

TOSHIBA



LIGHT BUSINESS

The performance you need.
The comfort you expect.



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TOSHIBA

THE IDEAL CLIMATE
FOR YOUR BUSINESS
APPLICATIONS

SOLUTIONS FOR THE PROS, BY THE PROS

TOSHIBA Digital Inverter systems offer exceptional savings in operation and extremely compact units. Featuring the latest technologies, flexible control, and improved installation, they deliver comfort and convenience for all medium-sized business systems.

TOSHIBA offers a full line of indoor units for any commercial application, including ceiling, cassette, duct, and high-wall units. We've expanded our range to include maximum capacities of up to 27 kW that cover more higher-volume applications in the commercial sector.



THE TOSHIBA PROMISE

TOSHIBA air conditioning systems create an ideal indoor climate and combine many benefits in a single unit. They can be used for heating, dehumidifying, and filtering the air as well as for cooling.

> Efficient air conditioning systems

Modern, expertly adjusted air conditioning systems consume minimum power, achieve peak efficiency values, and help to cut costs while reducing environmental pollution.

> Versatile solutions

TOSHIBA stands for maximum system flexibility with space-saving outdoor units, a large selection of indoor units, and adaptable installation options.

> 24-hour continuous operation

TOSHIBA Digital Inverter systems were specially developed for continuous operation in rooms housing highly sensitive technology, where they guarantee stable room temperatures around the clock.

> Durability

TOSHIBA air conditioning systems use robust technologies for above-average service lives. This ensures an excellent indoor climate, in addition to business continuity.

> Broad operating range

Innovative technology results in versatile systems that can be used in heating and cooling mode all year round.

> Reliability

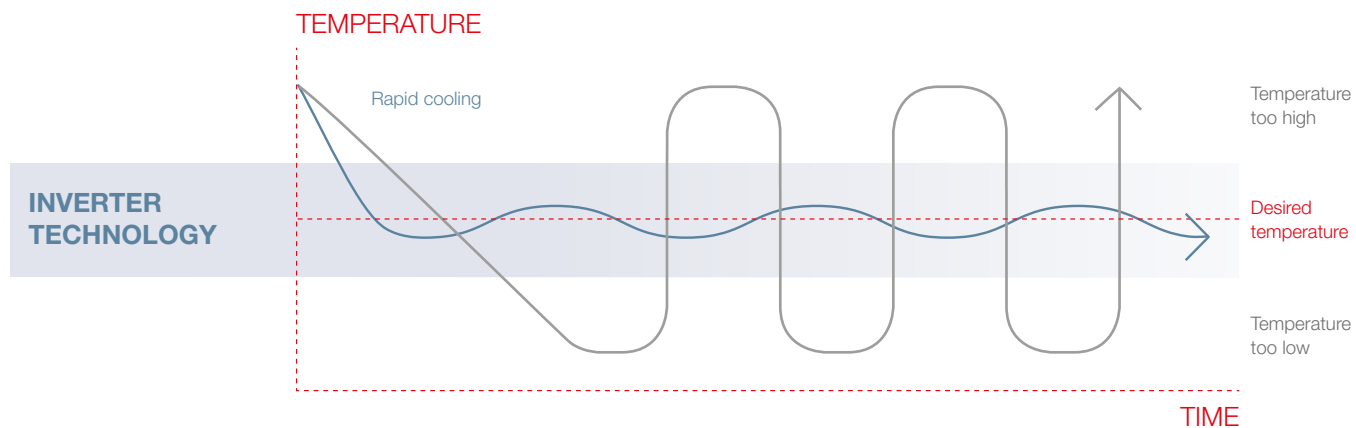
TOSHIBA guarantees top quality and smooth operation without malfunctions.

TOSHIBA INVERTER TECHNOLOGY



An inverter air conditioner raises or lowers the temperature in the room by automatically changing the compressor speed. When the room has been sufficiently cooled or heated as required, the inverter automatically reduces the speed of the compressor. This both saves energy and reduces temperature fluctuations in the room.

Variable regulation of the compressor speed ensures that the power is limited to only what is necessary. Since the compressor is not constantly switched on and off, the service life of the air conditioner is also extended. In 1981, TOSHIBA was the first manufacturer to market air conditioners with inverter technology. Since then, the technology has been continuously refined and improved.



The TOSHIBA inverter control uses two different drive modes for the compressor. Either **pulse width modulation** (high efficiency / PWM) is used for very efficient operation in the part load range, or **pulse height modulation** (high power / PAM) is applied to ensure that the set temperature is quickly reached.

OUR INVERTERS, YOUR ADVANTAGE



High performance with low power consumption

Digital and Super Digital Inverters are the ideal way to combine high performance with low power consumption. In addition to impressive performance, these technologies offer maximum comfort and minimize energy loss regardless of the conditions.



Extremely adaptable

Digital and Super Digital Inverters feature an exceptionally compact housing. These systems ensure adaptability to cover an operating range of between -27°C and +52°C through the use of advanced technologies including DC hybrid control and twin-rotary compressors.



Quiet running

At the heart of the TOSHIBA twin-rotary compressor are two disks rotating in opposite directions. This design creates maximum mechanical stability and minimal vibrations, guaranteeing quiet operation in all TOSHIBA units.



Consistent indoor climate

The TOSHIBA inverter system's intelligent control constantly regulates the modulation width between 20 and 100%. This precise regulation ensures a consistent temperature so the unit doesn't need to be repeatedly switched on and off.



Individual settings

Special modes including "soft cooling" and "dual setpoint" let users make individual settings to suit their needs. From supreme comfort to efficient energy management, TOSHIBA makes it simple to adjust the desired functions.



Automatic mode change

If the desired temperature value needs to be reached quickly, PAM* mode is activated – "High Power" is required here. Once the value is reached, it is maintained with the lowest possible energy consumption (PWM* mode).



