

A Total Comfort Solution for Small Commercial Spaces

Toshiba Carrier RAV
for Light Commercial

TOSHIBA

Carrier

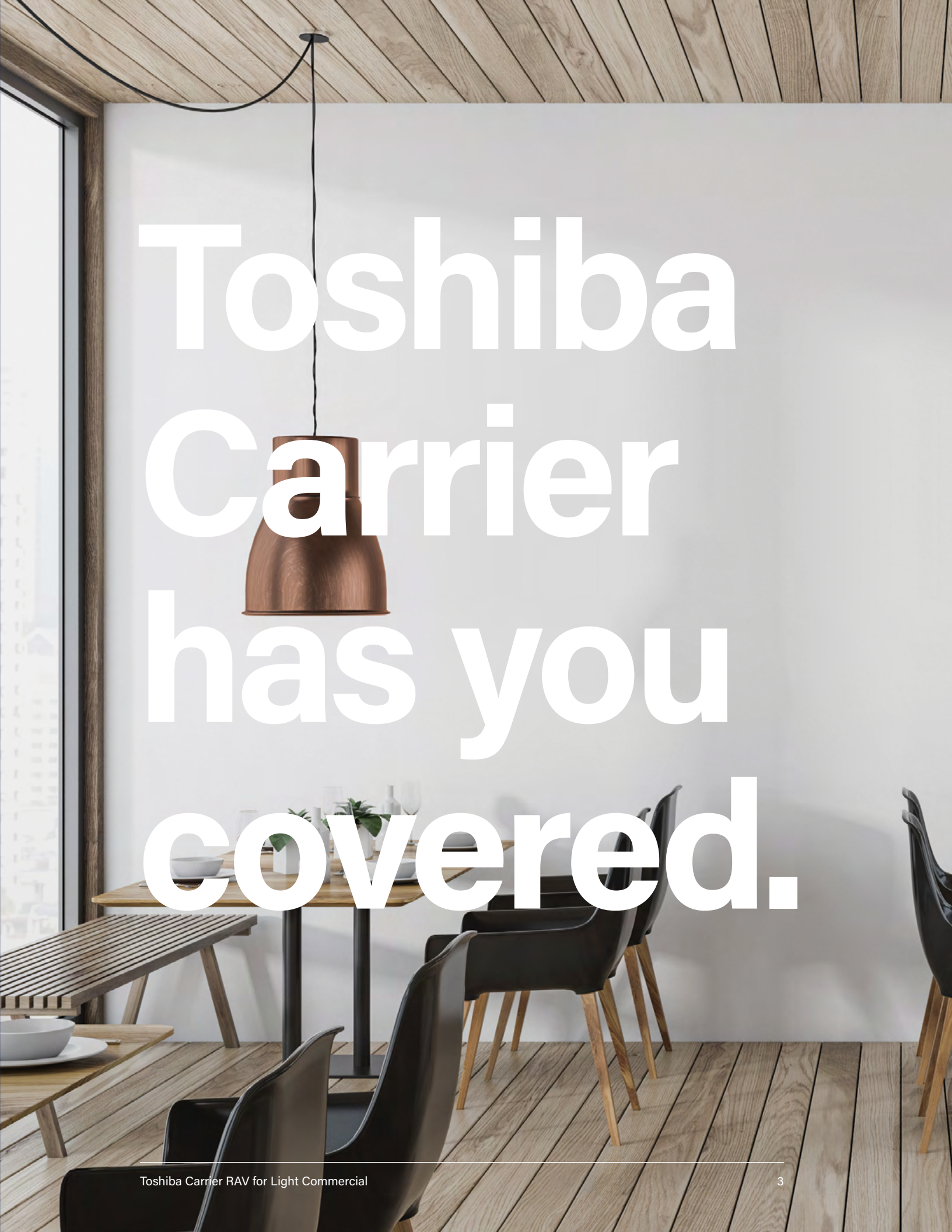
HVAC Is Not a One-Size-Fits-All Proposition

At Toshiba Carrier, we know that there's no one solution for all HVAC needs—a system that works for a home may not work for small office. So, we've invested in solutions for light commercial spaces, including ductless products, to help bring comfort to your business.

