5. Outdoor Unit Multi Connection Piping Kit

5.1 BHF22M90·135

Installation

■THIS KIT INCLUDES THE FOLLOWING PARTS. Table 1

KIT NAME	SHAPE				
	GAS SIDE JOINT	LIQUID SIDE JOINT	REDUCER(FOR GAS PIPE)	REDUCER (FOR LIQUID PIPE)	JOINT FOR OIL PIPE
BHF22M 90	1 pcs.	1 pcs.	(1) 1 pcs. (2) 3 pcs. (3) 2 pcs.	1 pcs.	
BHF22M 135	(1) 1 pcs. (2) 1 pcs.	(1) 1 pcs. (2) 1 pcs.	(1) 1 pcs. (2) 2 pcs. (3) 4 pcs. (4) 2 pcs.	2 pcs.	1 pcs.

NOTE) • Installation of outdoor units refer to INSTALLATION MANUAL of outdoor unit.
• Installation of refrigerant pipes between outdoor and indoor units need to arrange for REFNET JOINT and REFNET HEADER.
• Combination of outdoor units follow Engineering Data.

■FIELD SUPPLY PARTS Table 2

PARTS	QUANTITY	SELECTION PROCEDURE
INSULATION FOR PIPE	1 SET	FOR BHF22M90 :Refer to Table4, 5 FOR BHF22M135 :Refer to Table7, 8, 9
REFRIGERANT PIPES		
JOINT (FOR GAS PIPE ANGLE OF 90 DEGREES)	1 pcs.	Joint size must be the same as gas side pipe size of the upper side outdoor unit. FOR BHF22M90 :Refer to Table5 FOR BHF22M135 :Refer to Table9
TAPE	1 SET	(FOR INSULATION)

■SELECTION PROCEDURE Table 3

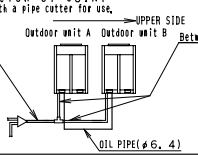
NO. of outdoor units	KIT NAME
2units	BHF22M90
3units	BHF22M135

FOR BHF22M90 ⚠CAUTION Outdoor units multi connection piping connect right according to the INSTALLATION MANUAL of outdoor unit.

Pipe size selection and cutting position of JOINT
According to the following table cut the joint or reduser with a pipe cutter for use.

Between the outdoor unit and the refrigerant branch kit
• Select the proper pipe size based on the total capacity index of outdoor units. Table 4

Total capacity index of outdoor units	Pipe size (Unit : mm) GAS	LIQUID
450 ≦ X ≦ 550	ø34. 9	ø19. 1
605	ø41. 3	
650 ≦ X ≦ 800		ø22. 2



Between the outdoor unit and the connection piping kit Table 5

Capacity index of outdoor units	Pipe size (Unit : mm) GAS	LIQUID
200・250	ø28. 6	ø12. 7
300・350 ・400	ø34. 9	ø15. 9

• Cut the pipe with a pipe catter.

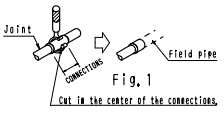
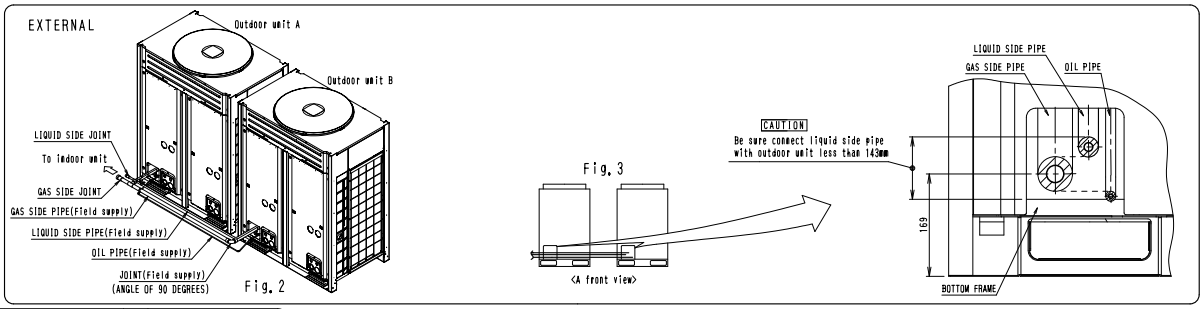
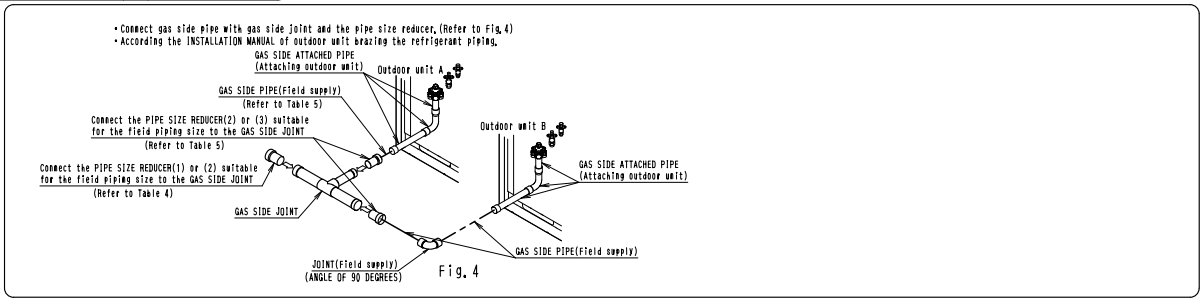


Fig. 1

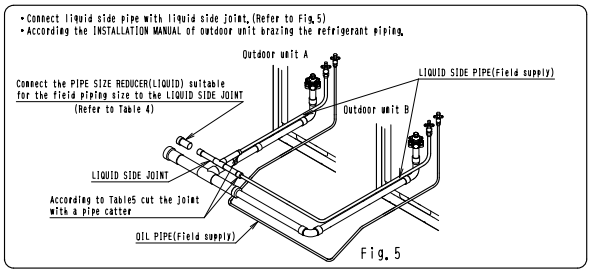
❶ ILLUSTRATION IN CASE OF FRONT PIPING



❷ INSTALLATION OF GAS SIDE PIPES



❸ INSTALLATION OF LIQUID SIDE PIPES AND OIL PIPE



❹ AFTER CONNECTION PIPING

4-1 CONNECTION PIPING BETWEEN THE OUTDOOR UNIT AND INDOOR UNIT
• According to the INSTALLATION MANUAL of outdoor unit.

4-2 INSULATION OF JOINT
• Seal the insulation and field piping insulation joint with the tape.

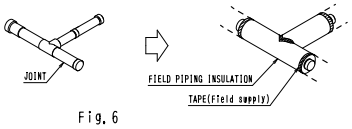


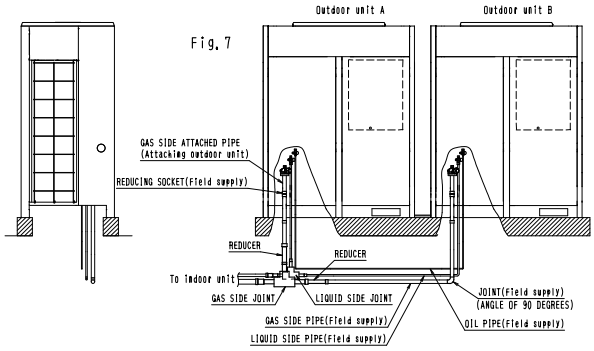
Fig. 6

1P115031

❶ ILLUSTRATION IN CASE OF UNDERSIDE PIPING

⚠CAUTION Be sure to secure space for brazing and piping work under the outdoor unit.

Fig. 7



• According to IN CASE OF FRONT PIPING connect the pipes with the JOINT and the PIPE SIZE REDUCER.

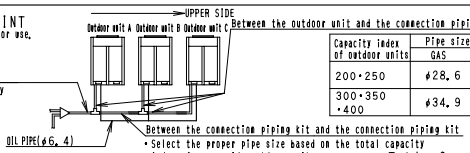
FOR BHF22M135 ⚠CAUTION Outdoor units multi connection piping connect right according to the INSTALLATION MANUAL of outdoor unit.

