

For use with R410A-compatible units



CITY MULTI

OPTIONAL PARTS

2-BRANCH JOINT PIPE

(CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2)

INSTALLATION MANUAL

Caution

The incorrect selection of the type of branch pipe and the size of connecting pipe does not allow the air conditioner to provide the rated capacity. Please read this instruction manual carefully for correct mounting work.

1 The following parts are contained in this box. Please identify the quantity with types.

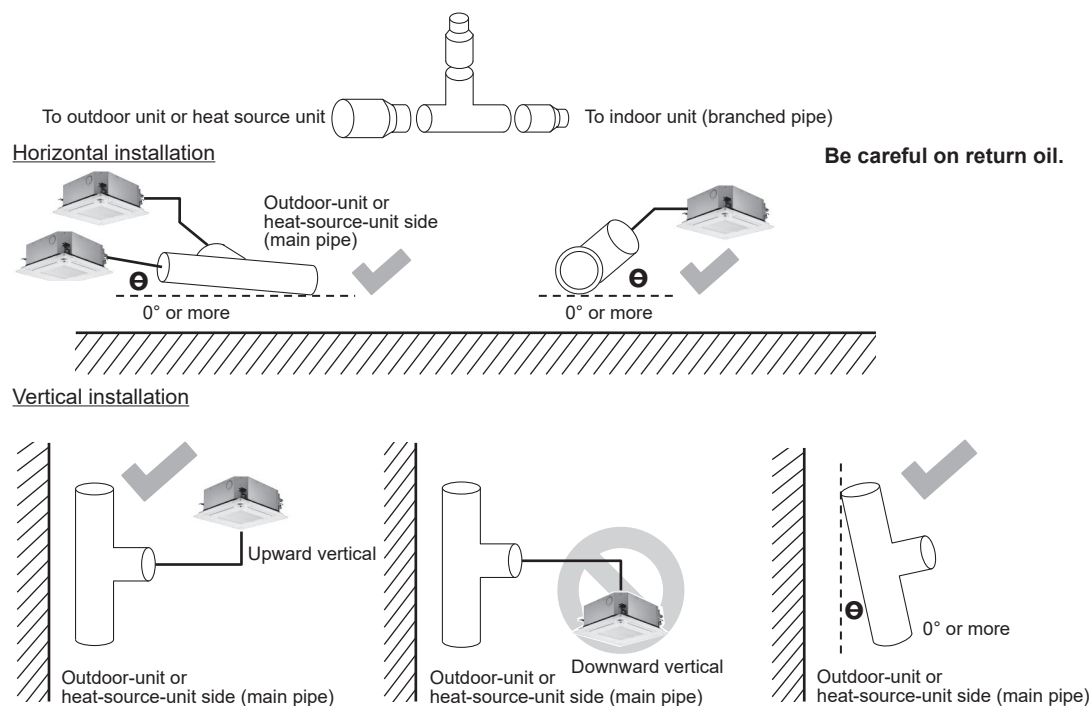
Part name	① Instruction	② 2-branch joint (small)	③ 2-branch joint (large)	④ Cover 1	⑤ Cover 2	⑥ Pipe 1	⑦ Pipe 2	⑧ Pipe 3	⑨ Pipe 4	⑩ Pipe 5	⑪ Pipe 6	⑫ Pipe 7	⑬ Pipe 8
Shape		For liquid line	For gas line	For liquid line	For gas line								
	This sheet 1 sheet					OD9.52[3/8]-ID6.35[1/4]	OD15.88[5/8]-ID12.7[1/2]	OD19.05[3/4]-ID12.7[1/2]	OD19.05[3/4]-ID15.88[5/8]	OD12.7[1/2]-ID9.52[3/8]	OD19.05[3/4]-ID22.2[7/8]	OD25.4[1]-ID22.2[7/8]	OD25.4[1]-ID12.7[1/2]
CMY-Y102SS-G2	1	1	1	1	1	2	1	1	2	-	-	-	-
CMY-Y102LS-G2	1	1	1	1	1	1	-	1	1	2	1	2	-
CMY-Y202S-G2	1	1	1	1	1	-	1	1	1	1	1	1	-
CMY-Y302S-G2	1	1	1	1	1	-	1	1	1	-	-	1	1

