



Split Systems

## SPLIT SYSTEMS



## Better air The new era in air conditioning

## Clearing the air for gei

Health

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As human activities accelerate climatic change, scientists foresee limits to how much damage th Sustainable solutions require stronger commitment.

Toshiba is making a positive difference in a big way. We take initiatives with innovators in acade move faster towards more sustainable solutions.



TOSHIB

### Toshiba air conditioning, we care about better air...



Our products comply with RoHS regulations, which ensures the exclusion of restricted substances in the materials of every single component.

By using plastic that can be recycled, we aim to minimise the impact of waste electrical goods on the environment.

Increased cost savings have been made by using digital technology. This can provide superior control and cost efficiency by utilising a DC inverter compressor as opposed to a AC fixed speed compressor. This environmentally sustainable DC compressor results in a power saving of up to 50%\* with the added benefit of super-accurate rotation and quieter operation.

\*13k Inverter vs. fixed-speed class A product

## nerations to come

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ia, industry and government to think bigger, act bolder and







## Quality and saving

Toshiba has been studying, designing and creating innovative air conditioning systems for more than 30 years and as a result has always offered high performance.

Energía

Quality has always been Toshiba's strength and will remain the trademark that will differentiate Toshiba air conditioners.

xcellent

Toshiba's advanced air conditioners all perform with efficiency. A wide product range with a high ranking in energy labeling will meet all your air conditioning needs.

Less energy consumption means more savings in electricity costs for you.



# When technology meets comfort

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.

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, also innovation 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 **energy-efficient air conditioners** reducing greenhouse gas emission at the source.





— DC Hybrid Inverter



DC-Motor

Twin-Rotary– Cylinder







## DC Twin-Rotary Compressor

### A wide range of efficiency is realised

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.

### High efficiency

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 yet with very powerful operation.

### High reliability & low noise

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





### Toshiba DC Hybrid Inverter A new dimension in efficient performance

The Hybrid Inverter features PAM (Pulse Amplitude Modulation) and PWM (Pulse Width Modulation).



### Unique hybrid design



PWA **High efficiency** 

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



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 energy consumption.

The former provides the highest levels of power while the latter ensures the desired room temperature and energy efficiency. As a hybrid, the Toshiba Inverter system features the best of both.

### **TOSHIBA DC Hybrid Inverter**

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# Benefits of the Toshiba DC Hybrid Inverter system



### Energy saving

Digital technology provides superior control and cost efficiency with the DC Inverter compressor when compared to AC Fixed Speed compressors. Super-accurate rotation of an environmentally sustainable compressor results in power savings of up to 50%\* and quieter operation.

### Comfort

Toshiba's DC Hybrid Inverter uses a Twin Rotary compressor\*\*, which ensures a steadier rotation therefore reducing the unwanted vibration sound.

### High power

PAM drives high power to ensure the fast achievement of the set temperature.

\* 13k Inverter vs. Fixed-Speed class A product \*16-24SAV Series





### **Active Purification**

Make your home a hideaway from dirt and discomfort. The innovative Toshiba Plasma Air Purifier uses 10x active purification technology to trap bacteria, viruses and particles.

### **Double Freshness**

Negative ions create a fresh and healthy indoor environment to refresh and relax you, while the Toshiba new IAQ filter makes unpleasant smells a thing of the past and removes harmful oxidants that can damage healthy cells.

## Plasma Air Puri

How does the Plasma Air Purifier remove a wide range of impurities?

### Step 1 CHARGE

An ionized circuit forces pollutants to adopt a positive electrical charge.

### Step 2 COLLECT

Negative electrons in the collection board attract large positive pollutants.

#### Step 3 COMPLETE

Any remaining particles are forced towards the second collection board by a positive charge.



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Double Steps, Double Performance



Performance of Air Purifying



"Cannot remove harmful aubatances in tobacco, og. carbon monoxide, etc.



## Active Purification Purification The Air For Your Health





Through the three steps, Charge, Collect and Complete, the Daiseikai Plasma Air Purifier manages a greater volume of air in your room for optimum purity, unlike conventional filters, which do not feature active purification and have smaller air capacity.



Plasma Air Purifier

**Conventional Filter** 

### Smoke disappears almost immediately



The chamber is filled with smoke

### Fast & Effective

The smoke is completely eliminated in a few seconds

The Daiseikai Plasma Air Purifier rapidly clears smoke as demonstrated.





