



Passion at work

LIGHT COMMERCIAL AIR CONDITIONING RANGE

LIGHT COMM



Light Commercial



Solutions for professionals, from professionals

Toshiba Digital and Super Digital Inverter systems deliver exceptional operating savings and ecological features in extremely compact units. With state-of-the-art technologies, flexible controls and improved installation they bring comfort

and convenience to any business installation.

A complete range of indoor units satisfies all commercial applications: ceiling, cassette, ducted, suspended, high-wall and flexi units.

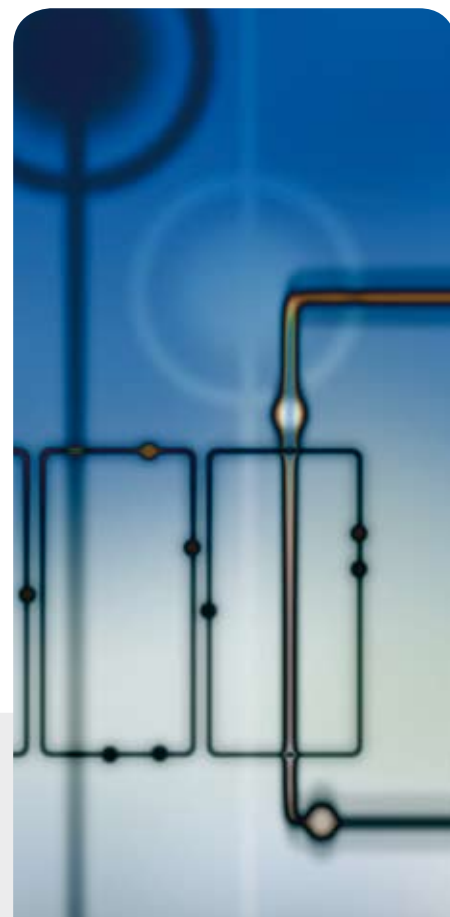
The Digital and Super Digital Inverter systems represent the most economical and ecological approach to air conditioning.

When the inverter becomes digital

The technology of the Digital Inverter control module ensures optimised reproduction of the supply sine wave at the desired frequency, in order to reduce inefficient harmonics that inverters normally emit.

considerable advantages in terms of capacity, energy savings and optimised comfort. Compressor operation is practically imperceptible.

With this innovative control method, the Toshiba Digital Inverter brings state-of-the-art inverter technology to the commercial sector, offering



TOP PERFORMANCE



Who says that you must choose between improved performance and minimised consumption?

The Toshiba Digital and Super Digital Inverters are powerful and extremely efficient. They provide air conditioning with great energy savings.

In most applications, these systems can reduce energy consumption by up to 40% compared with traditional fixed-speed units.

The variable capacity level of the compressor allows the Digital and Super Digital Inverter to maintain room temperature control and to ensure minimum energy wastage.



Simplicity and beyond

The Digital Inverter range for business applications provides compact, light-weight units with exceptional performance.

Thanks to the TCC-Link communication system, the systems suit any installation with little business disruption.

In addition, the Super Digital Inverter boasts energy efficiency class A and permits an even larger range of applications.

The wide range of indoor units can satisfy any kind of requirement and the enhanced DC twin-rotary compressor

delivers stable performance with less friction, making this system very quiet.

Light Commercial



Vector IPDU

Toshiba's Digital Inverter models use the new, vector-controlled, Intelligent Power Drive Unit that produces a power supply with a frequency and voltage to provide superb control and energy efficiency.

The new technology has allowed a much wider range of frequencies and voltages to be achieved.

Performance is further improved by the high-speed converter circuit that calculates the relationship between the compressor windings and rotor through the currents drawn – allowing instantaneous optimisation of the power supply to the compressor.

The heart of the system

DC inverter IC board



DSP



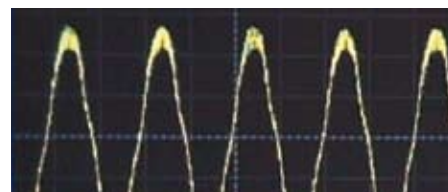
DC twin-rotary compressor



Brushless DC motor



Wave generated by a traditional inverter.



Wave generated by the new vector IPDU inverter.

Refrigerant R-410A: respect for the environment

R-410A is a blend of R-32 and R-125 and is the most energy-efficient, non-ozone-depleting refrigerant available for Light Commercial systems.

The use of this refrigerant is a clear demonstration of Toshiba's commitment and respect of the environment.





Vectoral control inverter

DC twin-rotary compressor

Refrigerant R-410A



DC twin-rotary compressor: assured efficiency and energy saving

The Toshiba DC twin-rotary compressor has a large capacity interval, with an effective power limitation system, that allows a considerable reduction in the power consumed.

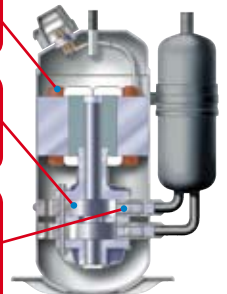
With this type of compressor the desired comfort is reached quickly.

In addition, the inverter technology offers up to 50% more energy saving than conventional models.

Improved motor windings deliver greater motor efficiency

More effective compression thanks to high-precision parts

Flow channels re-designed to deliver more efficient compression



Easy installation

The outdoor units are designed to satisfy any installation need. They are extremely compact and light. An example: only 77 kg for 14 kW of power!

In addition, the system is very flexible, and the condensing units can be positioned in difficult installation spaces, thanks to the refrigerant piping length (up to 70 m).



The importance of the outdoor unit

The condensing unit is the most important element of an air conditioning system. It contains the compressor and the condensing coil.

