

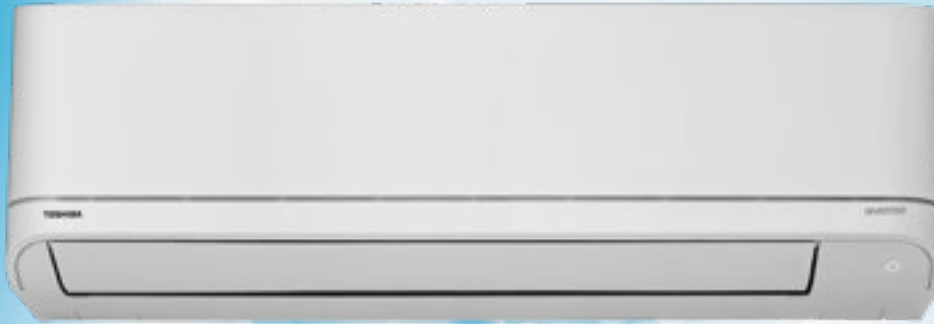
# TOSHIBA

## HEAT PUMPS

Think Toshiba. Think reliability.



### Better Air Solutions



- Sleek modern design
- Eco-friendly
- Magic coil & self-cleaning
- Smart Airflow

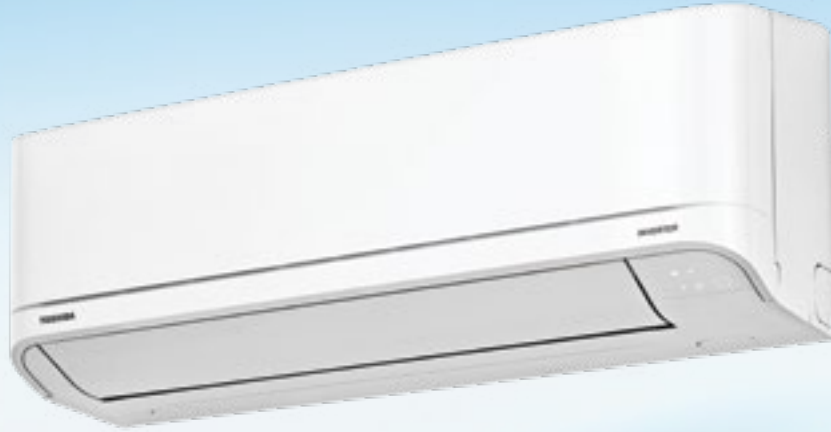
"Improve your quality of life with style"

**R32**  
INVERTER

# PKVSG

# SHORAI





Toshiba is proud to offer its latest innovation in Residential design, comfort and high energy performance.

The all new Shorai R32 range of residential heat pumps is another level of technology that has been developed for your lifestyle today, tomorrow and in the future. The new modern design creates fresh air to better the quality of life with less energy consumption, and easier control with just one touch. An advanced technology that you can breathe, touch and experience. The range incorporates a new fresh design with smooth blended lines and rounded corners which will fit seamlessly into any interior. Exclusive to Toshiba, discreet white LEDs which dim or turn off secure its role as a stylish yet high-tech addition to the room.

One of the many attributes of the new Shorai R32 range is its flexibility. With 7 capacity sizes, there is always a model that meets your requirements.

With all models incorporating Toshiba's inverter rotary compressor technology, the Shorai R32 range of units operates effortlessly even when placed in extreme operating environments. This sleek hi-wall offers maximum comfort down to -15°C, guaranteeing outstanding heating performance, whatever the weather.

Created by TOSHIBA - INVERTER TECHNOLOGY		
<b>COP (Rated) up to 4.64</b>	<b>COP (50% Part Load) up to 5.56</b>	<b>Heating Operation Down to -15°C</b>
<b>7 sizes covering 2.0/2.5 to 7.1/8.0 kW (cooling/heating)</b>		<b>Unique Toshiba Functions: Fireplace Mode Silent Operation</b>

## Maximum Simplicity

LEDs on the unit allow you to see which operations are active at a glance.

