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Product Bulletin

New VRF SHRM Advance for Europe

Toshiba are pleased to announce the NEW “VRF SHRM Advance for Europe” has been added to the VRF product range.

1. Model Names

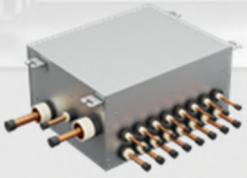
Outdoor Units – Standard Model

HP	Capacity Heat/Cool (kW)	Model Name	Appearance	Dimensions H x W x D (mm)
8	22.4 / 22.4	MMY-SUG0801MT8P-E		1690 x 990 x 780
10	28.0 / 28.0	MMY-SUG1001MT8P-E		
12	33.5 / 33.5	MMY-SUG1201MT8P-E		
14	40.0 / 40.0	MMY-SUG1401MT8P-E		
16	45.0 / 45.0	MMY-SUG1601MT8P-E		1690 x 1290 x 780
18	50.4 / 50.4	MMY-SUG1801MT8P-E		
20	56.0 / 56.0	MMY-SUG2001MT8P-E		
22	61.5 / 61.5	MMY-SUG2201MT8P-E		
24	67.0 / 67.0	MMY-SUG2401MT8P-E		

Safety Equipment for R32 VRF models

- This new product uses R32 as a refrigerant and under certain installation conditions may require the following safety equipment.
- Please refer to the installation manual for the outdoor unit for more details.
- The safety equipment is common to Europe Market.

Safety Equipment for R32 VRF models

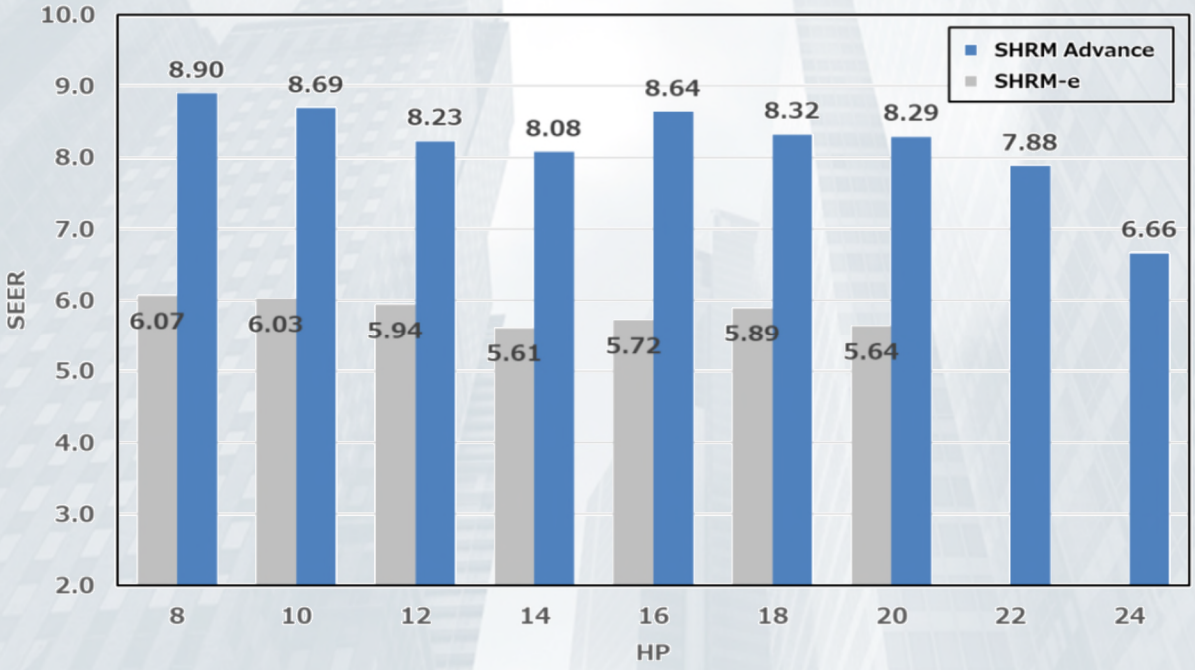
Product Name	Model Name	Appearance	Dimensions H x W x D (mm)
FS Single Port	RBM-Y1121FUPE		206 x 385 x 282
	RBM-Y1801FUPE		
	RBM-Y2801FUPE		
FS Multi-Port	RBM-Y1121FU4PE		293 x 338 x 468
	RBM-Y1801FU8PE		293 x 578 x 468
	RBM-Y2801FU12PE		293 x 818 x 468
Shut-Off Valve (For 2 pipe systems)	RBM-SV1121HUPE		206 x 385 x 282
	RBM-SV1801HUPE		
Battery Kit	TCB-BT1UPE		51 x 176 x 72
Leak Detector	TCB-LD1UPE		120 x 86 x 30

