

# INVERTER DUCTED SYSTEMS

What you'll find inside:

- DC Twin-Rotary Compressor
- Inverter Ducted advantages
- Controllers
- Product specifications

+  
Energy  
Efficient

+  
Powerful  
Operation

+  
Flexible  
Application

# TOSHIBA

## AIR CONDITIONING



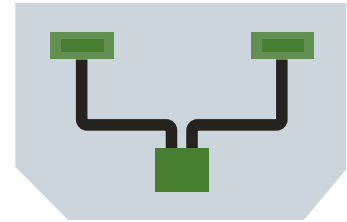
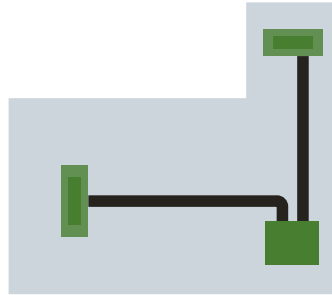
# About Toshiba's Inverter Ducted Systems

Toshiba's Inverter Ducted systems allows you to air condition your home without having to install the indoor units on your wall, making your home look neat and tidy.

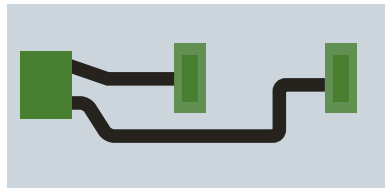
The indoor unit is installed in a confined space and ducts run through the ceiling leading to air outlets in your room. Air is allowed into the room through vents on the ceiling or on the wall.

## A wide range of applications

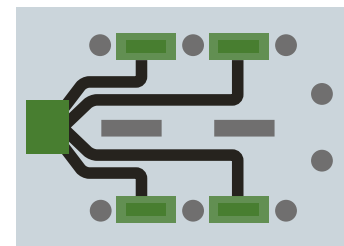
The use of ducts enables air outlets to be installed anywhere on the ceiling. Applications include a wide array of layouts from narrow spaces to polygon rooms.



POLYGONAL ROOMS



NARROW ROOMS



ROOMS WITH FIXTURES AND OBSTACLES

## The benefits

The benefits of Toshiba's refined design include flexibility in application, low operating sound level, improved air quality and all round comfort. This is as a result of the precise temperature control of Toshiba's Inverter technology. Plus, all units are high performing as well as energy efficient.

## Who is Toshiba Air Conditioning?

Toshiba is committed to delivering the highest standard of quality and innovation across our product range and services. For more than 40 years Toshiba Air Conditioning has led the world in creating better air conditioning and setting new standards in comfort, ease of use, energy efficiency and climate control.

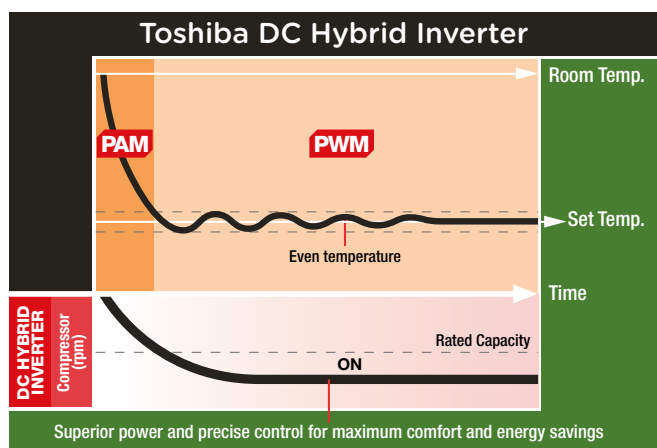




## Combining high power with high efficiency

### The Toshiba Air Conditioning Hybrid Inverter

The hybrid inverter integrates two distinct compressor control modules to ensure constant natural comfort which is achieved with maximum energy efficiency. PAM (Pulse Amplitude Modulation) provides the highest levels of power for when you need to get cool (or warm) fast, while PWM (Pulse Width Modulation) ensures the desired room temperature and optimum energy efficiency. The Toshiba Inverter system features the best of both.



**PAM** High power

PAM works like a turbo engine in a car. It will set a compressor at the maximum power, providing fast cooling in order to achieve the desired room temperature when the air conditioner is switched on.

**PWM** High efficiency

PWM helps to balance the compressor speed revolution, either high speed when providing fast cooling, or slow speed when maintaining room temperature. So, like cruise control in a car, it results in significantly less consumption.

