TOSHIBA

TOSHIBA R32 REFRIGERANT

TOSHIBA
LIGHT COMMERCIAL SYSTEMS

Providing endless possibilities

WHY CHOOSE TOSHIBA AIR CONDITIONERS?

Being comfortable in your environment means much more than controlling the temperature. Toshiba air conditioners are designed for flexibility in application with low operating noise and improved air quality, and above all, reliability. So, you get all year-round comfort plus accurate temperature control.

FLEXIBLE RANGE

Whether you are looking to cool a small bedroom or a office boardroom, the range of Toshiba's residential air conditioning solutions are ideal for all areas of your home or office. From wall mounted split systems to inverter ducted systems or under ceiling systems, Toshiba has a wide variety of heating and cooling solutions to suit your requirements.

AFTER SALES SERVICE

Problems tend to happen when you least expect them. Our in-house technical support team is unlike any other and it's easy to know why.

You can count on our in-house technical support to assist you with anything you may need. We take this duty very seriously, so you can rest assured you will have dependable, ongoing support every time.

PEACE OF MIND

At Toshiba, we are confident our heat pumps can withstand any condition of New Zealand climate, which is why we offer a 5-year warranty across our entire range of air conditioning products, New Zealand-wide for all residential applications.

REDUCING GWP WITH R32

Our world is as precious as it is delicate, it's our responsibility to help take care of it.

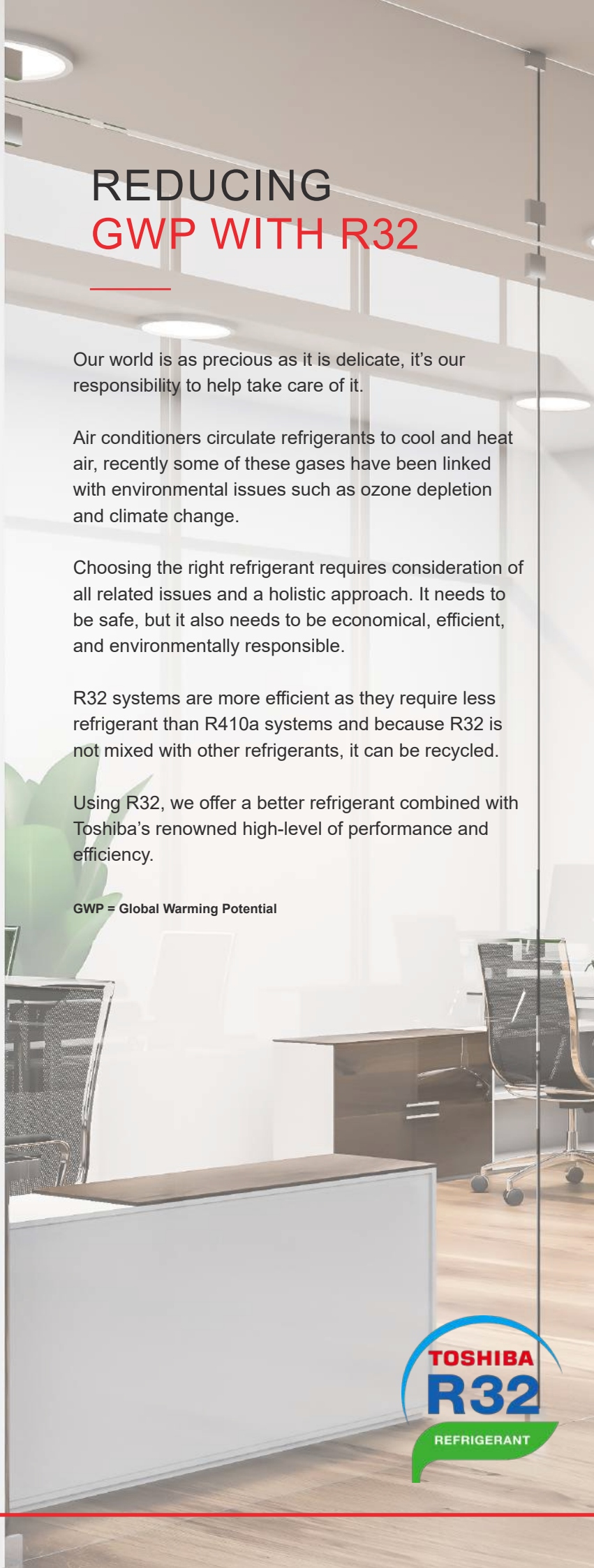
Air conditioners circulate refrigerants to cool and heat air, recently some of these gases have been linked with environmental issues such as ozone depletion and climate change.