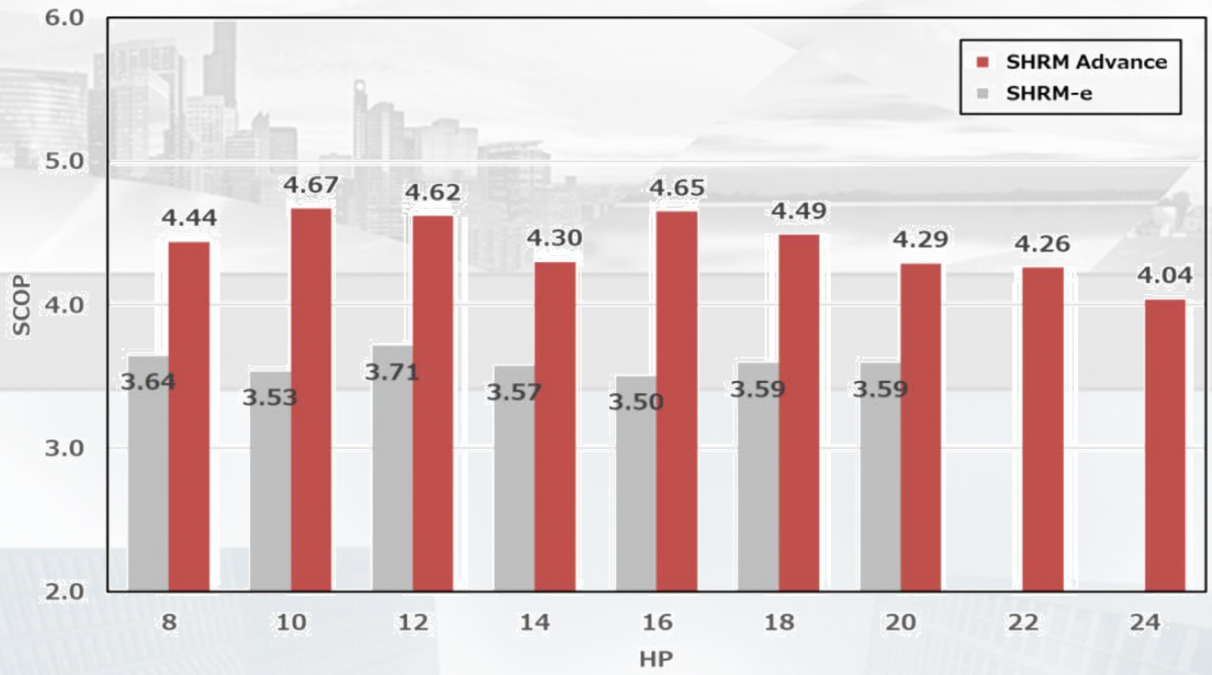
2. Production Date

TCTC Production March 2023

3. Performance

SHRM Advance achieves industry high-class SEER and SCOP for all capacity models.





4. Applicable Market

UK & Ireland

5. Features

5.1 Specification

- Assorted chassis sizes: Two types of 990W model (12 & 14HP), reduced from SHRMe (1210W) and three types of 1290W model (16, 18 & 20HP), reduced from SHRMe (1600W).
- 22HP & 24HP with a single outdoor unit.
- 77cc A3 Compressor is fitted to 8 to 14 and 22 to 24HP models.
- Maximum external static pressure increased to 80Pa.
- Decreased connecting port diameter.
- Oil Balance pipe removed.
- Reduced refrigerant charge Vs SHRMe (990W: 11.0kg > 6.0kg, 1290W: 11.0kg > 9.0kg)
- Expanded operation temperature range for cooling (-10.0 – to 46.0℃ > -15.0 to 50.0℃).

Specification comparison

		SHRM Advance								
Equivalent HP		8,10, ① 12,14				① 16,18,20			② 22,24	
Appearance										
Cooling capacity (kW)		22.4	28.0	33.5	40.0	45.0	50.4	56.0	61.5	67.0
Heating capacity (kW)		22.4	28.0	33.5	40.0	45.0	50.4	56.0	67.0	67.0
External dimensions	Height (mm)	1,690mm								
	Width (mm)	990mm				1,290mm				
	Depth (mm)	780mm								
Compressor		③ 77cc A3×1				64cc A3×2			③ 77cc A3×2	
Max external static pressure (Pa)		④ 80Pa								
Connecting port diameter (mm)	Suction pipe	⑤19.1	22.2	⑤22.2	28.⑤	28.⑤	28.⑤	28.⑤	28.⑤	28.⑤
	Discharge pipe	⑤15.9	19.1	19.1	19.1	22.2	22.2	22.2	22.2	22.2
	Liquid pipe	12.7	12.7	12.7	⑤12.7	15.9	⑤15.9	⑤15.9	⑤15.9	15.9
	Balance pipe	⑥ NA								
Amount of refrigerant (R410A)		⑦ 6.0kg				⑦ 9.0kg				
Operation temperature range	Cooling	⑧ -15.0 to 50.0								
	Heating	-25.0 to 15.5								

SHRM-e						
8,10		12,14		16,18,20		
						
22.4	28.0	33.5	40.0	45.0	50.4	56.0
22.4	28.0	33.5	40.0	45.0	50.4	56.0
1,800mm						
990W		1,210mm		1,600mm		
780mm						
64cc A3×2						
60	50	50	40	40	40	40
22.2	22.2	28.6	28.6	28.6	28.6	28.6
19.1	19.1	19.1	22.2	22.2	22.2	22.2
12.7	12.7	12.7	15.9	19.1	19.1	19.1
9.5	9.5	9.5	9.5	9.5	9.5	9.5
11.0kg						
-10.0 to 46.0						
-25.0 to 15.5						

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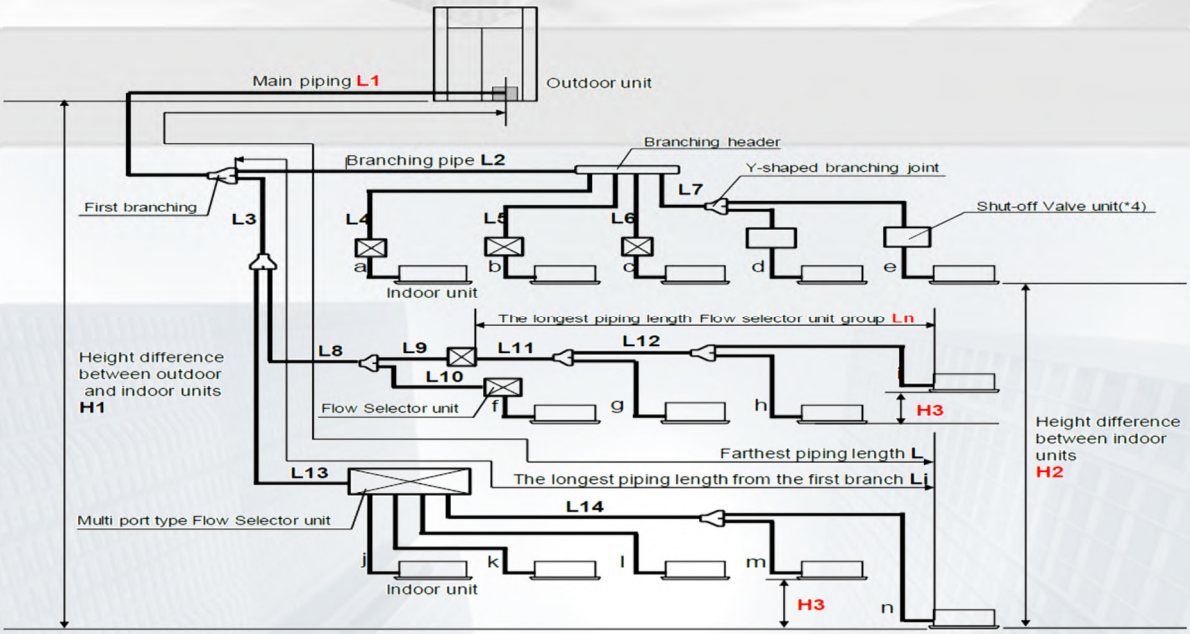
5.2 Piping Specification