Part name	⑭ Pipe 9	⑮ Pipe 10	⑯ Pipe 11	⑰ Pipe 12	⑱ Pipe 13	⑲ Pipe 14	⑳ Pipe 17	㉑ Pipe 19	㉒ Pipe 20	㉓ Pipe 21
Shape										
	OD12.7[1/2]-ID6.35[1/4]	OD25.4[1]-ID28.58[1-1/8]	OD19.05[3/4]-ID25.4[1]	OD15.88[5/8]-ID9.52[3/8]	OD15.88[5/8]-ID6.35[1/4]	OD31.75[1-1/4]-ID28.58[1-1/8]	OD25.4[1]-ID19.05[3/4]	OD25.4[1]-ID15.88[5/8]	OD31.75[1-1/4]-ID34.93[1-3/8]	OD31.75[1-1/4]-ID41.28[1-5/8]
CMY-Y102SS-G2	-	-	-	-	-	-	-	-	-	-
CMY-Y102LS-G2	-	2	-	-	-	-	2	1	-	-
CMY-Y202S-G2	1	3	1	1	-	-	-	-	-	-
CMY-Y302S-G2	-	1	-	1	1	1	1	1	2	2

2 Please observe the items below for the mounting work.

1. Observe the restrictions on refrigerant piping length in Table-1.
2. Braze the pipes under nitrogen purge.
3. The 2-branch joint is equipped with a stopper. Push in the pipes into the branch joint until they stop.
4. Be careful that foreign materials like dust do not enter into the piping when connecting pipes.
5. Apply insulation material to all refrigerant pipings.

6. When installing the branch joint CMY-Y202S-G2 or CMY-Y302S-G2 on the gas piping, it must be installed horizontally or with the branched pipes facing up (as shown in the figure below).



7. See [3] for how to select refrigerant piping size and use of 2-branch joint.

8. When installing outdoor units above indoor units, provide a trap to keep the oil from stagnating in the stopped indoor units. The trap should be positioned as close to the branch joint pipe as possible.