Choosing the right refrigerant requires consideration of all related issues and a holistic approach. It needs to be safe, but it also needs to be economical, efficient, and environmentally responsible.

R32 systems are more efficient as they require less refrigerant than R410a systems and because R32 is not mixed with other refrigerants, it can be recycled.

Using R32, we offer a better refrigerant combined with Toshiba's renowned high-level of performance and efficiency.

GWP = Global Warming Potential



TOSHIBA

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TOSHIBA'S TWIN ROTARY COMPRESSOR

Toshiba's Twin Rotary compressor brings outstanding performance without compromising on system reliability.

TWIN ROTARY COMPRESSOR

Our proprietary Toshiba Twin Rotary compressor and inverter provide optimum control for maximising performance efficiency. With a rotor in each compression chamber, Toshiba Twin Rotary compressor systems are compact, lightweight, and low vibration while requiring less space for installation.

DLC TREATMENT

Toshiba's Diamond Like Carbon coating technology is unique to Toshiba's compressors.

It covers the wear surfaces on compression vanes for outstanding hardness and wear resistance, enhancing both the compressor's performance and durability.

Large capacity

Wide operating range

DLC Treatment [Diamond Like Carbon]

TOSHIBA TECHNOLOGY

PAM

Pulse Amplitude Modulation [PAM] is a technology that controls the current waveform so that it resembles the supply voltage wave, thereby reducing loss and realising more efficient use of electricity.

With a PAM inverter, the voltage delivered to the compressor could be increased as needed, resulting in increased rotation speed.

Using PAM control, 98% of the input power supply is used effectively.

PWM

Pulse Width Modulation [PWM] helps to balance the compressor speed revolution, either higher speed when providing fast cooling, or slow speed when maintaining room temperature resulting in significantly reduced consumption.

INVERTER CONTROL

The inverter component allows for the Toshiba outdoor unit to vary its speed and output to match the required capacity of the indoor unit. Thus, the unit can achieve 30% more operating efficiency than conventional models and therefore, is more economical to run.

COMMITTED TO DEVELOPMENT & COMFORT

ABSOLUTE COMFORT

Toshiba's commitment to society drives a company-wide focus on attention to details through every stage of the development process, from design to user field tests, installations using our products and systems therefore featuring higher standard of indoor air quality, sound levels and energy savings when compared to its predecessors.

DIGITAL INVERTER

GM SERIES

A full range of Toshiba R32 light commercial systems are now available with Digital Inverter combinations to suit an array of application types, whether it be for residential or commercial spaces.

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.

With this innovative control method, Toshiba's Digital Inverter brings state-of the art inverter technology to its light commercial range, offering considerable advantages from wide capacity range, energy efficiencies to optimised comfort.

COMPACT CHASSIS

Single fan outdoor units are available from 2.5kw through to 12.5kw with a compact height of less than 900mm, making them an ideal unit for commercial applications where space may be a constraint. Being compact also enables these units to be double stacked without compromising on performance.