- Maximum capacity of indoor units: 200%
- Total Piping length: 500m
- Maximum equivalent main piping length: 125m
- Maximum real length between FS unit and indoor unit (Ln): 50m
- Maximum height between indoor units: 30m
- Maximum height between outdoor units: 15m



Piping Specification

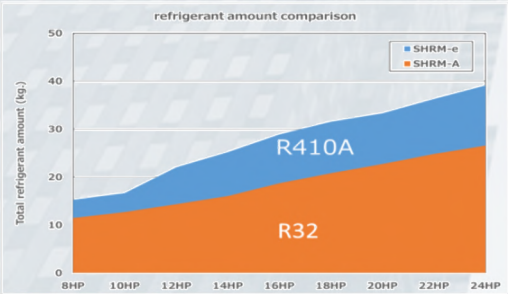
			SHRM Advance	SHRM-e	
System Restriction	Total capacity of indoor units	H2 ≤ 15m	200%	135%	
Piping Length	Total piping length (m)		500	300	
	Max. equivalent length of Main piping L1 (m)		125	H2 > 3m	100
				H2 ≤ 3m	120
	Max real length between FS unit and IDU Ln (m)		50	Single / Multi port	
Height difference	Height between IDU and IDU H2 (m)		30	15	
	Height between outdoor units H3 (m)		15	0.5	

*Regarding restrictions, please refer to IM and Data book

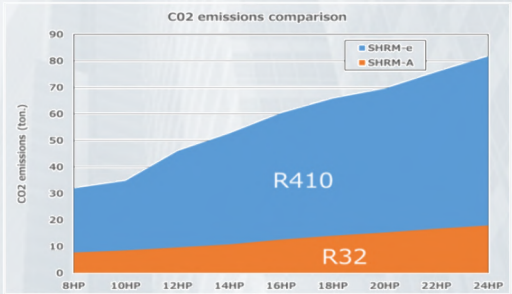
5.3 Environmentally Conscious by using lower GWP R32 Refrigerant

In consideration of environmental protection, SHRM Advance achieved a reduction of the system refrigerant amount used.

By introducing low GWP refrigerant and reducing the system refrigerant amount, SHRM Advance will greatly contribute to the reduction of environmental load in terms of CO2 emission.



Note : The above is a sample case
1. Main piping 10m, 2. The other piping is 1m for each,
3. Y joint is used, 4. IDU are all 1HP, 5. Standard condition of liquid size

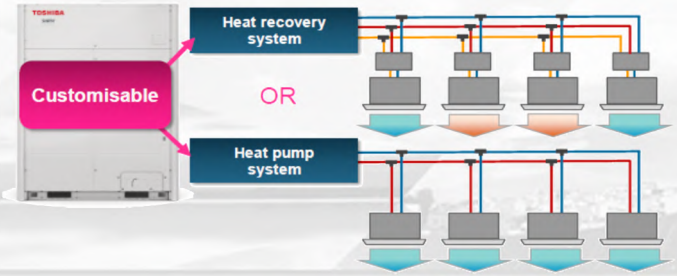


Note : The above is a sample case
1. Main piping 10m, 2. The other piping is 1m for each,
3. Y joint is used, 4. IDU are all 1HP, 5. Standard condition of liquid size

5.4 Customisable 2-Pipe Heat Pump or 3-Pipe Heat Recovery system

With SHRM Advance, you can choose Heat pump system or Heat recovery system in the field, depending on the applications requirement or stock availability.

***The 2-pipe system is available in 8, 10 and 12HP configuration.**



5.5 How to Set the Safety Devices

R32 VRF system requires safety measures depending on total system refrigerant amount and floor space. Check figure 1 and confirm applicable "Zone" (A to D) which decides the number of necessary safety measures (0 to 2) figure 2 shows brief outlook of safety measures you can select for our R32 VRF System.

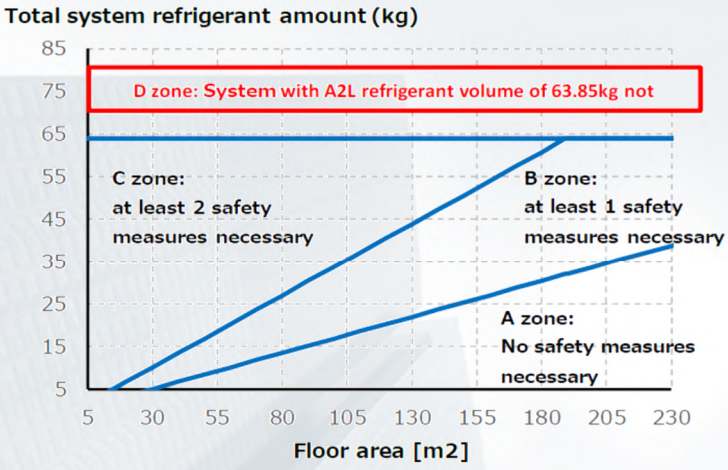


Fig. 1 Safety measures requirement
(Total system refrigerant amount vs Floor area)

