TOSHIBA

SHRM

SUPER HEAT RECOVERY MULTI

A D V A N C E

Inspired VRF technologies

Better Air Solutions

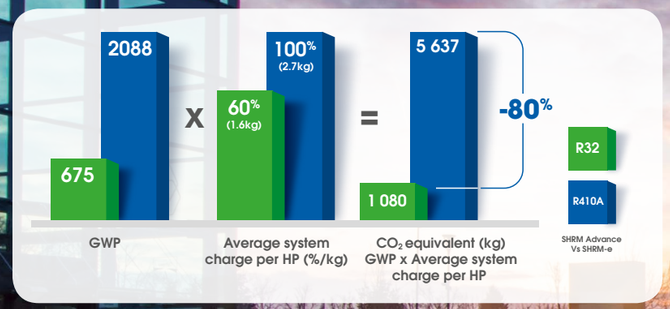
THE WORLD IS TARGETING **ZERO EMISSION**

Today the process of cooling and heating buildings, is not the sole challenge. Global warming is an issue that effects us all and Toshiba Air Conditioning are prioritising the decarbonisation of buildings as a top priority. The SHRM Advance system, with its new and inspired R32 VRF technologies, will help to achieve this goal, whilst also preserving comfort and cost effectiveness.

TOSHIBA R32 REFRIGERANT

Inspired technologies to support building decarbonization

R32 low GWP, combined with SHRM Advance 40% reduction of refrigerant charge, allow to reduce the total equivalent CO_2 by 80% of the system, in comparison with R410A legacy model.



The right choice to make for the benefit of all

Environmental oriented refrigerant, top-class efficiencies, heat recovery function and much more to the benefit of all stakeholders.

Investors

Support decarbonization of buildings.
Make true energy savings.
Boost your investments.

Consultants

Secure your specifications.
Ensure premium comfort.
Ease buildings labelling.

Installers

Differentiate yourself from competitors, choose the expert of inspired R32 technologies since 2014.

Our planet

Always consider the impact.
Go further than just products, create safe low GWP solutions to friendly interact with the planet.

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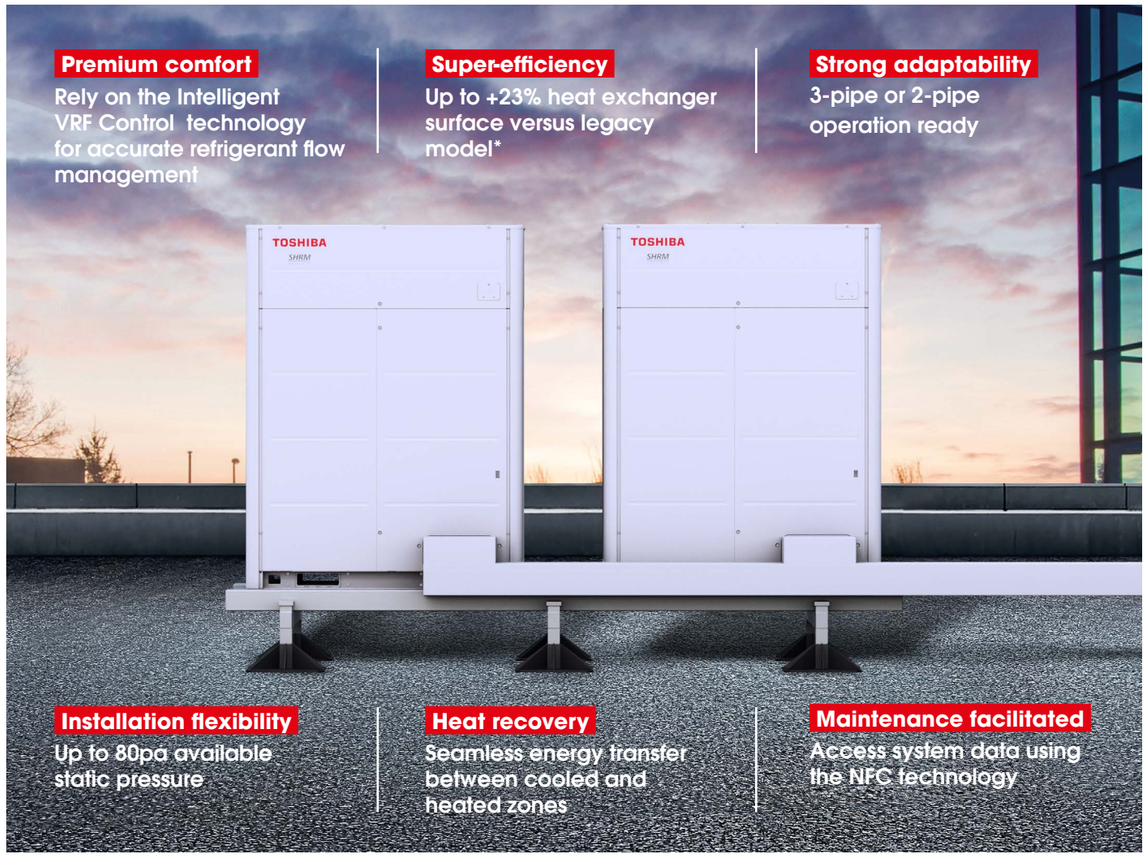
SHRM ADVANCE
FORWARD-THINKING SOLUTION