RAV-GM301 - 3.1kW
RAV-GM401 - 4.0kW
RAV-GM561 - 5.3kW

RAV-GM801 - 8.0kW

RAV-GM1101 - 11.2kW
RAV-GM1401 - 14.0kW

RAV-GM1601 - 16.0kW

RAV-GM2241 - 22.4kW
RAV-GM2801 - 27.0kW

DIGITAL INVERTER [DI]
LINE-UP

	DIGITAL INVERTER [DI]						
							
SINGLE PHASE OUTDOOR	RAV-GM301ATP-A	RAV-GM401ATP-A	RAV-GM561ATP-A	RAV-GM801ATP-A	RAV-GM1101ATP-A	RAV-GM1401ATP-A	RAV-GM1601ATP-A
THREE PHASE OUTDOOR	-	-	-	-	-	-	-
 COMPACT 4-WAY CASSETTE	RAV-RM301MUT-E	RAV-RM401MUT-E	RAV-RM561MUT-E	N/A	N/A	N/A	N/A
 4-WAY CASSETTE	N/A	N/A	RAV-GM561UTP-A	RAV-GM801UTP-A	RAV-GM1101UTP-A	RAV-GM1401UTP-A	RAV-GM1601UTP-A
 HIGH WALLS	RAV-GM301KRTP-A	RAV-GM401KRTP-A	RAV-GM561KRTP-A	RAV-GM801KRTP-A	N/A	N/A	N/A
 MID-STATIC DUCTED	N/A	N/A	RAV-GM561BTP-A	RAV-GM801BTP-A	RAV-GM1101BTP-A	RAV-GM1401BTP-A	RAV-GM1601BTP-A
 HIGH STATIC DUCTED	N/A	N/A	RAV-GM561DTP-A	RAV-GM801DTP-A	RAV-GM1101DTP-A	RAV-GM1401DTP-A	RAV-GM1601DTP-A
 UNDER CEILING	N/A	N/A	RAV-GM561CTP-A	RAV-GM801CTP-A	RAV-GM1101CTP-A	RAV-GM1401CTP-A	RAV-GM1601CTP-A

	DIGITAL INVERTER [DI]	
		
THREE PHASE OUTDOOR	RAV-GM2241AT8-A	RAV-GM2801AT8-A
 HIGH STATIC DUCTED	RAV-RM2241DTP-E2	RAV-RM2801DTP-E2

SUPER DIGITAL INVERTER

GP SERIES

The expectations of a modern air conditioning system have evolved over the past years. Today, advanced comfort goes hand in hand with reduced energy and maintenance costs, combined with maximised simplicity and true operational flexibility.

The Super Digital Inverter associates all of Toshiba's innovative spirit and outstanding expertise to create highly efficient solutions with maximum end user comfort at its core.

Toshiba Super Digital air conditioners combine economy and ecology in a compact body. They feature Toshiba's state-of-the-art technology, flexible control, and easy installation to bring natural comfort and convenience to any home or business environment.

PIPING FLEXIBILITY

Toshiba's Super Digital Inverter series supports height differences of up to 30 meters on a single system, which is enough height to cover an 8 storey building.

The SDI series also boasts up to 75 meters of allowable pipe run, increasing installation flexibility, making it possible to use in just about any application.

RAV-GP561 - 5.6kW

RAV-GP801 - 8.0kW

RAV-GP1101 - 11.2kW
RAV-GP1401 - 14.0kW
RAV-GP1601 - 16.0kW

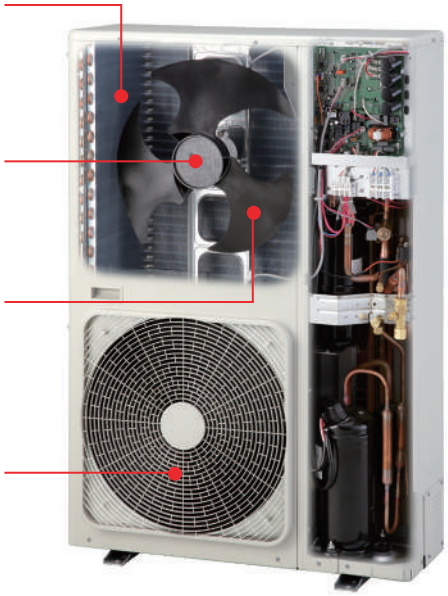
ECO-DRIVING DC TWIN ROTARY

High efficiency heat-transfer
Heat-transfer tube with improved heat-transfer coefficient.