Limitation on Refrigerant Piping Length

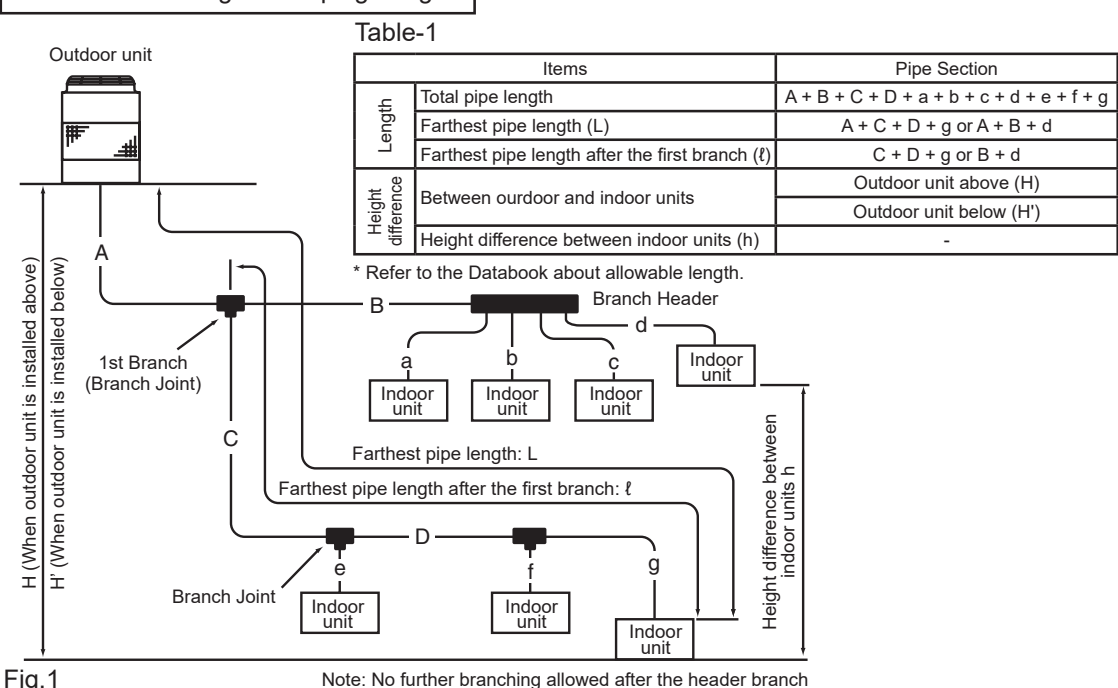


Fig.1

Limitation on indoor unit connection

- Select the correct indoor unit connection referring to the installation manual of outdoor unit or the Databook.

3 Selection of refrigerant piping size and use of 2-branch joint.

1. Prepare the pipe to be connected in the field.
2. Determine the piping sizes of each part from Table-2 and 3.
3. The 2-branch joint can be connected to all piping sizes selected in the item 2. to match a specified piping size.
 - (1) Use the joint as standard. (No auxiliary pipe is necessary. Direct connection available)
 - (2) Use it by connecting the auxiliary pipe.
4. When pipe is cut with a pipe cutter or the like, remove burr, dust and foreign materials inside the pipe, and connect the pipe.

Table-9		(Unit:mm[in])		
Pipe types	Dimension	A	B	C
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]
	Gas pipe	ø19.05[3/4]	ø19.05[3/4]	ø15.88[5/8]
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	ø12.7[1/2]	ø9.52[3/8]
	Gas pipe	ø25.4[1]	ø25.4[1]	ø19.05[3/4]
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	ø15.88[5/8]	ø12.7[1/2]
	Gas pipe	ø25.4[1]	ø25.4[1]	ø19.05[3/4]
CMY-Y302S-G2	Liquid pipe	ø19.05[3/4]	ø19.05[3/4]	ø15.88[5/8]
	Gas pipe	ø31.75[1-1/4]	ø31.75[1-1/4]	ø25.4[1]

Table-5 Between branching (Fig.1-C)		(Unit:mm[in])							
Pipe types	Down stream capacity	Non-US model	~140	141~200	201~300	301~400	401~650	651~800	801~
		US model	~54	55~72	73~108	109~144	145~240	241~308	309~
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]	ø12.7[1/2]	ø15.88[5/8]	ø19.05[3/4]	ø19.05[3/4]
	Gas pipe	ø15.88[5/8]	ø15.88[5/8]	ø19.05[3/4]	ø22.2[7/8]	ø28.58[1-1/8]	ø34.93[1-3/8]	ø41.28[1-5/8]	ø41.28[1-5/8]
CMY-Y102LS-G2	Liquid pipe	ø9.52[3/8]	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe
	Gas pipe	ø19.05[3/4]	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe	No need pipe
CMY-Y202S-G2	Liquid pipe	ø12.7[1/2]	pipe5	pipe5	pipe5	No need pipe	No need pipe	No need pipe	No need pipe
	Gas pipe	ø19.05[3/4]	pipe4	pipe5	pipe6	pipe10, 11	-	-	-
CMY-Y302S-G2	Liquid pipe	ø15.88[5/8]	pipe12	pipe12	pipe12	pipe2	No need pipe	No need pipe	No need pipe
	Gas pipe	ø25.4[1]	pipe19	pipe17	pipe17	pipe10	pipe10	-	-

