

New R32 VRF MINI-SMMS 4, 5, 6HP for Europe

TOSHIBA are pleased to announce the new R32 VRF MINI-SMMS 4.0 – 6.0HP Outdoor units for Europe have been added to the VRF product range.

1. Model Names

Europ	e model (HSW-E) 1p	h 50Hz 220~240v / Heat Pump
НР	Capacity (kW) Cooling / Heating	Model Name
4	12.1 / 12.1	MCY-MUG0401HSW-E
**	14.0 / 14.0	MCY-MUG0501HSW-E
6	15.5 / 15.5	MCY-MUG0601HSW-E



2. Safety Equipment

This new product uses R32 refrigerant and may require the following safety devices under certain installation conditions. Please refer to the installation manuals and selection software for more details.

Safety devices for Europe market.

Name	Model Name	Appearance
SV Unit	RBM-SV1121HUPE	
(Shut-Off Valve Unit	RBM-SV1801HUPE	
Battery Kit	TCB-BT1UPE	
Leak Detector	TCB-LD1UPE	·

Better Air Solutions



TOSHIBA

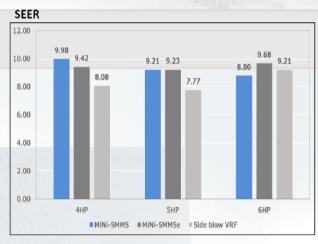
3. Production Date

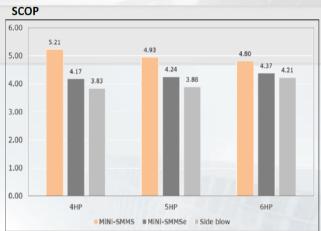
Outdoor Units: December 2022 from TCAE

R32 Safety Equipment: December 2022 from TCTC

4. Performance

The performance of this new product has been improved from the current 2 fan models with a single fan chassis design.





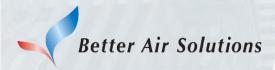
5. Features

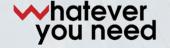
- Reduced chassis size compared to current 2 fan models
- Reduced gas pipe size for the 6HP model (19.1mm > 15.9mm)
- Uses low GWP R32 refrigerant and has a reduced refrigerant charge compared to current model.

5.1 Specifications

Specification Comparison

	Alle	New	/ MINI-	SMMS	M	INI-SMA	۸Se	Si	de Blo	w VRF
Equivalent HP		4HP	5HP	6HP	4HP	5HP	6HP	4HP	5HP	6HP
Appearance			100	max.		Торніва		700	HIBA #	TSSEM
Cooling Capac	ity (kW)	12.1	14.0	15.5	12.1	14.0	15.5	12.1	14.0	15.5
Heating Capac	ity (kW)	12.1	14.0	15.5	12.5	16.0	18.0	12.5	16.0	18.0
	Height	1,050mm		1,235mm		910mm 1,235r		1,235mm		
External	Width	1,010mm		990mm		990mm		nm		
Dimensions	Depth	370mm		390mm		390mm		nm		
	Volume	0.39m3		0.48m3		0.35m3		0.48m3		
Connecting	Gas	15.9	mm	15.9mm	15.9	mm	19.1mm	15.9m	m	19.1mm
Port Diameter	Liquid	9.5mm			9.5mm		9.5mm		nm	
Defricerent	Туре		R32			R410a		R410a		Da
Refrigerant	Amount		2.4Kg			6.4Kg		3.3Kg	3	3.9Kg

