

# TOSHIBA INSTALLATION MANUAL

Leading Innovation >>>

## SUPER MODULAR MULTI SYSTEM AIR CONDITIONER

### Branching Joint (Only for R410A)

Model: RBM-BY55E, BY105E, BY205E, BY305E

Thank you for purchasing the "Branching Joint" for TOSHIBA Air Conditioner. Before starting the installation work, please read this manual carefully and install the product properly.

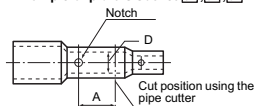
## PRECAUTIONS FOR SAFETY

- Please read "PRECAUTIONS FOR SAFETY" described in the Installation Manual of Super Modular Multi System outdoor unit.
- For piping material and size of the refrigerant pipes, refer to the Installation Manual of Super Modular Multi System outdoor unit.
- Installation work must be carried out by following this installation manual and using exclusive tools and pipes for the new refrigerant (R410A).
- Ask an authorized dealer or qualified installation professional to install this product.
- The parts shown in the right table are included in this package. Check those parts.

## 1. CONNECTING METHOD

- Select the socket (No. in ○) or plural socket (No. in □) fitting to the pipe diameter connected to the indoor unit. When using the plurals socket, cut with the pipe cutter as shown on the right.

<Example of plurals socket 91, 92, 94 >



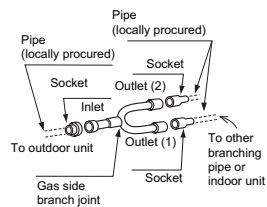
	Unit : mm		
Insertion pipe diameter D	Ø9.5	Ø12.7	Ø19.1
Dimensions A (rough standard)	10	11	17

- After cutting the pipe, be sure to remove the burrs and polish the end surface. When some squash or deformation, etc. occurs, improve the pipe insertion condition by using the flare tool.
- Confirm whether no dust, water, foreign matters, etc exists on the branching joint, the socket to be inserted, and inside the plurals socket.

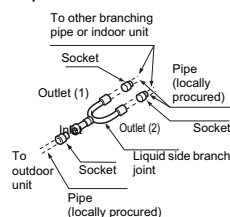
### CAUTION

- When brazing the refrigerant pipes, be sure to put the nitrogen first to prevent from oxidizing the inner pipe. If not, the oxidation scale brings the refrigerant cycle clogging and result in malfunction.
- Use the brand new pipe for the refrigerant pipe, and prevent from water and dust when installing.

#### <Gas side>

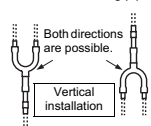


#### <Liquid side>



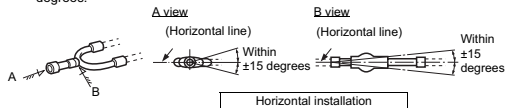
#### <Gas/Liquid side>

Install the branching pipes horizontally or vertically to make the flow split evenly.



### CAUTION

- When a branching pipe is installed horizontally, make its gradient within  $\pm 15$  degrees.



- After heat insulators are applied to the branching pipes, set some hanging metals (locally procured) as support.

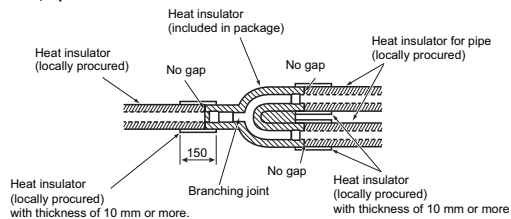
## 2. HEAT INSULATING METHOD

- In order to prevent dripping condensation, do not leave any gap between heat insulator for branching joint (included in package) and heat insulator for pipe (locally procured). And then, wrap the seam with heat insulators with thickness of 10 mm or more (locally procured).
- Use heat insulators with heat resistance of 120 °C or more for the gas side pipes.

### CAUTION

Condensation may occur on the heat insulator according to the atmosphere of the inside of the ceiling.  
If the inside of the ceiling is subject to be high temperature and high humidity, add glass wool (16 to 20 kg/m<sup>3</sup>, 10mm thick or more) on the heat insulator described above for a sufficient heat insulation.

#### <Gas, liquid side>



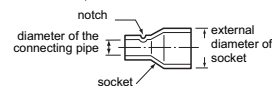
- Once heat insulators have been applied as shown above, tape up the heat insulator ends.