### COOLING



1

### HEATING







## Eco-Friendly Technology

R32 is the next generation refrigerant. The R32 Shorai range of Hi Walls from Toshiba offers our customers only the best in terms of performance without compromising on efficiency whilst limiting the impact on the environment. Shorai limits the global warming potential (GWP 675) across the board and uses a lower amount of refrigerant (36% less) than R-410A systems.

## R32 - Why Use a New Refrigerant?

Toshiba has faced the challenge to use a refrigerant that limits CO<sub>2</sub> emissions. R32 has a low GWP giving a perfect balance between energy efficiency and compliance for the environment. It also has no damaging effects on the ozone layer (0 ODP).

## Reducing the Environmental Impact

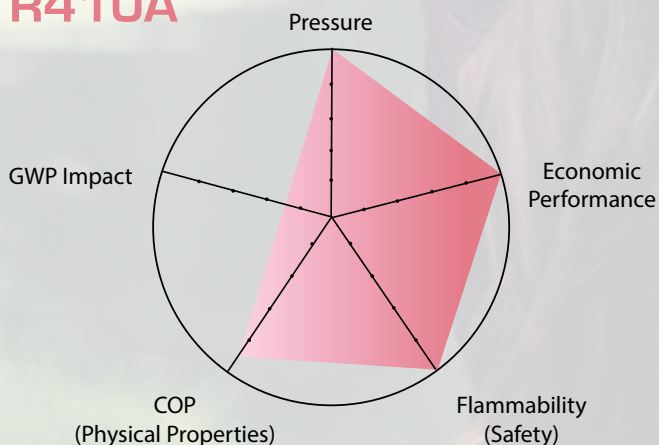
Toshiba engineers are constantly engaged in research to ensure the best heat pump technology. The amount of refrigerant used for the Shorai range is lower than its R-410A counterparts. This significantly reduces the potential environment impact while guaranteeing high performance and energy savings.

## Maximum Energy Efficiency

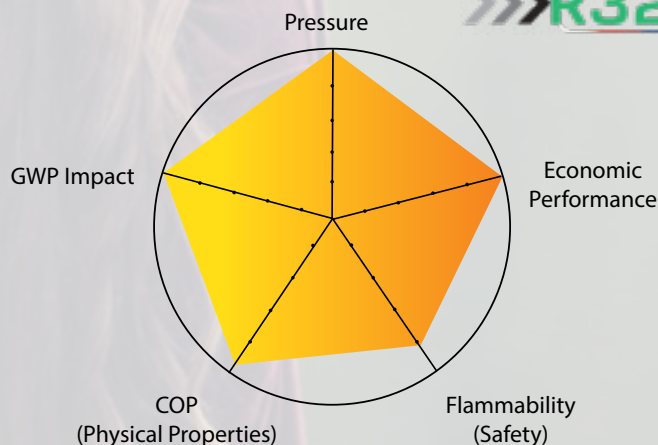
R32 Shorai is the new Toshiba concept for energy efficiency. The heat pumps in this range achieve high levels of EER and COP. In addition, the ability of the vector control inverter to modify the Compressor speeds to very low loads makes these systems perfect to use throughout the year without weighing on the electricity bill.

## Global Warming Potential (GWP)

**R410A**



**R32**



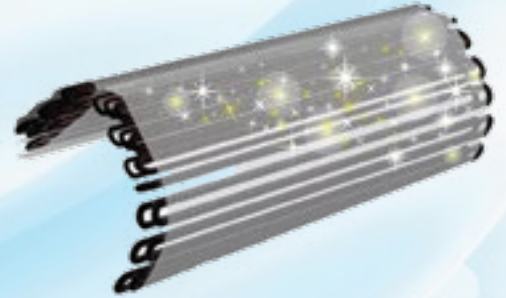


## Superior Indoor Air Quality

Superior Toshiba indoor air quality is guaranteed with the Shorai R32, which feature special self-cleaning fins and a magic non-stick coil to prevent moisture build-up and formation of mold. The air is kept fresh by the fan, which continues to run after the unit is switched off. This feature ensures a long lasting cleaning coil that produces clean and fresh air, lower energy consumption and less cleaning saving on maintenance costs.