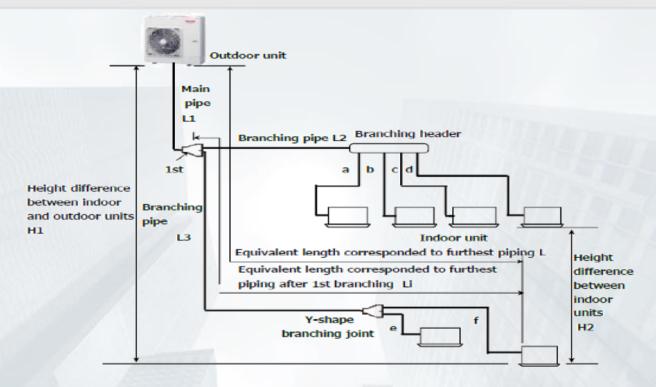






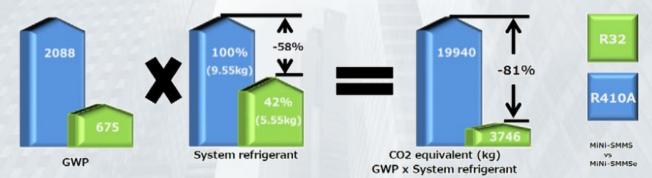
Piping Specification	n		MINI-SMMS	MINI-SMMSe	Side Blow VRF
	Total Extension of p	pipe (Liquid pipe, Real pipe)	300m	180m	90m
	Furthest Piping	Real Length	120m	100m	50m
	Length L	Equivalent Length	150m	125m	60m
Piping Length	Max. equivalent le	ngth of main pipe	80m	65m	30m
	Max. equivalent le 1st branch Li	ngth of furthest piping from	40m	35m	20m
	Max. real length of	indoor unit connecting pipe	15m	15m	10m
	ference Height between indoor and outdoor units H1 Height between Upper outdoor unit Lower outdoor unit		50m	30m	15m
Height Difference			40m	20m	15m
	Height between in	door units H2	15m	15m	10m

^{*}Please refer to the installation Manual or Databook for more details



5.3 Refrigerant Charge

- Uses low GWP R32
- A 58% reduction in system refrigerant charge
- A total equivalent CO2 reduction of 81% by system refrigerant



Assumptions: Outdoor unit: 6HP, Indoor units: 6, Piping: 6.4mm x 6m and 9.52mm x 40mm







6. Applicable Markets

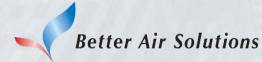
UK & Ireland

7. Connectable Indoor Units

Factory	FCU Type	FCU Model Name	FCU HP
raciory	100 type	MMU-UP0091H-E	1.00
	199	MMU-UP0121H-E	1.25
		MMU-UP0151H-E	1.70
	Smart 4-	MMU-UP0181H-E	
TOO	Way Air		2.00
TCC	Discharge	MMU-UP0241H-E	2.50
	Cassette	MMU-UP0271H-E	3.00
		MMU-UP0301H-E	3.20
		MMU-UP0361H-E	4.00
		MMU-UP0481H-E	5.00
		MMU-UP0091HP-E	1.00
		MMU-UP0121HP-E	1.25
		MMU-UP0151HP-E	1.70
	4-Way Air	MMU-UP0181HP-E	2.00
TCTC	Discharge	MMU-UP0241HP-E	2.50
	Cassette	MMU-UP0271HP-E	3.00
	1233	MMU-UP0301HP-E	3.20
		MMU-UP0361HP-E	4.00
	3333	MMU-UP0481HP-E	5.00
		MMU-UP0051MH-E	0.60
	13-11	MMU-UP0071MH-E	0.80
	Compact	MMU-UP0091MH-E	1.00
TCC	4-Way	MMU-UP0121MH-E	1.25
	Cassette	MMU-UP0151MH-E	1.70
		MMU-UP0181MH-E	2.00
		MMU-UP0071WH-E	0.80
		MMU-UP0091WH-E	1.00
		MMU-UP0121WH-E	1.25
	2-Way Air	MMU-UP0151WH-E	1.70
TCC	Discharge	MMU-UP0181WH-E	2.00
	Cassette	MMU-UP0241WH-E	2.50
		MMU-UP0271WH-E	3.00
		MMU-UP0301WH-E	3.20
	9/44	MMU-UP0361WH-E	4.00
		MMU-UP0481WH-E	5.00
		MMU-UP0031YHP-E	0.30
	\	MMU-UP0051YHP-E	0.60
		MMU-UP0071YHP-E	0.80
	1-Way Air	MMU-UP0091YHP-E	1.00
TCTC	Discharge	MMU-UP0121YHP-E	1.25
	Cassette	MMU-UP0151YHP-E	1.70
		MMU-UP0181YHP-E	2.00
		MMU-UP0241YHP-E	2.50
		MMU-UP0271YHP-E	3.00
	1-Way Air	MMU-UP0151SH-E	1.70
TCC	Discharge	MMU-UP0181SH-E	2.00
100	Cassette		
	Cusselle	MMU-UP0271SH-E	2.50
		MMD-UP0051SPHY-E	0.60
		MMD-UP0071SPHY-E	0.80
		MMD-UP0091SPHY-E	1.00
TCAC	Compact	MMD-UP0121SPHY-E	1.25
	Slim Duct	MMD-UP0151SPHY-E	1.70
		MMD-UP0181SPHY-E	2.00
		MMD-UP0241SPHY-E	2.50
		MMD-UP0271SPHY-E	3.00