Variable control

The speed of the compressor and thus the power of the unit is practically infinitely variable in increments of 0.1 Hz. This allows for precise settings to be made and for energy to be used in the most efficient manner.

SMALL, BIG, OR BIGGEST.

TOSHIBA commercial applications are available in two systems: a **single-room solution (RAV)** with up to four indoor units in a temperature zone and a **multi-room solution (VRF)** for large buildings with virtually unlimited combinations of indoor units and temperature zones.

Single-room solution – RAV

The single-room solution is suitable for smaller commercial applications, such as offices, shop floors, or plant rooms, where reliability is paramount and continuous operation is needed. Up to four indoor units of the same design can be connected to an outdoor unit. The nominal cooling capacity is between 2.5 kW and 22.5 kW.



Advantages of the single-room solution

> Versatile

The units can be used from the smallest server room through to large shop floors.

> Up to four indoor units

Several indoor units can be combined for optimum air distribution.

> Cooling or heating

The system cools or heats the room as desired, so it can be operated all year round.

> 24-hour continuous operation

Plant rooms, storerooms, or laboratories demand a precisely defined indoor climate all year round.



Digital Inverter CLASSIC

The Digital Inverter Classic offers TOSHIBA's full expertise at an affordable price for a wide range of small and medium-sized commercial applications.



	5 kW	6.7 kW	9.5 kW	11.5 kW [12.10 kW]	13 kW	COMPATIBLE WITH
1 Ph	✓	✓	✓	✓	✓	High-wall unit, 4-way cassette, standard duct unit
3 Ph			✓	✓	✓	

➤ Compact chassis

At a maximum width of 900 mm, the Digital Inverter Classic is exceptionally compact and can also be installed in locations that have limited space available.

➤ TOSHIBA expertise

The twin-rotary compressor, hybrid inverter, and heat exchanger testify to the innovative technology TOSHIBA has been developing since the 1980s and make the Digital Inverter Classic a brilliant solution.

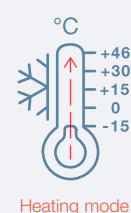
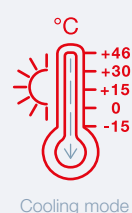


➤ Classic lineup

Thanks to a comprehensive product range extending from 5 to 13 kW and 1-phase to 3-phase electrical connections, this unit is suitable for most smaller commercial applications.

➤ Operating temperature range

Heating operation is possible down to an outdoor temperature of -15°C, while cooling mode is available at an outdoor temperature of -15°C and up to 46°C. This creates scope for a broad range of applications.



Digital Inverter NEXT



The Digital Inverter NEXT combines compact outdoor units, an unrivaled capacity range, and a large selection of indoor units. This is the ultimate high-efficiency solution for light commercial applications in terms of product reliability and quality.



Smart inverter

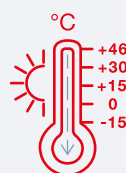
The hybrid inverter control combines two intelligent control mechanisms to reach the set temperature in the minimum possible time and with the maximum efficiency:

- PAM mode, which quickly achieves a high power and the desired comfort.
- PWM mode minimizes power consumption and maximizes energy efficiency.

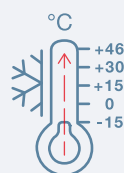
The result is a high level of energy efficiency.

Operating temperature range

Heating operation is possible down to an outdoor temperature of -15°C , while cooling mode is available at an outdoor temperature of -15°C and up to 46°C . This creates scope for a broad range of applications.



Cooling mode



Heating mode

Broad capacity range

Eight sizes from 2.5 to 14 kW with 1-phase or 3-phase electrical connections cover any type of project, from a room measuring 15 m^2 up to a 200 m^2 store – in both new buildings and renovation projects.

Small, lightweight chassis

The single-fan housing for all sizes makes the Digital Inverter NEXT extremely compact and suitable for installation in very small spaces.

	2.5 kW	3.6 kW	5 kW	6.7 kW	8 kW	9.5 kW	12.1 kW	14 kW
1Ph	✓	✓	✓	✓	✓	✓	✓	✓
3Ph						✓	✓	✓

Super Digital Inverter



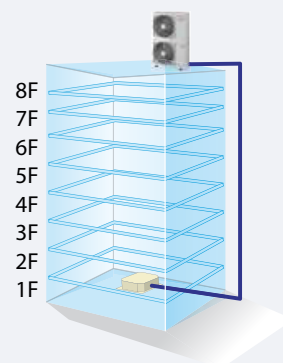
The Super Digital Inverter maximizes your energy savings and reduces operating costs to a minimum thanks to TOSHIBA's renowned twin-rotary compressors, the vector-controlled inverter, and a larger heat exchanger.

	5 kW	7.10 kW	5 kW	10 kW	12.5 kW	14 kW
1Ph	✓	✓	✓	✓	✓	
3Ph				✓	✓	✓

Flexible piping

The Super Digital Inverter is an industry leader and uses a single system to support height differences of up to 30 meters – which is sufficient height for an 8 story building. This height difference makes it possible to install the outdoor unit out of sight and enhances flexibility during installation.

- Farthest equivalent length: 75 m
- Height between the indoor units: 30 m



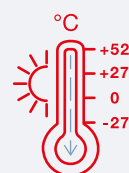
A perfect pair: Twin-rotary compressor and vector-controlled inverter

The TOSHIBA twin-rotary compressors enhance the advantages offered by the inverter technology. They enable outstanding variable regulation within a range of 20 to 100% capacity – an advantage you'll only find at TOSHIBA!