DC fan motor
Highly efficient DC Motor.

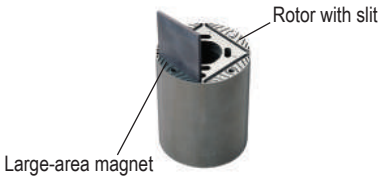
Bat wing fan
Newly development for high-pressure low-volume fan.

Wide-flow grille
Optimising ventilation performance, bringing out the full effect of fan and motor.



PIPING FLEXIBILITY

A low minimum speed of 10 rps has been achieved. This has further improved the operating efficiency when the load is low.



The structure and shape of each compressor component has been optimised. The area of the rotor magnet has been increased and a slit introduced to the design. These improvements have further enhanced efficiency and reduced noise.

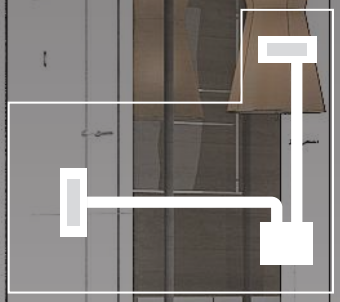
SUPER DIGITAL INVERTER [SDI]					
					
SINGLE PHASE OUTDOOR	RAV-GP561ATP-A	RAV-GP801ATP-A	RAV-GP1101ATP-A	RAV-GP1401ATP-A	RAV-GP1601ATP-A
THREE PHASE OUTDOOR	-	-	RAV-GP1101AT8P-A	RAV-GP1401AT8P-A	RAV-GP1601AT8P-A
4-WAY CASSETTE					
	RAV-GM561UTP-A	RAV-GM801UTP-A	RAV-GM1101UTP-A	RAV-GM1401UTP-A	RAV-GM1601UTP-A
HIGH WALLS					
	RAV-GM561KRTP-A	RAV-GM801KRTP-A	N/A	N/A	N/A
MID-STATIC DUCTED					
	RAV-GM561BTP-A	RAV-GM801BTP-A	RAV-GM1101BTP-A	RAV-GM1401BTP-A	RAV-GM1601BTP-A
HIGH STATIC DUCTED					
	RAV-GM561DTP-A	RAV-GM801DTP-A	RAV-GM1101DTP-A	RAV-GM1401DTP-A	RAV-GM1601DTP-A
UNDER CEILING					
	RAV-GM561CTP-A	RAV-GM801CTP-A	RAV-GM1101CTP-A	RAV-GM1401CTP-A	RAV-GM1601CTP-A

MID-STATIC DUCTED

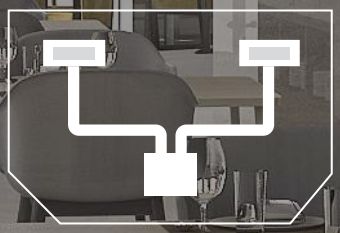
SEAMLESS DESIGN & INSTALLATION FLEXIBILITY

Toshiba ducted systems allow for a range of diffuser designs to best suit any decor.

Versatile and easy installation also made possible with the capability of adjusting the distance between the air intake and the air outlet vents to create the optimal airflow configuration.