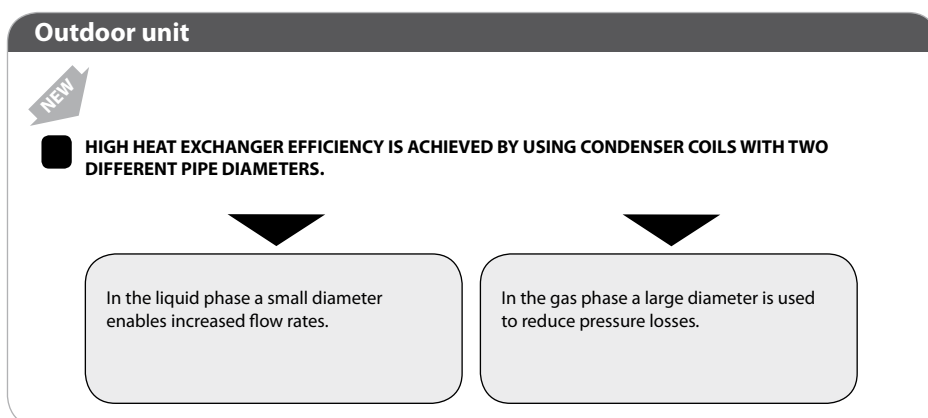
We know that a perfect unit is the sum of perfection in every detail. Solutions that are studied and verified in every tiny element are recognised universally by air conditioning professionals for their total reliability.



The condensing coil

The condensing coil uses two different pipes to obtain the most efficient heat transfer.

The phase changes from gas to liquid, and the diameter is adapted according to the refrigerant state.

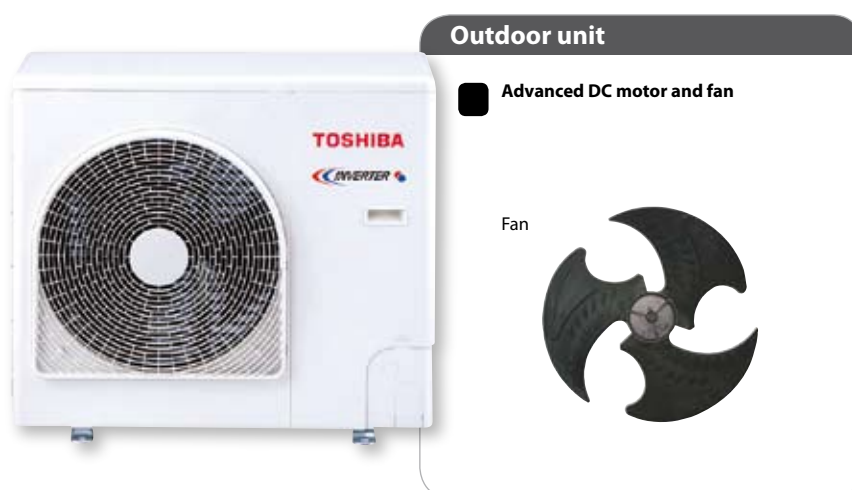


A powerful breeze

The fan in the outdoor unit has been re-designed to deliver higher static pressure and reduced sound levels to offset a more compact heat exchanger.

New fan blades have been designed to reduce eddy currents and turbulence with "anti-eddy" protuberances and a reverse curved profile.

In this way, despite a more compact coil, air flow has been increased and sound power level decreased.



New Digital Inverter (series 3): the ideal solution to replace old units, re-using existing refrigerant lines

This new system represents the advanced solution that meets the increasing market needs, in terms of comfort and ease of installation.

Thanks to the filter positioned in the refrigerant circuit, the new Digital Inverter system, equipped with R-410A refrigerant, can use piping designed for old R-22 or R-407C refrigerant.

Thanks to high-mesh filters and to stable lubricant oil against chloride compounds, the new Digital Inverter – series 3 – enables the existing pipework to be used.

This solution offers significant benefits in terms of performances, acoustic comfort and efficiency.

Moreover, the Digital Inverter – series 2 – is still available, combining ecology and savings in a smart unit. It offers technology, efficiency and easy installation.



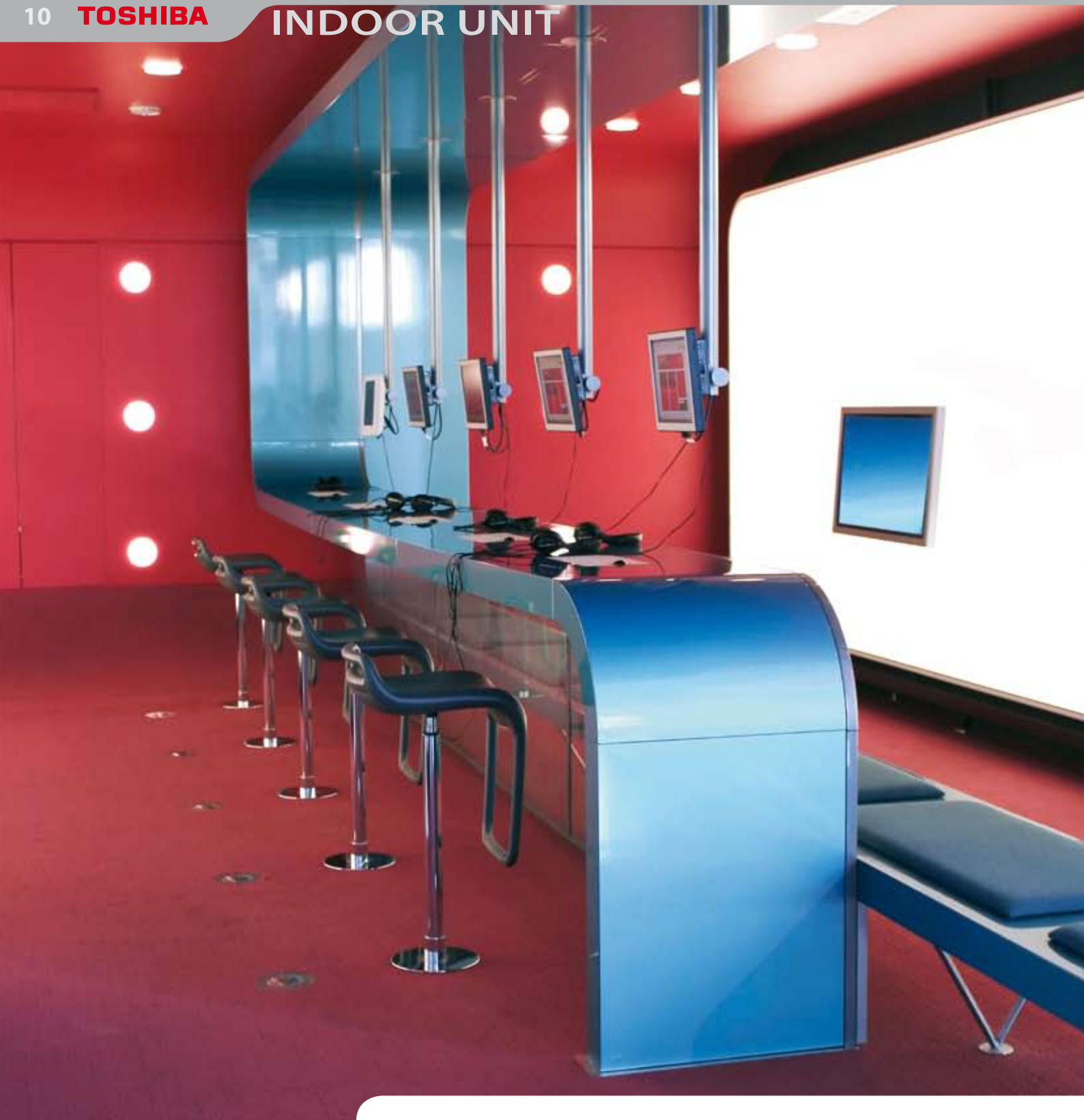
Super Digital Inverter: high performance