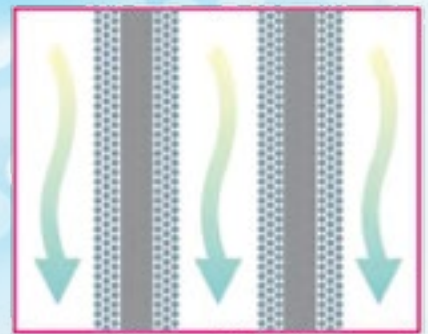
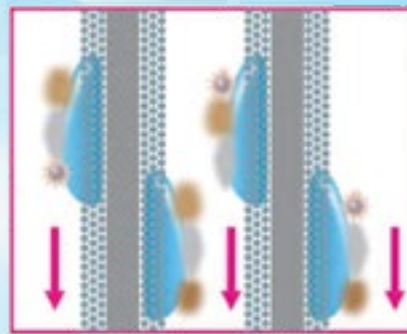
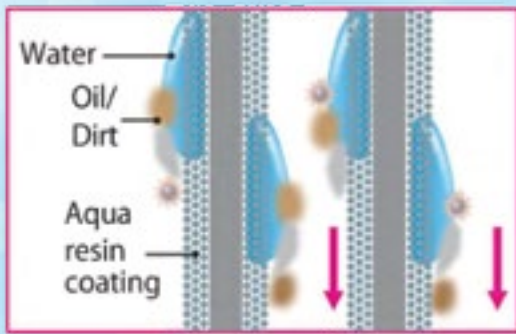
### How it Works



Oil and dirt cannot stick to the fin because of the special coated layer.

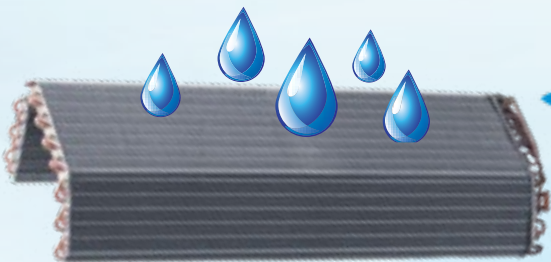
Condensed water washes off the oil and dirt.

The end result is a clean coil that looks like it's new.



## Aqua Resin Coated Coil + Self-Cleaning System

Heat Pumps can get very dirty inside, collecting bacteria and allergens. Aqua resin coated coil reduces the formation of water and oil on the coil unit as well as minimise dust accumulating on the coil. Self-cleaning system - the heat pump will run on slow-speed for 20 minutes to dry the coil, which will effectively prevent any odour, mould and germs.



Coil WITHOUT Aqua Resin Coating



Coil WITH Aqua Resin Coating





## Easy Maintenance

All the components are designed for easy maintenance both in removal and re-assembly. Step by step maintenance procedures have never been easier.

Simple cleaning methods come with some benefits:

- **Energy Savings** - save on electricity costs, maintenance costs and enable longer product life.
- **Fresh Air** - better health for you and your family.
- **Fast Heating** - making you feel comfortable and warm faster than ever.



## Easy Clean

All you need to do is simply wash out the dirt with running water or use a vacuum cleaner to clean the filter. Always keep your air clean and fresh with simple and easy care.



## Efficient 3D Airflow - 6 Airflow Patterns\*

\*18, 22 and 24 models only

Improved comfort by distributing powerful and stable air volume in 6 unique air flow patterns. The indoor unit provides further air flow and stable air volume in 6 unique patterns to ensure optimum comfort levels. Independent louvers improve comfort with a selection of powerful air flow shower settings to evenly distribute the air flow, maintaining a consistent and comfortable temperature.





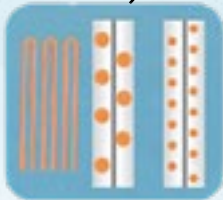
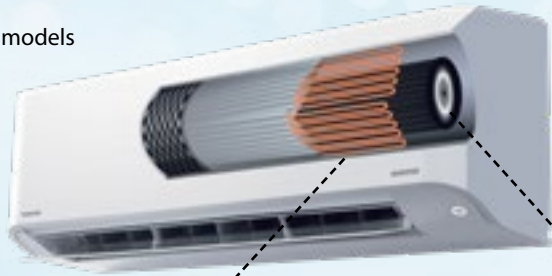
# Maximum Air Flow

The Shorai R32 range comes with a new design to further increase your comfort. It has a 13% bigger fan coil, delivering stronger and quieter airflow. The result is maximum air flows that heat and cool the entire room quickly.