Factory	FCU Type	FCU Model Name	FCU HP
		MMD-UP0051BHP-E	0.60
		MMD-UP0071BHP-E	0.80
		MMD-UP0091BHP-E	1.00
		MMD-UP0121BHP-E	1.25
	0	MMD-UP0151BHP-E	1.70
TCTC	Concealed Duct	MMD-UP0181BHP-E	2.00
	DUCI	MMD-UP0241BHP-E	2.50
		MMD-UP0271BHP-E	3.00
		MMD-UP0301BHP-E	3.20
		MMD-UP0361BHP-E	4.00
		MMD-UP0481BHP-E	5.00
		MMD-UP0181HP-E	2.00
	Concealed	MMD-UP0241HP-E	2.50
TCTC	Duct High Static	MMD-UP0271HP-E	3.00
		MMD-UP0361HP-E	4.00
		MMD-UP0481HP-E	5.00
		MMC-UP0151HP-E	1.70
	1111111111111	MMC-UP0181HP-E	2.00
TCTC	Celling	MMC-UP0241HP-E	2.50
ICIC		MMC-UP0271HP-E	3.00
		MMC-UP0361HP-E	4.00
		MMC-UP0481HP-E	5.00
		MMK-UP0031HP-E	0.30
		MMK-UP0051HP-E	0.60
		MMK-UP0071HP-E	0.80
		MMK-UP0091HP-E	1.00
		MMK-UP0121HP-E	1.25
TCTC	High-Wall	MMK-UP0151HP-E	1.70
		MMK-UP0181HP-E	2.00
		MMK-UP0241HP-E	2.50
		MMK-UP0271HP-E	3.00
		MMK-UP0301HP-E	3.20
		MMK-UP0361HP-E	4.00

R32 Compatibility for the above indoor units will be implemented from September 2022 production. Please refer to Product Bulletin TIB543-01 for further details.





TOSHIBA

8. Accessories

Branching Joints and headers

Name	Model Name	Remark
Y-Shape Branching Joint	RBM-BY55E	
4-Branching Header	RBM-HY1043E	
8-Branching Header	RBM-HY1048E	4

PMV Kit

Name	Model Name	Remark
PMV Kits	RBM-PMV0361U-E	Available for UP indoors
FIVIV KIIS	RBM-PMV0901U-E	Available for UP indoors

Optional PCB of Outdoor Unit

Name	Model Name	Remark
Power Peak-Cut Control board	TCB-PCDM4E	
External master on/off control board	TCB-PCM04E	Military
Output Control board	TCB-PCIN4E	49-14-1-1