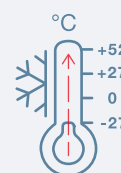


Operating temperature range

The heat mode is available down to an outside temperature of -27°C , creating a comfortable indoor temperature even during cold winters, while cooling mode is possible up to an outside temperature of 52°C . This creates scope for a broad range of applications and means the system can be used in colder regions in particular.



Cooling mode



Heating mode

Maximum efficiency

Highly efficient energy consumption, low operating costs: SEER of 9.40 and SCOP of 5.51, which come thanks to TOSHIBA's unrivaled Super Digital Inverter technologies and recently developed components.

Digital Inverter BIG single fan



The Digital Inverter BIG single fan combines a very small footprint with all the expertise TOSHIBA has to offer in terms of efficiency, reliability, and connectivity, guaranteeing energy savings and perfect comfort all year round.

➤ High efficiency and energy savings

- Top-class EER/COP values thanks to the exclusive TOSHIBA twin-rotary compressor.
- The two models are extremely powerful and highly compact, delivering a cooling/heating capacity of 19.0/22.5 kW and 22.4/25.0 kW.

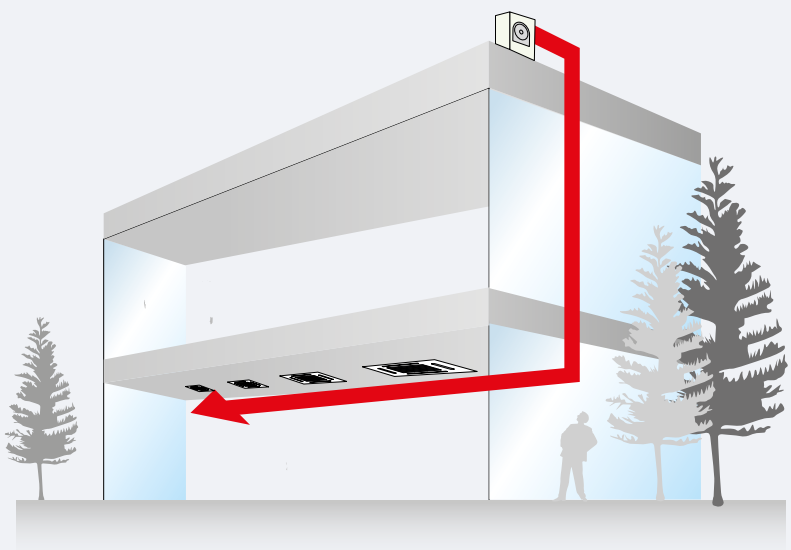
➤ Broad range of applications

- Four indoor units can be connected (same type and capacity).
- Compatible with a wide selection of indoor units: 4-way standard cassette, 60x60 slim cassette, slim duct unit, standard duct unit, high-pressure duct unit, high-wall and ceiling units.

➤ Operating temperature range

The heat mode is available down to an outside temperature of -27°C , creating a comfortable indoor temperature even during cold winters, while cooling mode is possible up to an outside temperature of 46°C . This creates scope for a very broad range of applications.

The installation can cover up to 100 m of total piping length and 30 m of height difference.



RAV INDOOR UNITS



HIGH-WALL UNITS

High-wall unit 2.5 – 8 kW

High-wall unit 10 kW

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CEILING UNIT

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CASSETTE UNITS

60×60 slim cassette

Smart cassette

4-way standard cassette

1-way flat cassette

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DUCT UNITS

Slim duct unit

Standard duct unit

High-pressure duct unit

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FLOOR STANDING UNIT

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VENTILATION SOLUTIONS

Direct expansion kit NEXT

Air curtain

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Measurement conditions for TOSHIBA air conditioning units according to Eurovent

Cooling:

Outdoor temperature: +35°C dry bulb temperature

Indoor air temperature: +27°C dry bulb temperature / +19°C wet bulb temperature

Humidity: 50 – 55% relative humidity

Heating:

Outdoor temperature: +7°C dry bulb temperature / +6°C wet bulb temperature

Indoor temperature: +20°C dry bulb temperature

No difference in height between indoor and outdoor unit

Sound pressure level:

Measured at 1 m distance from the indoor unit (1.5 m for cassette and duct units), or 1 m distance from the outdoor unit.

Values are determined in an anechoic chamber as defined in JIS B8616;

these values can be higher in the installed state since they are influenced by external factors.



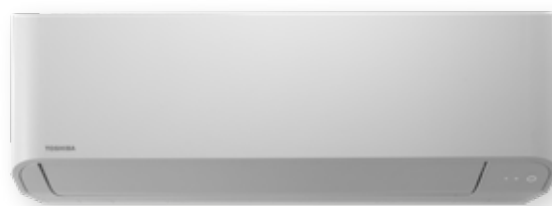
High-wall units

Efficient and easy to integrate

With their unobtrusive design, these high-wall units fit into offices, shops, hotels, utility rooms, restaurants, and more. A 5-speed fan and generously-sized louver ensure quiet and effective operation with optimum air distribution. The self-cleaning function fully dries the heat exchanger after operation has ended, and ensures hygienic operation in combination with the easy-clean dust filter. An infrared remote control is supplied as standard.

High-wall unit 2.5 – 8 kW

➤ **Comfort allrounder**



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM301KRTP-E	2,50	3,40	A++	29/34/40	450/540/670	293 x 798 x 230
RAV-HM401KRTP-E	3,60	4,00	A++	30/36/41	450/580/700	293 x 798 x 230
RAV-HM561KRTP-E	5,00	5,30	A++	35/39/42	680/ - /960	320 x 1050 x 250
RAV-HM801KRTP-E	6,70	7,70	A++	35/41/45	680/910/1040	320 x 1050 x 250
RAV-HM901KRTP-E	8,00	9,00	A++	35/41/47	680/ - /1180	320 x 1050 x 250

High-wall unit 10 kW

➤ **Power allrounder**



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM1101KRTP-E	10,00	11,20	A++	41/45/49	1180/ - /1610	350 x 1200 x 280

Ceiling unit

Elegant ambiance

Rounded edges for an elegant design. The large louver provides optimum air distribution and a high airflow rate.