## PARTS LIST

### NOTE

- 1 ( ) indicates outer diameter.
- 2 For the sockets, the side with a notch is the side to connect a pipe. (65, 68, 69, 72, 76) : without notch



↕ shows the combination. Unit : mm

NAME	MODEL	RBM-BY55E	RBM-BY105E	RBM-BY205E	RBM-BY305E	
Gas side		51 (Ø15.9) 16 (Ø15.9) 61 (Ø15.9) 91 (Ø15.9) Ø19.1 Ø12.7 Ø19.1 Ø12.7 Ø15.9 Ø9.5 Ø12.7 (Ø15.9)	76 (Ø22.2) 70 (Ø22.2) 14 (Ø22.2) Ø28.6 Ø28.6 Ø15.9 Ø22.2 Ø9.5 Ø15.9 Ø12.7 (Ø15.9)	27 (Ø31.8) 31.8 (Ø28.6) 43 (Ø28.6) Ø28.6 Ø28.6 Ø34.9 Ø22.2 Ø34.9 (Ø31.8) Ø15.9 Ø12.7 (Ø15.9)	61 (Ø38.1) 62 (Ø38.1) 61 (Ø38.1) 71 (Ø38.1) Ø34.9 Ø38.1 Ø41.3 Ø34.9 Ø28.6 Ø41.3 (Ø38.1) Ø34.9 Ø28.6 Ø22.2 Ø15.9 Ø12.7 (Ø15.9)	
		91 91	14 91	43 16 91	62 61 71 43 75 91	
Liquid side		61 (Ø9.5) 66.4 (Ø6.4) Ø9.5 Ø6.4	99 (Ø15.9) 91 (Ø15.9) 91 (Ø15.9) Ø12.7 Ø12.7 Ø9.5 Ø15.9 Ø6.4 (Ø15.9)	99 (Ø15.9) 91 (Ø15.9) 91 (Ø15.9) Ø12.7 Ø12.7 Ø9.5 Ø15.9 Ø6.4 (Ø15.9)	94 (Ø22.2) 94 (Ø22.2) 94 (Ø22.2) Ø19.1 Ø19.1 Ø15.9 Ø15.9 Ø15.9 Ø6.4 (Ø15.9)	
		61	92	92	92	
Heat insulator (gas side/liquid side)						
		No. 69 Ø12.7×(Ø15.9) ..... 1pc 51 Ø19.1×(Ø15.9) ..... 1pc	No. 70 Ø28.6×(Ø22.2) ..... 1pc 14 (Ø22.2)×Ø15.9 ..... 2pcs 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc	No. 27 Ø34.9×(Ø31.8) ..... 1pc 31.8 Ø28.6×(Ø31.8) ..... 1pc 43 (Ø28.6)×Ø34.9 ..... 1pc 16 (Ø28.6)×Ø15.9 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc	No. 62 Ø41.3×(Ø38.1) ..... 1pc 61 Ø34.9×(Ø38.1) ..... 1pc 61 (Ø38.1)×Ø41.3 ..... 1pc 71 (Ø38.1)×Ø34.9 ..... 2pcs 71 (Ø38.1)×Ø28.6 ..... 2pc 43 (Ø28.6)×Ø22.2 ..... 1pc 75 (Ø38.1)×Ø15.9 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc	
Socket	Gas side	Inlet side	69 Ø12.7×(Ø15.9) ..... 1pc 51 Ø19.1×(Ø15.9) ..... 1pc	70 Ø28.6×(Ø22.2) ..... 1pc	27 Ø34.9×(Ø31.8) ..... 1pc 31.8 Ø28.6×(Ø31.8) ..... 1pc	62 Ø41.3×(Ø38.1) ..... 1pc 61 Ø34.9×(Ø38.1) ..... 1pc
		Outlet side	51 (Ø15.9)×Ø19.1 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 2pcs	70 (Ø22.2)×Ø28.6 ..... 1pc 14 (Ø22.2)×Ø15.9 ..... 2pcs 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc	27 Ø34.9×(Ø31.8) ..... 1pc 31.8 Ø28.6×(Ø31.8) ..... 1pc 43 (Ø28.6)×Ø34.9 ..... 1pc 16 (Ø28.6)×Ø15.9 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc	62 (Ø38.1)×Ø41.3 ..... 1pc 71 (Ø38.1)×Ø34.9 ..... 2pcs 71 (Ø38.1)×Ø28.6 ..... 2pc 43 (Ø28.6)×Ø22.2 ..... 1pc 75 (Ø38.1)×Ø15.9 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc
Liquid side	Inlet side	61 (Ø9.5)×Ø6.4 ..... 2pcs	99 Ø12.7×(Ø15.9) ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5 ..... 1pc 92 (Ø15.9)×Ø12.7×Ø9.5×Ø6.4 ..... 1pc	99 (Ø15.9)×Ø12.7 ..... 1pc 91 (Ø15.9)×Ø12.7×Ø9.5×Ø6.4 ..... 1pc	94 (Ø22.2)×Ø19.1×Ø15.9 ..... 2pcs 92 (Ø15.9)×Ø12.7×Ø9.5×Ø6.4 ..... 1pc	
		Outlet side				
Installation manual		This manual				