The Super Digital Inverter range is dedicated to those who demand the best, without any compromise.

In fact, this system offers all the features of the standard series, plus superior characteristics, such as

excellent performance, high energy efficiency and a wide operating range.





Indoor units: an extended range of solutions

Toshiba offers a wide range of systems and indoor units, to satisfy any kind of requirement.

They are ideal for shops, offices and restaurants.

They are very flexible and easy to install.

Toshiba's indoor unit range includes discreet cassettes, stylish high-wall and invisible ducted units. Toshiba

can offer the right solution for the most demanding application.

4-way cassette

This A class unit (series 3) is easy to install and maintain and provides high performance and total comfort. Unobtrusive and flexible, it is ideal for small commercial applications, where space is limited.



Compact 4-way cassette

Fits all the standard 600 × 600 mm grid ceilings. Its compact design blends with any room interior, where appearance is as important as functionality.



Ducted

Suitable for a wide range of applications, the ducted unit is completely unobtrusive and ensures uniform air distribution. It is ideal for hotels and banks, due to its very low sound levels.



Ceiling

This ceiling-suspended unit is ideal for offices, classrooms and restaurants. It provides high efficiency and very low noise level.



High-wall

With its stylish and compact design, this high-wall unit easily blends with any room interior. It is particularly suitable for elegant shops and restaurants. The advanced filtration system improves the indoor air quality.



Flexi

This flexible unit can be installed either as a low-wall or ceiling-suspended model. Elegant and compact, it easily blends with the room interior.



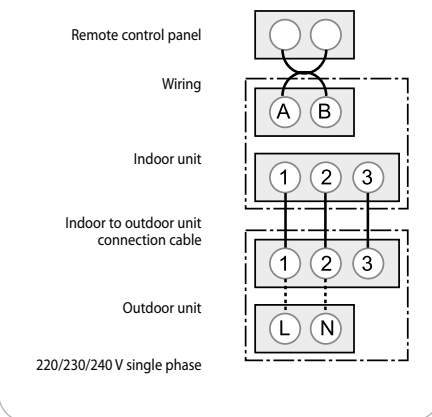
TCC Link. Toshiba simplicity

TCC Link controls have been projected to ensure easy installation and simple maintenance.

The number of wires connecting the indoor and outdoor units has been reduced from three to only two.

In this way the installation is much easier and the possibility of installation errors is greatly reduced.

System wiring



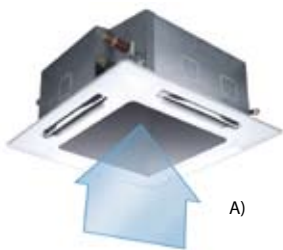
TCC Link. Flexibility re-defined

Unlike in conventional units, the return air (room) temperature sensor can be located in different positions.

In fact, it can be located remotely and independently, on the control panel, or even on the infrared remote control.

In a conventional indoor unit that is subject to wide temperature variations (i.e. close to a door in a public building), reacting to these fluctuations can cause overloading. In this case, moving the sensor from the unit to the remote control overcomes the problem.

An additional benefit is that the desired temperature is achieved near the remote control, i.e. closer to the occupants who should benefit from the system comfort levels.



A) Temperature sensor in return air
B) Remote temperature sensor

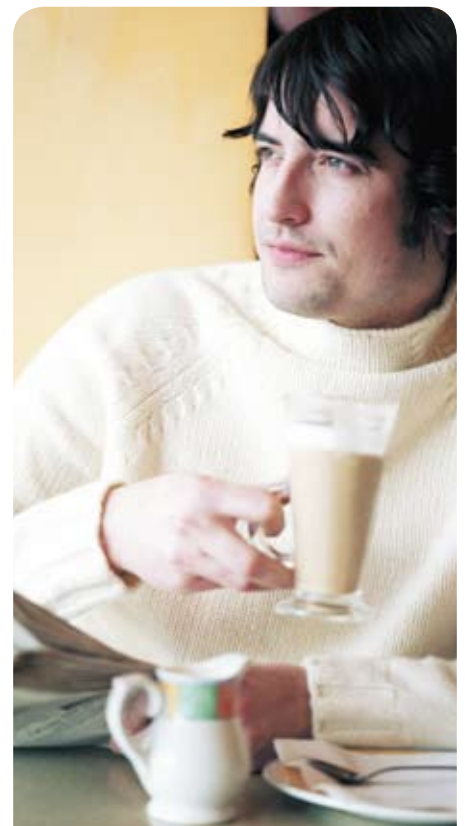
TCC Link. Power re-defined

When functioning in group mode, there is another exclusive feature: automatic addressing.

When the system is first set up, TCC Link analyses the network and assigns a virtual address to each indoor unit. A more efficient and secure solution than using hardware addresses with internal switches.

The TCC Link controls can also be used to program and optimise functions according to the characteristics of the space being air conditioned.

TCC Link controlled commercial systems can also be integrated into a BMS network using a dedicated interface.



Toshiba units have everything under control



Wired Control

RBC-AMT31E

The standard remote controller can control an individual indoor unit or a group of 8 indoor units. The remote control allows the operating parameters to be set for the indoor unit. It also allows faults to be displayed and unit configurations to be set up. The weekly timer can be fitted to this remote control.