Pipe size selection and cutting position of JOINT
According to the following table cut the joint or reduser with a pipe cutter for use.

Between the outdoor unit and the refrigerant branch kit
• Select the proper pipe size based on the total capacity index of outdoor units.

Table 7

Total capacity index of outdoor units	Pipe size (Unit : mm) GAS	LIQUID
855	ϕ41. 3	ϕ22. 2
900 ≦ X	ϕ54. 1	



Between the outdoor unit and the connection piping kit

Table 9

Capacity index of outdoor units	Pipe size (Unit : mm) GAS	LIQUID
200・250	ϕ28. 6	ϕ12. 7
300・350 ・400	ϕ34. 9	ϕ15. 9

Between the connection piping kit and the connection piping kit
• Select the proper pipe size based on the total capacity index of upper side outdoor units.

Table 8

Total capacity index of outdoor units	Pipe size (Unit : mm) GAS	LIQUID
500 ≦ X ≦ 550	ϕ34. 9	ϕ19. 1
605	ϕ41. 3	ϕ22. 2
650 ≦ X ≦ 800		

• Cut the pipe with a pipe catter.



Fig. 8

Cut in the center of the connections.

❶ ILLUSTRATION IN CASE OF FRONT PIPING

EXTERNAL

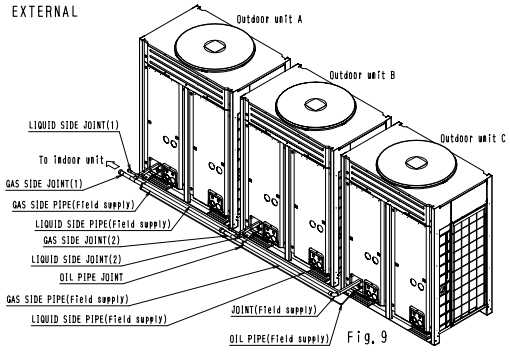
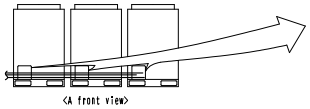


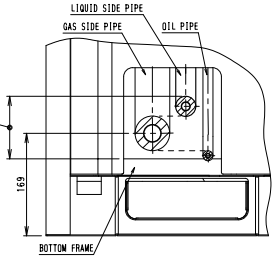
Fig. 9

Fig. 10

CAUTION
Be sure connect liquid side pipe with outdoor unit less than 143mm



<A front view>



❷ INSTALLATION OF PIPES

2-1 CONNECTION GAS SIDE PIPING

• Connect gas side pipe with gas side joint and the pipe size reducer. (Refer to Fig. 11)
• According the INSTALLATION MANUAL of outdoor unit brazing the refrigerant piping.

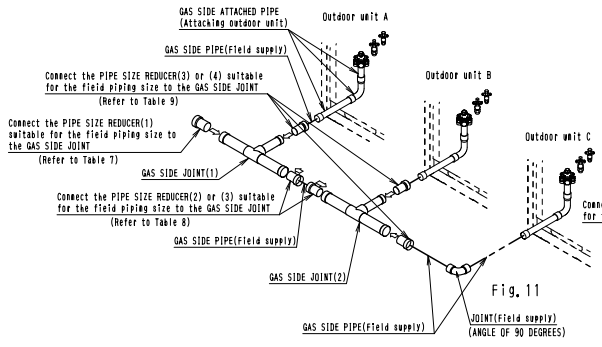


Fig. 11

2-2 CONNECTION LIQUID SIDE AND OIL PIPING

• Connect liquid side pipe with liquid side joint. (Refer to Fig. 12)
• According the INSTALLATION MANUAL of outdoor unit brazing the refrigerant piping.

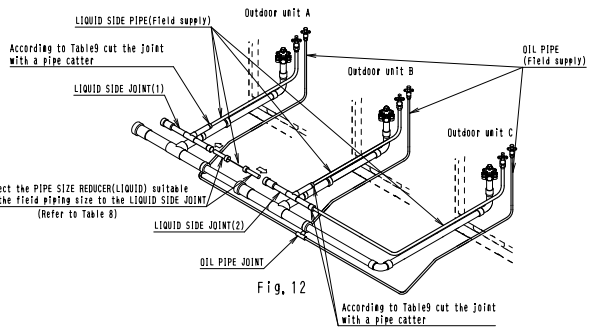


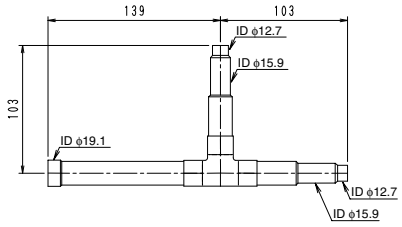
Fig. 12

❸ AFTER CONNECTION PIPNG

IN CASE OF UNDERSIDE PIPING	• Be sure to secure space for brazing and piping work under the outdoor unit. • According to Fig. 7 install the kit.