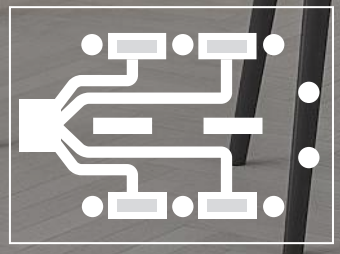


Polygon Rooms



Polygon Rooms

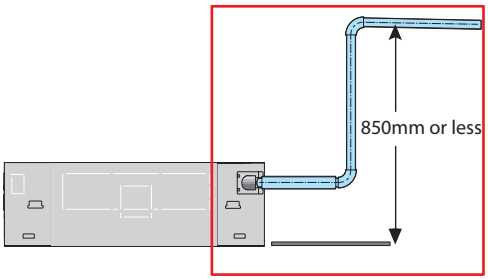
Narrow Rooms



Rooms with fixtures and obstacles

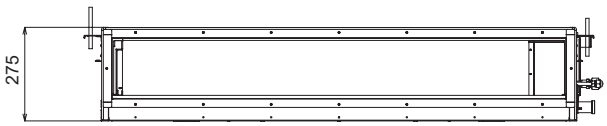
BUILT-IN DRAIN PUMP

The flexible piping layout is made possible by the built-in drain-pump kit that raises the drain piping up to 850mm from the drain port.



SPACE SAVING DESIGN

With a height of 275mm, the Toshiba mid-static ducted can be installed in almost any application including homes, apartments or commercial buildings.



WEEKY TIMER

A hassle-free, intuitive management system via the wired controller. A fully programmable 7-day timer offering the ability to completely eliminate the need to manually control the air conditioner.

The weekly timer function enables users to preset the unit to automatically turn on and off or change temperature to suit user's weekly schedule.

The 7-day timer function allows the user to set up to eight ON/OFF and temperature settings for each day of the week.

* Feature available on model: RBC-AMSU51-ES

MID-STATIC DUCTED SPECIFICATIONS

DIGITAL INVERTER [DI]

INDOOR UNIT		RAV-GM561BTP-A	RAV-GM801BTP-A	RAV-GM1101BTP-A	RAV-GM1401BTP-A	RAV-GM1601BTP-A
OUTDOOR UNIT		RAV-GM561ATP-A	RAV-GM801ATP-A	RAV-GM1101ATP-A	RAV-GM1401ATP-A	RAV-GM1601ATP-A
Cooling Capacity Range	kW	5.0 [1.5 - 5.6]	7.1 [1.5 - 8.0]	10.0 [3.0 - 11.2]	12.5 [3.0 - 14.0]	14.0 [3.0 - 16.0]
Heating Capacity Range	kW	5.3 [1.5 - 6.3]	8.0 [1.5 - 9.0]	11.2 [3.0 - 13.0]	14.0 [3.0 - 16.0]	16.0 [3.0 - 18.0]
EER		3.31	3.60	3.36	3.10	3.20
COP		3.71	4.00	4.00	3.60	3.50
Maximum Operating Current	A	15.50	17.00	22.80	26.00	29.00
Dimensions - Indoor [H x W x D]	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
Dimensions - Outdoor [H x W x D]		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 - Indoor / Outdoor	kg	23 / 40	31 /47	41 / 64	41 / 68	41 / 97
Airflow [H / M / L]	l/s	280 / 250 / 200	472 / 388 / 277	583 / 458 / 361	611 / 513 / 416	652 / 555 / 416
Sound Pressure Level Indoor / Outdoor	dB(A)	34 / 48	40 / 51	40 / 55	41 / 57	42 / 57
Static Pressure	Pa	30 - 180	30 - 180	50 - 200	50 - 200	50 - 200
Operating Range Cooling	°C db	-15 to 46	-15 to 46	-15 to 46	-15 to 46	-15 to 46
Operating Range Heating	°C wb	-15 to 15	-15 to 15	-15 to 15	-15 to 15	-15 to 24
Pipe Sizes (Liquid / Gas)	mm	6.35 / 12.70	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88
Maximum Pipe Length / Lift	m	30 / 30	50 / 30	50 / 30	50 / 30	50 / 30
Maximum Pre-charged Length		20	20	30	30	30
Power Supply	Ph / V / Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz

SUPER DIGITAL INVERTER [SDI] - SINGLE PHASE

INDOOR UNIT		RAV-GM561BTP-A	RAV-GM801BTP-A	RAV-GM1101BTP-A	RAV-GM1401BTP-A	RAV-GM1601BTP-A
OUTDOOR UNIT		RAV-GP561ATP-A	RAV-GP801ATP-A	RAV-GP1101ATP-A	RAV-GP1401ATP-A	RAV-GP1601ATP-A
Cooling Capacity Range	kW	5.0 [1.2 - 6.0]	7.1 [1.9 - 8.0]	10.0 [2.6 - 12.0]	12.5 [2.6 - 14.0]	14.0 [2.6 - 16.0]
Heating Capacity Range	kW	5.6 [0.9 - 8.1]	8.0 [1.5 - 11.3]	11.2 [2.4 - 13.0]	14.0 [2.4 - 18.0]	16.0 [2.4 - 19.0]
EER		3.50	3.70	4.10	3.45	3.23
COP		4.00	4.20	4.30	3.85	3.56
Maximum Operating Current	A	13.10	15.80	29.00	29.00	29.00
Dimensions - Indoor [H x W x D]	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
Dimensions - Outdoor [H x W x D]		630 x 800 x 300	890 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320
Weight - Indoor / Outdoor	kg	23 / 43	31 / 62	41 / 102	41 / 102	41 / 102
Airflow [H / M / L]	l/s	280 / 250 / 200	472 / 388 / 277	583 / 458 / 361	611 / 513 / 416	652 / 555 / 416
Sound Pressure Level Indoor / Outdoor	dB(A)	38 / 48	40 / 52	40 / 51	41 / 53	42 / 58
Static Pressure	Pa	30 - 180	30 - 180	50 - 200	50 - 200	50 - 200
Operating Range Cooling	°C db	-15 to 52	-15 to 52	-15 to 52	-15 to 52	-15 to 52
Operating Range Heating		-20 to 24	-20 to 24	-20 to 24	-20 to 24	-20 to 24
Pipe Sizes (Liquid / Gas)	mm	6.35 / 12.70	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88
Maximum Pipe Length / Lift	m	50 / 30	50 / 30	75 / 30	75 / 30	75 / 30
Maximum Pre-charged Length		20	30	30	30	30
Power Supply	Ph / V / Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz	1ph / 220-240V / 50Hz

SUPER DIGITAL INVERTER [SDI] - THREE PHASE

INDOOR UNIT		RAV-GM1101BTP-A	RAV-GM1401BTP-A	RAV-GM1601BTP-A
OUTDOOR UNIT		RAV-GP1101AT8P-A	RAV-GP1401AT8P-A	RAV-GP1601AT8P-A
Cooling Capacity Range	kW	10.0 [2.6 - 12.0]	12.5 [2.6 - 14.0]	14.0 [2.6 - 16.0]
Heating Capacity Range	kW	11.2 [2.4 - 13.0]	14.0 [2.4 - 18.0]	16.0 [2.4 - 19.0]
EER		4.10	3.45	3.23
COP		4.30	3.85	3.56
Maximum Operating Current	A	16.50	16.50	16.50
Dimensions - Indoor [H x W x D]	mm	275 x 1400 x 750	275 x 1400 x 750	275 x 1400 x 750
Dimensions - Outdoor [H x W x D]		1340 x 900 x 320	1340 x 900 x 320	1340 x 900 x 320
Weight - Indoor / Outdoor	kg	41 / 100	41 / 100	41 / 100
Airflow [H / M / L]	l/s	583 / 458 / 361	611 / 513 / 416	652 / 555 / 416
Sound Pressure Level Indoor / Outdoor	dB(A)	40 / 51	41 / 53	42 / 58
Static Pressure	Pa	50 - 200	50 - 200	50 - 200
Operating Range Cooling	°C db	-15 to 52	-15 to 52	-15 to 52
Operating Range Heating		-20 to 24	-20 to 24	-20 to 24
Pipe Sizes (Liquid / Gas)	mm	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88
Maximum Pipe Length / Lift	m	75 / 30	75 / 30	75 / 30
Maximum Pre-charged Length		30	30	30
Power Supply	Ph / V / Hz	3ph / 380-415V / 50Hz	3ph / 380-415V / 50Hz	3ph / 380-415V / 50Hz

Refer to the Engineering Databook for details on these conditions and requirements.