We're committed to creating HVAC systems with unmatched flexibility in both layout and value. And don't worry—we're good at what we do, with superior application, installation, service, training and software available to all our customers. Plus, expertise that extends beyond residential and large buildings into those designed for smaller offices, restaurants and other light commercial applications.

So, trade the headache of selecting and installing components for a total system solution that's made to improve comfort in small commercial spaces.



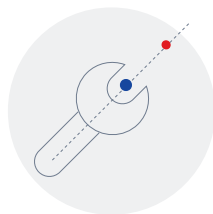
A modern dining area with a wooden ceiling, a copper pendant light, and a dining table with black chairs. The scene is set in a bright, minimalist space with large windows on the left. The text "Toshiba Carrier has you covered." is overlaid in large white font across the center of the image.

Toshiba Carrier has you covered.

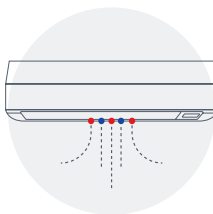
Applications

The HVAC System You Choose Can **Really Make a Difference**

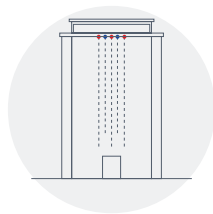
The Toshiba Carrier Light Commercial Series fits into restaurants, small businesses, office spaces and more—seamlessly. We're dedicated to advancements that help ductless systems serve the design needs and functions of a space, not the other way around.



Flexibility—With an array of unit options, ductless systems can accommodate almost any building size or architectural style.



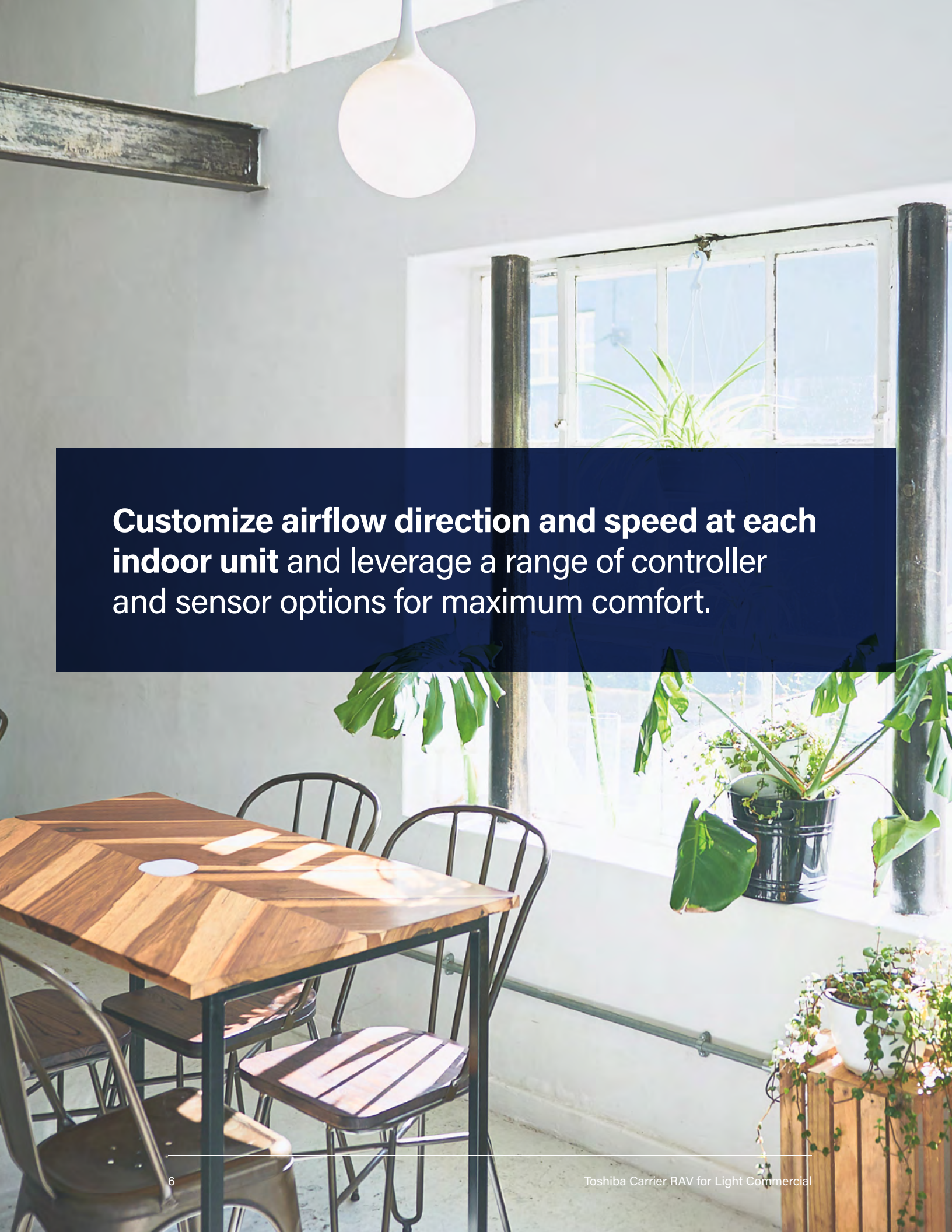
Efficiency—Ductless systems use no-to-minimal ductwork, depending on the application. This eliminates any energy waste associated with central duct systems.