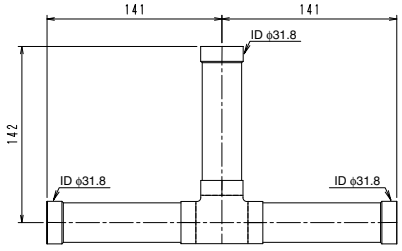
1P115031

BHF22M90 - Liquid Pipe



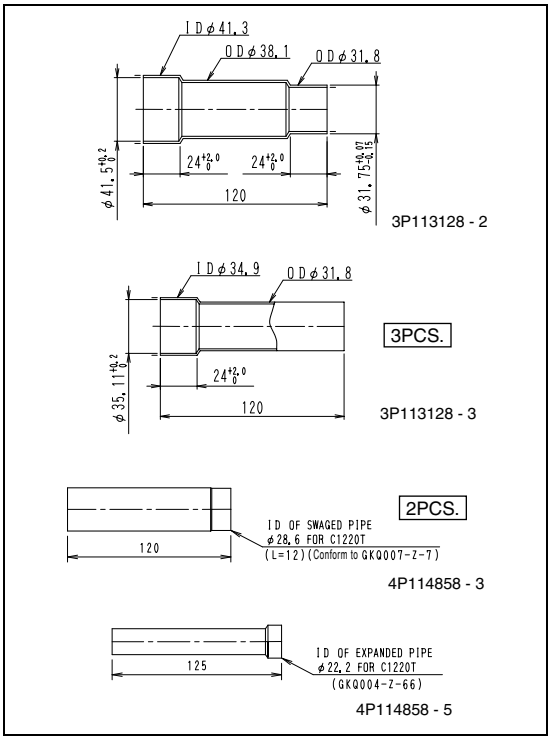
4P114979

BHF22M90 - Gas Pipe

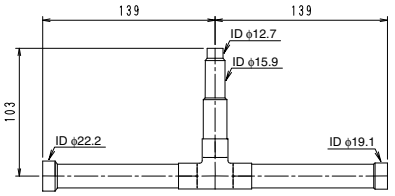


4P114977

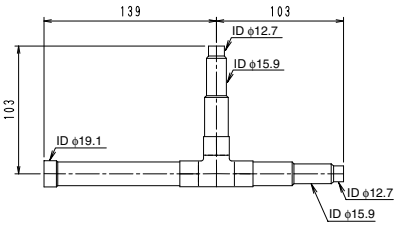
Reducer



BHF22M135 - Liquid Pipe

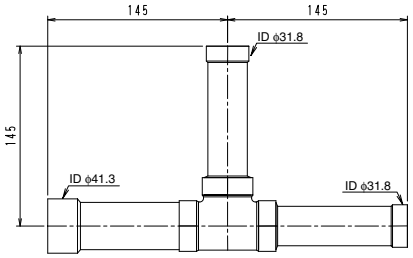


4P114980

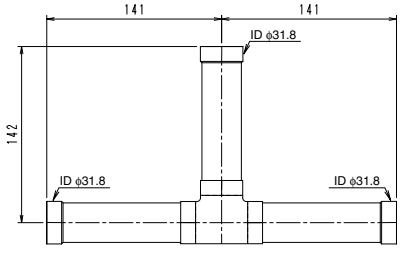


4P114979

BHF22M135 - Gas Pipe

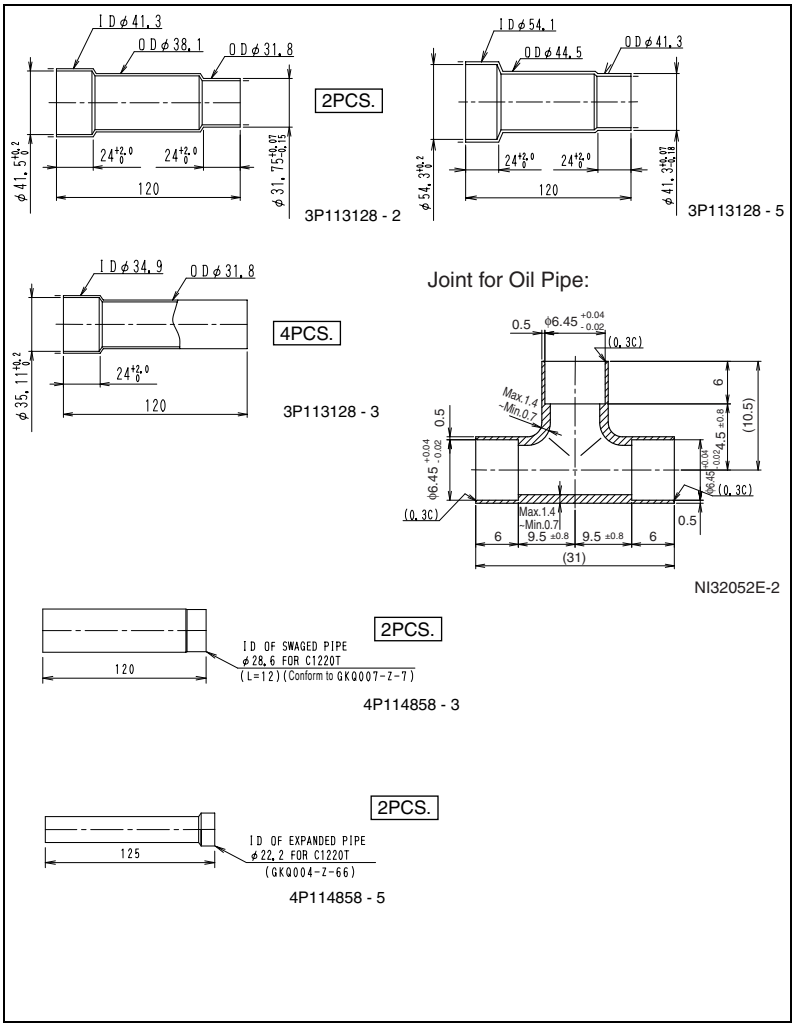


4P114978



4P114977

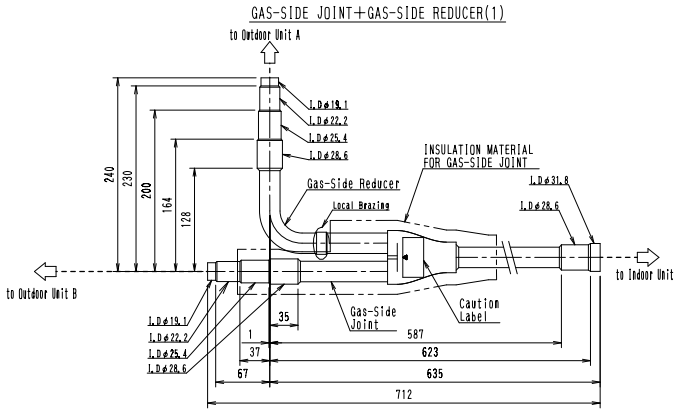
Reducer

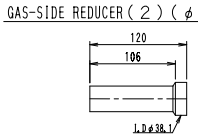


5.2 BHFP22P100·151

BHFP22P100

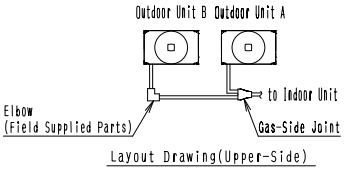
Gas side



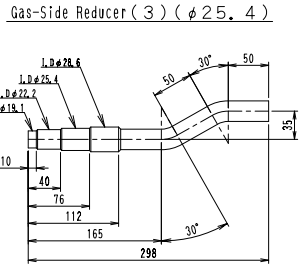


Accessory

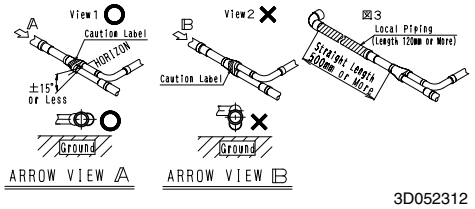
GAS-SIDE JOINT : 1
LIQUID-SIDE JOINT : 1
GAS-SIDE REDUCER(1) : 1
GAS-SIDE REDUCER(2) : 1
GAS-SIDE REDUCER(3) : 1
GAS-SIDE REDUCER(7) : 1
GAS-SIDE REDUCER(9) : 1
LIQUID-SIDE REDUCER(1) : 1
LIQUID-SIDE REDUCER(3) : 1
LIQUID-SIDE REDUCER(5) : 1
INSULATION MATERIAL FOR GAS-SIDE JOINT : 1
INSULATION MATERIAL FOR LIQUID-SIDE JOINT : 1
INSULATION MATERIAL FOR GAS-SIDE PIPE : 1
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 1
INSTALLATION MANUAL



Layout Drawing(Upper-Side)

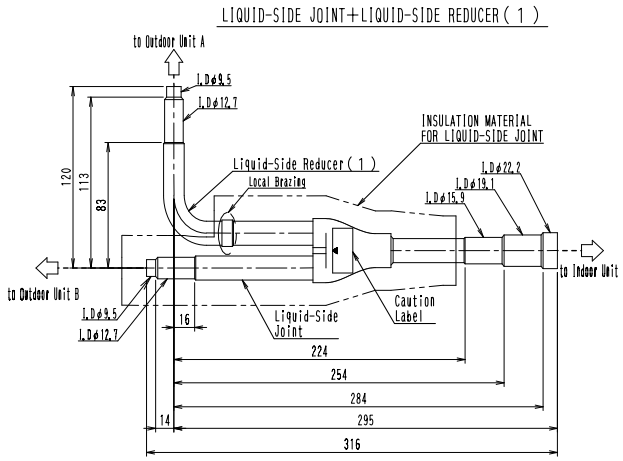


NOTE)1. "------" in the figure show field supply piping.
2. About size of connection pipe refer the "engineering data of VRV Ⅲ".
3. In case of install this kit observe follow conditiones.
- Do not tilt the joint more than ±15°.
Install the joint horizontally so that the caution label attached to joint comes to the top.
- Do not install the joint vertically why it may cause the malfunction of outdoor unit.
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.



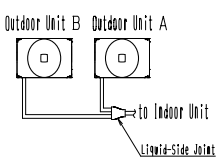
3D052312

Liquid side



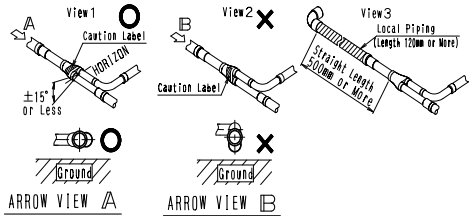
Accessory

GAS-SIDE JOINT : 1
LIQUID-SIDE JOINT : 1
GAS-SIDE REDUCER(1) : 1
GAS-SIDE REDUCER(2) : 1
GAS-SIDE REDUCER(3) : 1
GAS-SIDE REDUCER(7) : 1
GAS-SIDE REDUCER(9) : 1
LIQUID-SIDE REDUCER(1) : 1
LIQUID-SIDE REDUCER(3) : 1
LIQUID-SIDE REDUCER(5) : 1
INSULATION MATERIAL FOR GAS-SIDE JOINT : 1
INSULATION MATERIAL FOR LIQUID-SIDE JOINT : 1
INSULATION MATERIAL FOR GAS-SIDE PIPE : 1
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 1
INSTALLATION MANUAL