### Double Freshness Air lonizer

### Make your home a health spa

Around forests, waterfalls, lakes and streams, negative ions make the air fabulously fresh, clean and relaxing. This invigorating atmosphere is emulated in spas and health clubs. Now you can enjoy similar ambience in your own home.

### The power of the Daiseikai Ionizer

By generating more than 1 million negative ions for every square centimetre of air, the Daiseikai Ionizer will invite the freshness of nature into your personal space. In the middle of a room, up to 35,000\* negative ions can be registered.



Start with a room temperature of 24°C and numidity of 80%. On dry mode, 35,000 negative air ions can be measured in 17m<sup>2</sup> of space, 1m up from the floor over 2 hours (temperature 24°C, humany 50%).

### Protect your home from pests and tobacco stains\*\*



Helps prevent pests, such as termites and cockroaches from breeding.



Deodorises and neutralises tobacco smoke and helps prevent tobacco strains on wallpaper.



**Reduces** mould formation.



Keeps your room fresh.



## Technology for health



### **Toshiba IAQ\* filter**

Toshiba IAQ's technology is able to seriously inhibit the reproductive ability of *harmful bacteria, and viruses such as H5N1 Avian Influenza.* With Toshiba IAQ, your family can breathe easy and your house will look like as if it has been spring cleaned.



### Anti Virus<sup>^</sup> and Anti Bacteria\*\*

H5N

\* Improve air hygienic by reducing the amount of bacteria and viruses. However, does not guarantee a sterilised room or protection against infection after using the filter.



H5N

- Anti bacteria : destroys most bacteria
- Deodorising power: Absorbs and decomposes smoke, ammonia, volatile organics, food smells and bad odours
- *Prevent mould formation* : Inhibits the formation of mould and fungi

Leuconostoc enzyme  Anti virus : Avian Influenza virus (H5N1)

\* Korea Apparei Testing & Research Institute, ES05-00001771 \*\*Betagro Science Center Co., Ltd., 900017366

### Your health is our main concern

We spend a great deal of time in air conditioned rooms, either in the office or at home, "Clean airflow" means you can breathe with greater confidence.

## Self Cleaning Function



This function is designed to reduce the humidity that causes mould to form inside an air conditioning unit.

### It simply refreshes you in a natural way

When you turn off your air conditioner, an internal fan automatically activates to dry out the coil. This removes the moisture, which causes mould to form.



TOSHIR

20 minutes of fan operation after shut down dries the moist air and helps reduce mould formation.



Natural Air-Flow



### Friendly Universal Remote Controller Enhancing Visibility

### Remote controller with backlight display

### Luminous buttons and user friendly screen

Toshiba's new remote controller with luminous buttons provide luxurious feeling and comfortable use.

The biggest screen and symbols ever, making Toshiba air conditioners very user friendly.

### Complete Control Features

The Toshiba remote control is as carefully designed as the rest of the system. Frequently used buttons are placed at the top, while feature buttons are laid out in user-friendly zones.

#### Hi Power



Hi Power mode makes your room cool faster and is also quiet when operating



When you come home after a hot day, just press the "Hi-POWER" button. Toshiba's extra airflow rapidly delivers extra cooling throughout the room without making undesired noise.

Efficient Airflow



Now with 12 louver settings, Toshiba air conditioners allow you to adjust the airflow precisely to the position that gives you the greatest comfort. Alternatively, use the swing feature to distribute air evenly throughout the room.



Powerful & Precise



Toshiba air conditioners have 7 fan-speed settings, including Auto Fan and Hi-Power modes. Choose from a gentle airflow right up to the full cooling or heating of Hi-Power mode, which provides up to 620 m<sup>3</sup>/h\* of fresh air instantly.



\* 13k, depends on model





#### Super Quiet



Silence is bliss. That's why Toshiba air conditioners are designed with the latest in anti-noise technology. At QUIET Mode, the unit operates **3dB quieter** with a super low fan speed. By pressing the QUIET button, the air conditioner starts the following operation :

- The fan speed is changed to super low.
- The quiet sign appears on the LCD of the remote control.

Toshiba has assessed user preferences to ensure that our needs can be fully catered for. The one touch My Comfort features customised temperature and airflow settings, which will deliver you ultimate

This keeps your home peaceful and serene.

comfort with one simple touch of the button.

### One Touch My Comfort

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#### Comfort Sleep





When using the convenient Comfort Sleep button, your air conditioning system will compensate for naturally lower night air temperatures so that you can sleep in complete comfort.





