

#### **INTRODUCING A STABLE POWER INVERTER**

## FOR LIGHT COMMERCIAL USE

A compact, energy-saving air conditioner, the new SPI Classic comes with a 4-way cassette and duct ideal for light commercial use. Its compact size makes it easily installable in small spaces like retail stores, restaurants, etc. The SPI's USP lies in its high Energy Efficiency Ratio (EER) and reduced refrigerant volume.



Environment-friendly R32 refrigerant



2 - 6 HP capacity range



High energy efficiency with ISEER value up to 4.42



High reliability and durability



Compact & lightweight CDU



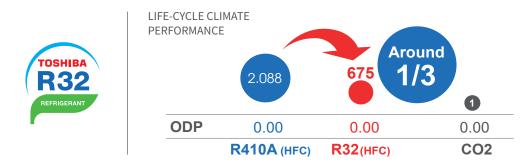
IDU designed for maximum comfort



### **ENVIRONMENT-FRIENDLY**

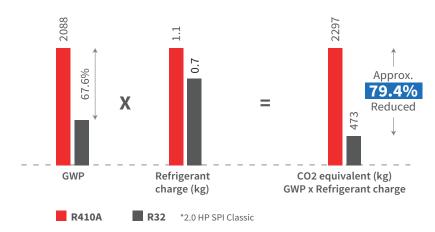
#### **SPI R32 TO REDUCE GWP**

New generation of Toshiba SPI uses the new R32 refrigerant with low GWP (Global Warming Potential).



Lower GWP refrigerant means that the product will have a much lower impact on the climate.

Low GWP R32 refrigerant, combined with 36% reduction of refrigerant charge, allows to reduce the total equivalent CO2 by 79.4% of the system.\*



## **HIGH ENERGY PERFORMANCE**

SPI's low power consumption gives it a high ISEER value, thus facilitating energy-optimal performance.



#### **ENDURING DURABILITY**

#### HIGH DURABILITY OF HEAT EXCHANGER

Special design of Toshiba aluminum alloy heat exchanger makes the SPI R32 product resistant to corrosion, making it highly durable.

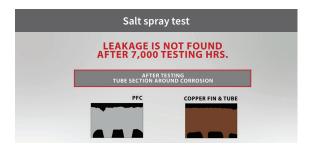
Aluminum general alloy is used for making the heat exchanger fin while aluminum special alloy is used for the heat exchanger tube. Incorporating this design in the SPI Classic has reduced the corrosion rate and expanded the life of the product.



Additionally, the corrosion test results confirmed that the durability of the Toshiba aluminum alloy heat exchanger is at a similar level as a copper heat exchanger.



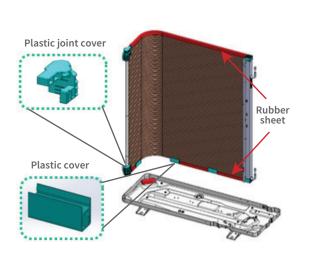
Aluminum general alloy fin acts as a sacrifice material protecting the aluminum special alloy tube from corrosion



Test results show similar levels between Toshiba aluminum alloy heat exchanger, copper fin and tube heat exchanger

#### INSTALLATION OF PLASTIC JOINT COVER AND RUBBER SHEET

The installation of a plastic joint cover and a rubber sheet between the aluminium alloy heat exchanger and the steel part in the outdoor unit helps achieve longer lifetime operation. This also reduces corrosion.





### **HIGH RELIABILITY**

### PROTECTION CIRCUIT ON CONTROL BOARD

SPI has a protection circuit\* to protect the PC board under unstable power supply and a function that detects miswiring of the power supply.