Layout Drawing(Upper-Side)

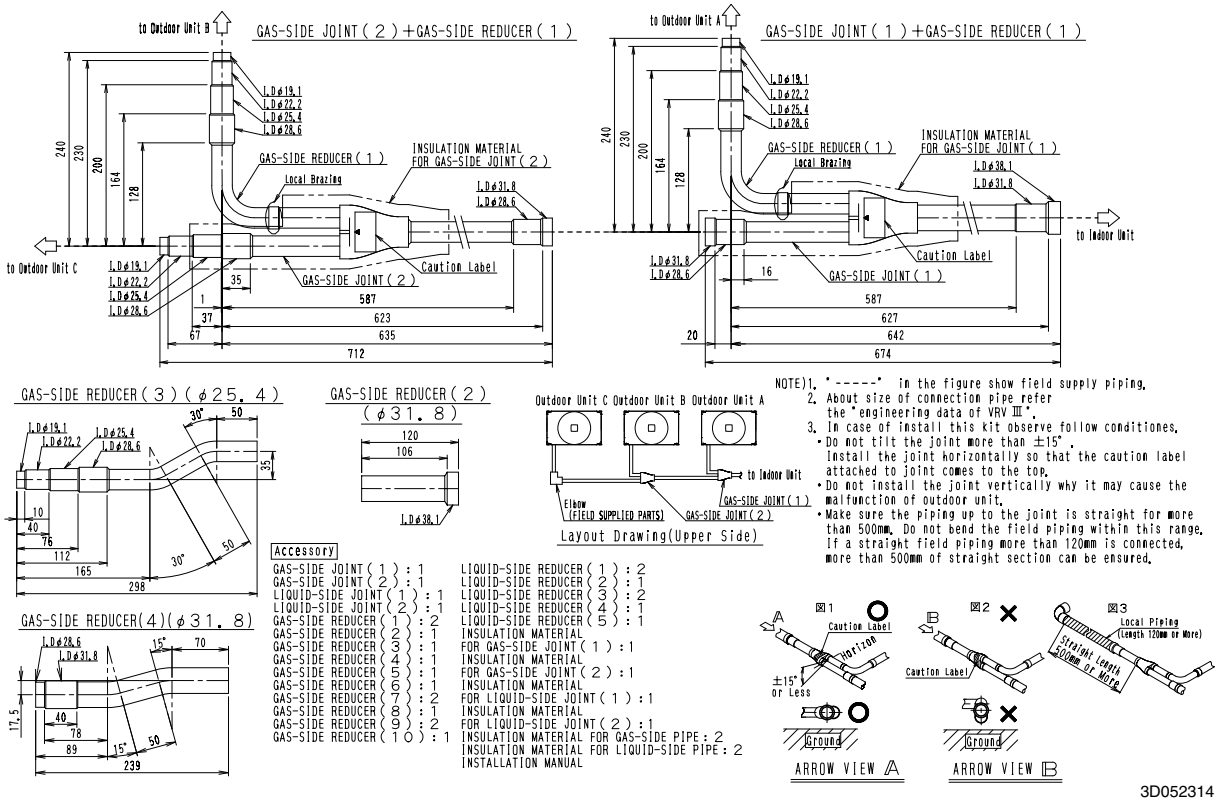
NOTE)1. "------" in the figure show field supply piping.
2. About size of connection pipe refer the "engineering data of VRV Ⅲ".
3. In case of install this kit observe follow conditiones.
- Do not tilt the joint more than ±15°.
Install the joint horizontally so that the caution label attached to joint comes to the top.
- Do not install the joint vertically why it may cause the malfunction of outdoor unit.
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.



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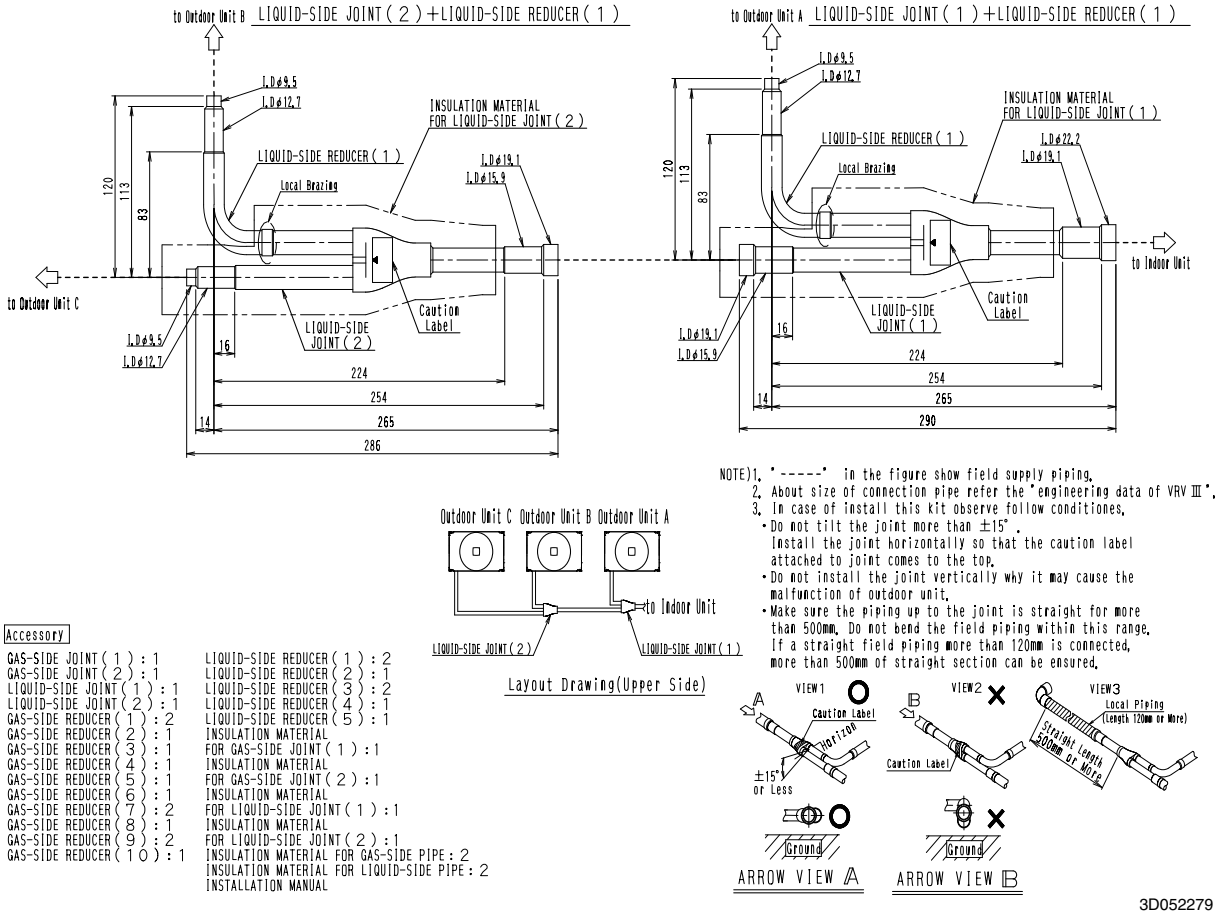
BHFP22P151

Gas side



3D052314

Liquid side



3D052279

VRV III Series

Please be sure to read before installation and follow the instructions carefully when performing installation work.