Simplified Control

RBC-AS21E2

The simplified remote controller is connected in the same way as the standard remote controller, but offers reduced functionality. The remote controller does not have the lapse timer and the ability to set up the indoor unit. Unit fault codes are still displayed.



Central Controller

TCB-SC642TLE2

The central controller can control up to 64 indoor units individually. All their functions can be controlled. Malfunction checks are available for each indoor unit.

This controller can also connect to the weekly timer and has volt-free inputs to enable the indoor units and indicate a fault. It has the ability to shut down all units in the event of a fire. Up to four controllers can be connected to the network.



IR Remote Control

TCB-AX21E2

The wireless remote controller can be used with the appropriate indoor units to give full control of the indoor units. Two remote controllers can be used on the same indoor unit. The sensor on the remote controller can be used to control the system. Fault codes are displayed.



Weekly Timer

RBC-EXW21E2

The weekly timer connects directly to the rear of an RBC-AM31 remote controller or a central remote controller. The timer allows the connected air conditioners to be enabled under a 7-day profile with up to three on/off periods per day.

Control options

Model number	Reference	Description	Used with
RBC-AMT31E	Wired Remote Controller	Main wired remote controller	All indoor units
RBC-AS21E2	Simplified Wired Remote Controller	As above, but designed for hotel and domestic applications	All indoor units
RBC-EXW21E2	Weekly Timer	A 7 day timer complete with day omit	RBC-AMT31E/TCB-SC642TLE2
TCB-AX21U(W)-E2	Infra-red Remote Kit	Wireless remote controller	Four-way cassettes
RBC-AX22CE2	Infra-red Remote Kit	Wireless remote controller	All ceiling units and one-way cassettes (SH2 series)
TCB-AX21E2	Infra-red Remote Kit	Wireless remote controller	All other units (including compact four-way cassette)
TCB-T21LE2	Remote Sensor	Remote temperature sensor	All indoor units
WH-H2UE	Infra-red Remote Controller	Wireless remote unit kit for Flexi units	DI Flexi
TCB-SC642TLE2	Central Remote Controller	Enables the control of up to 64 individual units	1:1 model connection interface required for DI/SDI (excluding high-wall type)
TCB-CC163TLE2	On / Off Controller	Enables on/off control (max. 16 units)	All indoor units
TCB-PCNT20E	Network/Protocol Adaptor Kit	Enables the integration with the AI network	All indoor units with AI-Network protocol (excluding high-wall type)
TCB-PCNT30TLE2	1 : 1 model connection interface	Integration with DI, SDI	Allows DI/SDI indoor units to be connected to TCC link network
TCB-IFCB-4E2	Remote location On/Off Control Box	Enables remote location on/off control	All indoor units
TCB-PCOS1E2	Application Control kit	Enables night operation control, demand control, operation monitoring	All DI units
BMS-TP0641ACE	Touch Screen Controller	Enables full control of up to 64 indoor units	Network 1:1 model connection interface required for DI/SDI (excluding high-wall type)
BMS-TP5121ACE	Touch Screen Controller	Enables full control of up to 512 indoor units	Network 1:1 model connection interface required for DI/SDI (excluding high-wall type)
BMS-TP0641PWE	Touch Screen Controller	Enables full control of up to 64 indoor units with electric billing	Network 1:1 model connection interface required for DI/SDI (excluding high-wall type)
BMS-TP5121PWE	Touch Screen Controller	Enables full control of up to 512 indoor units with electric billing	Network 1:1 model connection interface required for DI/SDI (excluding high-wall type)
TCB-IFLN640TLE	Lonworks® Gateway	Allows control of 64 indoor units from a Lonworks based BMS	Network 1:1 model connection interface required for DI/SDI (excluding high-wall type)

All the flexibility you have ever dreamt of

If you want high performance, compact units and optimum comfort, Toshiba has the ideal product for your requirements.

With the continuous improvement of the inverter control system, Toshiba offers vector control for its DC hybrid inverter, which enhances system efficiency and reduces noise levels in the power lines.

New developments in electronics have been complemented by compressor innovation.

High-tech elements include improved coils, high-precision components and higher refrigerant compression

thanks to re-designed compression channels.






This new technology is able to satisfy applications that require cooling at low operating conditions down to -15°C .

Powerful heating capacities are also possible at the same outdoor temperature.

The enhanced DC twin-rotary compressor delivers stable performance with less friction, making it ideal for noise-sensitive applications.



Light Commercial range **Matching table**

Outdoor units					
		Single-split DI	Single-split DI	Single-split SDI RAV-SP562/802AT-E	Single-split SDI RAV-SP 1102/1402AT-E
Indoor units		DIGITAL INVERTER - series 2 & 3		SUPER DIGITAL INVERTER	
HP INVERTER	 Four-way cassette RAV-SMxxx UT-E	✓*	✓*	✓	✓
	 Cassette 600 x 600 mm RAV-SM562MUT-E	✓**		✓**	
	 Ducted RAV-SMxxx BT-E	✓	✓	✓	✓
	 Ceiling RAV-SMxxx CT-E	✓	✓	✓	✓
	 High-Wall RAV-SMxxx KRT-E	✓		✓	
	 Flexi RAV-SMxxx XT-E	✓			

* 4-way cassette – series 3 – combines with DI3
 ** available only for size 563

R-410A HEAT PUMPS

VECTOR IPDU INVERTER

SUPER DIGITAL INVERTER

93% OF UNITS A-RATED



Sizes 1102 - 1402



Sizes 562 - 802

EERs up to 4.17

Cooling/heating down to -15 °C outside temperature

Extended pipe runs to 70 m

Outdoor SDI

Features

Now the standard Digital Inverter (DI) range has been complemented by the Super Digital Inverter (SDI) models with even higher energy efficiency ratings and enhanced technological innovations.

The Super Digital Inverter units offer all features of the standard series, plus the following superior characteristics.

Key features

Highest COP/EER values: EER values up to 4.17 in cooling mode (4 HP).

Increased energy efficiency:
– 93% of the units have energy label A.

– 50% energy cost savings, compared with fixed-speed units.

Vector Intelligent Drive Unit (IPDU): an increased number of smaller steps for more accurate control.