40 YEARS OF INSPIRED INNOVATIONS

The new SHRM Advance is the leading solution to provide heating, cooling and hot water for commercial applications with a limited impact on the environment.



*SHRM Advance is available in single model lineup only.

Your best ally

Toshiba Twin Rotary compressor with new liquid injection technology

Centre piece of the system, the Toshiba super efficient Twin rotary compressor has been engineered to perfectly fit R32 constraints.

- Large capacity
- Low noise
- Wide operating range
- DLC treatment
- Less refrigerant needed
- Liquid injection technology

UNLIMITED COMFORT

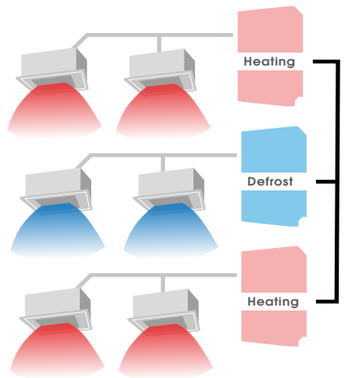
With climate changes, preserving comfort in buildings is becoming essential. Rely on simultaneous heating and cooling operations to make users satisfied and increase productivity all year round. In winter, optimized defrost will also participate to overall comfort.

Advanced defrost system

Stable indoor temperatures even under the harshest conditions.

Frost detection
Continuous heating up to 5 hours.

Ren-Kei
Utilising defrost rotation control between independent systems, results in continuous heating operation.



MAXIMIZED EFFICIENCY

Leading efficiency is part of Toshiba DNA. SHRM Advance is no exception with strong energy savings for indirect carbon reduction.

Embedded technologies such as liquid injection, twin rotary compressor, large heat exchanger, new sub cool plate heat exchanger and intelligent VRF Control contribute to reach unparalleled seasonal efficiencies.

HEATING	SCOP	UP TO **4.6**
	EthasH	UP TO **183%**
COOLING	SEER	UP TO **8.9**
	EthasC	UP TO **353%**

HEAT RECOVERY

Heat recovery transfer energy function from indoor unit in cooling mode to indoor in heating mode contributes to premium global energy efficiency.