➤ High airflow rate

Even during heating operation, this optimum air circulation offers excellent comfort. The unit also achieves a high level of efficiency through the use of a new heat exchanger.

TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM401CTP-E	3,60	4,00	A++	28/35/37	540/720/900	235 x 950 x 690
RAV-HM561CTP-E	5,00	5,30	A++	28/35/37	540/720/900	235 x 950 x 690
RAV-HM801CTP-E	6,90	7,70	A++	29/36/41	750/1000/1410	235 x 1270 x 690
RAV-HM901CTP-E	8,00	9,00	A++	30/38/42	900/- /1600	235 x 1586 x 690
RAV-HM1101CTP-E	9,50	11,20	A++	32/38/44	1020/1350/1860	235 x 1586 x 690
RAV-HM1401CTP-E	12,10	12,80	n/a	35/41/46	1200/1530/2040	235 x 1586 x 690
RAV-HM1601CTP-E	14,00	16,00	n/a	36/42/46	1200/1650/2040	235 x 1586 x 690



Cassette units

Perfect air distribution

With its low height, the cassette unit fits unobtrusively into any suspended ceiling. The louvers are individually controllable and ensure optimal air distribution with very quiet operation. A drain pump with 850 mm discharge head is incorporated into every cassette. A fresh air supply of up to 15% of the nominal airflow is also possible with an external fan – the connection port is pre-cut.

60x60 slim cassette

➤ Suitable for Euro grid

The optional upgrade with a presence sensor can help to save energy. The sensor registers when people are present. If there is no one in the room, the unit switches off automatically. Also available in black.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM301MUTP-E	2,50	3,40	A++	30/36/38	440/520/640	256 x 575 x 575
RAV-HM401MUTP-E	3,60	4,00	A++	32/36/41	468/660	256 x 575 x 575
RAV-HM561MUTP-E	5,00	5,30	A++	35/39/44	546/672/798	256 x 575 x 575

Smart cassette

➤ The high efficiency 360° classic

High efficiency with flat design panel and comfort functions for combining with Super Digital Inverter outdoor units.



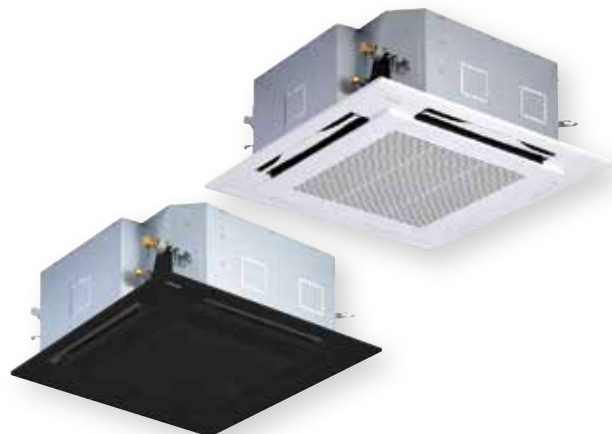
TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM561UT-E	5,00	5,60	A++	26/29/32	750/900/1050	256 x 840 x 840
RAV-HM801UT-E	7,10	8,00	A+++	27/35/42	810/1290/1920	319 x 840 x 840
RAV-HM1101UT-E	10,00	11,20	-	31/40/48	1050/1650/2250	319 x 840 x 840
RAV-HM1401UT-E	12,50	14,00	n/a	33/41/48	1170/1710/2250	319 x 840 x 840

This is a special order item. Delivery time provided on request.

4-way standard cassette

> The 360° classic

Optimum 360° air distribution. Individual comfort, even for large spaces with high capacity requirements. Panel is available in choice of black or white.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM561UTP-E	5,00	5,30	A++	28/29/32	780/870/1050	256 x 840 x 840
RAV-HM801UTP-E	6,70	7,70	A+++	28/31/35	810/960/1230	256 x 840 x 840
RAV-HM901UTP-E	8,00	9,00	A++	33/36/40	900/ - /1600	319 x 840 x 840
RAV-HM1101UTP-E	9,50	11,20	A++	33/38/43	1170/1440/2010	319 x 840 x 840
RAV-HM1401UTP-E	12,00	12,80	n/a	34/38/44	1230/1440/2100	319 x 840 x 840
RAV-HM1601UTP-E	14,00	16,00	n/a	36/40/45	1260/1500/2130	319 x 840 x 840

1-way flat cassette

> One-sided air flow from the design panel

Ultra-flat design with low installation height and plasma filter option. The optional presence sensor saves energy when there are no people in the room.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM301U1TP-E	2,50	3,40	A++	30/35/39	310/ - /520	150 x 990 x 450
RAV-HM401U1TP-E	3,60	4,00	A+	30/36/40	290/ - /540	150 x 990 x 450

Duct units

Invisible air conditioning

Whatever the shape of your room, duct units ensure uniform temperatures everywhere. Invisibly installed above the suspended ceiling, the air is directed into the room at minimal speed via one or more air outlets.