Extended pipe runs: 70 m length for increased installation flexibility.

Wider operating range: down to -15 °C in heating mode.



SDI Technical specifications heat pump

Outdoor unit		RAV-SP562AT-E	RAV-SP802AT-E	RAV-SP1102AT-E	RAV-SP1402AT-E
		2 HP	3 HP	4 HP	5 HP
Air flow	m ³ /h – l/s	3420 – 950	3420 – 950	7500 – 2083	7500 – 2083
Sound pressure level, cooling	dB(A)	46	47	49	53
Sound power level, cooling	dB(A)	63	64	66	70
Operating range, cooling	°C	–15 to 43	–15 to 43	–15 to 43	–15 to 43
Sound pressure level, heating	dB(A)	47	49	51	54
Sound power level, heating	dB(A)	64	66	68	71
Operating range, heating	°C	–15 to 15	–15 to 15	–15 to 15	–15 to 15
Dimensions (H × L × D)	mm	795 × 900 × 320	795 × 900 × 320	1340 × 900 × 320	1340 × 900 × 320
Weight	kg	55	62	95	95
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	5	5	5	5
Maximum pipe length	m	50	50	70	70
Maximum height difference	m	30	30	30	30
Pre-charged pipe length	m	20	30	30	30
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50

R-410A HEAT PUMPS

VECTOR IPDU INVERTER

DIGITAL INVERTER

DI3: SUITABLE FOR REPLACEMENT SYSTEM, SIMPLY USE EXISTING PIPEWORK AND UPDATE INDOOR/OUTDOOR UNIT



Sizes 1102 – 1402
– 1103 – 1403

Sizes 562 – 802
– 563 – 803

Outdoor DI

Features

Toshiba has launched the new Digital Inverter 3, an advanced solution that can meet the growing market need for ease of installation and increased consumer comfort.

This new system, which uses the ozone-friendly refrigerant R-410A, can use piping designed for old R-22 or R-407C refrigerants.

The old high-energy consumption air conditioning system can be replaced by the most advanced inverter units, with significant benefits in terms of performance, acoustic comfort and energy efficiency.

Key features

Excellent EER with significant savings in annual power consumption.

Compatible with a wide choice of indoor units: ceiling units, four-way cassettes, compact four-way cassettes, ducted, high-wall and flexi units.

Light, compact units: up to 40% height reduction and up to 35% lighter than conventional models (sizes 4 HP and 5 HP) for easier installation.

The Vector Intelligent Power Drive Unit (IPDU) technology ensures high performance.

Simplified maintenance using the new TCC-Link wired remote control panel.

Extremely light

Cooling/heating down to
-15 °C outside temperature

Compact

TCC Link



DI Technical specifications heat pump

Outdoor unit		RAV-SM562AT-E RAV-SM563AT-E	RAV-SM802AT-E RAV-SM803AT-E	RAV-SM1102AT-E RAV-SM1103AT-E	RAV-SM1402-AT-E RAV-SM1403AT-E
		2 HP	3 HP	4 HP	5 HP
Air flow	m ³ /h – l/s	2400 – 667	2700 – 750	4500 – 1250	4500 – 1250
Sound pressure level, cooling/heating	dB(A)	46/48	48/50	53/54	54/54
Sound power level, cooling/heating	dB(A)	63/65	65/67	70/71	71/71
Operating range, cooling	°C	-15 to 43	-15 to 43	-15 to 43	-15 to 43
Operating range, heating	°C	-15 to 15	-15 to 15	-15 to 15	-15 to 15
Dimensions (H × L × D)	mm	550 × 780 × 290	550 × 780 × 290	795 × 900 × 320	795 × 900 × 320
Weight	kg	38	42	77	77
Compressor type		DC twin-rotary	DC twin-rotary	DC twin-rotary	DC twin-rotary
Flare connections, gas - liquid	in	1/2 – 1/4	5/8 – 3/8	5/8 – 3/8	5/8 – 3/8
Maximum pipe length	m	30	30	50	50
Maximum height difference	m	30	30	30	30
Pre-charged pipe length	m	20	20	30	30
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50	220/240-1-50	220/240-1-50



R-410A HEAT PUMPS

CLASSIC CASSETTE

Easy control access via corner pockets

High ceiling temperature sensor control

Infra-red control option

Built-in lift pump

Four-way cassette

Features

Unobtrusive and flexible, the cassette blends in with any room interior and offers the ideal solution for small commercial applications where space is limited.

The new four-way cassette, series 3, designed for the new DI3, has an exceptional additional feature: it is an outstanding **A class** indoor unit.

Key features

Clean Ceiling: innovative air flow control and new panel design prevent dust from accumulating around the air outlet in the ceiling.

Easy installation: ideal for sites with restriction of the space above ceiling level, the unit features a high-lift drain pump (850 mm).

Easy maintenance: corner pockets in all four panel corners allow convenient access to the adjustment controls behind the panel.

Energy efficiency: a high-performance turbo fan improves the air throw distance and the optimum distance from the fan for improved heat transfer from the pentagonal heat exchanger.

Technical specifications heat pump

Indoor unit Outdoor unit		SMS6_UT-E SMS6_AT-E 2 HP	SM80_UT-E SM80_AT-E 3 HP	SM110_UT-E SM110_AT-E 4 HP	SM140_UT-E SM140_AT-E 5 HP
Cooling capacity (min. – nom. – max.)	kW	1.5 – 5.3 – 5.6	1.5 – 6.7 – 7.4	3.0 – 10.0 – 11.2	3.0 – 12.1 – 13.2
EER	W/W	3.21	3.21	3.22	3.21
Heating capacity (min. – nom. – max.)	kW	1.5 – 5.6 – 6.3	1.5 – 8.0 – 9.0	3.0 – 11.2 – 13.0	3.0 – 14.0 – 16.0
COP	W/W	3.89	3.62	3.61	3.61
Energy efficiency class, cooling/heating)*		A/A	A/A	A/A	A/A
Sound pressure level (h/l)	dB(A)	32/27	34/28	39/33	42/34
Sound power level (h/l)	dB(A)	47/42	49/43	54/48	57/49
Dimensions (H × L × D)	mm	256 × 840 × 840	256 × 840 × 840	256 × 840 × 840	319 × 840 × 840
Weight	kg	21	22	22	26

* A class performance with DI3 and cassette series 3



R-410A HEAT PUMPS

COMPACT CASSETTE

INVERTER

Standard 600 × 600 mm grid ceiling

New louvre design

Easy maintenance

TCC Link

Compact four-way cassette

Features

The new compact four-way cassette has been designed to suit all standard 600 × 600 mm grid ceilings, to allow simple and easy installation and maintenance.