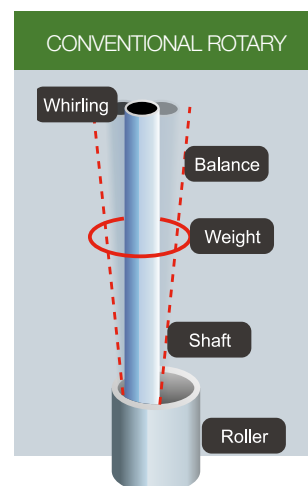
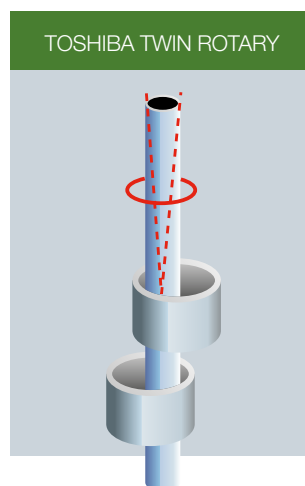
### The Toshiba Air Conditioning DC Twin-Rotary Compressor

#### High efficiency

This compressor enables the adoption of a high-pressure refrigerant. High efficiency is evident in low speed operation ranges. It can reduce energy consumption when operated in long stable conditions.

Rotating with two rollers at the same time makes accurate compressor rotation possible with less energy loss.

As a result, it offers a great reduction in energy consumption with powerful operation.



#### High reliability and low noise

The enhanced DC Twin-Rotary Compressor delivers stable performance with minimum friction. It's ideal for noise-sensitive applications as the sound of the outdoor unit is almost imperceptible.



## Advantages of Toshiba Air Conditioning's Inverter Ducted system



Quiet operation

Rapid heat and cool function which increases power temporarily to achieve desired temperature before returning to normal power

5 year warranty for consumer confidence

Low maintenance

Compact unit concealed in ceiling

Dual controllers with the ability to adjust from either controller

Reverse cycle (heating and cooling)

Powerful operation

R410A non ozone depleting refrigerant

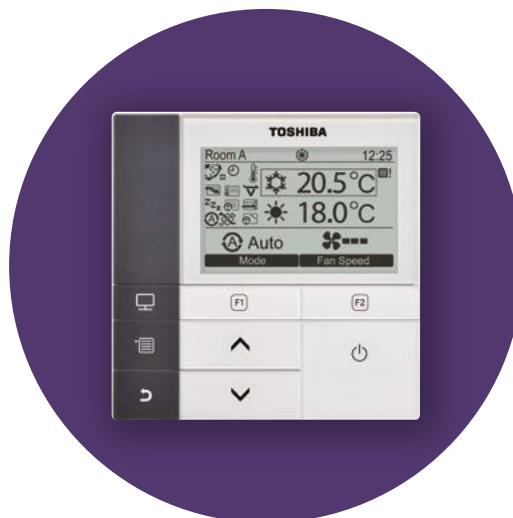
Easy to install

DC inverter system, designed to use electricity efficiently and effectively

Easy to use controller



## Controllers. Designed for real people



RBC-AMS54E-ES

Feature	Benefit
Wired controller	Controller is secured to the wall and can never be displaced.
Backlit	For ease of use during the day and night.
Energy saving function	The controller can be set into power saving mode which is anywhere between 50-100% of full operating mode. The lower the value is set, the more power will be saved.
Set temperature range	Set the minimum and maximum limit for each type of operation including heat, cool, dry and auto to cover for all variances in weather.
Off reminder function	A timer can be set for the indoor unit to switch off each day. Once set, the indoor unit can never accidentally be left on when no-one is home.
Key lock	Locks the controller so the temperature is stable and unable to be changed, resulting in a constant temperature with no variations.
Large buttons	For simple and easy operation.
Night operation	Reduces the operating noise of the outdoor unit when quieter operation is required at night.
Weekly schedule timer	Convenient for setting schedules on weekends and weekday.
Several language operation	Multi functional with 11 language options including English, French, Italian, German, Spanish, Portuguese, Dutch, Russian, Greek, Turkish and Polish.