Table-6 Between branching and indoor unit (Fig.1-e,f)		(Unit:mm[in])				
Pipe types	Indoor unit	Non-US model	20~50	63~140	200	250
		US model	06~18	24~54	72	96
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	pipe1	No need pipe	-	-
	Gas pipe	ø15.88[5/8]	pipe2	No need pipe	-	-
CMY-Y102LS-G2	Liquid pipe	ø9.52[3/8]	pipe1	No need pipe	No need pipe	No need pipe
	Gas pipe	ø19.05[3/4]	pipe3	No need pipe	pipe6	pipe6
CMY-Y202S-G2	Liquid pipe	ø12.7[1/2]	pipe9	pipe5	pipe5	pipe5
	Gas pipe	ø19.05[3/4]	pipe3	pipe4	No need pipe	pipe6
CMY-Y302S-G2	Liquid pipe	ø15.88[5/8]	pipe13	pipe12	pipe12	pipe12
	Gas pipe	ø25.4[1]	pipe8	pipe19	pipe17	pipe7

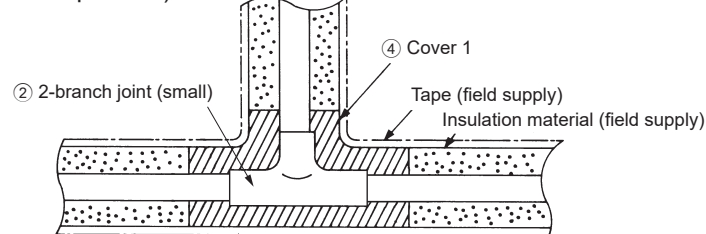
Table-7 Between branching (Fig.1-D)		(Unit:mm[in])							
Pipe types	Down stream capacity	Non-US model	~140	141~200	201~300	301~400	401~650	651~800	801~
		US model	~54	55~72	73~108	109~144	145~240	241~308	309~
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]	ø12.7[1/2]	ø15.88[5/8]	ø19.05[3/4]	ø19.05[3/4]
	Gas pipe	ø19.05[3/4]	ø15.88[5/8]	ø19.05[3/4]	ø22.2[7/8]	ø28.58[1-1/8]	ø34.93[1-3/8]	ø41.28[1-5/8]	ø41.28[1-5/8]
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	pipe4	No need pipe	pipe5	No need pipe	No need pipe	No need pipe	No need pipe
	Gas pipe	ø25.4[1]	pipe19	pipe17	pipe7	pipe10	-	-	-
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	-	-	pipe12	pipe2	No need pipe	No need pipe	No need pipe
	Gas pipe	ø25.4[1]	-	-	pipe7	pipe10	pipe10	-	-
CMY-Y302S-G2	Liquid pipe	ø19.05[3/4]	-	-	-	pipe3	pipe4	No need pipe	No need pipe
	Gas pipe	ø31.75[1-1/4]	-	-	-	pipe14	pipe20	pipe21	pipe21

Table-8 Between branching and indoor unit (Fig.1-g)		(Unit:mm[in])				
Pipe types	Indoor unit	Non-US model	20~50	63~140	200	250
		US model	06~18	24~54	72	96
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	pipe1	No need pipe	No need pipe	-
	Gas pipe	ø19.05[3/4]	pipe3	pipe4	No need pipe	-
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	-	pipe5	pipe5	pipe5
	Gas pipe	ø25.4[1]	-	pipe19	pipe17	pipe7
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	-	-	pipe12	pipe12
	Gas pipe	ø25.4[1]	-	-	-	pipe7
CMY-Y302S-G2	Liquid pipe	ø19.05[3/4]	-	-	-	-
	Gas pipe	ø31.75[1-1/4]	-	-	-	-

Note1: The diameter of the pipes after the first branch does not need to be greater than that of the main pipe.

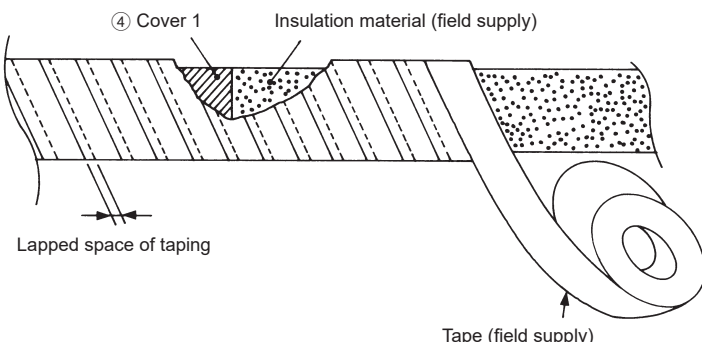
4 Installing the cover (insulation material)

Fig.3 (Example for liquid line)



- Install ④ Cover 1 along ② 2-branch joint (small). Seal the joint section of ④ Cover 1 with insulated sealing tape (field supply). (Refer to Fig.3.)
- Apply the same procedures to ③ 2-branch joint (large) also.