Its sophisticated design fits with any room interior, where appearance is as important as functionality and ease of installation.

Draught prevention and clean ceiling functions make this unit ideal for the most demanding of applications.

When combined with the Super Digital Inverter outdoor unit, the highest energy label, A is achieved.

A very effective product for any challenging refurbishment installation.

Key features

The slimline design makes this cassette suitable for the most demanding installations where ceiling height restrictions apply.

All capacity sizes have the same physical dimensions so the installation looks much smarter and consistent, regardless of the room size.

Easy maintenance: access to the corner pockets is easy and enables convenient installation and adjustment for perfect ceiling fitting.

The panel depth is less than 30 mm making it an unobtrusive model.

The TCC Link control panel makes system control both flexible and easy for maintenance and servicing.

Technical specifications heat pump

Indoor unit		SM562MUT
Outdoor unit		SM56_AT-E
		2 HP
Cooling capacity (min. – nom. – max.)	kW	2.2 – 5.0 – 5.6
EER	W/W	3.27
Heating capacity (min. – nom. – max.)	kW	2.2 – 5.6 – 7.0
COP	W/W	3.64
Energy efficiency class, cooling/heating		A/A
Sound pressure level (h/l)	dB(A)	43/34
Sound power level (h/l)	dB(A)	58/49
Dimensions (H × L × D)	mm	268 × 575 × 575
Weight	kg	17



R-410A HEAT PUMPS

DISCREET DUCTED UNITS

Infra-red control option

Discharge spigots as standard

High static pressure up to 98 Pa

Ducted unit

Features

Whatever the shape of the room, ducted units ensure uniform temperatures throughout.

Cool or warm air is ducted into the room through diffusers, discreetly positioned in the walls or ceiling.

These units are ideal for hotels, banks and similar applications, where very low sound levels are needed.

Key features

Wide range of applications: the use of ducts allows air outlets to be conveniently installed anywhere in the ceiling.

Improved room aesthetics, with its unobtrusive presence.

High static pressure: can be raised as high as 98 Pa, so that all areas of the room can be reached for even temperature distribution, no matter how complex the layout.

High-lift drain pump kit: raises drain up to 290 mm for flexible condensate piping layout.

Technical specifications heat pump

Indoor unit Outdoor unit		SM562BT-E SM56_AT-E	SM802BT-E SM80_AT-E	SM1102BT-E SM110_AT-E	SM1402BT-E SM140_AT-E
		2 HP	3 HP	4 HP	5 HP
Cooling capacity (min. – nom. – max.)	kW	1.5 – 5.0 – 5.6	1.5 – 7.1 – 7.4	3.0 – 10.0 – 11.2	3.0 – 12.5 – 13.2
EER	W/W	2.81	2.81	2.81	2.83
Heating capacity (min. – nom. – max.)	kW	1.5 – 5.6 – 6.3	1.5 – 8.0 – 9.0	3.0 – 11.2 – 12.5	3.0 – 14.0 – 16.0
COP	W/W	3.27	3.32	3.57	3.47
Energy efficiency class, cooling/heating		C/C	C/C	C/B	C/B
Sound pressure level (h/l)	dB(A)	40/33	40/34	42/36	44/38
Sound power level (h/l)	dB(A)	55/48	55/49	57/51	59/53
Dimensions (H × L × D)	mm	320 × 700 × 800	320 × 1000 × 800	320 × 1350 × 800	320 × 1350 × 800
Weight	kg	30	39	54	54



R-410A HEAT PUMPS

CEILING-SUSPENDED UNITS

Ceiling unit

Features

The SDI and DI ceiling-suspended units meet a wide range of needs, and are the ideal solution for offices, classrooms and restaurants.

Automatic louvre control and low noise level are the key characteristics of this state-of-the-art unit.

In addition, the drain pan inside the unit is mould-proof for maximum hygiene and easily recyclable thanks to its stain-resistant polypropylene resin body.

Key features

Low noise level: the unit operates at only 30 dB(A) (for 2 HP) – half of conventional units, thanks to its new design.

Optimum louvre control: the 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 of the room.

Installation efficiency: with the fully re-designed ceiling-mounted system, the unit can be suspended simply by adjusting two screws on the intake grille (compared to a dozen screws for conventional models).

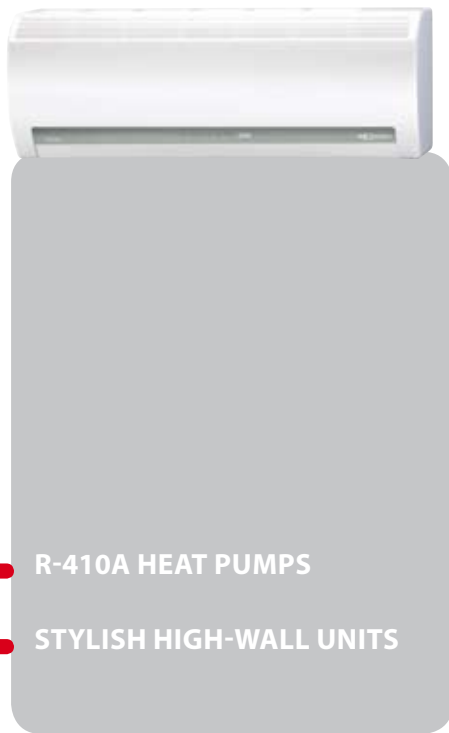
Low sound levels

Slimline design

Automatic louvre control
plus auto-swing

Technical specifications heat pump

Indoor unit Outdoor unit		SM562CT-E SM56_AT-E 2 HP	SM802CT-E SM80_AT-E 3 HP	SM1102CT-E SM110_AT-E 4 HP	SM1402CT-E SM140_AT-E 5 HP
Cooling capacity (min. – nom. – max.)	kW	1.5 – 5.0 – 5.6	1.5 – 7.0 – 7.4	3.0 – 10.0 – 11.2	3.0 – 12.3 – 13.2
EER	W/W	2.75	2.77	2.85	2.72
Heating capacity (min. – nom. – max.)	kW	1.5 – 5.6 – 6.3	1.5 – 8.0 – 9.0	3.0 – 11.2 – 12.5	3.0 – 14.0 – 16.0
COP	W/W	3.41	3.24	3.50	3.38
Energy efficiency class (cooling/heating)		D/B	D/C	C/B	D/C
Sound pressure level (h/l)	dB(A)	36/30	38/33	41/35	43/37
Sound power level (h/l)	dB(A)	51/45	53/48	56/50	58/52
Dimensions (H × L × D)	mm	210 × 910 × 680	210 × 1180 × 680	210 × 1595 × 680	210 × 1595 × 680
Weight	kg	21	25	33	33