			SINGLE PHASE	
INDOOR			RAV-SM1103DT-A	RAV-SM1403DT-A
OUTDOOR			RAV-SP1104AT-A2	RAV-SP1404AT-A2
Refrigerant Type			R410A	R410A
Power Supply		Volts-Phase-Hz	220-240V -/1/50Hz	220-240V -/1/50Hz
COOLING	Capacity - Rated	kW	10.4	12.5
	Capacity - Range (min ~ max)	kW	3.3~12.1	3.3~14.1
	Efficiency (rated )	EER	3.30	3.42
	Power Input (min ~ rated ~ max)	kW	0.90~3.15~3.99	0.90~3.66~4.98
	Operating Current (maximum)	A	22.8	22.8
HEATING	Capacity - Rated	kW	11.3	14.0
	Capacity - Range (min ~ max)	kW	4.2~17.0	4.2~18.0
	Efficiency (rated)	COP	4.38	4.14
	Power Input (min ~ rated ~ max)	kW	0.80~2.58~4.84	0.80~3.38~4.91
	Operating Current (maximum)	A	22.8	22.8
INDOOR UNIT	Dimension (HxWxD)	mm	380 x 1050 x 600	380 x 1050 x 600
	Net Weight	kg	57	57
	Cooling Airflow Volume	L/s	693.3	916.9
	Heating Airflow Volume	L/s	693.5	916.9
	Fan Motor Output	W	600	600
	Sound Pressure(H) at 1m distance	dBA	49	49
	Sound Power(H)	dBA	64	64
	External Static Pressure (default setting)	(Pa)	100	100
	External Static Pressure Range	(Pa)	40-225	50-250
OUTDOOR UNIT	Dimension (HxWxD)	mm	1340 x 900 x 320	1340 x 900 x 320
	Net Weight	kg	93	93
	Compressor Type	-	DC Twin Rotary	DC Twin Rotary
	Fan Motor Output	W	100+100	100+100
	Cooling Operating Noise (Sound Pressure) (H) at 1m	dBA (@spl)	49	51
	Cooling Operating Noise (Sound Power) (H)	dBA (@swl)	66	68
	Heating Operating Noise (Sound Pressure) (H) at 1m	dBA (@spl)	50	52
	Heating Operating Noise (Sound Power) (H)	dBA (@swl)	67	69
	Cooling Usable Temperature Range	DB°C	-15/43	-15/43
	Heating Usable Temperature Range	WB°C	-20/15	-20/15
PIPE SIZE	Liquid Line Ø	mm	9.5	9.5
	Gas Line Ø	mm	15.9	15.9
	Coupler Style	-	Flaring	Flaring
	Drain (Inside Diameter) Ø	mm	VP25	VP25
	Maximum Length	m	75	75
	Chargeless Length	m	30	30
	Maximum Height Difference	m	30	30

**Rated conditions**

Cooling: Indoor air temperature 27°C DB/19°C WB, outdoor air temperature 35°C DB

Heating: indoor air temperature 20°C DB, outdoor air temperature 7°C DB/6°C WB



		THREE PHASE		
RAV-SM1603DT-A		RAV-SM1603DT-A	RAV-SM2244DTP-E	RAV-SM2804DTP-E
RAV-SM1603AT-A1		RAV-SP1604AT8-A1	RAV-SM2244AT8-A1	RAV-SM2804AT8-A1
R410A		R410A	R410A	R410A
220-240V -/1/50Hz		FCU 220V-240V-/1/50Hz CDU 380-415V/3/50Hz	FCU 220V-240V-/1/50Hz CDU 380-415V/3/50Hz	FCU 220V-240V-/1/50Hz CDU 380-415V/3/50Hz
13.5		13.6	16.8	20.0
3.6~16.0		3.3~16.0	9.8~23.3	9.8~27.0
3.29		3.30	3.33	3.28
1.30~4.10~6.01		0.90~4.12~6.23	2.63~5.05~7.60	2.68~6.10~12.20
32		16.4	18	20
16.0		16.0	22.4	27.0
4.6~18.0		4.2~19.0	9.8~25.1	9.8~31.5
3.50		3.61	3.79	3.75
1.26~4.57~7.08		0.80~4.43~6.71	2.32~5.91~7.02	2.55~7.20~9.32
32		16.4	18	20
380 x 1050 x 600		380 x 1050 x 600	448 x 1400 x 900	448 x 1400 x 900
57		57	97	97
966.9		967	1056	1333
966.9		967	1056	1333
600		600	1000	1000
50		50	44/40/36 (H/M/L)	46/42/38(H/M/L)
65		65	79/75/71 (H/M/L)	81/77/73(H/M/L)
100		100	150	150
50-250		50-250	50-250	50-250
1340 x 900 x 320		1340 x 900 x 320	1540 x 900 x 320	1540 x 900 x 320
99		95	134	134
DC Twin Rotary		DC Twin Rotary	Twin Rotary	Twin Rotary
100+100		100+100	100+100	100+100
51		51	56	72
68		68	57	74
53		53	57	74
70		70	58	75
-15/43		-15/46	-15/46	-15/46
-15/15		-20/15	-20/15	-20/15
9.5		9.5	12.7	12.7
15.9		15.9	28.6	28.6
Flaring		Flaring	Flaring	Flaring
VP25		VP25	VP25	VP25
50		75	70	70
30		30	30	30
30		30	30	30



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

Product specifications in this brochure are only indicative and are subject to change. These are not intended to be used in place of the engineering or installation book

All features and specifications are subject to change without prior notice.

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

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

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Equipment rates in accordance with  
MEPS 3823.2-2011 E&OE

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