Fig.4



- Note 1. Apply insulation to all refrigerant piping (field supply). When using a commercially available insulation material, make sure to use the heat-resistant insulation material (heat resistant 120 °C [248 °F] minimum).
- Note 2. The insulation cover shrinks slightly, so wrap ④ Cover 1 and the field-installed insulation material securely with tape by overlapping the tape as shown in Fig. 4.

For use with R32-compatible units



CITY MULTI

OPTIONAL PARTS

2-BRANCH JOINT PIPE

(CMY-Y102SS-G2, CMY-Y102LS-G2, CMY-Y202S-G2, CMY-Y302S-G2)

INSTALLATION MANUAL

Caution

The incorrect selection of the type of branch pipe and the size of connecting pipe does not allow the air conditioner to provide the rated capacity.
Please read this instruction manual carefully for correct mounting work.

1 The following parts are contained in this box. Please identify the quantity with types.

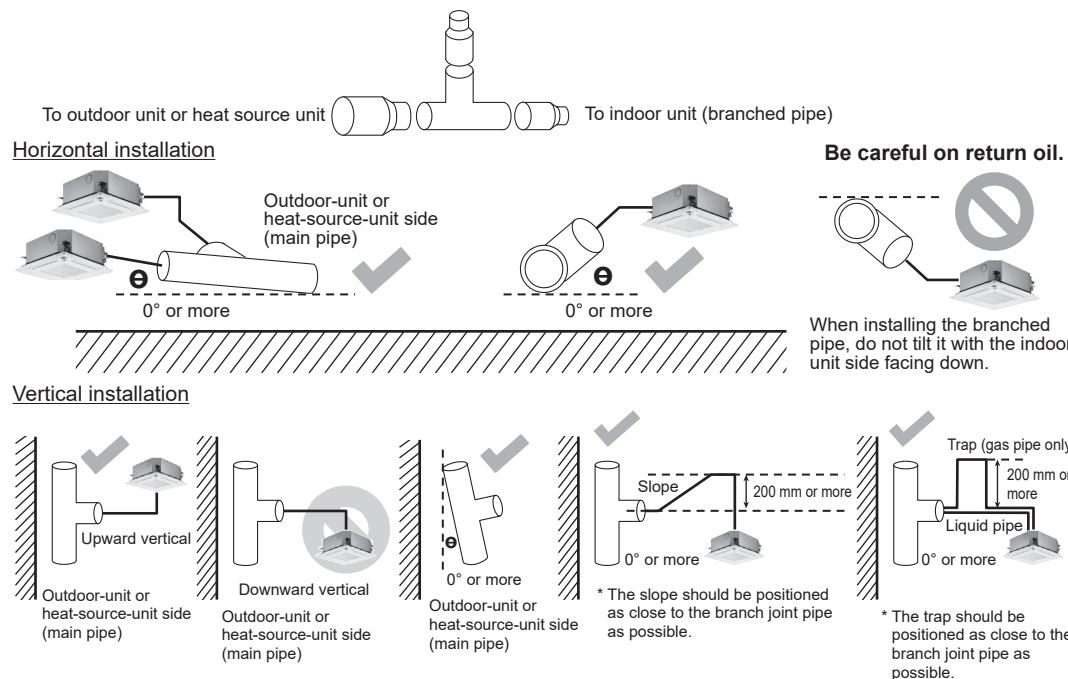
Part name	① Instruction	② 2-branch joint (small)	③ 2-branch joint (large)	④ Cover 1	⑤ Cover 2	⑥ Pipe 1	⑦ Pipe 2	⑧ Pipe 3	⑨ Pipe 4	⑩ Pipe 5	⑪ Pipe 6	⑫ Pipe 7	⑬ Pipe 8
Shape													
	This sheet 1 sheet	For liquid line	For gas line	For liquid line	For gas line	OD9.52[3/8]-ID6.35[1/4]	OD15.88[5/8]-ID12.7[1/2]	OD19.05[3/4]-ID12.7[1/2]	OD19.05[3/4]-ID15.88[5/8]	OD12.7[1/2]-ID9.52[3/8]	OD19.05[3/4]-ID22.2[7/8]	OD25.4[1]-ID22.2[7/8]	OD25.4[1]-ID12.7[1/2]
CMY-Y102SS-G2	1	1	1	1	1	2	1	1	2	-	-	-	-
CMY-Y102LS-G2	1	1	1	1	1	1	-	1	1	2	1	2	-
CMY-Y202S-G2	1	1	1	1	1	-	1	1	1	1	1	1	-
CMY-Y302S-G2	1	1	1	1	1	-	1	1	1	-	-	1	1