R-410A HEAT PUMPS

STYLISH HIGH-WALL UNITS

Zeolite Plus filter

Bio Enzyme filter

Sasa filter
(virus deactivation)Gingko filter
(allergy relieving)

High-wall unit

Features

With the Light Commercial high-wall inverter unit, Toshiba offers an attractive and slimline design for offices, restaurants and other applications where a light, compact and elegant solution is needed.

Moreover the latest filters designed by Toshiba improve the indoor air quality benefits of this high-wall unit.

Key features

Enhanced aesthetics: with its slim design, the compact and stylish unit blends in with any room setting.

New enhanced filtration system: Zeolite Plus + Sasa filter to deodorise, Bio-Enzyme filter + Gingko filter to purify and new anti-oxidant Vitamin C filter.

Auto louvre mode: to allow optimum distribution of the air throughout the room.

TCC Link remote control (optional).

Wireless controller included.

Technical specifications heat pump

Indoor unit		SM562KRT-E SM56_AT-E	SM802KRT-E SM80_AT-E
Outdoor unit		2 HP	3 HP
Cooling capacity (min. – nom. – max.)	kW	1.5 – 5.0 – 5.6	1.5 – 6.7 – 7.0
EER	W/W	2.67	2.46
Heating capacity (min. – nom. – max.)	kW	1.5 – 5.6 – 6.3	1.5 – 8.0 – 9.0
COP	W/W	3.29	3.00
Energy efficiency class, cooling/heating		D/C	E/D
Sound pressure level (h/l)	dB(A)	39/33	45/36
Sound power level (h/l)	dB(A)	54/48	60/51
Dimensions (H × L × D)	mm	298 × 998 × 221	298 × 998 × 221
Weight	kg	12	12



Flexi unit

Features

The stylish Flexi unit brings a touch of luxury to light commercial interiors. It incorporates the latest Toshiba technology, and meets the needs of all occupants.

Installation flexibility and indoor air quality are two of the many advantages of the system.

Key features

Ultimate flexibility: choice of low-wall or ceiling-suspended installation, without any need for modifications or additional accessories.

Triple-action filtering system first removes large particles. Then a passive electrostatic filter removes solid particles down to 0.01 micron in size and finally the Zeolite Plus filter absorbs even smaller airborne pollutants.

Natural air distribution: in ceiling-suspended applications air can be directed either horizontally, parallel to the ceiling or far away from the room occupants, for non-intrusive air distribution.

High-lift drain pump kit: raises drain piping up to 290 mm for flexible condensate piping layout (option - suitable for ceiling-suspended unit only).

R-410A HEAT PUMPS

CEILING-SUSPENDED/LOW-WALL UNIT

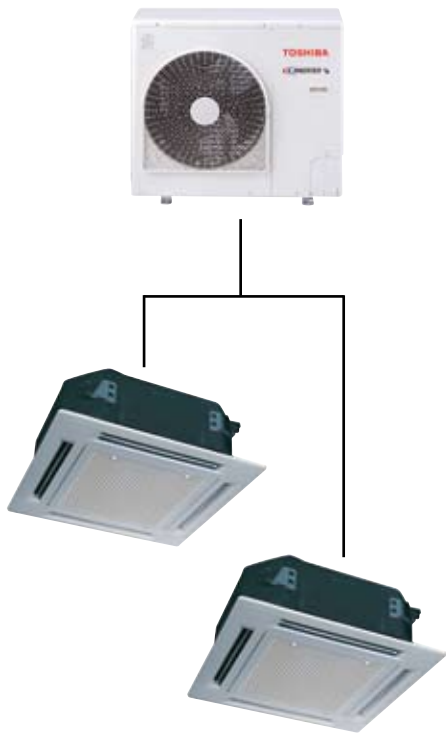
Triple-action filtering system

Zeolite Plus filter

Technical specifications heat pump

Indoor unit Outdoor unit		SM562XT-E SM56_AT-E 2 HP	SM802XT-E SM80_AT-E 3 HP
Cooling capacity (min. - nom. - max.)	kW	1.5 - 5.0 - 5.6	1.5 - 6.7 - 7.0
EER	W/W	2.67	2.46
Heating capacity (min. - nom. - max.)	kW	1.5 - 5.6 - 6.3	1.5 - 8.0 - 9.0
COP	W/W	3.29	3.00
Energy efficiency class, cooling/heating		D/C	E/D
Sound pressure level (h/l)	dB(A)	43/36	46/37
Sound power level (h/l)	dB(A)	58/51	61/52
Dimensions (H x L x D)	mm	208 x 1093 x 633	208 x 1093 x 633
Weight	kg	23	23

R-410A TWIN-SPLIT
INVERTER



Twin Split Light Commercial

Features

The twin-split system connects two indoor units of the same type and capacity to one outdoor unit in order to ensure more air distribution in a large zone.

One of the units is designated the master unit and it measures the temperature for both indoor units.

These should be installed in the same room, operate simultaneously and share a single controller.

Key features

Twin operation is possible with all Light Commercial indoor units.

Precise capacity control at all conditions.

Ideal for large shops, open-plan offices and other similar applications.

User-friendly controls.

Compact outdoor unit for easy installation.

Twinning requires a connection kit that includes an electromagnetic noise suppressor and pipe joint.

