.07	11.05	12.38
		16	13	13	3.16	2.87	2.87	2.0	8.9	10.7	380	2490	2790	2.07	11.05	12.38
		16	16	13	3.09	3.09	2.81	2.0	9.0	10.8	380	2550	2800	2.07	11.31	12.42

Outdoor unit: RAS-3M26GAV-E

Indoor units: RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10SMUV-E, RAS-M13SMUV-E, RAS-M16SMUV-E, RAS-M10GDV-E, RAS-M13GDV-E, RAS-M16GDV-E

Cooling, 230 V

23	3 unit operation	10	10	10	-	2.03	2.03	2.03	-	2.2	6.1	6.8	420	1840	1950	2.43	8.33	8.74
		13	10	10	-	2.51	1.79	1.79	-	2.2	6.1	6.8	420	1840	1950	2.43	8.33	8.74
		16	10	10	-	2.98	1.66	1.66	-	2.2	6.3	7.1	420	1950	2200	2.43	8.74	9.76
		13	13	10	-	2.32	2.32	1.66	-	2.2	6.3	7.1	420	1950	2200	2.43	8.74	9.76
		16	13	10	-	2.70	2.10	1.50	-	2.2	6.3	7.1	420	1950	2200	2.43	8.74	9.76
		13	13	13	-	2.10	2.10	2.10	-	2.2	6.3	7.1	420	1950	2200	2.43	8.74	9.76
		16	13	13	-	2.47	2.47	1.37	-	2.2	6.3	7.1	420	1950	2200	2.43	8.74	9.76
	4 unit operation	10	10	10	10	1.70	1.70	1.70	1.70	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		13	10	10	10	2.16	1.55	1.55	1.55	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		16	10	10	10	1.75	1.68	1.68	1.68	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20
		13	13	10	10	1.98	1.98	1.42	1.42	3.0	6.8	7.5	500	1950	2300	2.90	8.74	10.20

Heating, 230 V

23	3 unit operation	10	10	10	-	2.17	2.17	2.17	-	2.2	6.5	7.8	420	1650	2150	2.43	7.47	9.54
		13	10	10	-	2.61	1.94	1.94	-	2.2	6.5	7.8	420	1650	2150	2.43	7.47	9.54
		16	10	10	-	3.00	1.85	1.85	-	2.2	6.7	8.0	420	1750	2200	2.43	7.84	9.76
		13	13	10	-	2.44	2.44	1.82	-	2.2	6.7	8.0	420	1750	2200	2.43	7.84	9.76
		16	13	10	-	2.74	2.27	1.69	-	2.2	6.7	8.0	420	1750	2200	2.43	7.84	9.76
		13	13	13	-	2.23	2.23	2.23	-	2.2	6.7	8.0	420	1750	2200	2.43	7.84	9.76
		16	13	13	-	2.56	2.56	1.58	-	2.2	6.7	8.0	420	1750	2200	2.43	7.84	9.76
	4 unit operation	10	10	10	10	1.80	1.80	1.80	1.80	2.0	7.2	8.4	500	1630	2110	2.90	7.31	9.36
		13	10	10	10	2.23	1.66	1.66	1.66	2.0	7.2	8.4	500	1630	2110	2.90	7.31	9.36
		16	10	10	10	1.74	1.82	1.82	1.82	2.0	7.2	8.4	500	1630	2110	2.90	7.31	9.36
		13	13	10	10	2.06	2.06	1.54	1.54	2.0	7.2	8.4	500	1630	2110	2.90	7.31	9.36

Outdoor unit: RAS-4M23SAV-E

Indoor units: RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10SMUV-E, RAS-M13SMUV-E, RAS-M16SMUV-E, RAS-M10GDV-E, RAS-M13GDV-E, RAS-M16GDV-E