Part name	⑭ Pipe 9	⑮ Pipe 10	⑯ Pipe 11	⑰ Pipe 12	⑱ Pipe 13	⑲ Pipe 14	⑳ Pipe 17	㉑ Pipe 19	㉒ Pipe 20	㉓ Pipe 21
Shape										
	OD12.7[1/2]-ID6.35[1/4]	OD25.4[1]-ID28.58[1-1/8]	OD19.05[3/4]-ID25.4[1]	OD15.88[5/8]-ID9.52[3/8]	OD15.88[5/8]-ID6.35[1/4]	OD31.75[1-1/4]-ID28.58[1-1/8]	OD25.4[1]-ID19.05[3/4]	OD25.4[1]-ID15.88[5/8]	OD31.75[1-1/4]-ID34.93[1-3/8]	OD31.75[1-1/4]-ID41.28[1-5/8]
CMY-Y102SS-G2	-	-	-	-	-	-	-	-	-	-
CMY-Y102LS-G2	-	2	-	-	-	-	2	1	-	-
CMY-Y202S-G2	1	3	1	1	-	-	-	-	-	-
CMY-Y302S-G2	-	1	-	1	1	1	1	1	2	2

2 Please observe the items below for the mounting work.

- Observe the restrictions on refrigerant piping length in Table-1.
- Braze the pipes under nitrogen purge.
- The 2-branch joint is equipped with a stopper. Push in the pipes into the branch joint until they stop.
- Be careful that foreign materials like dust do not enter into the piping when connecting pipes.
- Apply insulation material to all refrigerant pipings.

6. When installing the branch joint on the gas piping, it must be installed horizontally or with the branched pipes facing up (as shown in the figure below).



- See [3] for how to select refrigerant piping size and use of 2-branch joint.
- When installing outdoor units above indoor units, provide a trap to keep the oil from stagnating in the stopped indoor units. The trap should be positioned as close to the branch joint pipe as possible.