9. Specifications

Outdoor unit model name							
					M CY-M UG0401HSW-E	M CY-M UG0501HSW-E	M CY-M UG0601HSW-E
Outdoor unit type					Inverter	Inverter	Inverter
Capacity code				HP	4	5	6
Cooling Capacity (*1)	101			kW	12.1	14	15.5
leating Capacity(Rated.) (*1)		and the same		kW	12.1	14	15.5
leating Capacity(Max.)				kW	14.2	16	17
	Power supply			(*2)		1p hase 50 Hz 220/230/240 V	The same of
		Running current	33.70	A	14.2/13.6/13.1	17.8/17.0/16.3	20.3/19.4/18.6
		Power consumpt	ion	kW	2.92	3.73	4.29
	Cooling	Power factor		%	93	95	96
		EER			4.14	3.75	3.61
		SEER (Erp lot6)	/21)		9.98	9.21	8.8
		Running current		Α	11.9/11.4/10.9	14.4/13.7/13.2	16.1/15.4/14.8
		Power consumpt	ion	kW	2.38	2.95	3.36
Electrical characteristics (Nominal) (*1)	Heating (Rated.)	Power factor		%	91	93	95
	3,,	COP			5.08	4.75	4.61
		SCOP (Erp lot6	/21)		5.21	4.93	4.8
	Heating		721)	1.	15.5/14.9/14.2	18.3/17.5/16.7	19.9/19.1/18.3
		Running current		Α			
	(Max.)	Power consumpt	ion	kW	3.22	3.85	4.21
		Power factor		%	94	96	96
		COP			4.41	4.16	4.04
	Starting Current			А		Soft start	
		Height		mm		1050	
	Unit	Width		mm		10 10	
Dimension		Depth		mm		370	
Jiriersion		Height		mm		1174	
	Packing	Width		mm		1097	
		Depth		mm		508	
3-20-7-10-0	Unit			kg		100	
Total Weight	Packed unit			kg		109	
						Silky shade	
Appearance(Color)				-		(M unsell 1Y 8.5/0.5)	
	Туре					Hermetic twin rotary compressor	
Compressor		kW		14007	3.75		
	Motor output			KVV			
	Fan					Propeller fan (Quantity 1)	
an unit	Motor output			w		100	
	Air volume			m3/h	4,560	4,7	40
						Finned tube	
Refrigerant R32(Charged refrigerant a	amount(kg)) (*3)			M Pa	2.4	2.4 ON:4 15 OFF:3 20	2.4
Refrigerant R32(Charged refrigerant a	amount(kg)) (*3)			M Pa		2.4 ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hig	
Heat exchanger Refrigerant R32(Charged refrigerant a High-pressure switch	amount(kg)) (*3)			МРа	Discharge	ON:4.15, OFF:3.20	h-pressure
kefrigerant R32(Charged refrigerant a fgh-pressure switch		MCA (*4)		M Pa	Discharge	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hig	h-pressure
tefrigerant R32(Charged refrigerant a ligh-pressure switch	umount(kg)) (*3)	MCA (*4) MOCP (*5)			Discharge Low-pressure	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hig sensor / Compressor case thermostat / F	h-pressure ² C board fuse
tefrigerant R32(Charged refrigerant a ligh-pressure switch	Unit		pe)	A	Discharge Low-pressure 23.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hig sensor / Compressor case thermostat / F	h-pressure P.C board fuse 28
efrigerant R32(Charged refrigerant a igh-pressure switch rotective devices		MOCP (*5)		A A	Discharge Low-pressure 23.5 32	ON:4:15, OFF:3:20 temp. sensor / Suction temp. sensor / Hig sensor / Compressor case thermostat / F 26:5 32	h-pressure P.C board fuse 28 32
efrigerant R32(Charged refrigerant a igh-pressure switch rotective devices	Unit Connecting port diameter	MOCP (*5) Gas side(main pi		A A mm	Discharge Low-pressure 23.5 32 15.8	ON:4:15, OFF:3:20 temp. sensor / Suction temp. sensor / Hig sensor / Compressor case thermostat / F 26:5 32 15:8	h-pressure P.C board fuse 28 32 15.8
refrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices	Unit	MOCP (*5) Gas side(main pi Liquid side(main Gas side		A A mm	Discharge Low-pressure 23.5 32 15.8	ON:4:15, OFF:3:20 stemp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26:5 32 15:8 9:5 Flare	h-pressure P.C board fuse 28 32 15.8
tefrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices	Unit Connecting port diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side		A A mm	Discharge Low-pressure 23.5 32 15.8	ON:4:15, OFF:3:20 stemp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26:5 32 15:8 9:5 Flare Flare	h-pressure P.C board fuse 28 32 15.8
tefrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices	Unit Connecting port diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side		A A mm mm mm	Discharge Low-pressure 23.5 32 15.8	ON:4:15, OFF:3:20 etemp. sensor / Suction temp. sensor / High esensor / Compressor case thermostat / F 26:5 32 15:8 9:5 Flare Flare 15:8	h-pressure P.C board fuse 28 32 15.8
tefrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side		A A FIRM FIRM FIRM FIRM FIRM FIRM FIRM FIRM	Discharge Low-pressure 23.5 32 15.8	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5	h-pressure P.C board fuse 28 32 15.8
refrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices lectrical specifications	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side		A A mm mm mm	Discharge Low-pressure 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hig sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300	h-pressure 2.C board fuse 2.8 3.2 15.8 9.5