We design real time on-off feature, which sets program setting to repeat every 24 hours.



The POWER SEL\* button, gives you the freedom to control the power consumption of the air conditioner from a remote control by preventing high power operation. It helps you when you would like to avoid electricity black outs, need electricity for other appliances and to save electricity.



- Slimline design
- Silent operation
- Extremely low noise levels
- High standards in energy efficiency
  - Top quality in all details

DAISEIKAI Inverter Hi-	waii single split system	- Margana		RTER HFC	SELF	WIC
HEAT PUMP Itandard type RAS-10SKVP2-A						2
AS-13SKVP2-A AS-16SKVP2-A			Cardo -	Standard type RAS-10SAVP2-A		

			MEAT PUMP		
Indoor			RAS-10SKVP2-A	RAS-135KVP2-A	RAS-16SKVP2-A
Outdoor			RAS-10SAVP2-A	RAS-13SAVP2-A	RAS-16SAVP2-A
Cooling Capacity - Rated	CO	kW	2.51	3,52	4.53
Cooling Capacity - Range	CO	kW	0.50-3.50	0.60-4.50	0.80-5.00
Power input (min - rated - max)	CO	kW	0.10-0.49-0.87	0.11-0.84-1.37	0.15-1.34-1.82
Operating current (min - rated - max)	CO	A	0.60-2.45-3.98	0.65-3.84-6.20	0.89-6.06-8.15
EER (min ~ rated ~ max)	CO		4-02-5-12-5-00	3.28-4.19-5.45	2.75-3.38-5.33
Heating Capacity - Rated	RC	kW	3.21	4.22	5,53
Heating Capacity - Range	RC	kW	0.50-6.10	0.50-6.70	0.70-7.00
Power input (min - rated - max)	RC	kW	0.09-0.63-1.82	0.10-0.95-2.33	0.15-1.47-2.51
Operating current (min - rated - max)	RC	A	0.53-3.04-8.07	0.60-4.35-10.33	0.89-6.58-11.12
COP (min - rated - max)	RC		3.57-5.10-5.56	3.30-4.44-5.00	3.19-3.76-4.67
Indoor Unit	and the second	the second s			
Airflow Volume (h/l)	CO	l/s	175 / 78	183 / 88	192/97
Mositure removal		l/hr	1.5	2.0	2.5
Sound Pressure (h/l)	CO	dB(A)	42-27	43-27	45-29
Dimension (HxWxD)		mm	275x790x205	275x790x205	275x790x205
Net Weight		kg	9.0	9.0	9.0
Sound Power (h)	CO	dB(A)	55	56	58
Fan Motor Output		W	30	30	30
Outdoor Unit					
Dimension (HxWxD)		mm	630x800x300	630x800x300	630x800x300
Net Weight		kg	41	41	41
Sound Pressure	CO	dBA	46	48	49
Operating range	CO	C	-10-46	-10-46	'-10-46
Sound Pressure	RC	dBA	47	50	50
Operating range	RC		-15-24	+15-24	·-15-24
Sound Power (h)	CO	dB(A)	59	61	62
Pipe Size					
Liquid Side		(mm/inch)	6.35(1/4")	6.35(1/4")	6.35(1/4")
Gas Side		(mm/inch)	9.52(3/87)	9.52(3/8")	12.70(1/2)
Maximum Piping Length		(m)	25	25	25
Maximum Piping Height difference		(m)	10	10	10
Chargeless Length		(m)	15	15	15
Compressor type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Power Supply		V/ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50

"The specification may be subject to change without notice for purpose of improvement



Condition (Cool) Indoor Air Temperature 27°C Db. 19°C Wb Outdoor Air Temperature 35°C Db. 24°C Wb

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Others



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HEAT PUMP RAS-105KV2-A RAS-135KV2-A1 RAS-165KV2-A1	-	~			TORMA COM
HEAT PUMP RAS-18SKV-A RAS-22SKV2-A1 RAS-24SKV2-A	-		-	<b>11</b>	RAS-10SAVR-A RAS-13SAV2-A1 RAS-16SAV2-A1 RAS-18SAV2-A RAS-22SAV2-A1 RAS-24SAV2-A

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Sn	00	ifica	ati	on	0
SD					-