\*Applicable for 3Phase products









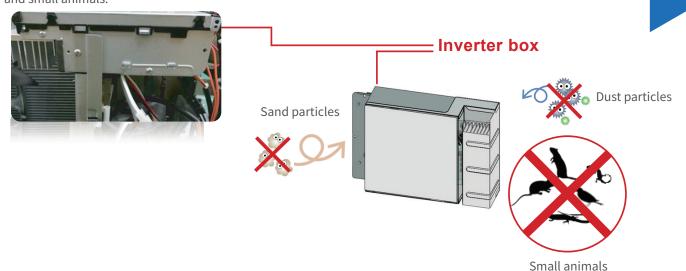
Black out

Unstable power supply

Temporary lower voltage

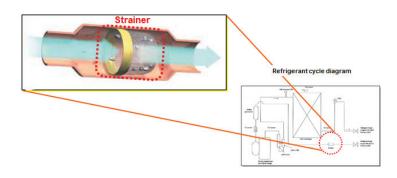
#### **SEALED-UP INVERTER BOX**

The SPI inverter box is fully sealed up in order to avoid malfunction due to sand & dust particles, and small animals.



#### STRAINER IN PIPE SYSTEM

SPI has a strainer in the pipe system to remove dust and metal-abrasion powder.



**Protection circuit** 

# **COMPACT AND INSTALLER-FRIENDLY CDU**

## COMPACT SIZE AND LIGHT WEIGHT

SPI R32 is made with aluminum alloy to make it light weight.







4 HP to 6 HP



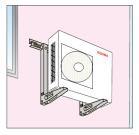


Less than 900mm up to 6 HP, the SPI is extremely compact and can be installed in very small places. In addition, chassis under 6 HP are less than 53 kgs.

#### **INSTALLER-FRIENDLY**



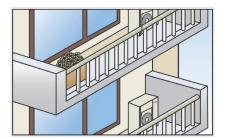
The outdoor unit is easy to install on the wall via racks

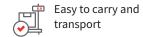




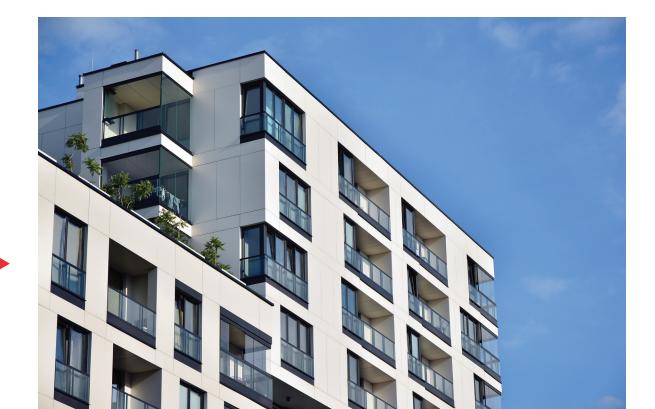


It is possible to reuse the pipe as the working pressure for R410A and R32 are similar