Cooling, 230 V

27	4 unit operation	10	10	10	10	1.98	1.98	1.98	1.98	4.0	7.9	8.7	930	2450	2800	4.49	10.87	12.42
		13	10	10	10	2.48	1.81	1.81	1.81	4.1	7.9	8.8	940	2450	2820	4.54	10.87	12.51
		16	10	10	10	2.86	1.71	1.71	1.71	4.1	8.0	9.0	940	2500	2860	4.54	11.09	12.69
		13	13	10	10	2.31	2.31	1.69	1.69	4.1	8.0	9.0	940	2500	2860	4.54	11.09	12.69
		16	13	10	10	2.65	2.18	1.59	1.59	4.2	8.0	9.1	950	2500	2880	4.59	11.09	12.78
		13	13	13	10	2.14	2.14	2.14	1.57	4.2	8.0	9.1	950	2500	2880	4.59	11.09	12.78
		16	13	13	10	2.47	2.03	2.03	1.48	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87
		13	13	13	13	2.00	2.00	2.00	2.00	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87
		16	16	10	10	2.50	2.50	1.50	1.50	4.2	8.0	9.2	950	2500	2900	4.59	11.09	12.87

Heating, 230 V

27	4 unit operation	10	10	10	10	2.23	2.23	2.23	2.23	2.2	8.9	10.8	450	2100	2810	2.45	9.32	12.47
		13	10	10	10	2.62	2.09	2.09	2.09	2.2	8.9	10.9	460	2100	2830	2.50	9.32	12.56
		16	10	10	10	2.83	2.06	2.06	2.06	2.2	9.0	10.9	460	2250	2830	2.50	9.98	12.56
		13	13	10	10	2.50	2.50	2.00	2.00	2.2	9.0	10.9	470	2250	2830	2.55	9.98	12.56
		16	13	10	10	2.68	2.43	1.95	1.95	2.2	9.0	11.0	480	2250	2850	2.61	9.98	12.64
		13	13	13	10	2.37	2.37	2.37	1.89	2.2	9.0	11.0	480	2250	2850	2.61	9.98	12.64
		16	13	13	10	2.54	2.31	2.31	1.85	2.2	9.0	11.0	490	2250	2850	2.66	9.98	12.64
		13	13	13	13	2.25	2.25	2.25	2.25	2.2	9.0	11.0	490	2250	2850	2.66	9.98	12.64
		16	16	10	10	2.61	2.61	1.89	1.89	2.2	9.0	11.0	500	2250	2850	2.72	9.98	12.64

Outdoor unit: RAS-4M27GAV-E

Indoor units: RAS-B10SKVP-E, RAS-B13SKVP-E, RAS-B16SKVP-E, RAS-M10SKV-E, RAS-M13SKV-E, RAS-M16SKV-E, RAS-M10GDV-E, RAS-M13GD