Slim duct unit

➤ Where space is limited

Ultra-slim design with top energy efficiency values. Air may be supplied via the underside or rear.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	External static pressure	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	Pa	mm
RAV-HM301SDTY-E	2,50	3,40	A++	26/29/32	420/ - /570	10/50	210 x 700 x 450
RAV-HM401SDTY-E	3,60	4,00	A+	27/30/33	440/ - /600	10/50	210 x 700 x 450
RAV-HM561SDTY-E	5,00	5,30	A++	29/32/34	650/ - /780	10/50	210 x 900 x 450
RAV-HM801SDTY-E	6,70	7,70	A++	32/34/37	910/ - /1140	10/50	210 x 1100 x 450

Standard duct unit

➤ The invisible classic

Air may be supplied via the underside or rear. An optional spigot flange is available. Also suitable for connecting textile air hoses.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	External static pressure	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	Pa	mm
RAV-HM561BTP-E	5,00	5,30	A	25/29/33	480/630/800	30/120	275 x 700 x 750
RAV-HM801BTP-E	6,70	7,70	A++	26/30/34	750/930/1200	30/120	275 x 1000 x 750
RAV-HM901BTP-E	8,00	9,00	A++	30/33/37	1000/ - /1700	30/120	275 x 1400 x 750
RAV-HM1101BTP-E	9,50	11,20	A+	33/36/40	1260/1650/2100	50/120	275 x 1400 x 750
RAV-HM1401BTP-E	12,10	12,80	n/a	33/36/40	1260/1650/2100	50/120	275 x 1400 x 750
RAV-HM1601BTP-E	14,00	16,00	n/a	33/36/40	1260/1650/2100	50/120	275 x 1400 x 750

High-pressure duct unit

➤ With full power

The high static compression makes this unit most suitable for large buildings. The drain pump and long-life air filter kit are available as options.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	External static pressure	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	Pa	mm
RAV-RM2241DTP-E2	19,00	22,40	-	-/44/-	3800	50/97/250	448 x 1400 x 900
RAV-RM2801DTP-E2	22,50	27,00	-	-/46/-	4800	50/97/250	448 x 1400 x 900

Floor standing unit

Space-saving – for any room

The slim design allows the unit to be positioned flexibly. The automatic swing mode distributes the air optimally – even when positioned in a corner of the room. An integrated leak detection system ensures EN378-compliant usage, even in small rooms.



TYPE	Cooling capacity	Heating capacity	Energy efficiency class	Sound pressure level (low/med/high)	Airflow	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	dB(A) ❄️	m³/h	mm
RAV-HM561FT-E	5,00	5,60	A+	38/42/46	600/ - /820	1750 x 600 x 210
RAV-HM801FT-E	7,10	8,00	A++	41/45/50	640/ - /930	1750 x 600 x 210
RAV-HM901FT-E	8,00	9,00	A++	37/40/45	820/ - /1330	1750 x 600 x 390
RAV-HM1101FT-E	10,00	11,20	A++	41/46/51	1170/ - /1660	1750 x 600 x 390
RAV-HM1401FT-E	12,50	14,00	n/a	45/48/53	1350/ - /1760	1750 x 600 x 390
RAV-HM1601FT-E	14,00	16,00	n/a	45/48/53	1350/ - /1760	1750 x 600 x 390

This is a special order item. Delivery time provided on request.

DX-kit NEXT

Integrate 3rd party heat exchangers

The DX-kit NEXT is an efficient direct expansion kit consisting of a control cabinet and sensors. It is ideal for use with air handling units and air curtains. The controller can be flexibly configured for exhaust air temperature or 0 – 10 V capacity control.



Cooling capacity (kW)

3.0 – 27.0



Heating capacity (kW)

4.5 – 31.5



Airflow (m³/h)

450 – 5040



Dimensions (mm)
H × W × D

420 × 330 × 122

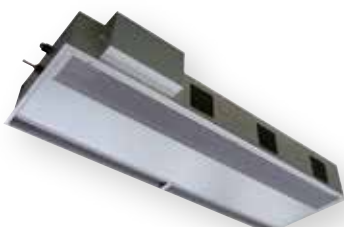
Air curtain

Air curtains are used in entrance areas, where they save energy by creating a laminar air flow that reduces the exchange of air between indoors and outdoors. The air curtains are custom planned to match the requirements, so specific details and designs are available on request.

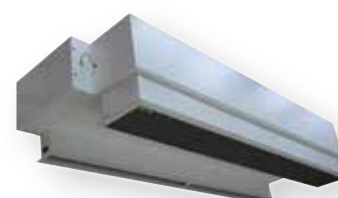


Free-hanging unit

This is a special order item. Delivery time provided on request.