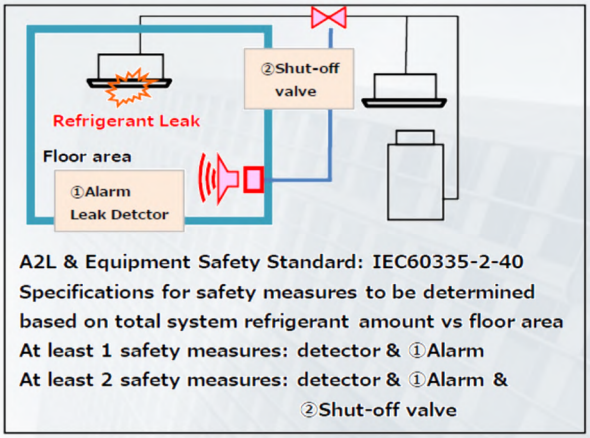
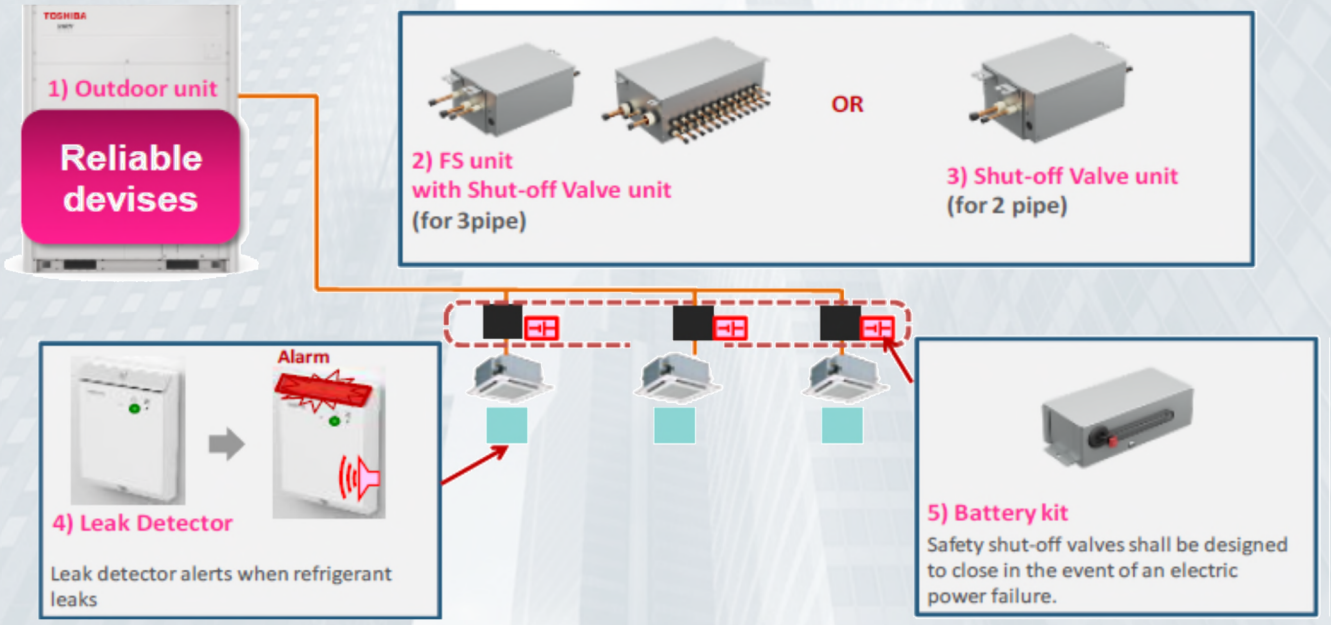


Fig. 2 Safety measures outlook

Toshiba has prepared 5 Safety measures to enable support for a wide range of application.

With these devices, Toshiba propose 3 safety measures concept.



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7. Connectable Indoor Units

Factory	FCU Type	FCU Model Name	FCU HP
TCC	Smart 4-Way Air Discharge Cassette	MMU-UP0091H-E	1.00
		MMU-UP0121H-E	1.25
		MMU-UP0151H-E	1.70
		MMU-UP0181H-E	2.00
		MMU-UP0241H-E	2.50
		MMU-UP0271H-E	3.00
		MMU-UP0301H-E	3.20
		MMU-UP0361H-E	4.00
		MMU-UP0481H-E	5.00
		MMU-UO0561H-E	6.00
TCTC	4-Way Air Discharge Cassette	MMU-UP0091HP-E	1.00
		MMU-UP0121HP-E	1.25
		MMU-UP0151HP-E	1.70
		MMU-UP0181HP-E	2.00
		MMU-UP0241HP-E	2.50
		MMU-UP0271HP-E	3.00
		MMU-UP0301HP-E	3.20
		MMU-UP0361HP-E	4.00
		MMU-UP0481HP-E	5.00
		MMU-UP0561HP-E	6.00
TCC	Compact 4-Way Cassette	MMU-UP0051MH-E	0.60
		MMU-UP0071MH-E	0.80
		MMU-UP0091MH-E	1.00
		MMU-UP0121MH-E	1.25
		MMU-UP0151MH-E	1.70
		MMU-UP0181MH-E	2.00
TCC	2-Way Air Discharge Cassette	MMU-UP0071WH-E	0.80
		MMU-UP0091WH-E	1.00
		MMU-UP0121WH-E	1.25
		MMU-UP0151WH-E	1.70
		MMU-UP0181WH-E	2.00
		MMU-UP0241WH-E	2.50
		MMU-UP0271WH-E	3.00
		MMU-UP0301WH-E	3.20
		MMU-UP0361WH-E	4.00
		MMU-UP0481WH-E	5.00
		MMU-UP0561WH-E	6.0
TCTC	1-Way Air Discharge Cassette	MMU-UP0031YHP-E	0.30
		MMU-UP0051YHP-E	0.60
		MMU-UP0071YHP-E	0.80
		MMU-UP0091YHP-E	1.00
		MMU-UP0121YHP-E	1.25
		MMU-UP0151YHP-E	1.70
		MMU-UP0181YHP-E	2.00
		MMU-UP0241YHP-E	2.50
		MMU-UP0271YHP-E	3.00
TCC	1-Way Air Discharge Cassette	MMU-UP0151SH-E	1.70
		MMU-UP0181SH-E	2.00
		MMU-UP0241SH-E	2.50
TCAC	Compact Slim Duct	MMD-UP0051SPHY-E	0.60
		MMD-UP0071SPHY-E	0.80
		MMD-UP0091SPHY-E	1.00
		MMD-UP0121SPHY-E	1.25
		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
TCTC	Concealed Duct	MMD-UP0051BHP-E	0.60
		MMD-UP0071BHP-E	0.80
		MMD-UP0091BHP-E	1.00
		MMD-UP0121BHP-E	1.25
		MMD-UP0151BHP-E	1.70
		MMD-UP0181BHP-E	2.00
		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-UP0561BHP-E	6.0
TCTC	Concealed Duct High Static	MMD-UP0181HP-E	2.00
		MMD-UP0241HP-E	2.50
		MMD-UP0271HP-E	3.00
		MMD-UP0361HP-E	4.00
		MMD-UP0481HP-E	5.00
TCTC	Celling	MMC-UP0151HP-E	1.70
		MMC-UP0181HP-E	2.00
		MMC-UP0241HP-E	2.50
		MMC-UP0271HP-E	3.00
		MMC-UP0361HP-E	4.00
		MMC-UP0481HP-E	5.00
		MMC-UP0561HP-E	6.00
TCTC	High-Wall	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
		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
TCTC	Design High Wall (HORAI)	MMK-UP0051DHPL-E	0.60
		MMK-UP0071DHPL-E	0.80
		MMK-UP0091DHPL-E	1.00
		MMK-UP0121DHPL-E	1.25
		MMK-UP0151DHPL-E	1.70
		MMK-UP0181DHPL-E	2.00
TCC	Hot Water Module	MMW-UP0271LQ-E	3.00
		MMW-UP0561LQ-E	6.00
TCTC	Fresh Air Intake	MMD-UP0481HFP-E1	5.00
		MMD-UP0721HFP-E1	8.00
		MMD-UP0961HFP-E1	10.00
		MMD-UP1121HFP-E1	12.00