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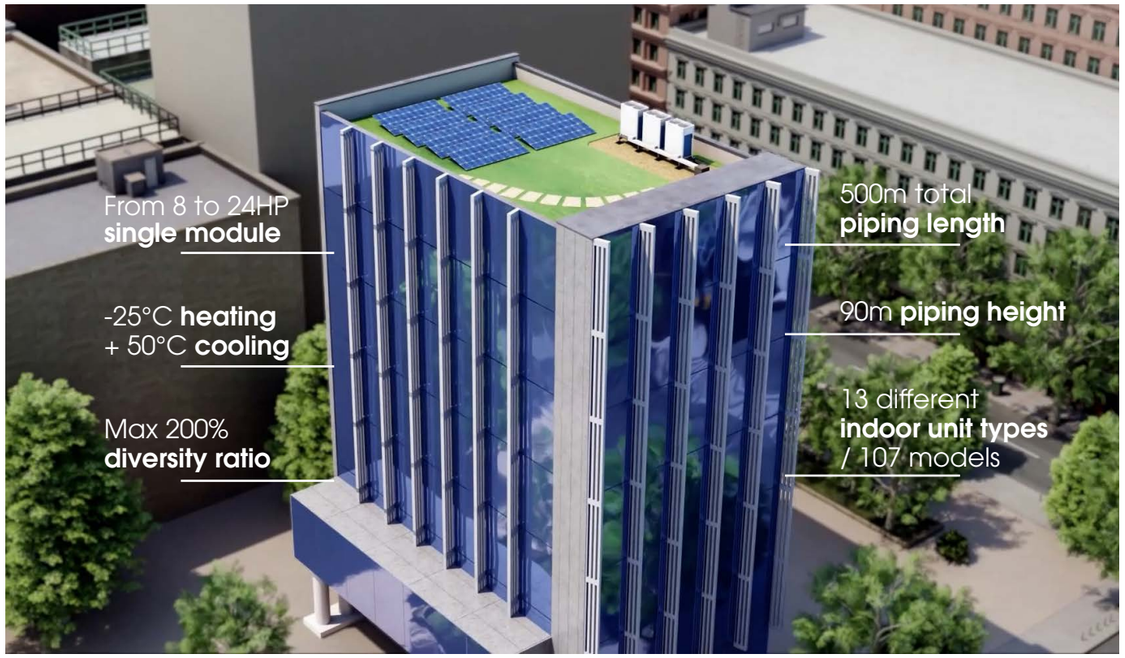
EXTENDED PROJECT COVERAGE

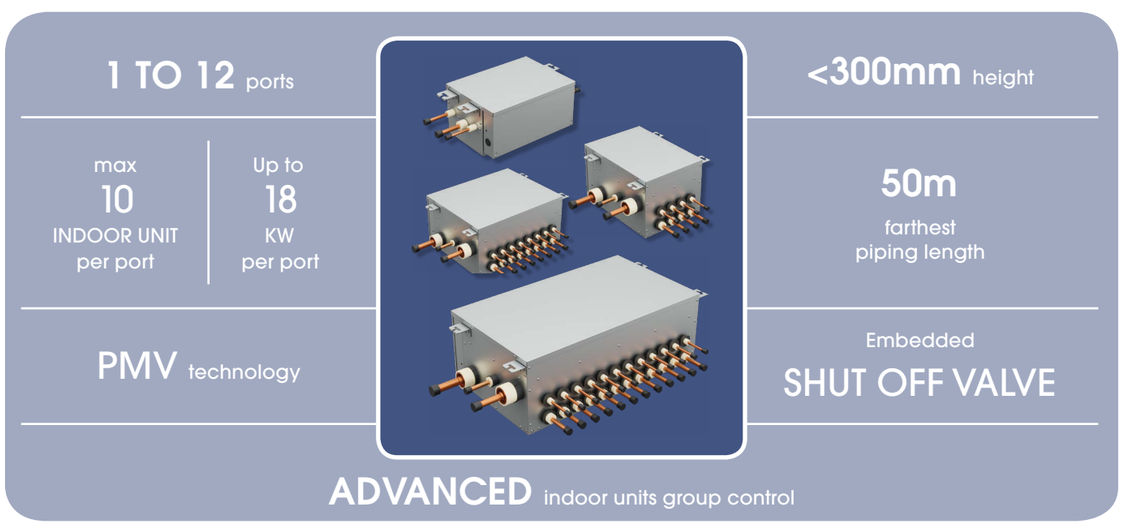
Advanced connectivity

At Toshiba Air Conditioning, low carbon footprint products go hand-in-hand with high specification standards. SHRM Advance has been designed to enhance system flexibility and maximize project coverage.



Large flow selector units

Increased flexibility at project design stage & simplified installation process.