Performance—With heating down to -13°F , cooling up to 115°F and no “hard shutoffs,” ductless systems operate in even the most extreme environments.



When you invest in Toshiba Carrier, you get a system that delivers on the promise of flexibility, efficiency and performance, time after time.

A bright, modern interior space, likely a cafe or office break area. In the foreground, a square wooden table with a dark metal frame is surrounded by four black metal chairs with wooden seats. A large window in the background offers a view of a bright outdoor area. A large green plant in a black bucket sits on the windowsill. A white pendant light hangs from the ceiling. The overall atmosphere is clean, bright, and contemporary.

Customize airflow direction and speed at each indoor unit and leverage a range of controller and sensor options for maximum comfort.



Advantages

✓ Indoor Air Quality

Maintain a controlled microclimate with regulated temperature zone filtration for more comfortable air.

✓ Occupant Comfort

Experience less noise and more consistent, comfortable temps with units so sleek, you won't even know they're there.

✓ Energy Savings

Get the best value with a system that reduces waste and improves efficiency.

✓ Plug & Play Compact System

Complete factory wiring, user-friendly features, intuitive interfaces and compact design make unit setup and integration fast and easy.

✓ Advanced Control

Customize airflow direction and speed at each indoor unit and leverage a range of controller and sensor options for maximum comfort.

Indoor Units

Sleek, Innovative Units You Won't Even Notice

We offer a variety of indoor unit options to fit nearly every light commercial need, space and layout. No matter which you choose, you'll be met with high reliability and comfort.



RAV Cassette

A compact unit that's easy to install and maintain, provides high performance, and is unobtrusive and flexible; **ideal for small commercial applications where space is limited.**



FEATURES

- **Quiet operation**, even at high fan speeds
- **Customized airflow** with 2, 3 or 4-way directional blow
- **Four louvers** that can each be positioned at different angles
- **Built in** condensate lift (26")
- **Includes a washable filter**