6.1 How to identify R32 Compatible indoor units

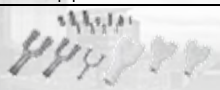
- R32 compatible indoor units listed above will be implemented from September 2022 production
- Please refer to bulletin TIB-543-01 "New R32 Compatible VRF indoor Units for Europe"

8. Indoor Specifications

7.1 Branching Joints

For the existing branching joints and headers, sockets have been added to the kit, enabling connection with SHRM Advance.

1) Branching joints list (For 3 piping)

Name	Appearance	Model Name	How to Distinguish
Y-Shape branching joint		RBM-BY55FE	Socket added (see 3 below)
		RBM-BY105FE	Socket added (see 3 below)
		RBM-BY205FE	No change
4-branching header		RBM-HY1043FE	Socket added (see 3 below)
		RBM-HY2043FE	Socket added (see 3 below)
8-branching header		RBM-HY1083FE	Socket added (see 3 below)
		RBM-HY2083FE	Socket added (see 3 below)

2) Branching joints list (For 2 piping)

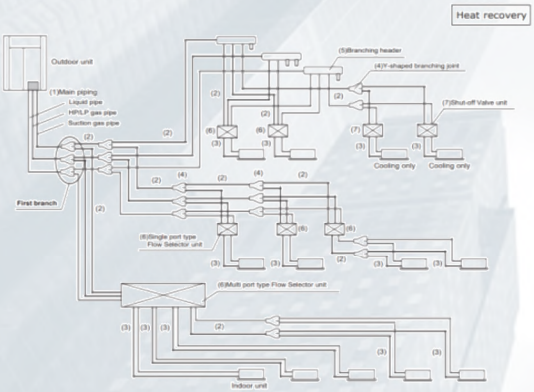
Name	Appearance	Model Name	How to Distinguish
Y-Shape branching joint		RBM-BY55E	Socket added (see 3 below)
		RBM-BY105FE	Socket added (see 3 below)
4-branching header		RBM-HY1043E	Socket added (see 3 below)
		RBM-HY1083E	Socket added (see 3 below)

3) How to distinguish

From July, 2022 (production basis)

The marks (15mm×15mm ■) are added on both sides of the packaging box.

4) Selection of refrigerant piping (For 3 piping)



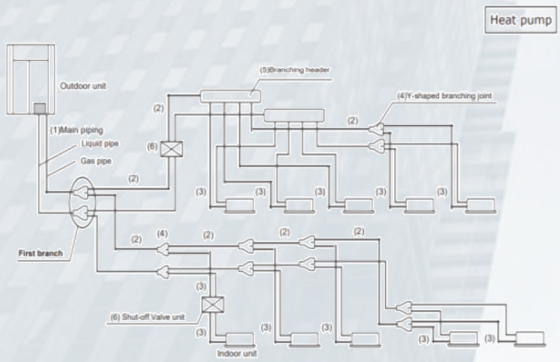
(4) Y-shaped branching joint

Total capacity code of indoor unit at downstream side	Model name	Model name
Equivalent to capacity (HP)	For 3 piping	For 2 piping
Below 6.4	RBM-BY55FE	RBM-BY55E
6.4 to below 14.2	RBM-BY105FE	RBM-BY105E
14.2 or more	RBM-BY205FE	

(5) Branching header

Total capacity code of indoor unit at downstream side		Model name	Model name
Equivalent to capacity (HP)		For 3 piping	For 2 piping
For 4 branches	Below 14.2	RBM-HY1043FE	RBM-HY1043E
	14.2 or more	RBM-HY2043FE	RBM-HY2043E
For 8 branches	Below 14.2	RBM-HY1083FE	
	14.2 or more	RBM-HY2083FE	

5) Selection of refrigerant piping (For 2 piping)



(4) Y-shaped branching joint

Total capacity code of indoor unit at downstream side	Model name
Equivalent to capacity (HP)	For 2 piping
Below 6.4	RBM-BY55E
6.4 or more	RBM-BY105E

(5) Branching header

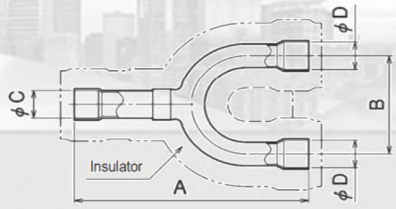
Total capacity code of indoor unit at downstream side		Model name
Equivalent to capacity (HP)		For 2 piping
For 4 branches	Below 14.2	RBM-HY1043E
	14.2 or more	RBM-HY2043E

7.2 Y-Shape Branch Joints

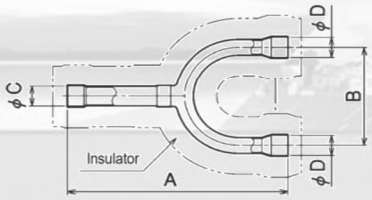
RBM-BY55FE, BY105FE, BY205FE (For 3 piping)

(Unit : mm)