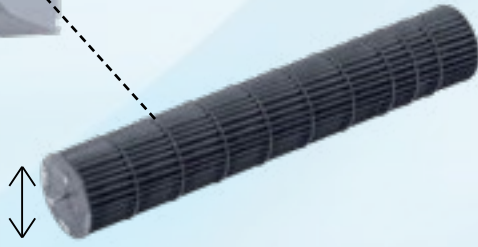
There is a new condensed piping design resulting in a 10% increase in the heat transfer surface. The diameter of the copper tube has been reduced (6.35mm to 5.0mm) giving more tubes per surface area for heat-exchanging.

Specially incline-designed fan blades reduce noise for a quieter performance with an operating sound of only 26 decibels.\*

\* 07 and 10 models



Heat transfer surface increased by 10%.



13% bigger fan



**Conference**  
60 dB(A)



**Library**  
40 dB(A)



**Bedroom**  
20 dB(A)





# Comfort, Unlimited

## Fireplace Mode

Toshiba's unique fireplace mode provides optimum diffusion of heat from your fireplace or other heat sources by keeping the indoor fan blowing continuously at low speed, even when the compressor is switched off.

### Fireplace Mode 1

The fan on the indoor unit will continue to run at the same speed previously selected by the user.

### Fireplace Mode 2

The fan on the indoor unit will continue to run at a super-low speed per the factory settings.



## Silent Operation (Outdoor Unit)

Operate the outdoor unit on silent mode to ensure you and your neighbours will have a peaceful sleep.

### Silent Mode 1

The heating capacity is prioritised to ensure optimal comfort in the room. This setting is a perfect balance between the heating and sound level of the outdoor unit.

### Silent Mode 2

Compromising the heating capacity to the sound level of the outdoor unit, this setting can reduce the maximum sound level of the outdoor unit by 4 dB(A).

## 8°C Heating

Optimise your energy savings and enhance your wellbeing by tailoring the ambient temperature in the room.

The 8°C heating mode protects your home and contents from freezing temperatures while you are away, making it the perfect choice for cold climates.

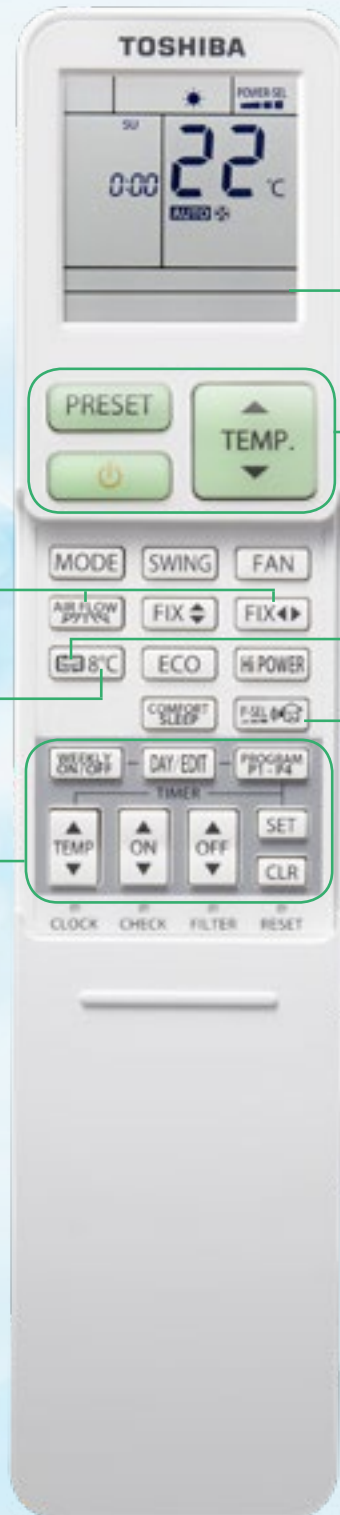
This setting can be adjusted to any temperature between 5°C and 13°C.