1P173261−1A

Outdoor unit Multi Connection Piping Kit Installation Manual

BHFP22P100 • BHFP22P151

Component parts

■This kit contains the follwing parts. **<Do not throw away any of the accessories until installation is complete.>**

Kit name	SHAPE						
	Gas-side joint	Liquid-side joint	Gas-side reduser	Liquid-side reduser	Insulating tube for gas pipe	Insulating tube for liquid pipe
BHFP 22 P100	O.D⌀25.4 O.D⌀28.6 O.D⌀31.8 O.D⌀22.2 O.D⌀19.1 1pc	O.D⌀15.9 O.D⌀12.7 O.D⌀9.5 O.D⌀22.2 1pc	(1) O.D⌀19.1 O.D⌀22.2 O.D⌀25.4 O.D⌀28.6 1pc (2) O.D⌀31.8 O.D⌀38.1 1pc (3) O.D⌀19.1 O.D⌀25.4 O.D⌀28.6 O.D⌀22.2 1pc (7) O.D⌀31.8 O.D⌀34.9 1pc (9) O.D⌀31.8 O.D⌀41.3 1pc	(1) O.D⌀9.5 O.D⌀12.7 O.D⌀15.9 1pc (3) O.D⌀15.9 O.D⌀9.5 O.D⌀12.7 1pc (5) O.D⌀12.7 O.D⌀15.9 1pc	Big 1pc	Small 1pc
BHFP 22 P151	(1) O.D⌀25.4 O.D⌀28.6 O.D⌀31.8 O.D⌀38.1 1pc (2) O.D⌀25.4 O.D⌀28.6 O.D⌀31.8 O.D⌀22.2 O.D⌀19.1 1pc	(1) O.D⌀15.9 O.D⌀19.1 O.D⌀22.2 1pc (2) O.D⌀15.9 O.D⌀12.7 O.D⌀19.1 O.D⌀9.5 1pc	(1) O.D⌀19.1 O.D⌀22.2 O.D⌀25.4 O.D⌀28.6 2pc (2) O.D⌀31.8 O.D⌀38.1 1pc (3) O.D⌀19.1 O.D⌀25.4 O.D⌀28.6 O.D⌀22.2 1pc (4) O.D⌀28.6 O.D⌀31.8 O.D⌀31.8 1pc (5) O.D⌀28.6 O.D⌀31.8 1pc (6) O.D⌀22.2 O.D⌀28.6 O.D⌀25.4 1pc (7) O.D⌀31.8 O.D⌀34.9 2pc (8) O.D⌀38.1 O.D⌀41.3 1pc (9) O.D⌀31.8 O.D⌀41.3 2pc (10) O.D⌀19.1 O.D⌀28.6 1pc	(1) O.D⌀9.5 O.D⌀12.7 O.D⌀15.9 2pc (2) O.D⌀12.7 O.D⌀19.1 O.D⌀15.9 1pc (3) O.D⌀15.9 O.D⌀9.5 O.D⌀12.7 2pc (4) O.D⌀19.1 O.D⌀15.9 1pc (5) O.D⌀12.7 O.D⌀15.9 1pc	Big 2pc	Small 2pc

Caution • Please be sure to read this manual before installation and follow the instruction carefully when performing installation work.
• See the outdoor unit's installation manual for outdoor unit installation.
• Installation of interconnecting piping between the outdoor and indoor units, REFNET joint or REFNET header will be needed separately.

Selection Procedure

Number of outdoor units connected	2 units	3 units
Outdoor unit Multi Connection Piping Kit	BHFP22P100	BHFP22P151

• 2 or 3 outdoor units can be connected.
• There are restrictions on the combination and the installation order of outdoor units, so please refer to "the Engineering Data of VRV III" and "the installation manual" (attached sheet of outdoor unit) for details.

Field supply parts

■The following parts are needed to connect this kit and are not included.

Field supply parts		
Name	Q'ty	Selection Procedure
Insulation for piping	1set	See the "Connecting Pipe Sizes and location of cutting the joint" for details on the necessary size.
Connection piping	1pc	Prepare a gas pipe diameter for the upper outdoor unit as listed in "Connecting Pipe Sizes and location of cutting the joint."
Elbow	1set	For Insulation materials
Tape		

Caution
• Quantity and selection procedure of elbow only applies to a front or bottom connection.
• For a lower front connection, the quantity and selection procedure are different, so please refer to the instructions for a lower front connection.
• A joint for the same diameter pipes is needed only for a bottom connection. See the instructions for the bottom connection for details on quantity and specifications.
• The min. thickness of the pipes in this manual shows the requirements of Japanese High Pressure Gas Control low. (As of Jan.2003)
And the temper grade (O, 1/2H) shows the material type of JIS H 3300. The thickness and material shall be selected in accordance with local code for the design pressure 4.0MPa(40bar).

(Unit : mm)

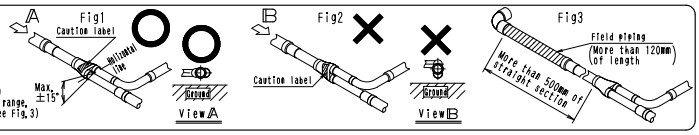
Temper grade	O Type				1/2H Type								
Copper tube O.D.	⌀6.4	⌀9.5	⌀12.7	⌀15.9	⌀15.1	⌀22.2	⌀25.4	⌀28.6	⌀31.8	⌀34.9	⌀38.1	⌀41.3	
Copper tube W.T (Minimum requirement)	0.80	0.80	0.80	0.99	0.80	0.80	0.88	0.99	1.10	1.21	1.32	1.43	

To the pipeing installer

When installing this kit, please apply the following restrictions.

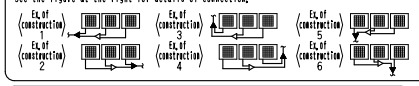
Restrictions on Installing Multi Connection Piping Kit

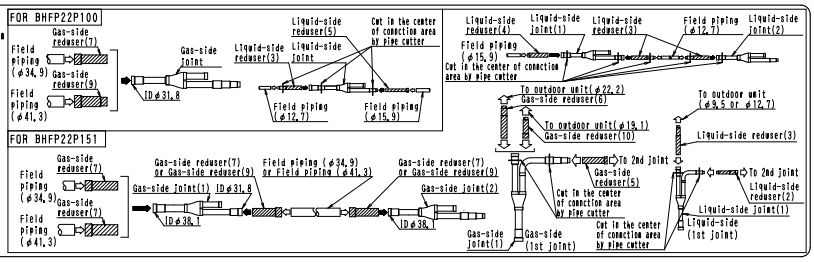
• Install the joint horizontally so that the caution label attached to joint comes to the top. Do not tilt the joint more than ±15°. (See Fig. 1) In addition, do not install the joint vertically. (See Fig. 2)
• Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See Fig. 3)
• Improper installation may lead to malfunction of the outdoor unit.



Installation examples

• The figure at the lower shows a typical front connection. Make sure to follow the installation restrictions and carry out installation taking the field requirements into consideration.
• This manual explains the front connection <Ex. of construction 1>.
• For 3-unit installation on Ex. of construction 5 and 6, in some cases the reducers (5), (6) or (10) for gas piping and the reducers (2) and (3) for liquid piping may be used on the 1st joint (section shown with ◀—). See the figure at the right for details of connection.
• When the size of the Gas-side pipe between the Gas-side joint (1) and Gas-side joint (2) on the 3-units system or the size of the main pipe is ⌀41.3 or ⌀34.9, Gas-side reducer (7), (8) and (9) will be used. See the figure at the right for details of connection.
• When the size of the Liquid-side pipe between the Liquid-side joint (1) and Liquid-side joint (2) on the 3-units system is ⌀12.7, Liquid-side reducer (3) will be used. And when the side of main pipeis ⌀15.9, Liquid-side reducer (4) will be used. See the figure at the right for details of connection.





BHFP22P100 Installation Instructions

Caution There are some restrictions on the interconnecting piping between the outdoor units. See the installation manual attached to the outdoor units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in malfunction of the unit.

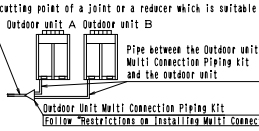
Connecting pipe sizes and location of cutting the joint

Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Main Pipe
● Select the pipe size according to the total capacity of outdoor unit.