Suction gas side, HP/LP gas side



Liquid side

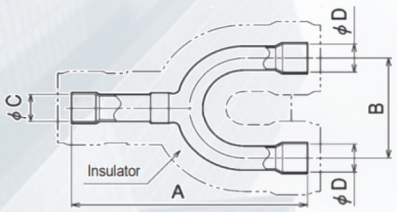


Model		A	B	øC	øD	Accessory socket Q'ty	Sealed pipe
RBM-BY55FE	Suction gas side	160	80	15.9	15.9	⑨1 x 2	
	HP/LP gas side	160	80	15.9	15.9	⑨ x 3	ø 12.7 x 1
	Liquid side	130	70	9.5	9.5	① x 2	
RBM-BY105FE	Suction gas side	170	80	22.2	22.2	⑭ x 2, ⑱ x 1, ⑦⓪ x 2, ⑨1 x 1	
	HP/LP gas side	170	80	22.2	22.2	⑭ x 1, ⑱ x 1, ⑨③ x 2	ø 12.7 x 1
	Liquid side	160	80	15.9	15.9	⑨1 x 2, ⑨② x 1	
RBM-BY205FE	Suction gas side	200	80	31.8	28.6	⑯ x 1, ㉓ x 1, ㉗ x 1, ㊸ x 2, ⑤⑧ x 1, ⑤⑨ x 1, ⑨1 x 1	
	HP/LP gas side	170	80	22.2	22.2	⑱ x 2, ⑦⓪ x 2, ⑨③ x 1	ø 12.7 x 1
	Liquid side	160	80	15.9	15.9	⑨ x 2, ⑤1 x 2, ⑨② x 1	

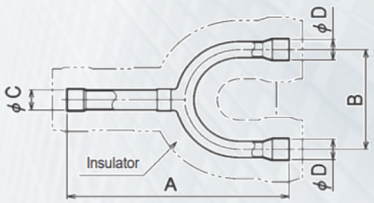
RBM-BY55E, BY105E (For 2 piping)

(Unit : mm)

Gas side



Liquid side



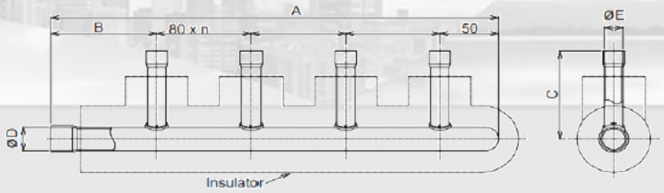
Model		A	B	øC	øD	Accessory socket Q'ty
RBM-BY55E	Gas side	160	80	15.9	15.9	⑨ x 1, ⑤1 x 2, ⑨1 x 2
	Liquid side	130	70	9.5	9.5	① x 2
RBM-BY105E	Gas side	170	80	22.2	22.2	⑭ x 2, ⑱ x 1, ⑦⓪ x 2, ⑨1 x 1
	Liquid side	160	80	15.9	15.9	⑥ x 1, ⑨ x 1, ⑨1 x 1, ⑨② x 1

7.3 Header Branch Joints

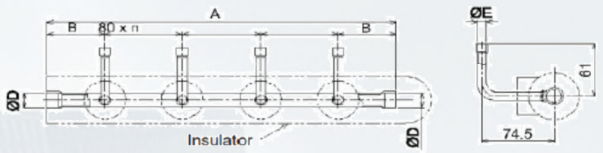
RBM-HY1043FE, HY1083FE, HY2043FE, HY2803FE (For 3 piping)

(Unit : mm)

Suction gas side, HP/LP gas side



Liquid side

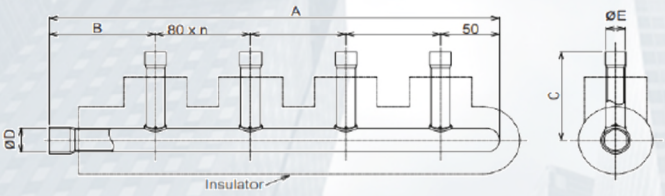


Model		A	B	C	øD	øE	n	Accessory socket Q'ty	Sealed pipe
RBM-HY1043FE	Suction gas side	380	90	83.6	22.2	15.9	3	⑥x 3, ⑨x 4, ⑭x 1, ⑱x 1, ⑦⓪ x 1	ø 15.9 x 1
	HP/LP gas side	380	90	83.6	22.2	15.9	3	⑥x 4, ⑨x 4, ⑱ x 1, ⑭x 1, ⑥⑤ x 1	ø 15.9 x 3
	Liquid side	330	45	-	15.9	9.5	3	①x 4, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 1
RBM-HY1083FE	Suction gas side	700	90	83.6	22.2	15.9	7	⑥x 7, ⑨x 8, ⑭x 1, ⑱x 1, ⑦⓪ x 1	ø 15.9 x 3
	HP/LP gas side	700	90	83.6	22.2	15.9	7	⑥x 8, ⑨x 8, ⑱ x 1, ⑭x 1, ⑥⑤ x 1	ø 15.9 x 7
	Liquid side	650	45	-	15.9	9.5	7	①x 8, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 3
RBM-HY2043FE	Suction gas side	385.5	95.5	89.3	31.8	15.9	3	⑥x 2, ⑨x 2, ㉗x 1, ㊾x 1	ø 15.9 x 1
	HP/LP gas side	380	90	83.6	22.2	15.9	3	⑨x 4, ⑱x 1, ⑦⓪ x 1	ø 15.9 x 3
	Liquid side	330	45	-	15.9	9.5	3	①x 2, ⑤①x 1, ⑨①x 1	ø 15.9 x 1, ø 9.5 x 1
RBM-HY2083FE	Suction gas side	705.5	95.5	89.3	31.8	15.9	7	⑥x 7, ⑨x 7, ㉗x 1, ㊾x 1	ø 15.9 x 3
	HP/LP gas side	700	90	83.6	22.2	15.9	7	⑨x 8, ⑱x 1, ⑦⓪ x 1	ø 15.9 x 7
	Liquid side	650	45	-	15.9	9.5	7	①x 7, ⑤①x 1, ⑨①x 1	ø 15.9 x 1, ø 9.5 x 3

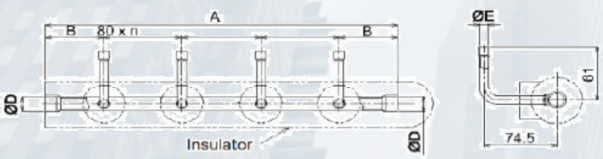
RBM-HY1043E, HY1083E (For 2 piping)