RAV System: 4-Way Cassette								
Model name	Indoor unit	RAV -	SM182UTP-UL	SM242UTP-UL	SM302UTP-UL	SM362UTP-UL	SM422UTP-UL	SM482UTP-UL
Cooling	Capacity(*1)	kBtu/h	18	24	30	36	42	48
	SEER		24.3	22.5	22.7	23.2	22.1	21.5
	EER		13.7	12.0	13.9	13.0	11.7	10.3
Heating	Capacity(*1)	kBtu/h	20	27	34	40	47	54
	HSPF		12.3	10.7	11.8	11.9	11.1	10.6
	COP		13.90	13.2	13.8	13.3	12.0	11.0
Electrical requirements	Power supply		1 Phase 208V/230V 60 Hz					
	MCA(*4)	A	14	17	30	30	32	32
	MOCP(*5)	A	25	25	40	40	40	40
Indoor unit								
External dimension Main unit (Ceiling panel)*	Height	in	10.1 (1.2)			12.6 (1.2)		
	Width	in	33.1 (37.4)			33.1 (37.4)		
	Depth	in	33.1 (37.4)			33.1 (37.4)		
Total weight (Ceiling panel)*	lbs	56.3 (10)			65.1 (10)			
Main unit	Standard airflow (H/M/L)	CFM	670 / 540 / 470	730 / 630 / 510	1150 / 840 / 630	1200 / 850 / 650	1250 / 870 / 650	1300 / 1080 / 880
	Motor output	W	60	60	130	130	130	130
	Motor type		DC	DC	DC	DC	DC	DC
Connecting pipe	Gas side	in	1/2		5/8			
	Liquid side	in	1/4		3/8			
	Drain port (nominal dia)	in	VP25 (Polyvinyl Chloride Tube: External Dia. 1-1/4 Internal Dia. 1)					
Sound pressure level (H/M/L)(*2)	dB(A)	38 / 33 / 31	41 / 37 / 34	43 / 38 / 34	45 / 39 / 35	46 / 40 / 36	48 / 44 / 41	

Note:

(*1) Rated conditions

Cooling: Indoor air temperature 80°F dry bulb / 67°F wet bulb, Outdoor air temperature 95°F dry bulb

Heating: Indoor air temperature 70°F dry bulb, Outdoor air temperature 47°F dry bulb / 43°F wet bulb

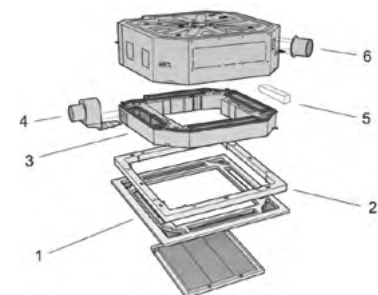
(*2) The actual values in an operating environment are generally higher than the indicated values due to the contribution from ambient noise.

(*3) The amount does not consider extra piping length. Refrigerant must be added on site in accordance with the actual piping length.

(*4) Select wire size based on larger value of MCA

MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)

(*5) MOCP: Maximum Over Current Protection



RAV Underceiling

Highly efficient and very quiet; **the perfect solution for long offices, classrooms and restaurants** (thanks to its air throw capability).



FEATURES

- **Airflow angle is automatically set** to the most suitable setting (based on needs)
- **Includes a washable filter**
- Automatic swing mode enables airflow to reach all areas of the room



RAV System: Underceiling								
Model name	Indoor unit	RAV -	SM182CTP-UL	SM242CTP-UL	SM302CTP-UL	SM362CTP-UL	SM422CTP-UL	SM482CTP-UL
Cooling	Capacity	kBtu/h	18	24	30	36	42	48
	SEER		22.9	22.0	21.0	21.6	19.2	18.4
	EER		11.5	12.7	12.5	12.1	9.8	8.8
Heating	Capacity	kBtu/h	20	27	34	40	47	54
	HSPF		11.0	10.4	10.5	12.2	11.3	11.0
	COP		13.1	12.9	12.2	12.5	11.5	11.1
Electrical requirements	Power supply		1 Phase 208V/230V 60 Hz					
	MCA(*4)	A	14	17	30	30	32	32
	MOCP(*5)	A	25	25	40	40	40	40
Indoor unit								
External dimension	Height	in	9.3	9.3			9.3	
	Width	in	37.5	50			62.5	
	Depth	in	27.2	27.2			27.2	
Total weight			52.9	66.1			83.8	
Main unit	Standard airflow (H/M/L)	CFM	565 / 425 / 320	845 / 600 / 440	845 / 600 / 440	1095 / 795 / 600	1095 / 900 / 705	1250 / 1125 / 925
	Motor output	W	94	94	94	139	139	139
	Motor type		DC	DC	DC	DC	DC	DC
Connecting pipe	Gas side	in	1/2			5/8		
	Liquid side	in	1/4			3/8		
	Drain port (nominal dia)	in	VP20 (Polyvinyl Chloride Tube: Dia. 1.1 Internal Dia 0.79)					
Sound pressure level (H/M/L)(*2)		dB(A)	37 / 35 / 28	41 / 36 / 29	43 / 36 / 33	44 / 38 / 32	44 / 41 / 35	47 / 45 / 41