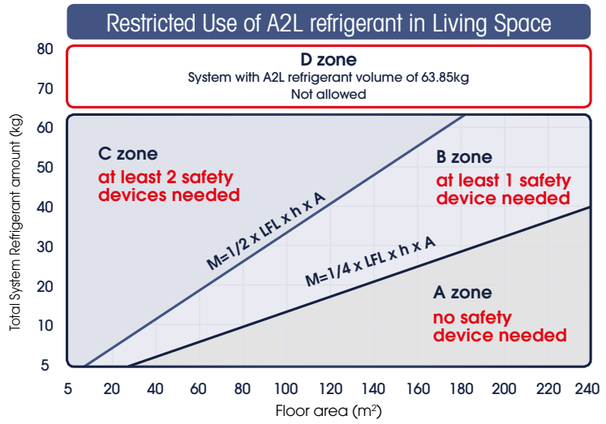


R32 CHALLENGING BY NATURE

Moving to R32 is a great opportunity for the environement. Nevertheless as classified A2L/mid flammable, precautions need to be taken. Toshiba Air Conditioning has thought of everything for your peace of mind.

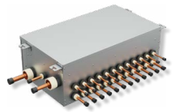
Following IEC 60335-2-40 edition 6.0, depending upon the room surface and the total refrigerant amount, system needs to be equipped with safety devices.

R32 LFL = 0.301 kg/m^3 - H = indoor unit position 2.2m - A= room surface in square metre
Please refer to IM and Toshiba Selection Software for toxicity



Toshiba Solutions Manage safety requirements*

TCB-LD1UPE
R32 leak detector
(audible and visual alarm)



RBM-Y_1FUxPE
Shut-off valve included into
Flow selector unit for 3-pipe
SHRM Advance operations

RBM-SV_1HUPE
Shut-off valve for 2 pipe
SHRM Advance operations

TCB-BT1UPE
Battery kit to secure
Shut-off valve operations
in case of power failure
(required by IEC603353-2-40 standard)

*Toshiba safety concept certified by 3rd party certification institution following IEC60335-2-40 (Ed.6) regulation

Meet buildings constraints

Select the appropriate answer

For buildings with large spaces

✓Only one flow selector unit is needed

In case of leak detection:
- Audible and visible alarm on concerned leak detector
- Refrigerant Pump down
- Fault code on remotes

SYSTEM IS TURNED OFF IN CASE OF LEAK DETECTION

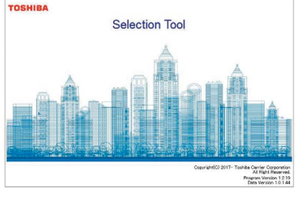
For buildings with many individual rooms

✓Multiple flow selector units are needed

In case of leak detection:
- Audible and visible alarm on concerned leak detector
- Fault code on remotes
- Individual shut down

SYSTEM CONTINUES TO RUN,
ONLY CONCERNED AREA IS TURNED OFF

Rely on Toshiba Selection Software



Toshiba Selection software has been fully designed with a user-friendly interface allowing novice and expert users alike to create simple, yet detailed VRF system schematics. It is highly versatile to tailor the level of details to customers'expectations. In line with R32 safety regulation, the software identify the rooms to be equipped with safety devices. Final detailed reports can then be produced and sent to customers in a PDF format that summaries all the information needed to ensure proper installation, good system operation and customer satisfaction.

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MAKE YOUR SELECTION

Outdoor Units

Picture	Model		kW	22.4	28	33.5	40	45	50.4	56	61.5	67
			HP	8	10	12	14	16	18	20	22	24
	MMY-SUGxx01MT8P-E	Decarbonize buildings: R32 refrigerant. Make your choice: 2-pipe heat pump or 3-pipe simultaneous heating & cooling with heat recovery function. Simplify the maintenance: Wave tool advance and link adapter.										