(Unit : mm)

Gas side



Liquid side

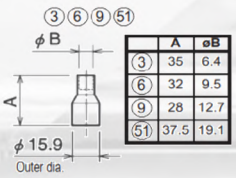


Model		A	B	C	øD	øE	n	Accessory socket Q'ty	Sealed pipe
RBM-HY1043E	Gas side	380	90	83.6	22.2	15.9	3	⑥x 4, ⑨x 4, ⑭x 1, ⑱x 1, ⑦⓪ x 1, ⑥⑤ x 1	ø 15.9 x 1
	Liquid side	360	60	-	15.9	9.5	3	①x 4, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 1
RBM-HY1083E	Gas side	700	90	83.6	22.2	15.9	7	⑥x 8, ⑨x 8, ⑭x 1, ⑱x 1, ⑦⓪ x 1, ⑥⑤ x 1	ø 15.9 x 3
	Liquid side	680	60	-	15.9	9.5	7	①x 8, ⑥x 1, ⑨x 1	ø 15.9 x 1, ø 9.5 x 3

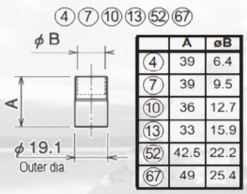
7.4 Accessory Sockets

(Unit : mm)

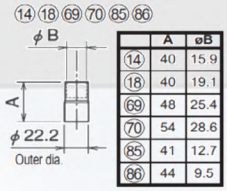
	A	øB
②	29	6.4
⑤	26	9.5
⑭	31	15.9
⑧④	40	19.1



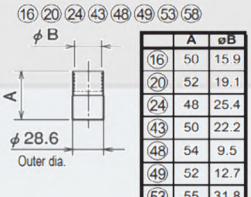
	A	øB
③	35	6.4
⑥	32	9.5
⑨	28	12.7
⑤①	37.5	19.1



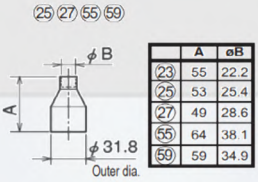
	A	øB
④	39	6.4
⑦	39	9.5
⑩	36	12.7
⑬	33	15.9
⑤②	42.5	22.2
⑥⑦	49	25.4



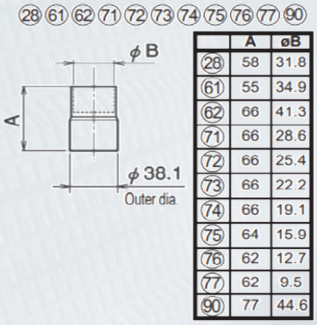
	A	øB
⑭	40	15.9
⑱	40	19.1
⑥⑨	48	25.4
⑦⓪	54	28.6
⑧⑤	41	12.7
⑧⑥	44	9.5



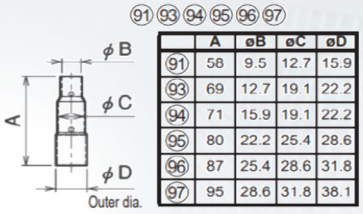
	A	øB
⑯	50	15.9
⑳	52	19.1
㉔	48	25.4
㊸	50	22.2
㊽	54	9.5
㊾	52	12.7
㊸	55	31.8
㊽	62	34.9



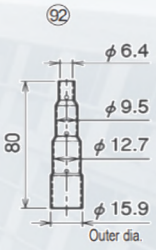
	A	øB
㉓	55	22.2
㉕	53	25.4
㉗	49	28.6
㊺	64	38.1
㊾	59	34.9



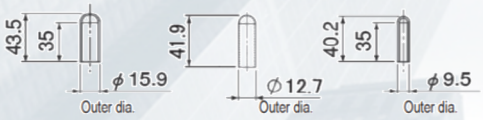
	A	øB
㉘	58	31.8
⑥①	55	34.9
⑥②	66	41.3
⑦①	66	28.6
⑦②	66	25.4
⑦③	66	22.2
⑦④	66	19.1
⑦⑤	64	15.9
⑦⑥	62	12.7
⑦⑦	62	9.5
⑨⓪	77	44.6



	A	øB	øC	øD
⑨①	58	9.5	12.7	15.9
⑨③	69	12.7	19.1	22.2
⑨④	71	15.9	19.1	22.2
⑨⑤	80	22.2	25.4	28.6
⑨⑥	87	25.4	28.6	31.8
⑨⑦	95	28.6	31.8	38.1



Sealed pipe



7.5 Optional PCBs for the Outdoor Unit

SHRM Advance has additionally listed as an installable outdoor unit to the installation manuals of following optional PCBs.

Specifications and/or features of each PCB has no change.

Please refer to the installation manual for PCB installation and setting methods.

Optional PCB of Outdoor unit

Name	Model Name
Output control board	TCB-PCIN4E
Power peak-cut control board	TCB-PCDM4E
External master ON/OFF control board	TCB-PCMO4E
Implementation period: From July 2022 (Production basis)	

7.6 Optional PMV Kits

Please Refer to Product Bulletin TIB-568-00 “NEW VRF PMV Kits”