Note:

(*1) Rated conditions

Cooling: Indoor air temperature 80°F dry bulb / 67°F wet bulb, Outdoor air temperature 95°F dry bulb
Heating: Indoor air temperature 70°F dry bulb, Outdoor air temperature 47°F dry bulb / 43°F wet bulb

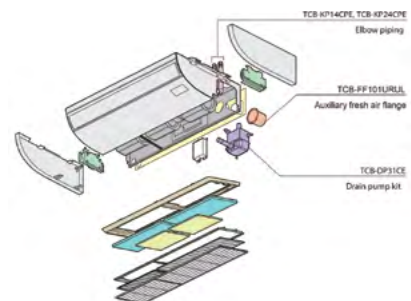
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(*4) Select wire size based on larger value of MCA

MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)

(*5) MOCP: Maximum Over Current Protection



RAV High Wall

A stylish and compact unit that easily blends with any room interior; **the perfect option for elegant shops and restaurants.**



FEATURES

- **Auto-swing louver** provides uniform air distribution and enhanced comfort control
- **Optional Condensate Drain Kit** available as an accessory
- **Includes a washable filter**
- **Flared refrigerant piping** connections

RAV System: High Wall							
Model name	Indoor unit	RAV -	SM122KRTP-UL	SM182KRTP-UL	SM242KRTP-UL	SM302KRTP-UL	SM362KRTP-UL
Cooling	Capacity	kBtu/h	12	18	24	30	36
	SEER		25.2	23.6	21.9	23.0	20.8
	EER		15.6	12.0	11.7	12.6	10.5
Heating	Capacity	kBtu/h	14	20	27	34	40
	HSPF		10.6	10.6	10.0	10.2	10.0
	COP		13.0	11.4	10.6	12.0	10.7
Electrical requirements	Power supply		1 Phase 208V/230V 60 Hz				
	MCA(*4)		14	14	17	30	30
	MOCP(*5)		25	25	25	40	40
Indoor unit							
External dimension	Height	in	12.6			13.7	
	Width	in	41.4			47.2	
	Depth	in	9.9			11	
Total weight			33.1			44.1	
Main unit	Standard airflow (H/M/L)	CFM	475 / 355 / 250	530 / 425 / 325	705 / 530 / 355	940 / 825 / 705	970 / 910 / 735
	Motor output	W	30	30	30	61	61
	Motor type		DC	DC	DC	DC	DC
Connecting pipe	Gas side	in	1/2		5/8		
	Liquide side	in	1/4		3/8		
	Drain port (nominal dia)	in	VP16 (Polyvinyl Chloride Tube: Dia. 0.87 Internal Dia. 0.63)				
Sound pressure level (H/M/L)(*2)		dB(A)	37 / 33 / 28	41 / 37 / 32	46 / 41 / 35	48 / 45 / 41	50 / 47 / 43

Note:

(*1) Rated conditions

Cooling: Indoor air temperature 80°F dry bulb / 67°F wet bulb, Outdoor air temperature 95°F dry bulb

Heating: Indoor air temperature 70°F dry bulb, Outdoor air temperature 47°F dry bulb / 43°F wet bulb

(*2) The actual values in an operating environment are generally higher than the indicated values due to the contribution from ambient noise.