Limitation on Refrigerant Piping Length

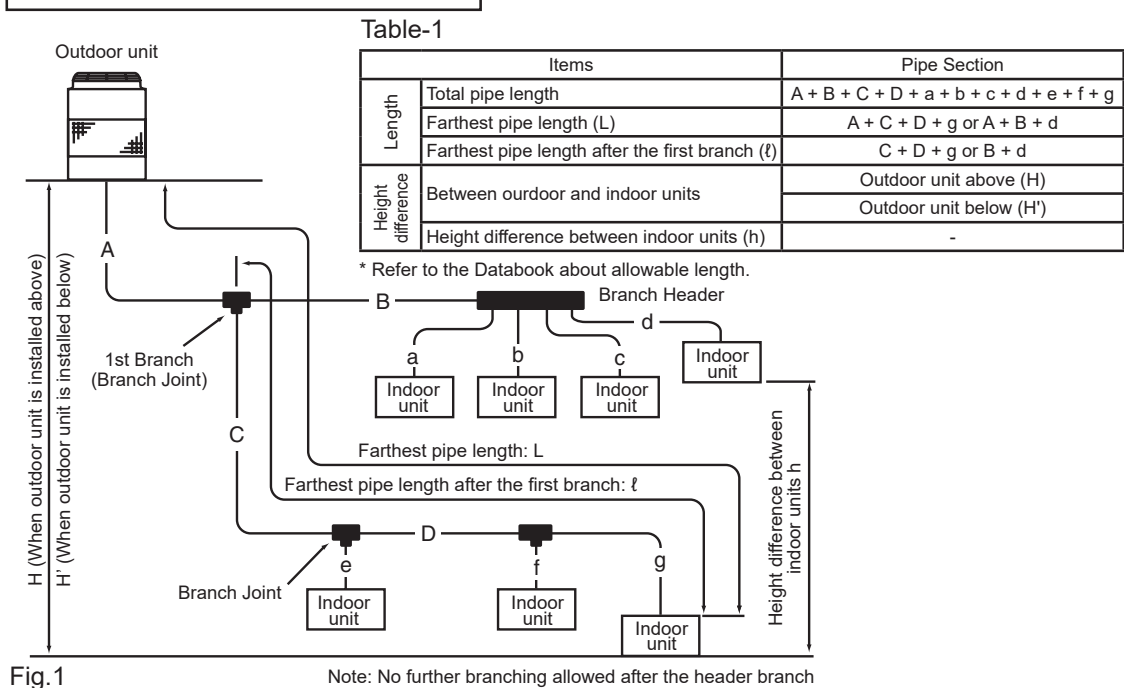


Fig.1

Note: No further branching allowed after the header branch

Limitation on indoor unit connection

- Select the correct indoor unit connection referring to the installation manual of outdoor unit or the Databook.

3 Selection of refrigerant piping size and use of 2-branch joint.

- Prepare the pipe to be connected in the field.
- Determine the piping sizes of each part from Table-2 and 3.
- The 2-branch joint can be connected to all piping sizes selected in the item 2. to match a specified piping size.
 - Use the joint as standard. (No auxiliary pipe is necessary. Direct connection available)
 - Use it by connecting the auxiliary pipe.Please conduct actual work by referring Fig.2, and Table-4~9.
- When pipe is cut with a pipe cutter or the like, remove burr, dust and foreign materials inside the pipe, and connect the pipe.

Table-9		(Unit:mm[in])		
Pipe types	Dimension	A	B	C
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	ø9.52[3/8]	ø9.52[3/8]
	Gas pipe	ø19.05[3/4]	ø19.05[3/4]	ø15.88[5/8]
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	ø12.7[1/2]	ø9.52[3/8]
	Gas pipe	ø25.4[1]	ø25.4[1]	ø19.05[3/4]
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	ø15.88[5/8]	ø12.7[1/2]
	Gas pipe	ø25.4[1]	ø25.4[1]	ø19.05[3/4]
CMY-Y302S-G2	Liquid pipe	ø19.05[3/4]	ø19.05[3/4]	ø15.88[5/8]
	Gas pipe	ø31.75[1-1/4]	ø31.75[1-1/4]	ø25.4[1]

Table-5 Between branching (Fig.1-C)		(Unit:mm[in])							
Pipe types	Down stream capacity	Non-US model	~140	141~200	201~300	301~400	401~650	651~800	801~
		US model	~54	55~72	73~108	109~144	145~240	241~308	309~
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-	-	-	-
	Gas pipe	ø15.88[5/8]	-	-	-	-	-	-	-
CMY-Y102LS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-	-	-	-
CMY-Y202S-G2	Liquid pipe	ø12.7[1/2]	-	-	-	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-	-	-	-
CMY-Y302S-G2	Liquid pipe	ø15.88[5/8]	-	-	-	-	-	-	-
	Gas pipe	ø25.4[1]	-	-	-	-	-	-	-

Table-6 Between branching and indoor unit (Fig.1-e,f) (Unit:mm[in])