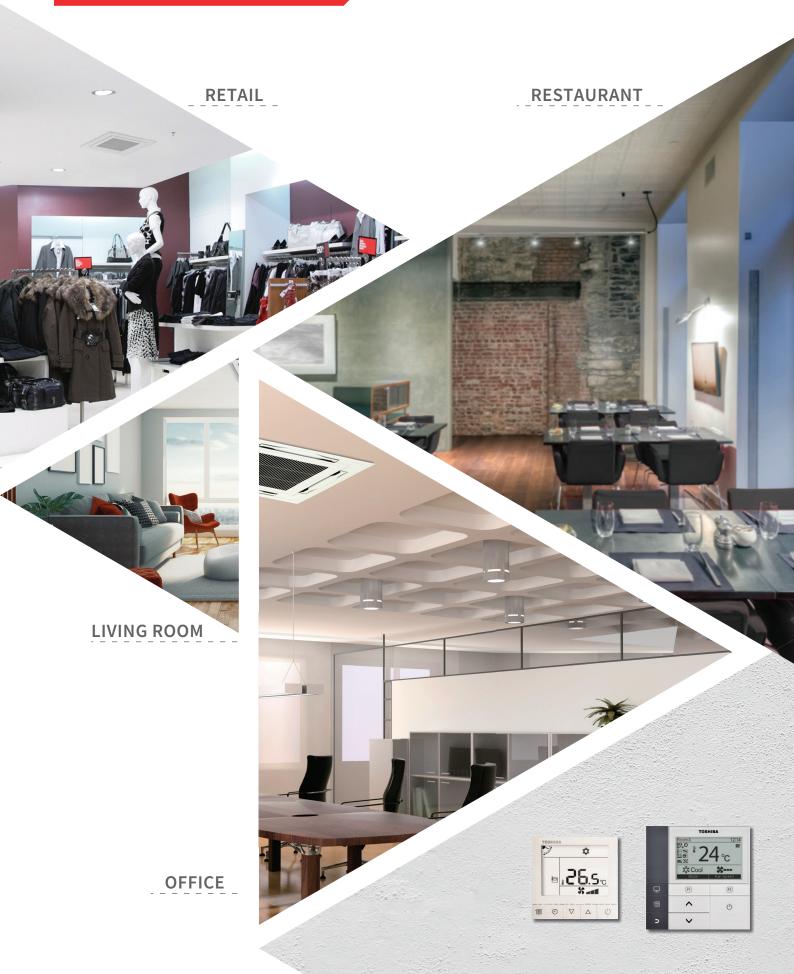








# APPLICATION AREA

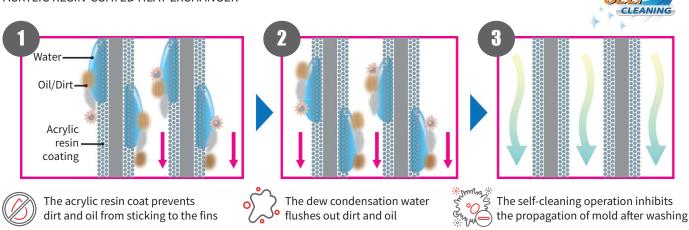


## **IDU DESIGNED FOR MAXIMUM COMFORT**

#### **SELF-CLEAN OPERATION**

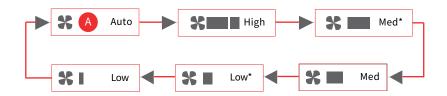
The self-cleaning mechanism of the acrylic resin-coated indoor unit's fins ensures clean and fresh air indoors.





## HIGHER ACCURACY OF ADJUSTMENT OF THE INDOOR AIRFLOW

Through a 5-step airflow, the SPI can control the wind strength with higher accuracy.\*







RBC-AMSU51-EN

RBC-ASCU11-E

These remote controllers are optional accessories.

\*This function is available with a wireless remote controller and a wired remote controller named RBC-AMSU51-EN and RBC-ASCU11-E respectively.

#### **AUTO-RESTART FUNCTION**

For stable operation in areas with unstable electricity, SPI has a standard auto-restart function for seamless continuity in blackout situations.







Post power failure recovery

SPI ensures that its operations continue as per the previous state

# 4-WAY CASSETTE

The 4-way cassette is designed to provide uniform air distribution and total comfort. It is the ideal solution for light commercial applications.

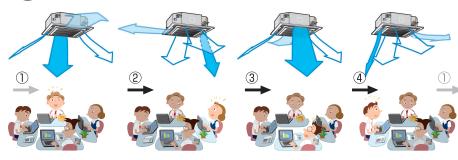
#### **COMFORT**

The angles of each louver can be set individually

Individual setting of louver position: 3 different swing modes

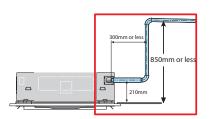






#### **FLEXIBILITY**

Built-in high-lift drain pump



#### **CLEANLINESS**

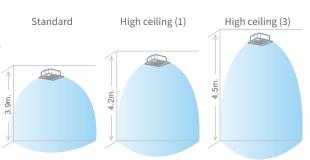
Built-in silver glass (anti-bacteria treatment) on the drain pump lid to prevent the growth of bacteria and mould in the drain pan. This increases cleanliness and reduces bad odour emanating from the drain water.





#### SUITABLE FOR HIGH CEILINGS

Even in spaces with high ceilings, comfortable airflow is carried down to the floor level.