SDI – Technical specifications heat pump - twin system

Outdoor unit	RAV-	SP1102AT-E	SP1102AT-E	SP1402AT-E	SP1102AT-E	SP1402AT-E	SP1102AT-E	SP1402AT-E	SP1102AT-E	SP1402AT-E
	(2 x)	600 × 600 4-way cassette		4-way cassette		Ducted		Ceiling		High-Wall
Indoor unit	RAV-	SM562MUT-E	SM562UT-E	SM802UT-E	SM562BT-E	SM802BT-E	SM562CT-E	SM802CT-E	SM562KRT-E	SM802KRT-E
Cooling capacity	kW	10.0	10.0	12.5	10.0	12.5	10.0	12.5	10.0	12.3
Cooling capacity (min. – max.)	kW	3.0 – 12.0	3.0 – 12.0	3.0 – 14.0	3.0 – 12.0	3.0 – 14.0	3.0 – 12.0	3.0 – 14.0	3.0 – 12.0	3.0 – 13.5
Power input, cooling	kW	2.4	2.4	3.56	2.5	3.9	2.4	3.9	2.4	4
EER	W/W	4.17	4.17	3.51	4	3.21	4.17	3.21	4.17	3.08
Energy efficiency class, cooling		A	A	A	A	A	A	A	A	B
Annual energy consumption	kWh	1200	1200	1780	1250	1950	1200	1950	1200	1950
Heating capacity	kW	11.2	11.2	14.00	11.2	14.0	11.2	14.0	11.2	14.0
Heating range (min. – max.)	kW	3.0 – 13.0	3.0 – 13.0	3.0 – 16.5	3.0 – 13.0	3.0 – 16.5	3.0 – 13.0	3.0 – 16.5	3.0 – 13.0	3.0 – 16.5
Power input, heating	kW	2.55	2.55	3.58	2.55	3.6	2.55	3.75	2.55	3.85
COP	W/W	4.39	4.39	3.91	4.39	3.89	4.39	3.73	4.39	3.64
Energy efficiency class, heating		A	A	A	A	A	A	A	A	A

DI – Technical specifications heat pump - twin system

Outdoor unit	RAV-	SM110_AT-E	SM110_AT-E	SM140_AT-E	SM110_AT-E	SM140_AT-E	SM110_AT-E	SM140_AT-E	SM110_AT-E	SM140_AT-E
	(2 x)	600 × 600 4-way cassette		4-way cassette		Ducted		Ceiling		High-Wall
Indoor unit	RAV-	SM562MUT-E	SM562UT-E	SM802UT-E	SM562BT-E	SM802BT-E	SM562CT-E	SM802CT-E	SM562KRT-E	SM802KRT-E
Cooling capacity	kW	10.0	10.0	12.5	10.0	12.5	10.0	12.3	10.0	12.0
Cooling capacity (min – max.)	kW	3.0 – 11.2	3.0 – 11.2	3.0 – 13.2	3.0 – 11.2	3.0 – 13.2	3.0 – 11.2	3.0 – 13.2	3.0 – 11.2	3.0 – 13.0
Power input, cooling	kW	3.52	3.52	4.09	3.56	4.42	3.51	4.52	3.48	4.52
EER	W/W	2.84	2.84	3.06	2.81	2.83	2.85	2.72	2.87	2.65
Energy efficiency class, cooling		C	C	B	C	C	C	D	C	D
Annual energy consumption	kWh	1860	1760	2045	1780	2210	1755	2260	1740	2260
Heating capacity	kW	11.2	11.2	14.0	11.2	14.0	11.2	14.0	11.2	14.0
Heating range (min. – max.)	kW	3.0 – 13.0	3.0 – 13.0	3.0 – 16.0	3.0 – 12.5	3.0 – 16.0	3.0 – 12.5	3.0 – 16.0	3.0 – 12.5	3.0 – 16.0
Power input, heating	kW	3.14	3.14	4.00	3.14	4.03	3.20	4.14	3.14	4.24
COP	W/W	3.57	3.57	3.50	3.57	3.47	3.50	3.38	3.57	3.30
Energy efficiency class, heating		B	B	B	B	B	B	C	B	C

Indoor unit	RAV-	600 × 600 4-Way Cassette	4-Way Cassette		Ducted		Ceiling		High-Wall	
		SM562MUT-E	SM562UT-E	SM802UT-E	SM562BT-E	SM802BT-E	SM562CT-E	SM802CT-E	SM562KRT-E	SM802KRT-E
Air flow (h/l)	m ³ /h l/s	546/798 152/220	1050/726 294/203	1200/816 336/228	780/588 218/165	1140/798 319/223	780/600 218/168	1110/876 310/245	840/642 235/180	1110/732 310/205
Sound pressure level (h/l)	dB(A)	43/34	32/27	34/28	40/33	40/34	36/30	38/33	39/33	45/36
Sound power level (h/l)	dB(A)	58/49	47/42	49/43	55/48	59/49	51/45	53/48	54/48	60/51
Dimensions (H × L × D)	mm	268 × 575 × 575	256 × 840 × 840		320 × 700 × 800	320 × 1000 × 800	210 × 910 × 680	210 × 1180 × 680	298 × 998 × 221	
Weight	kg	17	21	22	30	39	21	25	12	12

Outdoor unit	RAV-	SDI		DI	
		SP1102AT-E	SP1402AT-E	RAV-SM1102AT-E	RAV-SM1402AT-E
Air flow	m ³ /h – l/s	7500 – 2083		4500 – 1250	
Sound pressure level, cooling/heating	dB(A)	49 (51)		53 (54)	
Sound power level, cooling/heating	dB(A)	66 (68)		70 (71)	
Operating range, cooling/heating	°C	–15 to 43 (–15 to 15)		–15 to 43 (–15 to 15)	
Dimensions (H × L × D)	mm	1340 × 900 × 320		795 × 900 × 320	
Weight	kg	95		77	
Compressor type		DC twin-rotary		DC twin-rotary	
Flare connections - gas (main – sub.)	in	5/8 – 1/2		5/8 – 1/2	
Flare connections - liquid (main – sub.)	in	3/8 – 1/4		3/8 – 1/4	
Minimum pipe length	m	5		5	
Maximum pipe length	m	50		50	
Maximum height difference	m	30		30	
Pre-charged pipe length	m	30		30	
Power supply	V-ph-Hz	220/240-1-50		220/240-1-50	



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