Pipe types	Indoor unit	Non-US model	20~50	63~140	200	250
		US model	06~18	24~54	72	96
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-
	Gas pipe	ø15.88[5/8]	-	-	-	-
CMY-Y102LS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-
CMY-Y202S-G2	Liquid pipe	ø12.7[1/2]	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-
CMY-Y302S-G2	Liquid pipe	ø15.88[5/8]	-	-	-	-
	Gas pipe	ø25.4[1]	-	-	-	-

Table-7 Between branching (Fig.1-D) (Unit:mm[in])

Pipe types	Down stream capacity	Non-US model	~140	141~200	201~300	301~400	401~650	651~800	801~
		US model	~54	55~72	73~108	109~144	145~240	241~308	309~
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-	-	-	-
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	-	-	-	-	-	-	-
	Gas pipe	ø25.4[1]	-	-	-	-	-	-	-
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	-	-	-	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-	-	-	-
CMY-Y302S-G2	Liquid pipe	ø19.05[3/4]	-	-	-	-	-	-	-
	Gas pipe	ø31.75[1-1/4]	-	-	-	-	-	-	-

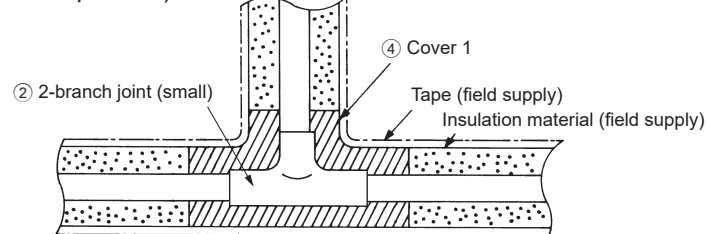
Table-8 Between branching and indoor unit (Fig.1-g) (Unit:mm[in])

Pipe types	Indoor unit	Non-US model	20~50	63~140	200	250
		US model	06~18	24~54	72	96
CMY-Y102SS-G2	Liquid pipe	ø9.52[3/8]	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-
CMY-Y102LS-G2	Liquid pipe	ø12.7[1/2]	-	-	-	-
	Gas pipe	ø25.4[1]	-	-	-	-
CMY-Y202S-G2	Liquid pipe	ø15.88[5/8]	-	-	-	-
	Gas pipe	ø19.05[3/4]	-	-	-	-
CMY-Y302S-G2	Liquid pipe	ø15.88[5/8]	-	-	-	-
	Gas pipe	ø31.75[1-1/4]	-	-	-	-

Note1: The diameter of the pipes after the first branch does not need to be greater than that of the main pipe.

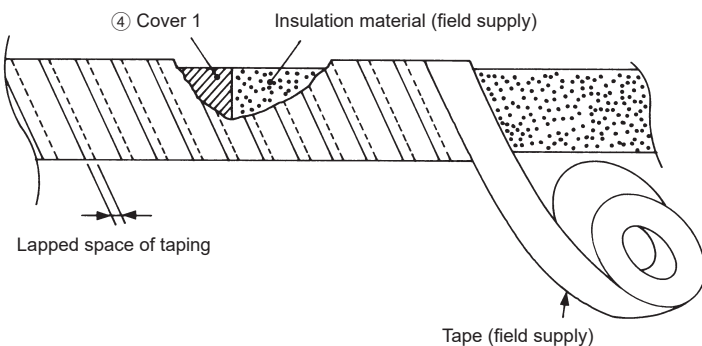
4 Installing the cover (insulation material)

Fig.3 (Example for liquid line)



- Install ④ Cover 1 along ② 2-branch joint (small). Seal the joint section of ④ Cover 1 with insulated sealing tape (field supply). (Refer to Fig.3.)
- Apply the same procedures to ③ 2-branch joint (large) also.

Fig.4



- Note 1. Apply insulation to all refrigerant piping (field supply).
When using a commercially available insulation material, make sure to use the heat-resistant insulation material (heat resistant 120 °C [248 °F] minimum).
- Note 2. The insulation cover shrinks slightly, so wrap ④ Cover 1 and the field-installed insulation material securely with tape by overlapping the tape as shown in Fig. 4.