# Smart Control at your Fingertips

Designed to maximise your comfort, the Shorai offers remote controller functions that make everyday life simpler. It is a truly intuitive system, nothing could be simpler to use. It restarts automatically after a power failure, and runs its own diagnostics. There is also the option to wire the remote without losing any functionality.



### 3D Airflow (18, 22 & 24 models only)

Improve comfort by distributing powerful/stable air volume in 6 unique airflow patterns.

### 8°C Heating

Indoor temperature kept at 8°C, protecting your home and contents from freezing temperatures.

### Weekly Timer

The weekly timer allows ON/OFF times to be set, or settings to be programmed every 24 hours. Up to 4 different temperature and ON/OFF settings can be programmed per day - with a different program possible for each day of the week. Intuitive to use, the control can be set to ON/OFF, temperature setting mode, operation mode, or fan speed.

Back-lit screen

3 Main Buttons for easy use and control

### Fire Place Mode

In heating mode, the fan motor continues to run.

### Silent Operation (Outdoor Unit)

Reduces the operating noise of the outdoor unit.

### Other Features

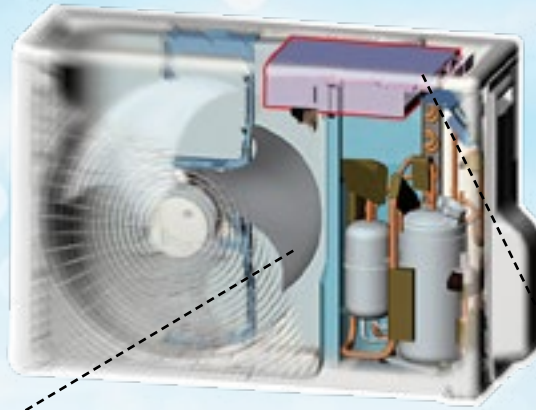
- Preset
- Power Select
- Comfort Sleep
- Hi-Power
- Eco-Logic

\* Image of controller is for 18, 22 and 24 models only

## Designed for Durability

### Bat Wing Fan

The design of the bat wing fan blade enables the unit to produce more wind at a quicker speed whilst maintaining a low sound level.



### Electronic Box

The newly designed electronic box protects the outdoor unit, keeping out insects and rodents which can cause a short circuit. It has a big heat sink that effectively releases heat to ensure long lasting operation.

### Reverse-Arc Shaped Wing

The reverse arc shaped design produces more wind with less noise.



## Inverter Technology

Created by Toshiba, Inverter Technology allows the Shorai R32 to regulate its cooling and heating capacity at all times by adjusting the compressor speed to demand. Inverter Technology maintains the indoor environment at precisely the temperature you choose to meet the most demanding requirements.