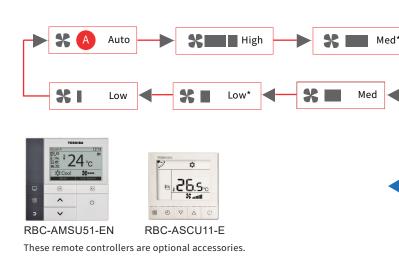
When the 4-way discharge direction is selected, a ceiling up to 4.5m in height can be accommodated (6 HP).

# CONCEAL DUCT TYPE

Whatever the shape of the room, this flexible model ensures a uniform temperature and air distribution for optimal end-user comfort.

#### **COMFORT**

5 fan speeds for airflow selection



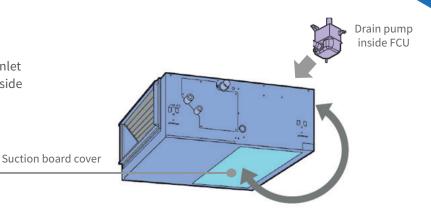


#### **FLEXIBILITY**

External static pressure up to 120Pa

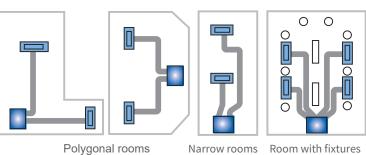
Its flexible design allows the inlet air to be configured between the standard rear inlet design or as an alternative from the underside of the unit. There is also provision or a fresh air intake supply via a pre-punched knockout hole

Compact and thin chassis measuring just 275mm in height



Built-in high-lift drain pump

Airzone compatibility: multiple individual controlled rooms with only one indoor unit



Narrow rooms

and obstacles

#### **TECHNICAL SPECIFICATION**

## RAV-GVXXX1UP-IN SPI CLASSIC

Equivalent HP		HP	2.0	3.0	4.0	5.0	6.0		
Model Name	Indoor unit	(	RAV-)	GV1801UP-IN	GV2401UP-IN	GV3601UP-IN	GV4201UP-IN	GV4801UP-IN	
	Outdoor unit	(1	RAV-)	GV1801AP-IN	GV2401AD-IN	GV3601A8D-IN	GV4201A8P-IN	GV4801A8P-IN	
Power su	pply (Outdoor u	nit)		1-phase 50Hz 230V		3-phase 50Hz 400V			
Cooling capacity kW				5.3 (1.3 - 5.6)	7.0 (1.3 - 8.0)	10.6 (3.5 - 11.2)	12.3 (3.5 - 13.2)	14.1 (3.5 - 15.9)	
Power consumption kW				1.58	2.23	3.42	4.10	4.78	
EER				3.35	3.18	3.10	3.00	2.95	
ISEER				4.42 (4 Star)	4.56 (4 Star)	4.01 (5 Star)	4.03 (5 Star)	4.09 (5 Star)	
Indoor unit	Airflow (H/M/L	.)	m³/h	1050/870/780	1230/960/810	1800/1530/1230	1860/1530/1230	2130/1500/1260	
	Sound pressure level (H/M/L) dB(A)			32/29/28	35/31/28	47/44/39	48/44/39	48/44/39	
	Panel model*			RBC-U31PGXP(W)-IN1					
	Dimensions (HxWxD)	Main unit	mm	256x840x840	256x840x840	256x840x840	256x840x840	319x840x840	
		Panel*	mm	30x950x950	30x950x950	30x950x950	30x950x950	30x950x950	
	Weight	Main unit	kg	18	20	20	20	24	
	vveignt	Panel*	kg	4	4	4	4	4	
Outdoor unit	Refrigerant charge (R32) kg			0.7	0.9	1.05	1.05	1.2	
	Sound pressure level dB(A)			52	52	53	54	58	
	Dimensions (HxWxD) mm		550x780x290	550x780x290	890x900x320	890x900x320	890x900x320		
	Weight kg		kg	27	32	52	52	53	
Piping connections	Liquid side mm		6.4	9.5	9.5	9.5	9.5		
connections	Gas side mm		12.7	15.9	15.9	15.9	15.9		
Max. total pipe length m			m	25	25	30	30	50	
Max. height m			m	10	10	20	20	30	
Operation	Operation range °C			15 ~ 46	15 ~ 46	15 ~ 46	15 ~ 46	15 ~ 46	

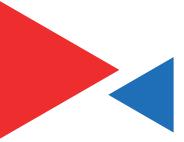
<sup>\*</sup>Panel to be purchased seperately

Rated conditions: Indoor Air temperature  $27^{\circ}\text{C DB} / 19^{\circ}\text{C WB}$ , Outdoor Air temperature  $35^{\circ}\text{C DB}$ . Star rating as per standards & labelling program of Bureau of Energy Efficiency. Airflow measured is at high fan speed.