(units : mm)

Outdoor unit total capacity type	Pipe size (O.D. x min. thickness [temper grade])	
	Gas pipe	Liquid pipe
16HP	⌀28.6×0.99[1/2H]	⌀12.7×0.80[O]
18~22HP		⌀15.9×0.99[O]
24HP	⌀34.9×1.21[1/2H]	
26~34HP		⌀19.1×0.80[1/2H]
36HP	⌀41.3×1.43[1/2H]	



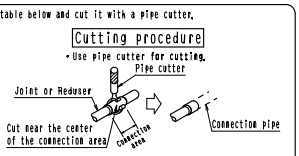
(units:mm)

Outdoor unit capacity type	Pipe size (O.D. x min. thickness [temper grade])	
	Gas pipe	Liquid pipe
8HP	⌀19.1×0.80[1/2H]	⌀ 9.5×0.80[O]
10HP	⌀22.2×0.80[1/2H]	
12~16HP	⌀28.6×0.99[1/2H]	⌀12.7×0.80[O]
18HP		⌀15.9×0.99[O]

• When upsizing the main pipe, use the gas side reducer (2).
• If the pipe size of ⌀19.1 or larger is used, the O material may be insufficient to withstand the specified pressure. Therefore, make sure to use the 1/2H material with thickness of 1.0mm or more. When using the O material for the pipe size of ⌀19.1, a thickness of 1.2 or more is required. In this case, the connection must be brazed.

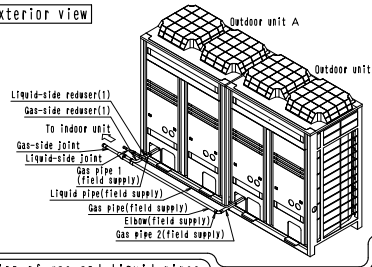
Cutting procedure

• Use pipe cutter for cutting.



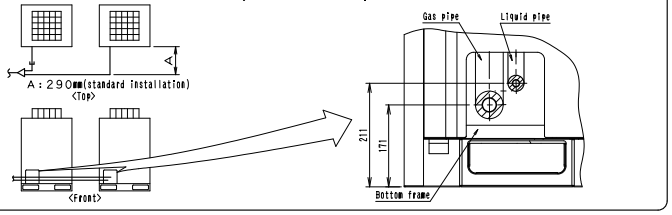
❶ Installation examples — Procedure for Front Connection

1-1 Exterior view



1-2 Finished dimensions

• For installations where the A dimensions exceed 290mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.



❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

• Cut the pipes according to Table 1.

Caution • This table shows the case when the A dimensions shown in 1-2 Finished dimensions is 290mm. If the A dimensions exceed 290mm, see Table 1 and adjust the dimensions of the gas pipe 1 and 2.
• The L dimensions of the gas pipe 2 in Table 1 show those when the field supply elbows have B dimension in Table 2. If the B dimension is not same with Table 2, see Table 1 and 2, and adjust them accordingly.

■ Table 1

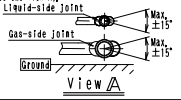
Model type	Gas pipe 1 (field supply) L (mm)	Gas pipe 2 (field supply) L (mm)
8HP	75	287
10HP	81	257
12~18HP	125	223

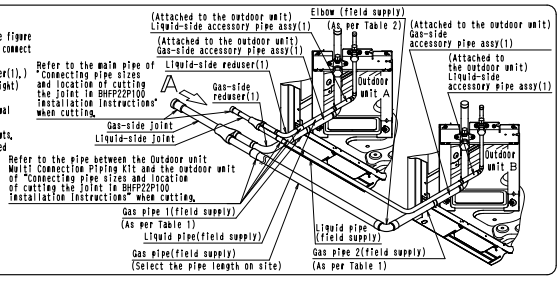
■ Table 2

Model type	Elbow(field supply) B (mm)
8HP	17
10HP	23
12~18HP	29

2-2 Connection of pipes

• Connect the gas and liquid pipes as shown in the figure at the right. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer(1), the liquid-side joint and the liquid side reducer(1).)
• See 1-2 Finished dimensions for the location(height) of the joint.
• See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
• Install the joint in such a way that the attached face of the caution label becomes horizontal (See the View A).





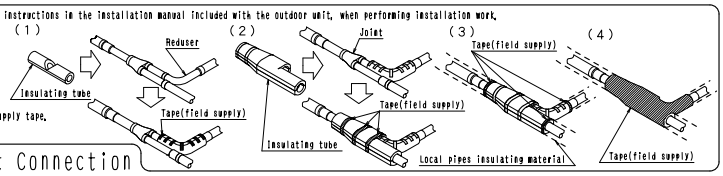
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❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
Insulation of joints

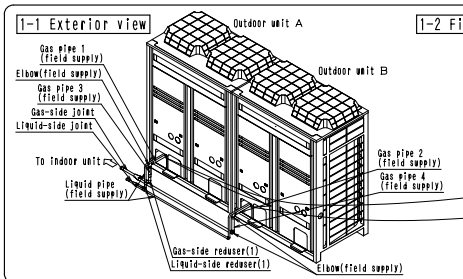
Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

(1) Fit the insulation to the reducer and temporarily keep it in place with tape.
(2) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces. (See the figure at the right.)
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



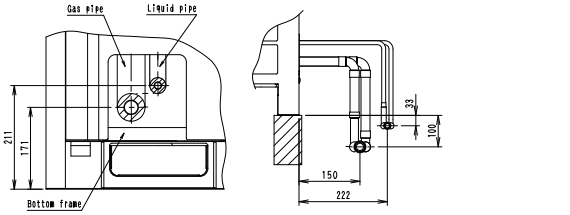
❶ Installation examples — Procedure for Lower Front Connection

1-1 Exterior view



1-2 Finished dimensions

- A standard installation has the following dimensions.
- When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint(field supply).



❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 to 4

- Cut the pipes according to Table 3

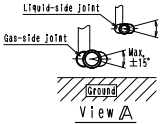
Caution
- The L dimensions of the gas pipe 1 to 4 in Table 3 show those when the field supply elbows have B dimension in Table 2 shown in Procedure for Front Connection, 2 Connection of gas and liquid pipes. If the B dimensions are not same with Table 2, see Table 2 and 3, and adjust them accordingly.

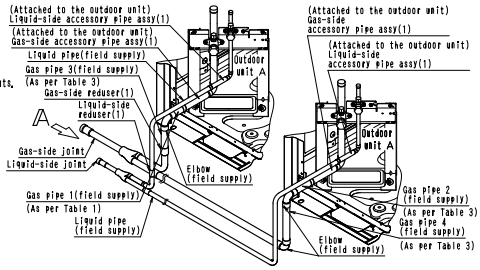
■ Table 3

Model type	Gas pipe 1(field supply) L(mm)	Gas pipe 2(field supply) L(mm)	Gas pipe 3(field supply) L(mm)	Gas pipe 4(field supply) L(mm)
8HP	130	165	59	237
10HP	100	135	83	225
12~18HP	66	101	149	213

2-2 Connection of pipes

- Connect the gas and liquid pipes as shown in the figure at the right. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid-side joint and the liquid-side reducer (1).)
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
- Install the joint in such a way that the attached face of the caution label becomes horizontal (See the View A).



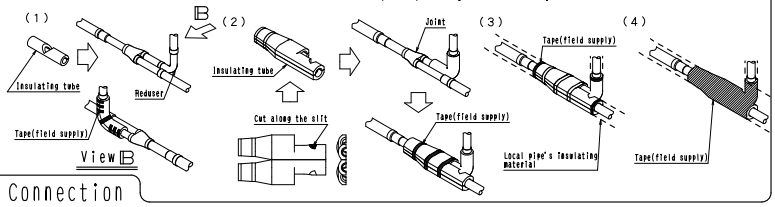


❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
Insulation of joints

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

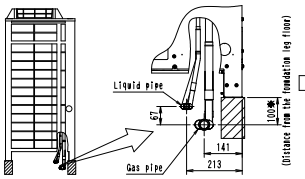
(1) Fit the insulation to the reducer and temporarily keep it in place with tape.
(2) Cut insulating tube along the slit. (See the figure at the right.) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



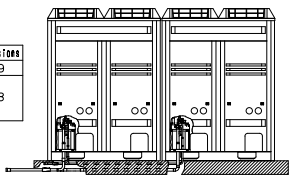
❶ Installation examples — Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized drain pan kit and/or vibration proof base are used, the dimensions marked with "✱" in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view



Separately-sold item also used	✱dimensions
Central drain pan kit	139
Vibration absorption stand	233
Vibration absorption stand+ central drain pan kit	



❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 and 2, and the Gas-side accessory pipe(3) attached to the outdoor unit

- Cut the pipes according to Table 4 or 5.