Cassette unit



Built-in unit



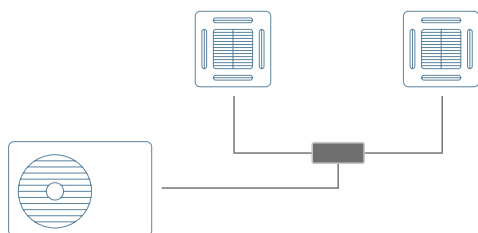




COMBINATION OPTIONS

TWIN

Digital / Super Digital Inverter / Digital Inverter NEXT

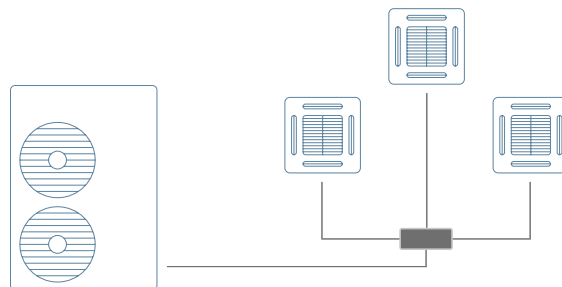


Combination options

OUTDOOR UNIT	INDOOR UNIT	BRANCH KIT
11.2	5.6 + 5.6	RBC-TWP-31-E
14.0	8.0 + 8.0	RBC-TWP-31-E

TRIPLE

Digital / Super Digital Inverter / Digital Inverter NEXT

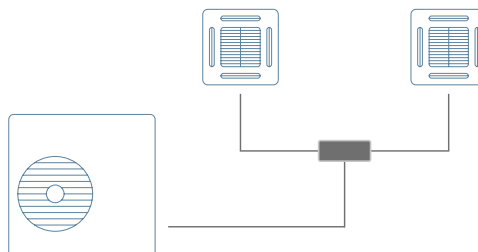


Combination options

OUTDOOR UNIT	INDOOR UNIT	BRANCH KIT
16	5.6 + 5.6 + 5.6	RBC-TRP100E

TWIN

Digital Inverter BIG single fan

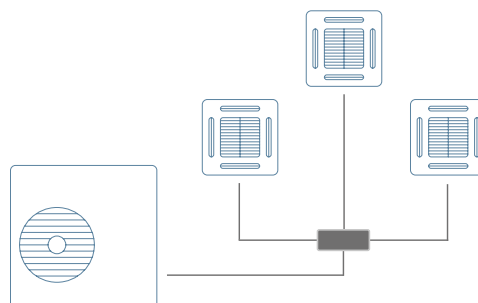


Combination options

OUTDOOR UNIT	INDOOR UNIT	BRANCH KIT
22.4	11.2 + 11.2	RBC-TWP102-E
28.0	14.0 + 14.0	RBC-TWP102-E

TRIPLE

Digital Inverter BIG single fan

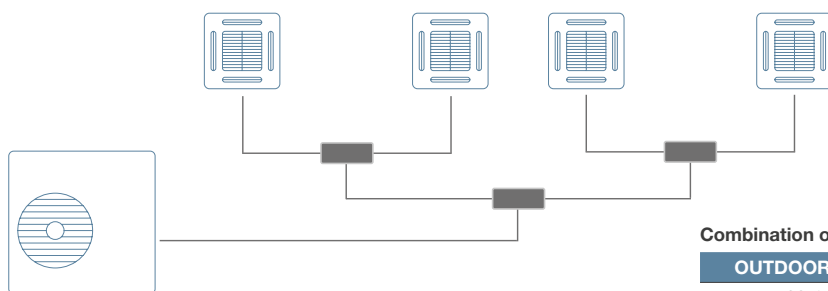


Combination options

OUTDOOR UNIT	INDOOR UNIT	BRANCH KIT
22.4	8.0 + 8.0 + 8.0	RBC-TRP100E
28.0	8.0 + 8.0 + 8.0	RBC-TRP100E

DOUBLE TWIN

Digital Inverter BIG single fan



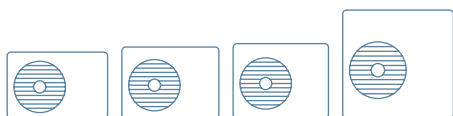
Combination options

OUTDOOR UNIT	INDOOR UNIT	BRANCH KIT
22.4	5.6 + 5.6 + 5.6 + 5.6	RBC-DTWP102-E
28.0	8.0 + 8.0 + 8.0 + 8.0	RBC-DTWP102-E

Excerpts – refer to the appropriate data books for the full combinations, data, and values.



RAV OUTDOOR UNITS



DIGITAL INVERTER CLASSIC

Page 27



DIGITAL INVERTER NEXT

Page 28



SUPER DIGITAL INVERTER

Page 29



DIGITAL INVERTER BIG SINGLE FAN

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WHICH REFRIGERANT DOES TOSHIBA USE?

Digital Inverter Classic

Economy Classic

- 5.0 to 13.0 kW cooling
- 5.3 to 16.0 kW heating
- For combining with high-wall units, 4-way standard cassettes, standard duct units



1-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GV561ATP-E	5,00	5,30	6,20	4,20	46	48	550 x 780 x 290
RAV-GV801ATP-E	6,70	7,70	5,10	4,00	48	51	550 x 780 x 290
RAV-GV1101ATP-E	9,50	10,00	5,10	3,80	53	55	630 x 800 x 300
RAV-GV1401ATP-E	11,50	11,90	5,10	3,80	53	60	710 x 900 x 320
RAV-GV1601ATP-E*	13,00	13,50	4,90	4,15	57	59	890 x 900 x 320

* Changing to RAV-GV1601ATP-E1 during the year

3-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GV1101AT8P-E	9,50	10,00	5,30	3,80	53	55	710 x 900 x 320
RAV-GV1401AT8P-E	12,10	12,30	5,10	3,80	53	60	710 x 900 x 320
RAV-GV1601AT8P-E*	13,00	16,00	4,90	4,15	57	59	890 x 900 x 320

* Changing to RAV-GV1601AT8P-E1 during the year

TOSHIBA has established the goal of providing eco-conscious products for the whole world, and helping to reduce environmental pollution. Although refrigerants play only a very small part in global warming (unit of measurement GWP = Global Warming Potential), it is an important

goal to minimize their use and maximize the efficiency of their use. For this reason, TOSHIBA primarily uses the refrigerant R32. With a GWP of 675, this is much lower than the standard R410A refrigerant which has a GWP of 2088. R32 is more energy efficient and has a significantly better heat transfer capacity than R410A. An air-conditioning system can thus achieve an approximately 60% higher output with the same charge.

nificantly better heat transfer capacity than R410A. An air-conditioning system can thus achieve an approximately 60% higher output with the same charge.