Technical specifications heat pump

Outdoor unit		RAS-10SAVP-E	RAS-13SAVP-E	RAS-16SAVP-E
Indoor unit		RAS-B10SKVP-E	RAS-B13SKVP-E	RAS-B16SKVP-E
Cooling capacity	kW	2.50	3.50	4.50
Cooling capacity range (min. – max.)	kW	0.5-3.5	0.6-4.5	0.8-5.0
Power input, cooling (min. – rated – max.)	kW	0.10 – 0.49 – 0.87	0.11 – 0.85 – 1.37	0.15 – 1.35 – 1.82
EER	W/W	5.10	4.12	3.33
Energy efficiency class, cooling		A	A	A
Annual energy consumption	kWh	245	425	675
Heating capacity	kW	3.20	4.20	5.50
Heating capacity range (min. – max.)	kW	0.6-6.1	0.6-6.9	0.8-8.0
Power input, heating (min. – rated – max.)	kW	0.12 – 0.63 – 1.71	0.12 – 0.95 – 2.09	0.15 – 1.49 – 2.51
COP	W/W	5.08	4.42	3.69
Energy efficiency class, heating		A	A	A
Indoor unit		RAS-B10SKVP-E	RAS-B13SKVP-E	RAS-B16SKVP-E
Air flow, cooling (h/l)	m ³ /h – l/s	546/276 – 152/77	564/276 – 157/77	606/318 – 168/88
Sound pressure level, cooling (h/l)	dB(A)	42/27	43/27	45/29
Sound power level, cooling (h/l)	dB(A)	57/42	58/42	60/44
Air flow, heating (h/l)	m ³ /h – l/s	612/282 – 170/78	636/300 – 177/83	678/342 – 188/95
Sound pressure level, heating (h/l)	dB(A)	43/27	44/27	45/29
Sound power level, heating (h/l)	dB(A)	58/42	59/42	60/45
Dimensions (H × L × D)	mm	250 × 790 × 208	250 × 790 × 208	250 × 790 × 208
Weight	kg	9	9	9
Outdoor unit		RAS-10SAVP-E	RAS-13SAVP-E	RAS-16SAVP-E
Air flow, cooling	m ³ /h – l/s	2148 – 597	2406 – 668	2406 – 668
Sound pressure level, cooling	dB(A)	46	48	49
Sound power level, cooling	dB(A)	59	61	62
Operating range, cooling	°C	–10 to 46	–10 to 46	–10 to 46
Sound pressure level, heating	dB(A)	47	50	50
Sound power level, heating	dB(A)	60	63	63
Operating range, heating	°C	–15 to 24	–15 to 24	–15 to 24
Dimensions (H × L × D)	mm	550 × 780 × 290	550 × 780 × 290	550 × 780 × 290
Weight	kg	38	38	38
Compressor type		DC Twin rotary	DC Twin rotary	DC Twin rotary
Flare connections				
Gas	in	3/8	3/8	1/2
Liquid	in	1/4	1/4	1/4
Minimum pipe length	m	2	2	2
Maximum pipe length	m	25	25	25
Maximum height difference	m	10	10	10
Pre-charged pipe length	m	15	15	15
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50

Technical specifications heat pump

Outdoor unit		RAS-10SAV-E	RAS-13SAV-E	RAS-16SAV-E
Indoor unit		RAS-10SKV-E	RAS-13SKV-E	RAS-16SKV-E
Cooling capacity	kW	2.50	3.50	4.50
Cooling capacity range (min. – max.)	kW	1.1-3.0	1.1-4.0	0.8-5.0
Power input, cooling (min. – rated – max.)	kW	0.26 – 0.75 – 0.97	0.25 – 1.07 – 1.33	0.15 – 1.60 – 1.90
EER	W/W	3.33	3.27	2.82
Energy efficiency class, cooling		A	A	C
Annual energy consumption	KWh	375	535	798
Heating capacity	kW	3.20	4.20	5.30
Heating capacity range (min. – max.)	kW	0.9-4.1	0.9-5.0	0.9-6.2
Power input, heating (min. – rated – max.)	kW	0.20 – 0.86 – 1.20	0.17 – 1.13 – 1.48	0.15 – 1.55 – 1.81
COP	W/W	3.72	3.72	3.42
Energy efficiency class, heating		A	A	B
Indoor unit		RAS-10SKV-E	RAS-13SKV-E	RAS-16SKV-E
Air flow, cooling (max)	m ³ /h – l/s	522 – 145	563 – 156	691 – 192
Sound pressure level, cooling (h/l)	dB(A)	38/29	39/26	45/30
Sound power level, cooling (h/l)	dB(A)	51/42	52/39	58/43
Air flow, heating (max)	m ³ /h – l/s	576 – 160	630 – 175	743 – 206
Sound pressure level, heating (h/l)	dB(A)	40/30	40/28	45/31
Sound power level, heating (h/l)	dB(A)	53/43	53/41	58/44
Dimensions (H x L x D)	mm	250 x 740 x 195	275 x 790 x 205	275 x 790 x 205
Weight	kg	8.0	9.0	9.0
Outdoor unit		RAS-10SAV-E	RAS-13SAV-E	RAS-16SAV-E
Air flow	m ³ /h – l/s	1620 – 450	2100 – 583	2100 – 583
Sound pressure level, cooling (h/l)	dB(A)	48	48	49
Sound power level, cooling (h/l)	dB(A)	61	61	62
Operating range, cooling	°C	+15 to +43*	-10 to +46	-10 to +46
Sound pressure level, heating (h/l)	dB(A)	50	50	50
Sound power level, heating (h/l)	dB(A)	63	63	63
Operating range, heating	°C	-10 to 24	-15 to 24	-15 to 24
Dimensions (H x L x D)	mm	550 x 660 x 240	550 x 780 x 290	550 x 780 x 290
Weight	kg	29	35	35
Compressor type		DC Rotary	DC Rotary	DC Rotary
Flare connections – gas	in	3/8	3/8	1/2
Flare connections – liquid	in	1/4	1/4	1/4
Minimum pipe length	m	1	1	1
Maximum pipe length	m	10	20	20
Maximum height difference	m	8	10	10
Pre-charged pipe length	m	10	15	15
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50