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(*4) Select wire size based on larger value of MCA

MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)

(*5) MOCP: Maximum Over Current Protection

RAV Medium Static Ducted

A tucked away unit that provides even temperature distribution; **perfect for single room, hideaway spaces.**



FEATURES

- **External static pressure can be raised** as high as 0.8 inches
- **Kit that raises the drain piping** up from the drain port
- **Built in** condensate lift (24.3")

RAV System: Medium Static Ducted										
Model name	Indoor unit	RAV -	SM122BTP-UL	SM182BTP-UL	SM242BTP-UL	SM302BTP-UL	SM362BTP-UL	SM422BTP-UL	SM482BTP-UL	
Cooling	Capacity(*1)	kBtu/h	12	18	24	30	36	42	48	
	SEER		20.8	20.1	22.4	20.0	21.4	19.3	18.2	
	EER		14.5	11.5	12.9	12.8	11.5	10.1	9.4	
Heating	Capacity(*1)	kBtu/h	14	20	27	34	40	47	54	
	HSPF		12.4	10.6	11.5	11.9	11.5	10.6	9.5	
	COP		13.3	11.4	13.4	14.1	13.1	12.2	11.3	
Electrical requirements	Power supply		1 Phase 208V/230V 60 Hz							
	MCA(*4)	A	14	14	17	30	30	32	32	
	MOCP(*5)	A	25	25	25	40	40	40	40	
Indoor unit										
External dimension	Height	in	10.9			10.9		10.9		
	Width	in	27.6			39.4		55.2		
	Depth	in	29.6			29.6		29.6		
Total weight		lbs	52.9			70.5		92.6		
Main unit	Standard airflow (H/M/L)	CFM	395 / 330 / 265	540 / 390 / 315	775 / 640 / 510	990 / 780 / 650	1130 / 920 / 790	1130 / 955 / 810	1175 / 1025 / 885	
	Motor output	W	150	150	150	250	250	250	250	
	Motor type		DC	DC	DC	DC	DC	DC	DC	
Connecting pipe	Gas side	in	1/2			5/8				
	Liquid side	in	1/4			3/8				
	Drain port (nominal dia)	in	VP25 (Polyvinyl Chloride Tube: External Dia. 1-1/4 Internal Dia. 1)							
Sound pressure level (H/M/L)(*2)		dB(A)	33 / 29 / 25	34 / 30 / 26	36 / 31 / 27	37 / 34 / 31	38 / 35 / 32	38 / 35 / 32	40 / 36 / 33	

Note:

(*1) Rated conditions

Cooling: Indoor air temperature 80°F dry bulb / 67°F wet bulb, Outdoor air temperature 95°F dry bulb

Heating: Indoor air temperature 70°F dry bulb, Outdoor air temperature 47°F dry bulb / 43°F wet bulb

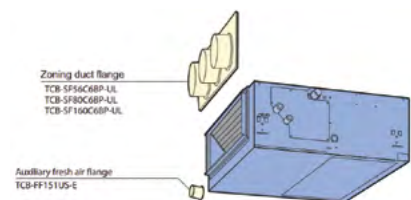
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MCA: Minimum Circuit Amps (Minimum Circuit Amps required for power supply design)

(*5) MOCP: Maximum Over Current Protection





Outdoor Unit

The Powerhouse of the Toshiba Carrier Ductless System

Our innovative heat pump outdoor units are quiet and reliable. And the outdoor module connects seamlessly with an indoor unit to either heat or cool a space.



RAV Ductless Heat Pumps

Energy efficient outdoor units that meet the needs of virtually any light commercial application.



FEATURES

- Either heats or cools
- Variable speed technology for consistent temperature regulation
- Longer pipe length for installation flexibility
- Among the highest SEER values in the industry

RAV System: Outdoor Model									
Model name	Outdoor unit	RAV -	SP122AT2P-UL	SP182AT2P-UL	SP242AT2P-UL	SP302AT2P-UL	SP362AT2P-UL	SP422AT2P-UL	SP482AT2P-UL
Outdoor unit									
Air flow volume	Cooling / Heating	CFM	1590 / 1590	1590 / 1590	2300 / 2220	3570 / 2870	3570 / 3100	3570 / 3290	4540 / 4060
Sound pressure level (High) (*2)	Cooling / Heating	dB(A)	48 / 52	48 / 52	52 / 54	54 / 54	54 / 54	54 / 54	60 / 60
External dimension	Height	in	21.7		35	52.8			
	Width	in	30.8		35.3	35.4			
	Depth	in	11.4		12.6	12.6			
Total weight	Main unit	lbs	99.2		141.1	218.3		233.7	
	Min. length	ft	16-1/2						
Refrigerant pipe	Max. total length	ft	164			246			
	Lift (ODU below IDU)	ft	98						
	Lift (ODU above IDU)	ft	98						
	Refrigerant (*3) (Charged refrigerant amount)	lbs	3.75	3.75	5.51	6.83	6.83	7.27	7.27
Flare connections	Gas side	in	1/2			5/8			
	Liquid side	in	1/4			3/8			
Operating range	Cooling	°F DB	5 to 115						
	Cooling w/ wind baffles	°F DB	5 to 115			-13 to 115			
	Heating	°F WB	-13 to 59						