Digital Inverter NEXT

➤ The Next level

- 2.5 to 14.0 kW cooling
- 3.4 to 16.0 kW heating
- Compact – durable – efficient
- Easy install and commissioning functions
- 3-level silent setting



1-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GM302ATP-E	2,50	3,40	6,86	4,73	46	47	550 x 780 x 290
RAV-GM402ATP-E	3,60	4,00	6,70	4,46	49	50	550 x 780 x 290
RAV-GM562ATP-E	5,00	5,30	6,84	4,62	46	48	550 x 780 x 290
RAV-GM802ATW-E	6,70	7,70	5,53	4,00	50	52	630 x 799 x 299
RAV-GM902ATW-E	8,00	9,00	6,24	4,00	52	55	630 x 799 x 299
RAV-GM1102ATW-E	10,00	11,20	6,22	3,92	53	56	1050 x 1010 x 370
RAV-GM1402ATW-E	12,00	14,00	5,53	3,90	56	56	1050 x 1010 x 370
RAV-GM1602ATW-E	14,00	16,00	5,20	3,90	57	56	1050 x 1010 x 370

3-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GM1102AT8W-E	10,00	11,20	5,88	3,92	53	56	1050 x 1010 x 370
RAV-GM1402AT8W-E	12,00	14,00	5,35	3,90	56	56	1050 x 1010 x 370
RAV-GM1602AT8W-E	14,00	16,00	5,15	3,82	57	56	1050 x 1010 x 370



Super Digital Inverter

➤ Long pipe lengths & large height differences

- 5.3 to 14.0 kW cooling
- 5.6 to 16.0 kW heating
- Single or up to three indoor units



1-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GP561ATW-E	5,30	5,60	7,73	4,98	46	48	630 x 799 x 299
RAV-GP801ATW-E	7,10	8,00	6,43	4,43	46	48	1050 x 1010 x 370
RAV-GP1101AT-E	10,00	11,20	6,99	4,40	49	50	1550 x 1010 x 370
RAV-GP1401AT-E1	12,50	14,00	8,15	4,72	50	51	1550 x 1010 x 370

3-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GP1101AT8-E	10,00	11,20	7,10	4,36	49	50	1340 x 900 x 320
RAV-GP1401AT8-E*	12,50	14,00	7,01	4,36	51	52	1340 x 900 x 320
RAV-GP1601AT8-E	14,00	16,00	6,72	4,36	51	53	1340 x 900 x 320

* Changing to RAV-GP1401AT8-E1 during the year

Digital Inverter BIG single fan

➤ Versatile, compact, and powerful

- 19.0 to 22.5 kW cooling
- 22.4 to 24.0 kW heating
- Single or up to four indoor units



3-phase

TYPE	Cooling capacity	Heating capacity	Energy efficiency SEER	Energy efficiency SCOP	Sound pressure level (low/med/high)	Sound pressure level (low/med/high)	Dimensions (HxWxD)
	kW ❄️	kW 🔥	❄️	🔥	dB(A) ❄️	dB(A) 🔥	mm
RAV-GM2243AT8P-E	19,00	22,40	6,30	3,80	58	60	890 x 1100 x 460
RAV-GM2803AT8P-E	22,50	25,00	5,50	3,70	61	63	890 x 1100 x 460



CONTROLS

Your individual needs taken care of

High quality air conditioners are naturally important but the controls also play a significant part in the ease-of-use and efficiency of the system. Optimized settings create the perfect ambiance for every room to suit individual requirements. As well as local control options, TOSHIBA also offers a broad selection of central controls, or the option to integrate these into the building management system.



One control system for all units



Control via app or browser



Integration in existing systems



Connection of external modules

Controls at a glance

External control options

A range of options can be used to connect external units, issue messages or alarms, facilitate noise reduction or redundancy switching – virtually any control requirement can be met.

- › Leak detection system
- › Accessory modules
- › CN connector
- › Redundancy box

Central controls

Complex air conditioners can be controlled from any central location, such as the reception area or plant room. Cable lengths of up to 2,000 m are possible, and up to 2,048 indoor units can be controlled.

- › Central remote control
- › Touchscreen controller
- › Smart Manager Touch

Building management systems

TOSHIBA air conditioners can be networked with all standard building management systems, making air conditioning an integral part of the central building control.

- › LonWorks®
- › Modbus®
- › BACnet®
- › Coolmaster
- › KNX®

Local controls

Wired remote controls (max. cable length 500 m) or wireless infrared remote controls are used to control single units or groups of up to 8 indoor units. Additional modules allow location independent control via apps or the Internet.

- › Wired remote controls
- › Infrared remote controls
- › WiFi solutions
- › Control options

Local controls



Simplified wired remote control:

Perfect for hotel rooms.



Standard wired remote control:

Controls all indoor unit functions, 168 hours ON/OFF timer.



Compact wired remote control:

Slim version of the standard wired remote control.



Wired remote control:

As for the standard wired remote control, but with 8 time events/day and 6 parameters/event.



Local touch lite remote control:

Compact local touchscreen remote control in smartphone format with customizable screens and logos.



Remote temperature sensor:

When an exact temperature measurement is not possible via the sensor in the indoor unit or in the wired remote control.



IR remote control + receiver kits:

Scope of functions as for standard wired remote control, but wireless. For panel installation or external.



Design comfort

Wired remote control:

With or without Bluetooth support



TO-RC-KNX®:

Module for controlling an indoor unit via the KNX® bus.



Remote On/Off + Window contact module:

Potential-free contact for external On/Off and window contact input.



Control board:

3 analog and 3 digital inputs, 3 digital outputs for external control, alarms, and messages (for ceiling units).



Operating, error signal, remote On/Off module:

Operating and error signal output, On/Off control, plus error message from up to 16 indoor units via potential-free contacts.



Analog interface:

Controls unit functions via 0 – 10 V signals or fixed resistors.



Modbus® interface:

Control of unit functions via a Modbus register. Up to 64 interfaces are possible.



BACnet® 1:1 interface:

Control of up to 16 indoor units. For integration with a locally provided BACnet® system.



WiFi 1:1 interface:

Control of an indoor unit using a smartphone via the TOSHIBA Home AC Control app.

Central controls



Touchscreen controller with energy billing:

Control of up to 512 indoor units. 12.1" multi-touchscreen, operation via PC also possible. Energy monitoring and billing. TCS Net Relay interface required (up to 8 units).