Model size 105 is suitable for a minimum outside temperature of +15°C.

Technical specifications **cooling only**

Outdoor unit		RAS-18GA-ES2	RAS-24GA-ES2
Indoor unit		RAS-18GKP-ES2	RAS-24GKP-ES2
Cooling capacity	kW	5.33	6.83
Power input	kW	1.91	2.63
EER	W/W	2.79	2.60
Energy efficiency class		C	D
Annual energy consumption	kWh	955	1315
Running current	A	8.60	12.53
Outdoor unit		RAS-18GA-ES2	RAS-24GA-ES2
Air flow	m ³ /h – l/s	2120 – 589	3380 – 939
Sound pressure level	dB(A)	51	56
Sound power level	dB(A)	64	69
Dimensions (H x L x D)	mm	550 × 780 × 290	715 × 780 × 290
Weight	kg	39	63

Technical specifications **heat pump**

Outdoor unit		RAS-18GAH-ES2	RAS-24GAH-ES2
Indoor unit		RAS-18GKHP-ES2	RAS-24GKHP-ES2
Cooling capacity	kW	5.03	6.30
Power input, cooling	kW	1.88	2.47
EER	W/W	2.68	2.55
Energy efficiency class, cooling		D	E
Annual energy consumption	kWh	940	1235
Running current, cooling	A	8.40	11.45
Heating capacity	kW	5.50	6.85
Power input, heating	kW	1.72	2.44
COP	W/W	3.20	2.81
Energy efficiency class, heating		C	D
Outdoor unit		RAS-18GAH-ES2	RAS-24GAH-ES2
Air flow	m ³ /h – l/s	1830 – 508	3380 – 939
Sound pressure level, cooling/heating	dB(A)	52/53	56/57
Sound power level, cooling/heating	dB(A)	65/66	69/70
Dimensions (H x L x D)	mm	550 × 780 × 290	715 × 780 × 290
Weight	kg	50	65