### Technical Specifications

System Code			PKVG07	PKVG10	PKVG13	PKVG16	PKVG18	PKVG22	PKVG24
Indoor unit			RAS-07PKVSG-NZ	RAS-10PKVSG-NZ	RAS-13PKVSG-NZ	RAS-16PKVSG-NZ	RAS-18PKVSG-NZ	RAS-22PKVSG-NZ	RAS-24PKVSG-NZ
Outdoor unit		Units	RAS-07PAVSG-NZ	RAS-10PAVSG-NZ	RAS-13PAVSG-NZ	RAS-16PAVSG-NZ	RAS-18PAVSG-NZ	RAS-22PAVSG-NZ	RAS-24PAVSG-NZ
Cooling capacity	kW	C	2.00	2.50	3.50	4.20	4.80	6.00	7.10
Cooling range (min. – max.)	kW	C	1.10 - 2.80	0.80 - 3.60	0.80 - 4.20	0.80 - 5.00	1.10 - 6.50	1.50 - 7.50	1.50 - 8.50
Power input (min. – rated – max.)	kW	C	0.26 - 0.49 - 0.84	0.19 - 0.56 - 1.07	0.22 - 0.83 - 1.13	0.25 - 1.13 - 1.56	0.24 - 1.16 - 2.10	0.28 - 1.53 - 1.95	0.30 - 1.93 - 2.60
EER	W/W	C	4.08	4.46	4.22	3.72	4.14	3.92	3.68
Energy Rating		C	★★★★↓	★★★★★	★★★★↓	★★★↓	★★★★↓	★★★★	★★★↓
Heating capacity	kW	H	2.50	3.20	3.70	5.40	5.80	6.90	8.00
Heating range (min. – max.)	kW	H	1.20 - 4.00	0.90 - 4.80	0.90 - 5.60	0.90 - 6.30	0.90 - 8.00	1.00 - 8.50	1.60 - 9.20
Power input (min. – rated – max.)	kW	H	0.21 - 0.55 - 1.28	0.18 - 0.69 - 1.58	0.18 - 0.80 - 1.54	0.19 - 1.43 - 1.92	0.19 - 1.36 - 2.25	0.21 - 1.63 - 2.34	0.30 - 2.07 - 2.40
COP	W/W	H	4.55	4.64	4.63	3.78	4.26	4.23	3.86
Energy Rating		H	★★★★★↓	★★★★★↓	★★★★★↓	★★★	★★★★↓	★★★★↓	★★★
Indoor unit			RAS-07PKVSG-NZ	RAS-10PKVSG-NZ	RAS-13PKVSG-NZ	RAS-16PKVSG-NZ	RAS-18PKVSG-NZ	RAS-22PKVSG-NZ	RAS-24PKVSG-NZ
Air flow rate	l/s	C	167	198	210	222	273	313	347
Sound pressure level (low/med/high)	dB(A)	H	26/34/42	26/33/42	31/38/45	33/41/48	34/41/46	35/41/46	35/43/50
Dimensions (H x W x D)	mm		293 x 798 x 230	293 x 798 x 230	293 x 798 x 230	293 x 798 x 230	320 x 1050 x 250	320 x 1050 x 250	320 x 1050 x 250
Weight	kg		9	10	10	9	14	14	14
Outdoor unit			RAS-07PAVSG-NZ	RAS-10PAVSG-NZ	RAS-13PAVSG-NZ	RAS-16PAVSG-NZ	RAS-18PAVSG-NZ	RAS-22PAVSG-NZ	RAS-24PAVSG-NZ
Air flow rate	l/s	C	550	550	569	607	607	810	810
Sound pressure level	dB(A)	C	47	48	49	50	53	55	55
Operating range	°C	C	-15 to +46	-15 to +46	-15 to +46	-15 to +46	-15 to +46	-15 to +46	-15 to +46
Sound pressure level	dB(A)	H	50	50	50	51	53	54	55
Operating range	°C	H	-15 to +24	-15 to +24	-15 to +24	-15 to +24	-15 to +24	-15 to +24	-15 to +24
Dimensions (H x W x D)	mm		530 x 660 x 240	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	550 x 780 x 290	630 x 800 x 300	630 x 800 x 300
Weight	kg		23	28	34	34	34	41	41
Refrigerant			R32	R32	R32	R32	R32	R32	R32
Compressor Type			DC Rotary	DC Rotary	DC Rotary	DC Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary
Flare connections - gas	in		3/8	3/8	3/8	1/2	1/2	1/2	1/2
Flare connections - liquid	in		1/4	1/4	1/4	1/4	1/4	1/4	1/4
Maximum pipe length	m		15	20	20	20	20	25	25
Maximum height difference	m		12	12	12	12	12	15	15
Chargeless pipe length	m		15	15	15	15	15	15	15
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	220 - 240/1/50
Power Supply			Indoor or Outdoor	Indoor or Outdoor	Indoor or Outdoor	Indoor or Outdoor	Indoor or Outdoor	Indoor or Outdoor	Indoor or Outdoor
Interconnecting wires - no.			3 + earth	3 + earth	3 + earth	3 + earth	3 + earth	3 + earth	3 + earth

C = cooling mode  
H = heating mode



Notice: Toshiba is committed to continuously improving its product to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.  
All features and specifications subject to change without prior notice.  
Note: All images provided in this catalogue are used for illustration purposes only.  
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