efrigerant R32(Charged refrigerant a gh-pressure switch rotective devices ectrical specifications efrigerant Piping otal extension of piping ax. No. of connected indoor units	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side		A A FIRM FIRM FIRM FIRM FIRM FIRM FIRM FIRM	Discharge Low-pressure 23.5 32 15.8	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highting sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300	h-pressure P.C board fuse 28 32 15.8
efrigerant R32(Charged refrigerant a gh-pressure switch rotective devices ectrical specifications efrigerant Piping otal extension of piping ax. No. of connected indoor units	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side	pipe)	A A mm	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highting sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130%	28 32 15.8 9.5
refrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices retrieved a specifications refrigerant Piping rotal extension of piping lax. No. of connected indoor units	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side		A A FIRM FIRM FIRM FIRM FIRM FIRM FIRM FIRM	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highting sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300	h-pressure 2.C board fuse 2.8 3.2 15.8 9.5
defrigerant R32(Charged refrigerant a ligh-pressure switch supersonal system of the second sy	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side	pipe)	A A mm	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highting sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130%	28 32 15.8 9.5
refrigerant R32(Charged refrigerant a ligh-pressure switch and the same state of the	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Liquid side	pipe)	A A PRINT PR	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highter / Highest / Figure / Suction temp. sensor / High sensor / Compressor case thermostat / Figure / Figu	28 32 15.8 9.5
refrigerant R32(Charged refrigerant a ligh-pressure switch and the same state of the	Unit Connecting port diameter Connecting method	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Liquid side	Cooling Heating	A A A Prom Prom Prom Prom Prom Prom Prom Prom	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Hights sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130%	28 32 15.8 9.5
refrigerant R32(Charged refrigerant a ligh-pressure switch and the same state of the	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Liquid side	Cooling Heating Cooling	A A A Promise A A Promise A A A Promise A A A Promise A A A A Promise A A A A A A A A A A A A A A A A A A A	23.5 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130% 53 55 50/47/44	28 32 15.8 9.5
tefrigerant R32(Charged refrigerant a ligh-pressure switch rotective devices dectrical specifications tefrigerant Piping otal extension of piping fax. No. of connected indoor units connectable FCU diversity	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Liquid side	Cooling Heating Cooling	A A A Promise A A Promise A A A Promise A A A Promise A A A Promise A A A A A A A A A A A A A A A A A A A	Discharge Low-pressure 23.5 32 15.8 9.5	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130% 53 55 50/47/44	1-pressure 2-C board fuse 2-8 3-2 15.8 9.5
Refrigerant R32(Charged refrigerant a stage of the stage	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Reside Liquid side	Cooling Heating Cooling Heating Heating Heating	mm mm dB(A) dB(A) dB(A) dB(A) dB(A) dB(A)	Discharge Low-pressure 23.5 32 15.8 9.5 8 8 69	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / Highting Sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130% 53 55 50/47/44 50/47/44	28 32 15.8 9.5 13 14 56 15 16 17 1
Refrigerant R32(Charged refrigerant a sigh-pressure switch Protective devices Rectrical specifications Refrigerant Piping Total extension of piping Aax. No. of connected indoor units Connectable FCU diversity	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Reside Liquid side	Cooling Heating Cooling Heating Cooling Heating Cooling Cooling Cooling Cooling	A A A mm mm mm mm dB(A)	Discharge Low-pressure 23.5 32 15.8 9.5 8 8 69	ON:4.15, OFF:3.20 Itemp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130% 53 55 50/47/44 50/47/44	28 32 15.8 9.5 13 14 56 15 16 17 1
Refrigerant R32(Charged refrigerant a	Unit Connecting port diameter Connecting method Connecting piping diameter	MOCP (*5) Gas side(main pi Liquid side(main Gas side Liquid side Gas side Liquid side Liquid side Reside Liquid side	Cooling Heating Cooling Heating Heating Heating	mm mm dB(A) dB(A) dB(A) dB(A) dB(A) dB(A)	Discharge Low-pressure 23.5 32 15.8 9.5 8 8 69	ON:4.15, OFF:3.20 temp. sensor / Suction temp. sensor / High sensor / Compressor case thermostat / F 26.5 32 15.8 9.5 Flare Flare 15.8 9.5 300 10 80%-130% 53 55 50/47/44 50/47/44 70 72 68/66/61	28 32 15.8 9.5 13 14 56 15 16 17 1