Technical specifications **cooling only and heat pump**

Indoor unit, heat pump		RAS-10GKHP-ES2	RAS-13GKHP-ES2	RAS-18GKHP-ES2	RAS-24GKHP-ES2
Indoor unit, cooling only				RAS-18GKP-ES2	RAS-24GKP-ES2
Air flow, cooling (h/l)	m ³ /h – l/s			900/625 – 250/174	900/625 – 250/174
Air flow, heating (h/l)	m ³ /h – l/s	560/400 – 155/110	650/490 – 180/135	900/625 – 250/174	900/625 – 250/174
Sound pressure level (h/l)	dB(A)	41/31	41/31	44/35	45/37
Sound power level (h/l)	dB(A)	54/44	54/44	57/48	58/50
Dimensions (H x L x D)	mm	250 × 740 × 185	275 × 790 × 218	298 × 998 × 220	298 × 998 × 220
Weight	kg	8	10	13	13
Outdoor unit, heat pump		RAS-10GAH-ES2	RAS-13GAH-ES2	RAS-18GAH-ES2	RAS-24GAH-ES2
Outdoor unit, cooling only				RAS-18GA-ES2	RAS-24GA-ES2
Operating range, cooling	°C			15 to 43	15 to 43
Operating range, heating	°C	-10 to 24	-10 to 24	-10 to 24	-10 to 24
Flare connections (gas – liquid)	in	3/8 – 1/4	1/2 – 1/4	1/2 – 1/4	1/2 – 1/4
Maximum pipe length	m	10	15	20	25
Maximum height difference	m	5	6	8	10
Pre-charged pipe length	m	10	15	15	15
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

Technical specifications **heat pump**

Outdoor unit		RAS-18GAH-ES2	RAS-24GAH-ES2
Indoor unit		RAS-18GFHP-ES2	RAS-24GFHP-ES2
Cooling capacity	kW	5.05	6.25
Power input, cooling	kW	1.99	2.55
EER	W/W	2.54	2.45
Energy efficiency class, cooling		E	E
Annual energy consumption	kWh	995	1275
Running current, cooling	A	8.85	11.73
Heating capacity	kW	5.73	7.05
Power input, heating	kW	1.86	2.48
COP	W/W	3.08	2.84
Energy efficiency class, heating		B	C
Indoor unit		RAS-18GFHP-ES2	RAS-24GFHP-ES2
Air flow (h/l)	m ³ /h – l/s	830/650 – 230/180	930/660 – 260/183
Sound pressure level (h/l)	dB(A)	43/36	46/37
Sound power level (h/l)	dB(A)	56/49	59/50
Dimensions (H x L x D)	mm	633 x 1093 x 208	633 x 1093 x 208
Weight	kg	23	23

Technical specifications **heat pump**

Outdoor unit		RAS-18GAH-ES2	RAS-24GAH-ES2
Air flow	m ³ /h – l/s	1920 – 535	3470 – 965
Sound pressure level, cooling/heating	dB(A)	51/53	56/58
Sound power level, cooling/heating	dB(A)	65/66	70/71
Operating range, cooling/heating	°C	15 to 43/-10 to 24	15 to 43/-10 to 24
Dimensions (H x L x D)	mm	538 x 780 x 300	690 x 880 x 310
Weight, cooling/heating	kg	39/50	63/65
Flare connections (gas – liquid)	in	1/2 – 1/4	1/2 – 1/4
Maximum pipe length	m	20	25
Maximum height difference	m	8	10
Pre-charged pipe length	m	15	15
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50

Technical specifications **heat pump**

Indoor unit		RAS-M10GDV-E	RAS-M13GDV-E	RAS-M16GDV-E
Cooling capacity	kW	2.7	3.7	4.5
Heating capacity	kW	4.0	5.0	5.5

Indoor unit		RAS-M10GDV-E	RAS-M13GDV-E	RAS-M16GDV-E
Air flow, cooling (h/l)	m ³ /h – l/s	720/400 – 200/111	780/428 – 217/119	780/428 – 217/119
Sound pressure level, cooling (h/l)	dB(A)	31/23	32/24	33/25
Sound power level, cooling (h/l)	dB(A)	44/36	45/37	46/38
Operating range, cooling	°C	21 to 32	21 to 32	21 to 32
Air flow, heating (h/l)	m ³ /h – l/s	720/450 – 200/111	780/428 – 217/119	780/428 – 217/119
Sound pressure level, heating (h/l)	dB(A)	32/24	33/25	34/26
Sound power level, heating (h/l)	dB(A)	45/37	46/33	47/34
Operating range, heating	°C	0 to 28	0 to 28	0 to 28
Dimensions (H x L x D)	mm	230 x 750 x 440	230 x 750 x 440	230 x 750 x 440
Weight	kg	19	19	19
Flare connections – gas	in	3/8	3/8	1/2
Flare connections – liquid	in	1/4	1/4	1/4
External static pressure* (standard/upper limit)	Pa	35.3/54.9	41.2/63.7	41.2/63.7