Smart Manager TOUCH with energy billing:

Control of up to 256 indoor units with intuitive operation via 7" color touch screen interface.



Central remote control:

Compact central control unit for controlling up to 64 indoor units. Weekly timer can be connected.

Building management systems



Modbus® interface:

Control of up to 64 indoor units. For integration with a locally provided Modbus® system.



KNX®-16/64:

Modules for controlling up to 16/64 indoor units via the KNX® bus.



Coolmaster / Coolmaster Pro:

Central control for up to 256 indoor units. Small touchscreen user interface. Control via smartphone, tablet, or PC possible.



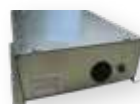
LonWorks® interface:

Control of up to 64 indoor units. For integration with a locally provided LonWorks® building management system (requires a LonWorks® network card).



BACnet® interface:

Control of up to 128 indoor units. For integration with a locally provided BACnet® system.



Analog interface:

Control of up to 64 indoor units. Control via 0 – 10 V signals or fixed resistors. 8 analog and 2 digital inputs. 5 analog and 5 digital outputs.



External control options



Noise reduction module (RAV):

For DI NEXT, DI CLASSIC, SDI 1-phase.
Input for noise reduction (night operation) and capacity control (0/50/75%).
Output for compressor operating signal.



Noise reduction cable set (RAV):

For SDI 3-phase.
Input for noise reduction (night operation) and capacity control (0/50/75%).
Output for compressor operating signal.



CN connector with cable:

For indoor units; various input/output functions via locally provided equipment.



Redundancy box:

Switches between two indoor units (or groups) in the event of a fault. Switchover dependent on operating hours; temperature-dependent switching on of the second system. Plug & Play, LAN port, monitoring via web browser possible.

KEY EFFICIENCY FIGURES



The efficiency of air conditioning systems and heat pumps is expressed by the coefficient of performance.

The **coefficient of performance** is the ratio of cooling or heating capacity generated for the electrical power used. A high coefficient of performance indicates high energy efficiency. A COP value of 4.0, for example, means that 4 kW of heating capacity is generated from 1 kW of electricity – four times as much.



EER

Energy Efficiency Ratio

Coefficient of performance for cooling mode



COP

Coefficient of Performance

The coefficient of performance for heating mode

With air conditioning systems, the EER indicates the coefficient of performance in cooling mode, while the COP is the coefficient of performance in heating mode. These figures are only related to a single operating point, so further coefficients of performance were defined especially for air conditioning. These take account of the part load and any climatic influences.



SEER

Seasonal Energy Efficiency Ratio

Means of determining the coefficient of performance over one year for cooling mode

- › Includes additional seasonal factors
- › Measuring points are +20, +25, +30, and +35°C



SCOP

Seasonal Coefficient of Performance

Means of determining the coefficient of performance over one year for heating mode

- › Includes additional seasonal factors
- › Measuring points are +12, +7, +2, and -7°C

For air conditioning systems and heat pumps, the coefficient of performance over one year is called SEER in cooling mode and SCOP in heating mode; it takes account of temperature fluctuations over the course of the year.





LIST OF IMAGES

We would like to take this opportunity to express our gratitude for the support and reference images provided. They give potential customers a realistic impression of our products and help us to strengthen the TOSHIBA brand.

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HOME

Your home – Your climate.



2 – 10 kW

TOSHIBA's innovative air conditioning systems were specially developed to ensure your wellbeing in your home, and its progressive technology offers comfort 365 days a year. Quiet operation, air filtering, and purification are just some of the benefits for greater comfort in your home. An air conditioning system is also the perfect heating solution, especially at season changes.

ESTIA

The Air-to-Water heat pump
The warmth of the future.



4 – 14 kW

High quality and efficiency in a space-saving format. The ESTIA air-to-water heat pump is extremely effective and is ideal for heating, hot water preparation, and cooling in your home.

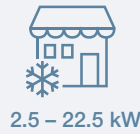
Heating with heat from the air – environmentally friendly, cost-effective, and efficient.



Expertise in every sector –
air conditioning systems and heat pumps for cooling and heating



LIGHT BUSINESS



2.5 – 22.5 kW

The performance you need. The comfort you expect.

With its versatility, the RAV single-room solutions are perfect for 24-hour continuous operation to maintain a precisely defined room climate – from small server rooms to large stores. Up to four indoor units can be combined for optimum air distribution and set to heat or cool the room as desired, so they can be operated all year round.



BUSINESS

Plan for excellence.
Cool excellently.



12.1 – 335 kW

Multi-room solutions comprise air conditioning systems for complex installations in large structures such as office buildings, shopping malls, or hotels. Huge system flexibility with piping lengths of 1200 m and up to 128 indoor units leave no wishes unmet. The system also allows independent cooling and heating at the same time in different rooms or areas of buildings.

CHILLERS

Cooling & heating in
the big leagues.



150 kW – 25.6 MW

TOSHIBA's USX chillers represent a new dimension in cooling and heating generation.

If the capacity required exceeds the technical and financial limits of direct evaporation systems, then water-based systems are used.



TOSHIBA

We advise you personally

YOUR CERTIFIED TOSHIBA AIR CONDITIONING PARTNER

TOSHIBA air conditioning partner:

Get quality and expertise with TOSHIBA air conditioning systems and heat pumps.

In addition to premium products, you'll benefit from a full range of consulting, planning, installation, and maintenance services from highly qualified air conditioning system specialists. Count on an optimum climate from the experts!

Flexibility for every application

TOSHIBA offers solutions for every requirement, from your home and business to industrial applications. Contact your TOSHIBA air conditioning partner or visit our website to find out more.



For more information: Visit our website!

You will find further information about TOSHIBA air conditioning systems and heat pumps as well as our sales partners on our website: www.toshiba-aircondition.com



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