				HEAT	PUMP			
Indoor			RAS-10SKV2-A	RAS-13SKV2-A1	RAS-16SKV2-A1	RAS-185KV-A	RAS-22SKV2-A1	RAS-24SKV2-A
Outdoor			RAS-10SAVR-A	RAS-13SAV2-A1	RAS-16SAV2-A1	RAS-18SAV2-A	RAS-22SAV2-A1	RAS-24SAV2-A
Cooling Capacity - Rated	CO	kW	2.5	3.4	4.4	5.0	6.0	7.1
Cooling Capacity - Range	CO	kW	1,10-3,10	2.00-4.10	0.80-5.00	1.10-6.00	1.20-6.70	1.50-7.70
Power input (min - rated - max)	CO	kW	0.25-0.598-0.82	0.49-0.92-1.30	0.15-1.34-1.72	0.18-1.42-2.00	0.20-1.83-2.65	0.30-2.33-2.90
Operating current (min ~ rated - max)	CO	A	1.36-2.89-3.75	2.80-4.20-6.31	0.88-6.06-7.62	1.06-6.41-8.90	1.16-8.19-11.78	1.78-10.65-12.85
EER (min rated max)	CO		3.78-4.18-4.40	3.15-3.70-4.08	2,91-3,28-5,33	3 00-3 52-6 11	2.53-3.28-6.00	2.66-3.05-5.00
Heating Capacity - Rated	RC	kW	3.2	4.2	5.3	5.8	7.0	8.1
Heating Capacity - Range	RC	kW	0.90-4.80	1.80-5.60	0.90-6.30	0.80-6.30	1.00-7.50	1.60-9.00
Power input (min - rated - max)	RC	KW.	0.17-0.75-1.40	0.38-1.12-1.69	0.15-1.50-1.98	0.14-1.56-1.70	0.18-1.98-2.21	0.30-2.45-3.30
Operating current (min - rated - max)	RC	A	0.92-3.51-6.21	2.11-5.01-7.55	0.89-6.71-8.77	0.84-6.97-7.58	1.06-8.87-9.79	1.81-11.20-14.62
COP (min - rated - max)	RC		3.43-4.27-5.29	3.31-3.75-4.74	3.18-3.53-6.00	3.71-3.72-5.71	3.39-3.54-5.56	2.73-3.31-5.33
Indoor Unit								
Airflow Volume (h/l)	CO	1/s	143/83	173/87	190/103	265/163	305/183	280/183
Mositure removal		1/hr	1.50	2.0	2.5	2.8	3.5	3.8
Sound Pressure (h/i)	CO	dB(A)	38-26	45-30	47-32	44-32	47-35	45-36
Dimension (HxWxD)		mm	275x790x205	275x790x205	275x790x205	320x1050x228	320x1050x228	320x1050x228
Net Weight		kg	9	9	9	13	13	13
Sound Power (h)	CO	dB(A)	51	60	62	59	62	58
Fan Motor Output		W	20	20	30	30	30	30
Outdoor Unit						A CONTRACTOR OF A CONTRACTOR OFTA CONTRACTOR O		
Dimension (HxWxD)		mm	550x780x290	550x780x290	550x780x290	550x780x290	630x800x300	890x900x320
Net Weight		kg	35	37	38	41	43	65
Sound Pressure	CO	dBA	46	49	51	49	53	52
Operating range	CO	C	-10-46	-10-46	-10-46	-10-46	-10-46	-10-46
Sound Pressure	RC	dBA	47	50	52	50	52	52
Operating range	RC		-15-24	-15-24	-15-24	-15-24	-15-24	-15-24
Sound Power (h)	CO	dB(A)	59	64	66	64	68	65
Pipe Size		10 10 10 10						00
Liquid Side		(mm/inch)	8.35(1/4")	6.35(1/4")	6.35(1/4")	6.35(1/4")	6.35(1/4")	9.52(3/8")
Gas Side		(mm/inch)	9.52(3/8")	9.52(3/8")	12.70(1/27)	12.70(1/2")	12.70(1/2")	15.88(5/8*)
Maximum Piping Length		(m)	20(extra charge 20g/m)			20(extra charge 20g/m)	20(extra charge 20g/m)	30(extra charge 20g/n
Maximum Piping Height difference		(m)	10	10	10	10	10	20
Chargeless Length		(m)	15	15	15	15	15	20
Compressor type		4.4	DC Rotary	DC Hotary	DC Twin Hotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
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

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Condition (Cool) Indoor Air Temperature 27°C Db, 19°C Wb Outdoor Air Temperature 35°C Db, 24°C Wb





Others