Model Name
RBM-PMV0361UP-E
RBM-PMV0901UP-E

7.7 Optional Touch Screen Controller

Model Name
BMS-CT2560U-E

8. Specifications

Model name			MMY-	SUG0801MT8P-E	SUG1001MT8P-E	SUG1201MT8P-E	SUG1401MT8P-E
Outdoor Unit Type				Inverter unit	Inverter unit	Inverter unit	Inverter unit
Cooling Capacity			kW	22.4	28.0	33.5	40.0
Heating Capacity (Rated)			kW	22.4	28.0	33.5	40.0
Heating Capacity (Max)			kW	25.0	31.5	37.5	45.0
Capacity range			HP	8	10	12	14
Power Supply				3N- 50Hz 400V(380-415V)			
Voltage range		Minimum	V	342	342	342	342
		Maximum	V	456	456	456	456
Electrical characteristic	Cooling	Running current	A	9.14	11.5	14.2	18.9
		Power input	kW	5.13	6.83	8.88	12.04
		EER		4.37	4.10	3.77	3.32
	Heating (Rated.)	Running current	A	8.95	10.6	12.5	16.3
		Power input	kW	4.96	6.22	7.64	10.28
		COP		4.52	4.50	4.38	3.89
	Heating (Max.)	Running current	A	9.79	12.1	14.8	19.8
		Power input	kW	5.56	7.32	9.21	12.59
		COP		4.50	4.30	4.07	3.57
	Starting current			Soft Start	Soft Start	Soft Start	Soft Start
Dimension		Height	mm	1690	1690	1690	1690
		Width	mm	990	990	990	990
		Depth	mm	780	780	780	780
Weight			kg	232	232	232	232
Colour				Silky shade Munsell 1Y8.5/0.5)			
Compressor		Type		Hermetic twin rotary compressor			
		Motor output	kW	4.74	6.40	8.29	11.40
Fan unit		Type		Propeller fan	Propeller fan	Propeller fan	Propeller fan
		Motor output	kW	1.0	1.0	1.0	1.0
		Air volume	m3/h	9900	10500	11700	11880
Max. external static pressure			Pa	80	80	80	80
Heat exchanger				Finned tube	Finned tube	Finned tube	Finned tube
Refrigerant		Name		R32	R32	R32	R32
		Charge	kg	6.0	6.0	6.0	6.0
High-pressure switch			MPa	ON:3.20 OFF:4.15			
Protective devices				(*3)	(*3)	(*3)	(*3)
Power supply wiring		MCA	A	17.0	23.0	27.0	31.0
		MOCP	A	20.0	32.0	32.0	40.0
		Max Power input	kW	9.81	13.1	15.7	17.6
Piping connections	Suction gas	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	019.1	022.2	022.2	028.6
	HP/LP gas	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	015.9	019.1	019.1	019.1
	Liquid	Type		Brazing	Brazing	Brazing	Brazing
		Diameter	mm	012.7	012.7	012.7	012.7
Max. number of connected indoor units				18	22	27	31
Sound pressure level		Cooling	dB(A)	53	55	58	58
		Heating	dB(A)	56	58	62	63
Sound power level		Cooling	dB(A)	74	75	79	79
		Heating	dB(A)	77	78	82	84
Operation temperature range		Cooling	°CDB	-15.0 to 50.0	-15.0 to 50.0	-15.0 to 50.0	-15.0 to 50.0
		Heating	°CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5

TOSHIBA

Model name			MMY-	SUG1601MT8P-E	SUG1801MT8P-E	SUG2001MT8P-E	SUG2201MT8P-E	SUG2401MT8P-E
Outdoor unit type				Inverter unit	Inverter unit	Inverter unit	Inverter unit	Inverter unit
Cooling capacity			kW	45.0	50.4	56.0	61.5	67.0
Heating capacity (Rated)			kW	45.0	50.4	56.0	61.5	67.0
Heating capacity (Max)			kW	50.0	56.0	63.0	69.0	70.0
Capacity range			HP	16	18	20	22	24
Power Supply				3N- 50Hz 400V(380-415V)				
Voltage range		Minimum	V	342	342	342	342	342
		Maximum	V	456	456	456	456	456
Electrical characteristic	Cooling	Running current	A	21.1	24.8	25.4	29.2	38.1
		Power input	kW	12.16	14.78	15.47	18.19	24.27
		EER		3.70	3.41	3.62	3.38	2.76
	Heating (Rated.)	Running current	A	19.9	23.8	23.6	26.1	30.9
		Power input	kW	11.06	14.00	14.25	16.10	19.48
		COP		4.07	3.60	3.93	3.82	3.44
	Heating (Max.)	Running current	A	21.9	27.4	27.3	30.9	37.9
		Power input	kW	12.43	16.52	17.01	19.48	24.15
		COP		4.02	3.39	3.70	3.54	2.90
	Starting current			Soft Start	Soft Start	Soft Start	Soft Start	Soft Start
Dimension		Height	mm	1690	1690	1690	1690	1690
		Width	mm	1290	1290	1290	1290	1290
		Depth	mm	780	780	780	780	780
Weight			kg	329	329	361	361	361
Colour				Silky shade (Munsell 1Y8.5/0.5)				
Compressor		Type		Hermetic twin rotary compressor				
		Motor Output	kW	5.63×2	6.84×2	7.16×2	8.48×2	11.5×2
Fan unit		Type		Propeller fan	Propeller fan	Propeller fan	Propeller fan	Propeller fan
		Motor output	kW	1.0×2	1.0×2	1.0×2	1.0×2	1.0×2
		Air volume	m3/h	15300	16800	15900	16500	16800
Max. external static pressure			Pa	80	80	80	80	80
Heat exchanger				Finned tube	Finned tube	Finned tube	Finned tube	Finned tube
Refrigerant		Name		R32	R32	R32	R32	R32
		Charge	kg	9.0	9.0	9.0	9.0	9.0
High-pressure switch			MPa	ON:3.20 OFF:4.15				
Protective devices				(*3)	(*3)	(*3)	(*3)	(*3)
Power supply wiring		MCA	A	34.0	38.0	40.0	57.0	60.0
		MOCP	A	40.0	50.0	50.0	63.0	80.0
		Max Power input	kW	19.5	21.7	23.0	32.5	34.5
Piping connections	Suction gas	Type		Brazing	Brazing	Brazing	Brazing	Brazing
		Diameter	mm	028.6	028.6	028.6	028.6	028.6
	HP/LP gas	Type		Brazing	Brazing	Brazing	Brazing	Brazing
		Diameter	mm	022.2	022.2	022.2	022.2	022.2
	Liquid	Type		Brazing	Brazing	Brazing	Brazing	Brazing
		Diameter	mm	015.9	015.9	015.9	015.9	015.9
Max. number of connected indoor units				36	40	45	49	54
Sound pressure level		Cooling	dB(A)	60	61	63	64	64
		Heating	dB(A)	64	67	67	67	69
Sound power level		Cooling	dB(A)	83	84	85	86	86
		Heating	dB(A)	87	89	89	90	91
Operation temperature range		Cooling	°CDB	-15.0 to 50.0	-15.0 to 50.0	-15.0 to 50.0	-15.0 to 50.0	-15.0 to 50.0
		Heating	°CWB	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5	-25.0 to 15.5

For further information please contact our customer support team on 0870 843 0333, your local representative, your supplier of Toshiba products or email any enquiries to: - general.enquiries@toshiba-ac.com

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