4-Way Cassette
RAV-SPxxxUT-UL



Underceiling
RAV-SPxxxCT-UL



Medium Static Ducted
RAV-SPxxxBTP-UL



High Wall
RAV-SPxxxKRT-UL

Outdoor Units	Indoor Units			
Single-split SD1 RAV-SP120AT2P-UL			✓	✓
Single-split SD1 RAV-SP180/240/300/360AT2-UL	✓	✓	✓	✓
Single-split SD1 RAV-SP420/480AT2-UL	✓	✓	✓	

Big Innovations Are Not Reserved for Big Buildings

Handheld remotes and centralized controllers, plus touchscreens and intuitive interfaces, provide maximum flexibility and user-friendly temperature regulation. Our ductless controls even easily integrate with building management systems and other third-party heat pump units for enhanced visibility and comfort control.

With Toshiba Carrier, **smart has truly never been so simple.**

RAV Controls Compatibility

Model Number	Description	Used with
RBC-AS41UL	Simple wired remote controller	All Systems
RBC-AMS54E-UL	Wired remote control with schedule timer	All Systems
TCB-AX32UL	Stand-alone receiver	All Indoor Units
RBC-AX32U(W)-UL	Integral receiver	All Cassettes
RBC-AX33CUL	Integral receiver	All Underceilings
TCB-TC41LUL	Remote sensor	All Indoor Units
BMS-CT1280UL	Touchscreen central controller	All Systems

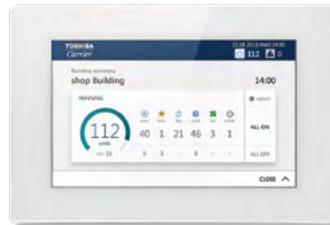
RAV Network Adapter Compatibility

	4-Way Cassette	Medium Static Ducted	Underceiling	High Wall
Network Adapter TCB-PCNT31TLUL	Needed	Needed	Needed	Included



Wired Remote Controller

A programmable controller that's a low voltage thermostat and easily mounted on the wall.



Touchscreen Central Controller

A line voltage controller mounted on the wall with a touchscreen LCD display panel.



Simple Wired Remote Control

Mounted on the wall to remote sense the room's temperature while also enabling users to engage with and control the system.



Remote Sensor

Mounted on the wall to remote sense the room's temperature without the ability for users to engage with and control the system.



Standalone Receiver

A combination of a wall-mounted (or ceiling-mounted) receiver and a handheld wireless remote.



Wireless Remote Control

A handheld thermostat that controls the unit remotely through transmission of signal.



Integral Receiver (Cassette)

A combination of a mounted receiver on a cassette indoor unit and a handheld wireless remote.



Integral Receiver (Underceiling)

A combination of a mounted receiver on an underceiling indoor unit and a handheld wireless remote.

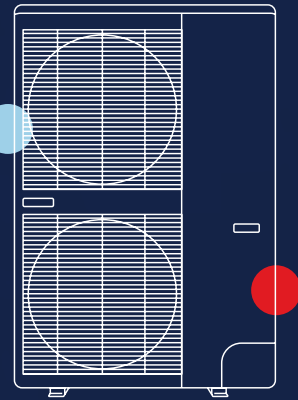


RAV Network Adapter

Allows users to connect RAV systems to central controllers through RAV indoor units. One needed per indoor unit or group controller.



The Perfect HVAC System Is Just a Call Away



Contact us today to learn more about how ductless can benefit your building and other light commercial applications.

carrierductless.com

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