Rate conditions: Cooling: Indoor 27 °C Dry Bulb / 19 °C Wet Bulb, Outdoor 35 °C Dry Bulb.
Heating: Indoor 20 °C Dry Bulb, Outdoor 7 °C Dry Bulb / 6 °C Wet Bulb.
Base on equivalent piping length of 7.5m and piping height difference of 0m.

ADVANCED CONTROLS

128 SMART MANAGER

BMS-SM1281ETLE

This Smart Manager has the ability to control from a local area network with dedicated interface accessible from every web browser.

FUNCTIONS:

- On / Off
- Temperature setting
- Error display
- Schedule timer
- Web connection
- Energy monitoring
- Error information transfer function by E-mail

256 TOUCH SCREEN CONTROLLER

BMS-CT2560U-E

This controller is ideally suited to any small or large installation where energy monitoring functions are required.

FUNCTIONS:

- Full control of maximum 256 units
- 7' Colour touch screen
- Intuitive navigation
- Advanced scheduling of indoor and outdoor units
- Energy monitoring with or without power meter
- Embedded input and output
- Dedicated fault code menu with email transfer capability

ZONING WITH T-ZONE

For times when you only want to condition certain spaces, zoning can be the answer. Whether you are looking at installing a new Toshiba ducted system or have an existing system retrofitted, zoning can save energy, and reduce wear and tear of your system.

T-Zone gives you total temperature control of each space individually. With up to 14 zones capability, every space can be at the perfect temperature at all times.

SMART DEVICE CONTROL [WIFI]

BMS-IWF0320E

A versatile interface for Toshiba light commercial and VRF air conditioning units that enables WiFi connection.

FUNCTIONS:

- Remote access via app on a smart device
- On / Off
- Temperature setting
- Fan speed
- Timer function
- Schedule function
- Energy save function
- Permit / Prohibit function
- Error display
- Room temperature monitoring

TOSHIBA

Toshiba is committed to continuously improving its product to ensure the highest quality and reliability standards are met, and to meet local regulations and market requirements.

The specifications on this document may change without notice to allow Toshiba to incorporate the latest products and innovations for its customers. The information contained in this brochure are merely informative, they are not intended to be used in place of the Engineering or Installation Manuals.

Cooling and heating capacities mentioned for the products are nominal capacities at standard operating conditions.

All images provided in this document are used for illustration purposes only.

Equipment rates in accordance with MEPS GEMS 2019 Determination.

AHIC [New Zealand] Pty Ltd, the importer and distributor of Toshiba branded heat pump systems declines any responsibility in the broadcast sense, for damage, direct or indirect, arising from the use and interpretation of the recommendation in this document.

AHIC [NEW ZEALAND] Pty Ltd

ENQUIRIES
customer.services@ahi-carrier.co.nz

Head Office:
AHIC [NEW ZEALAND] Pty Ltd
211 Station Road
Penrose, Auckland 1060

For more information, visit our website toshibaheatpums.co.nz

World's 1st Inverter Air Conditioner | IEEE

Toshiba, the world's 1st inverter Air Conditioner

Better Air Solutions

Auckland Head Office
207-211 Station Road
Penrose, Auckland
Tel: 09 355 6720
E: sales@ahi-carrier.co.nz

Wellington Branch
Cnr Jarden Mile & McCormack Place
Ngauranga, Wellington
Tel: 04 473 5990
E: sales@ahi-carrier.co.nz

Christchurch Branch
23 Iversen Terrace
Waltham, Christchurch
Tel: 03 379 0894
E: sales@ahi-carrier.co.nz

Napier Branch
31 Ford Road
Napier
Tel: 06 561 0183
E: sales@ahi-carrier.co.nz

Dunedin Branch
56 Fox Street
Dunedin
Tel: 03 552 0401
E: sales@ahi-carrier.co.nz