## RAV-GVXXX1BP-IN SPI CLASSIC

Equivalent HP		2.0	3.0	4.0	5.0	6.0	
Model	Indoor unit	(RAV-)	GV1801BP-IN	GV2401BP-IN	GV3601BP-IN	GV4201BP-IN	GV4801BP-IN
Name	Outdoor unit	(RAV-)	GV1801AP-IN	GV2401AP-IN	GV3601A8P-IN	GV4201A8P-IN	GV4801A8P-IN
Power supply (Outdoor unit)			1-phase 50Hz 230V		3-phase 50Hz 400V		
Cooling capacity kW			5.3 (1.3 - 5.6)	7.1 (1.3 - 8.0)	10.6 (3.5 - 11.2)	12.3 (3.5 - 13.2)	14.1 (3.5 - 15.9)
Power consumption kW			1.60	2.29	3.40	4.10	4.78
EER			3.31	3.10	3.12	3.00	2.95
Indoor unit	Airflow (H/M/L)	m³/h	900/720/540	1440/1220/960	1710/1260/830	2100/1650/1260	2100/1650/1260
	External static pressure	Standard Pa	30	30	30	50	50
		Upper-Lower Pa	120-30	120-30	120-30	120-30	120-30
	Sound pressure I	evel (H/M/L) dB(A)	33/29/25	41/37/34	44/42/39	44/42/39	44/42/39
	Dimensions (HxWxD) mm		275x700x750	275x1000x750	275x1000x750	275x1400x750	275x1400x750
	Weight	kg	23	31	31	41	41
Outdoor unit	Refrigerant cha	arge (R32) kg	0.7	0.9	1.05	1.05	1.2
	Sound pressure	e level dB(A)	52	52	53	54	58
	Dimensions (H	xWxD) mm	550x780x290	550x780x290	890x900x320	890x900x320	890x900x320
	Weight	kg	27	32	52	52	53
Piping connections	Liquid side	mm	6.4	9.5	9.5	9.5	9.5
	Gas side	mm	12.7	15.9	15.9	15.9	15.9
Max. total pipe length			25	25	30	30	50
Max. height			10	10	20	20	30
Operation range		°C	15 ~ 46	15 ~ 46	15 ~ 46	15 ~ 46	15 ~ 46







TOSHIBA SERVICE HELPLINE 1800 3000 3545

For more details, please contact our sales office:



Corporate & Registered Office: Carrier Airconditioning & Refrigeration Ltd, Kherki Daula Post, Narsingpur, Gurgaon 122004, Tel: 0124-4825500 Sales Offices: Ahmedabad: 079-44820400/401 Ghaziabad: 0120-4183260 Bangalore: 080-43442000 Bhubaneswar: 9778030033 Chandigarh: 0172-5007549/50 Chennai: 044-66448888 Cochin: 0484-4029000/001, Coimbatore: 7397444250 Daryaganj: 011-23244491, 9810973264 Delhi/NCR: 0124-4873200 Goa: 9987868667 Guwahati: 9831079624 Hyderabad: 040-4181 2222 Indore: 0731-2445200 Jaipur: 0141-4921737 / 738 Kolkata: 033-40592000/3000 Lucknow: 0522-4158701/704 Navi Mumbai/Thane: 9167788252 Mumbai: 022-61700700 Nagpur: 9881714903 Patna: 7070621177 Pune: 020-48571000 Raipur: 9752542882 Surat: 7433920332

CIN: U74999HR1992FLC036104 Website: www.toshibaac.in

E-mail: info@toshibaac.in



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