* static pressure at nominal condition

SM_UV – New inverter cassette

Technical specifications **heat pump**

Indoor unit		RAS-M10SMUV-E	RAS-M13SMUV-E	RAS-M16SMUV-E
Air flow, cooling/heating (h/l)	m ³ /h – l/s	588 – 163	618 – 172	660 – 183
Sound pressure level, cooling/heating (h/l)	dB(A)	37/30	38/30	40/31
Sound power level, cooling/heating (h/l)	dB(A)	52/45	53/45	55/46
Dimensions (H x L x D)	mm	268 x 575 x 575	268 x 575 x 575	268 x 575 x 575
Weight	kg	17	17	17

Technical specifications **heat pump**

Outdoor unit		2-room multi-split		3-room multi-split		4-room multi-split	
		RAS-M14GAV-E	RAS-M18GAV-E	RAS-3M18SAV-E	RAS-3M26GAV-E	RAS-4M23SAV-E	RAS-4M27GAV-E
Cooling capacity	kW	4.00	5.20	5.20	7.50	6.80	8.00
Cooling capacity range (min. – max.)	kW	1.1 – 4.5	1.1 – 6.2	2.2 – 6.5	1.4 – 8.9	3.0 – 7.5	1.4 – 9.2
Power input, cooling	kW	1.08	1.60	1.34	2.25	1.95	2.50
EER	W/W	3.70	3.25	3.88	3.33	3.49	3.20
Energy efficiency class, cooling		A	A	A	A	A	B
Heating capacity	kW	4.40	6.70	6.80	9.00	7.20	9.00
Heating capacity range (min. – max.)	kW	0.5 – 5.2	0.7 – 8.5	2.2 – 7.7	0.8 – 10.8	2.0 – 8.4	0.8 – 11.0
Power input, heating	kW	1.01	1.85	1.60	2.55	1.63	2.25
COP	W/W	4.35	3.62	4.25	3.53	4.42	4.00
Energy efficiency class, heating		A	A	A	B	A	A
Air flow	m ³ /h – l/s	1820 – 505	2100 – 583	2100 – 583	3000 – 833	2800 – 778	3000 – 833
Sound pressure level, cooling	dB(A)	46	48	47	48	47	48
Sound power level, cooling	dB(A)	59	61	62	61	62	61
Operating range, cooling	°C	5 to 43	5 to 43	5 to 43	10 to 43	5 to 43	10 to 43
Sound pressure level, heating	dB(A)	48	50	49	48	48	48
Sound power level, heating	dB(A)	61	63	64	61	63	61
Operating range, heating	°C	–15 to 24	–15 to 24	–15 to 24	–15 to 21	–15 to 24	–15 to 21
Dimensions (H x L x D)	mm	550 × 780 × 290	550 × 780 × 290	695 × 780 × 270	795 × 900 × 320	795 × 900 × 320	795 × 900 × 320
Weight	kg	36	40	47	64	55	65
Compressor type		DC Twin rotary	DC Twin rotary	Twin rotary	DC Twin rotary	Twin rotary	DC Twin rotary
Flare connections							
Gas	in	3/8 × 2	3/8 × 2	3/8" × 3	3/8 × 2 + 1/2	3/8" × 4	3/8 × 3 + 1/2
Liquid	in	1/4 × 2	1/4 × 2	1/4" × 3	1/4 × 3	1/4" × 4	1/4 × 4
Maximum pipe length (per unit/total)	m	20/30	20/30	20/50	25/50	25/60	25/70
Maximum height difference	m	10	10	10	15	15	15
Pre-charged pipe length	m	20	20	50	50	40	70
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