Indoor Units

	Picture		Model		IAQ filter**	kW	0.9	1.7	2.2	2.8	3.6	4.5	5.6	7.1	8	9	11.2	14	16	22.4	28
						HP	0.3	0.6	0.8	1	1.25	1.7	2	2.5	3	3.2	4	5	6	8	10
Cassette		Smart cassette	MMU-UP_H-E	High efficiency. Low noise. Unique flap design for optimal air diffusion. 5-step air flow. Optional motion sensor for automatic operation.																	
		Standard 4-way cassette	MMU-UP_HP-E	High level of comfort with large air flow diffusion and three different swing modes. Compact chassis with only 256mm height (up to size 30). PM2.5 filter available as an option.	Ionizer + PM2.5																
		Compact 4-way cassette	MMU-UP_MH-E	Flat panel design. 620x620mm to fit perfectly into ceiling. Optional motion sensor for automatic operation.																	
		2-way cassette	MMU-UP_WH-E	Unique air flow control to balance flow into opposite directions. Light weight.																	
		1-way cassette	MMU-UP_YHP-E	150mm chassis height. 0.3HP small capacity. Low noise. 5-speed air flow.	Plasma																
Duct		Slim duct	MMD-UP_SPHY-E	210mm height. 0.3HP small capacity. 50Pa available static pressure. 5-speed air flow. Low noise 3DW diffusor available as an option.																	
		Standard duct	MMD-UP_BHP-E	Slim design with 275mm height. Low noise. 0.6HP small capacity. Up to 150Pa available static pressure. Spigot available as an option.																	
		Hight static pressure duct	MMD-UP_HP-E1	Large air flow up to 4,800m³/h. From 50 to 250Pa available pressure. Unobtrusive, flexible and compact (298mm depth up to size 56).																	
High wall		Standard model	MMK-UP_HP-E	Wide capacity range. Compact and light weight. Special fin coating.	Ultra pure filter																
		Without PMV model	MMK-UP_HPL-E																		
Ceiling			MMC-UP_HP-E	Automatic air flow angle setting based on operation mode. Up to 8m air flow distance. Low noise.																	
Water		Mid temp. hot water module	MMW-UP_LQ-E	Up to 50°C leaving water temperature. Compatible with both space heating and domestic hot water production. -20°C/+19°C operation.																	
Ventillation		Fresh air intake duct	MMD-UP_HFP-E(1)	AHU alternative: Up to 3,060m³/h fresh air. 200Pa available static pressure. Constant 20°C fresh delivery from -10°C to +46°C air suction. 5-speed air flow.																	

**available as an option

Flow Selector Units

Picture	Model	Specification	Number of ports
	RBM-Y1121FUPE	Flow Selector unit Single-port type	1
	RBM-Y1801FUPE		1
	RBM-Y2801FUPE		1
	RBM-Y1801FU4PE	Flow Selector unit Multi-port type	4
	RBM-Y1801FU8PE		8
	RBM-Y1801FU12PE		12

Safety Devices

Picture	Model		When required? 2-Pipe	When required? 3-Pipe
	Leak detector TCB-LD1UPE	Stand alone. Powered by the indoor unit. 10-year sensor lifetime.	✓ Required for zone B & C (as 1st safety device)	✓ Required for zone B & C (as 1st safety device)
	Shut-off valve RBM-SV_HUPE	To separate leaking indoor units from main refrigerant circuit. Only needed in 2-pipe operation as flow selectors include shut-off valve.	✓ Required for zone C (as 2nd safety device)	✓ Embedded into flow selector unit
	Battery kit TCB-BT1UPE	Keep shut-off valve operation in case of power shutdown. 5-year lifetime. To be positioned inside FS box/shut-off valve.	✓ Required for zone C (to be installed into shut-off valve unit)	✓ Required for zone C (to be installed into flow selector unit)

Controls

Wired remote		Central remote		Gateways	
 Standard remote RBC-ASCU11-E	 Advance remote RBC-AMSU51-ES/EN	 64 central remote TCB-SC640U-E	 Touch screen BMS-CT2560U-E	 BACnet® gateway BMS-IFBN1280U-E	 Modbus® gateway BMS-IFMB1280U-E

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Performances

Outdoor unit		MMY-	SUG0801MT8P-E	SUG1001MT8P-E	SUG1201MT8P-E	SUG1401MT8P-E	SUG1601MT8P-E	SUG1801MT8P-E	SUG2001MT8P-E	SUG2201MT8P-E	SUG2401MT8P-E
			8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24HP
Cooling capacity	**kW**		**22.4**	**28.0**	**33.5**	**40.0**	**45.0**	**50.4**	**56.0**	**61.5**	**67.0**
Power input (rated)	kW	C	5.13	6.83	8.88	12.0	12.2	14.8	15.5	18.2	24.3
EER	W/W		4.37	4.10	3.77	3.32	3.70	3.41	3.62	3.38	2.76
EthasC/SEER	W/W		353.0%/8.90	344.6%/8.69	326.2%/8.23	320.2%/8.08	342.6%/8.64	329.8%/8.32	328.6%/8.29	312.2%/7.88	263.4%/6.66
Running current	A	C	9.14	11.5	14.2	18.9	21.1	24.8	25.4	29.2	38.1
Heating capacity rated/max	**kW**		**22.4**	**28.0**	**33.5**	**40.0**	**45.0**	**50.4**	**56.0**	**61.5**	**67.0**
Power input (rated)	kW	H	4.96	6.22	7.64	10.3	11.1	14.0	14.3	16.1	19.5
COP	W/W		4.52	4.50	4.38	3.89	4.07	3.60	3.93	3.82	3.44
EthasH/SCOP			174.6%/4.44	183.8%/4.67	181.8%/4.62	169%/4.30	183%/4.65	176.6%/4.49	168.6%/4.29	167.4%/4.26	158.6%/4.04
Running current	A	H	8.95	10.6	12.5	16.3	19.9	23.8	23.6	26.1	30.9
Maximum overcurrent protection	A		20	32	32	40	40	50	50	63	80

Physical data

Outdoor unit		MMY-	SUG0801MT8P-E	SUG1001MT8P-E	SUG1201MT8P-E	SUG1401MT8P-E	SUG1601MT8P-E	SUG1801MT8P-E	SUG2001MT8P-E	SUG2201MT8P-E	SUG2401MT8P-E
	m^3/h		9900	10500	11700	11880	15300	16800	15900	16500	16800
Sound power level	dB(A)	H	77.0	78.0	82.0	84.0	87.0	89.0	89.0	90.0	91.0
Sound pressure level	dB(A)	H	56.0	58.0	62.0	63.0	64.0	67.0	67.0	67.0	69.0
Sound power level	dB(A)	C	74.0	75.0	79.0	79.0	83.0	84.0	85.0	86.0	86.0
Sound pressure level	dB(A)	C	53.0	55.0	58.0	58.0	60.0	61.0	63.0	64.0	64.0
External static pressure available	Pa		80.0								
Dimensions (hxwxd)	mm		1690x990x780				1690x1290x780				
Weight	kg		232				329		361		
Compressor type			Hermetic Twin Rotary								
Refrigerant charge R32	kg		6.0				9.0				
	TCO_2eq		4.1				6.1				
Gas line diameter	inch	2-pipe	3/4'	7/8'			1' 1/8				
Liquid line diameter (downsized diameter with limited length)	inch	2-pipe	1/2' (3/8')				5/8' (1/2')				
Suction line diameter	inch	3-pipe	3/4'	7/8'			1' 1/8				
LP/HP gas line diameter	inch	3-pipe	5/8'	3/4'			7/8'				
Liquid line diameter (downsized diameter with limited length)	inch	3-pipe	1/2' (3/8')				5/8' (1/2')				
Farthest piping equivalent length 2-pipe/3-pipe	m		215/190								
Farthest piping actual length for 2-pipe/3-pipe	m		190/165								
Maximum pipe length	m		500								
Maximum lift (indoor unit above/ below)	m		40/90								
Operating range - db	°C	C	-15 to 50								
Operating range - wb	°C	H	-25 to 15.5								
Power supply	V-ph-Hz		380/415-3-50								

Connected indoor unit: MMU-UP_1H-E
C: cooling mode - H: heating mode

CE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

TOSHIBA Air Conditioning participates in the ECP program for Comfort Air Conditioners (AC). Check ongoing validity of certificate: www.eurovent-certification.com

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