Caution
- The "L" dimensions of the gas pipe 1 in Table 4 and the gas pipe 2 in Table 5 are identical to the "B" dimensions in table 2, those of "field supply elbows" shown in the procedure of front connection, which are equivalent to "straight size joint" without stopper. If the "B" dimentions are not identical to table 2 or "straight size joint" is with sttoper, adjust them as table 2, 4 and 5 show.

■ Table 4 (For Outdoor unit A Side)

Model type	Gas-side accessory pipe(3) B(mm) ✱dimensions For 100	For 139	For 233	Cutting position	Gas pipe 1(field supply) L(mm) ✱dimensions For 100	For 139	For 233
8HP	102	63	48	B	unnecesary		79
10HP	72	33	25	B	unnecesary		86
12HP ~ 18HP	0 (no cutting)	53	0 (no cutting)	B	unnecesary	92	133

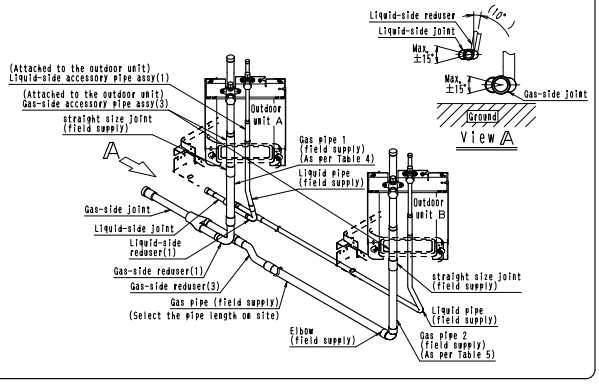
■ Table 5 (For Outdoor unit B Side)

Model type	Gas-side accessory pipe(3) B(mm) ✱dimensions For 100	For 139	For 233	Cutting position	Gas pipe 2(field supply) L(mm) ✱dimensions For 100	For 139	For 233
8HP	0 (no cutting)	0 (no cutting)	0 (no cutting)	B	76	115	209
10HP	18	0 (no cutting)	0 (no cutting)	B	88	109	203
12HP ~ 18HP	32	0 (no cutting)	0 (no cutting)	B	96	103	197

2-2 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the gas and liquid pipe as shown in the figure below. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer(1), the liquid-side joint and the liquid-side reducer (1))
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
- Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A)
- Connect the liquid side reducer(1) tilting approx. 10° and bend the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the view A)

Caution
- If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.



continue to reverse side

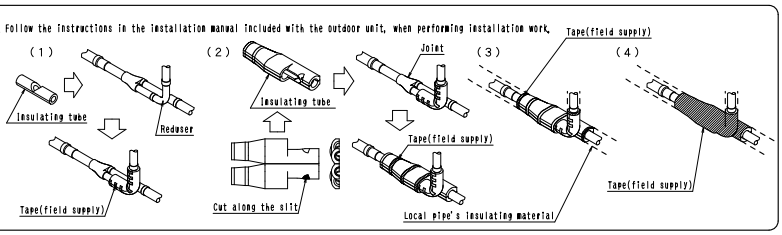
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❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Insulation of joints

(1) Fit the insulation to the reducer and temporarily keep it in place with tape.
(2) Cut insulating tube along the slit. (See the figure at the right.)
Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



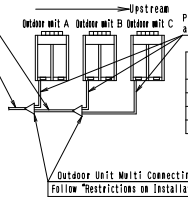
BHFP22P151 Installation Instructions

⚠Caution There are some restrictions on the interconnecting piping between the outdoor units. See the installation manual attached to the outdoor units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in malfunction of the unit.

Connecting Pipe Sizes and location of cutting the joint

Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Pipe between outdoor unit Multi Connection Piping Kit
●Select the pipe size according to the total capacity of the outdoor unit (unit B, C).
Main pipe
●Select the pipe size according to the total capacity of the outdoor unit to be connected upstream (unit A, B, C).



Pipe between the outdoor unit Multi Connection Piping Kit and the outdoor unit

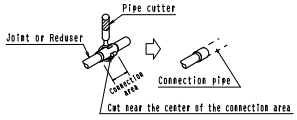
(units:mm)

Outdoor unit capacity type	Pipe size (O.D. x mlt. thickness [temper grade])	
	Gas pipe	Liquid pipe
8HP	ø19.1×0.80[1/2H]	ø 9.5×0.80[0]
10HP	ø22.2×0.80[1/2H]	
12~16HP	ø28.6×0.99[1/2H]	ø12.7×0.80[0]
18HP		ø15.9×0.99[0]

(units:mm)

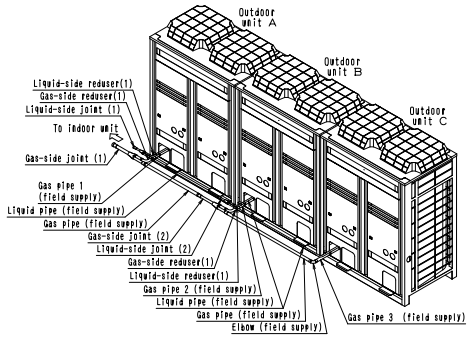
Outdoor unit total capacity (unit A, B, C) or the total capacity of the outdoor unit to be connected upstream (unit B, C)	Pipe size (O.D. x mlt. thickness [temper grade])	
	Gas pipe	Liquid pipe
16HP	ø28.6×0.99[1/2H]	ø12.7×0.80[0]
18~22HP		ø15.9×0.99[0]
24HP	ø34.9×1.21[1/2H]	
26~34HP		ø19.1×0.80[1/2H]
36HP~	ø41.3×1.43[1/2H]	

Cutting procedure
・Use pipe cutter for cutting.

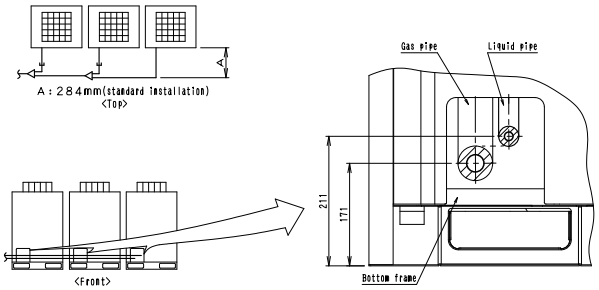


❶ Installation examples Procedure for Front Connection

1-1 Exterior view



1-2 Finished dimensions ・For installations where the A dimensions exceed 284 mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.



❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

・Cut the pipes according to Table 6.

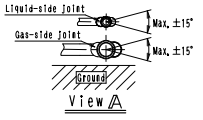
Caution・This Table shows the case when the A dimensions shown in "1-2 Finished dimensions" is 284mm. If the A dimensions exceed 284mm, see Table 6 and adjust the dimensions of the gas pipe 1 and 2 and 3.
・The L dimensions of the gas pipe 3 in Table 6 show those when the field supply elbows have B dimension in Table 2 shown in BHFP22P151 Installation Instruction, 2 connection of gas and liquid pipes.
If the B dimensions are not same with Table 2, see Table 2 and 6, and adjust them accordingly.

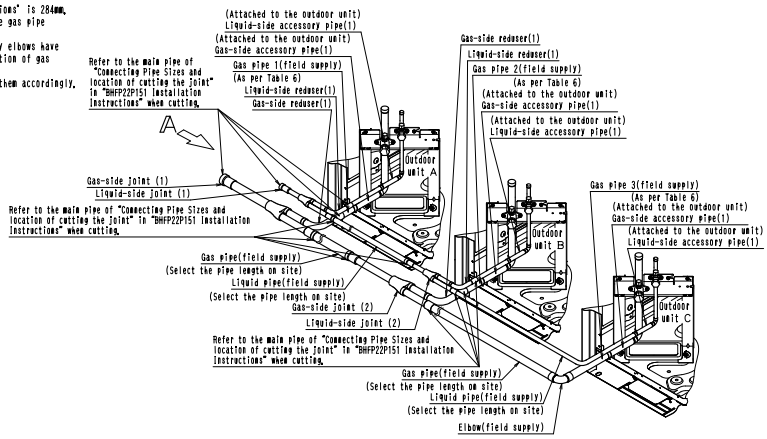
■ Table 6

Model type	Gas pipe 1 (field supply) L (mm)	Gas pipe 2 (field supply) L (mm)	Gas pipe 3 (field supply) L (mm)
8HP	51	69	282
10HP	57	75	252
12~18HP	101	119	218

2-2 Connection of pipes

・Connect the gas and liquid pipes as shown in the figure at the right. When connecting the pipes, first connect the gas-side joint and the gas-side reducer(1), the liquid-side joint and the liquid side reducer(1).
・See "1-2 Finished dimensions" for the location(height) of the joint.
・See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
・Install the joint in such a way that the attached face of the caution label becomes horizontal (See the View A).





❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

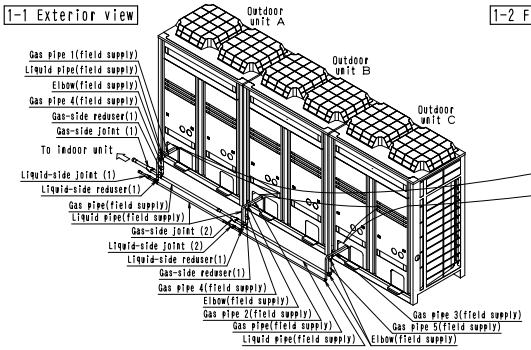
Insulation of joints

・See "The work after the kit is connected" for a front connection in "BHFP22P151 Installation Instructions."

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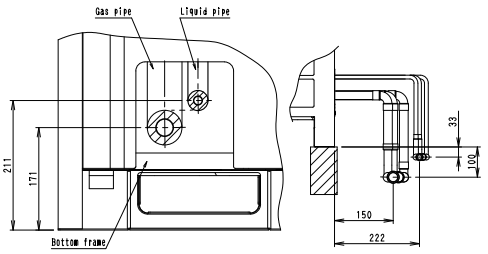
❶ Installation examples — Procedure for Lower Front Connection

1-1 Exterior view



1-2 Finished dimensions

• A standard installation has the following dimensions.
• When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint. (field supply)



❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipes

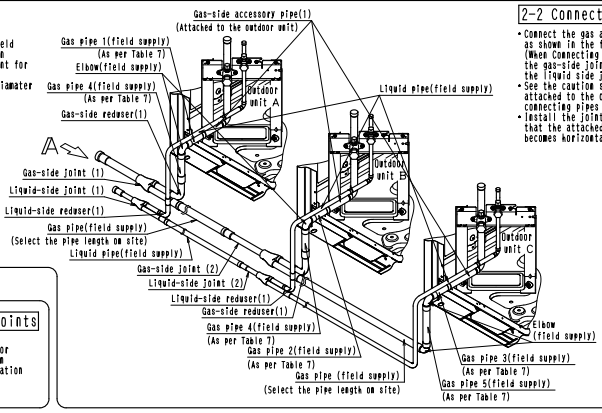
• Cut the pipes according to Table 7.

Caution • The L dimensions of the gas pipe 1 to 5 in Table 7 show those when the field supply elbows have B dimension in Table 2 shown in BHFP22P100 Installation Instruction, 2 Connection of gas and liquid pipes and the field supply joint for the same diameter pipes are without stopper. If the B dimensions are not same with Table 2 or the joint for the same diameter pipes have stopper, see Table 2 and 7, and adjust them accordingly.

■ Table7

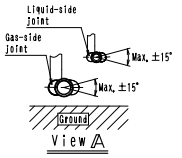
Model type	Gas pipe 1(field supply) L (mm)	Gas pipe 2(field supply) L (mm)	Gas pipe 3(field supply) L (mm)
8HP	130	147	182
10HP	100	117	152
12~18HP	66	83	118

Model type	Gas pipe 4(field supply) L (mm)	Gas pipe 5(field supply) L (mm)
8HP	59	237
10HP	83	225
12~18HP	149	213



2-2 Connection of pipes

• Connect the gas and liquid pipes as shown in the figure at the left. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer (1), the liquid side joint and the liquid-side reducer (1).)
• See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
• Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the View A).



❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
} Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

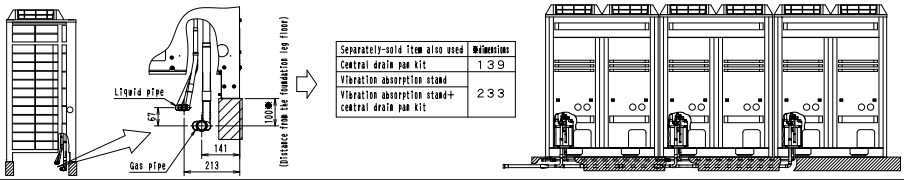
Insulation of joints

• See "The work after the kit is connected" for a lower front connection of "BHFP22P100 Installation Instructions."

❶ Installation examples — Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized drain pan kit and/or vibration proof base are used, the dimensions marked with "✽" in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view



Separately-sold item also used	Dimensions
Central drain pan kit	139
Vibration absorption stand	233
Vibration absorption stand+ central drain pan kit	

❷ Connection of gas and liquid pipes

2-1 Cutting the field supply gas pipe 1 and 2, and the Gas-side accessory pipe(3) attached to the outdoor unit

• Cut the pipes according to Table 8 or 9.

Caution • The "L" dimensions of the gas pipe 1 in Table 8 and the gas pipe 2 in Table 9 are identical to the "B" dimensions in table 2, those of "field supply elbows" shown in the procedure of front connection, which are equivalent to "straight size joint" without stopper. If the "B" dimentions are not identical to table 2 or "straight size joint" is with sttoper, adjust them as table 2, 8 and 9 show.

■ Table 8 (For Outdoor unit A, B Side)

Model type	Gas-side accessory pipe(3) B (mm) ✽dimensions For 100	For 139	For 233	Cutting position	Gas pipe 1(field supply) L (mm) ✽dimensions For 100	For 139	For 233
8HP	102	63	48	B	unnecesary		79
10HP	72	33	25				86
12HP ~ 18HP	0 (no cutting)	53	0 (no cutting)			92	133

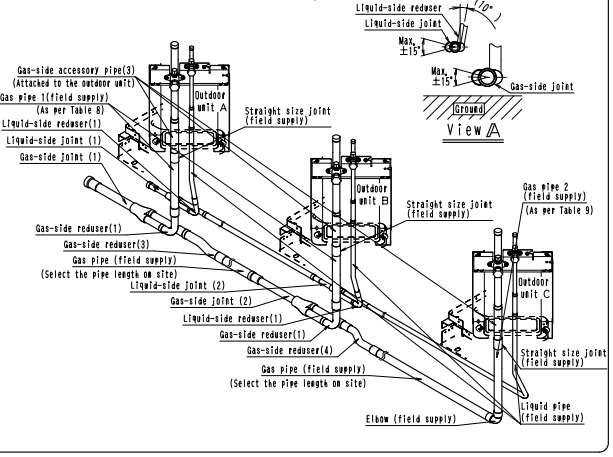
■ Table 9 (For Outdoor unit C Side)

Model type	Gas-side accessory pipe(3) B (mm) ✽dimensions For 100	For 139	For 233	Cutting position	Gas pipe 2(field supply) L (mm) ✽dimensions For 100	For 139	For 233
8HP	0 (no cutting)	0 (no cutting)	0 (no cutting)	B	76	115	209
10HP	18	0 (no cutting)	0 (no cutting)		88	109	203
12HP ~ 18HP	32	0 (no cutting)	0 (no cutting)		96	103	197

2-2 Connection of pipes

• Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
• Connect the gas and liquid pipe as shown in the figure below. (When connecting the pipes, first connect the gas-side joint and the gas-side reducer(1), the liquid-side joint and the liquid-side reducer (1))
• See the caution section in the installation manual attached to the outdoor unit for brazing pipes and connecting pipes with flare nuts.
• Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view A)
• Connect the liquid side reducer(1) tilting approx. 10° and bend the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the view A)

Caution • If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.



❸ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
} Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

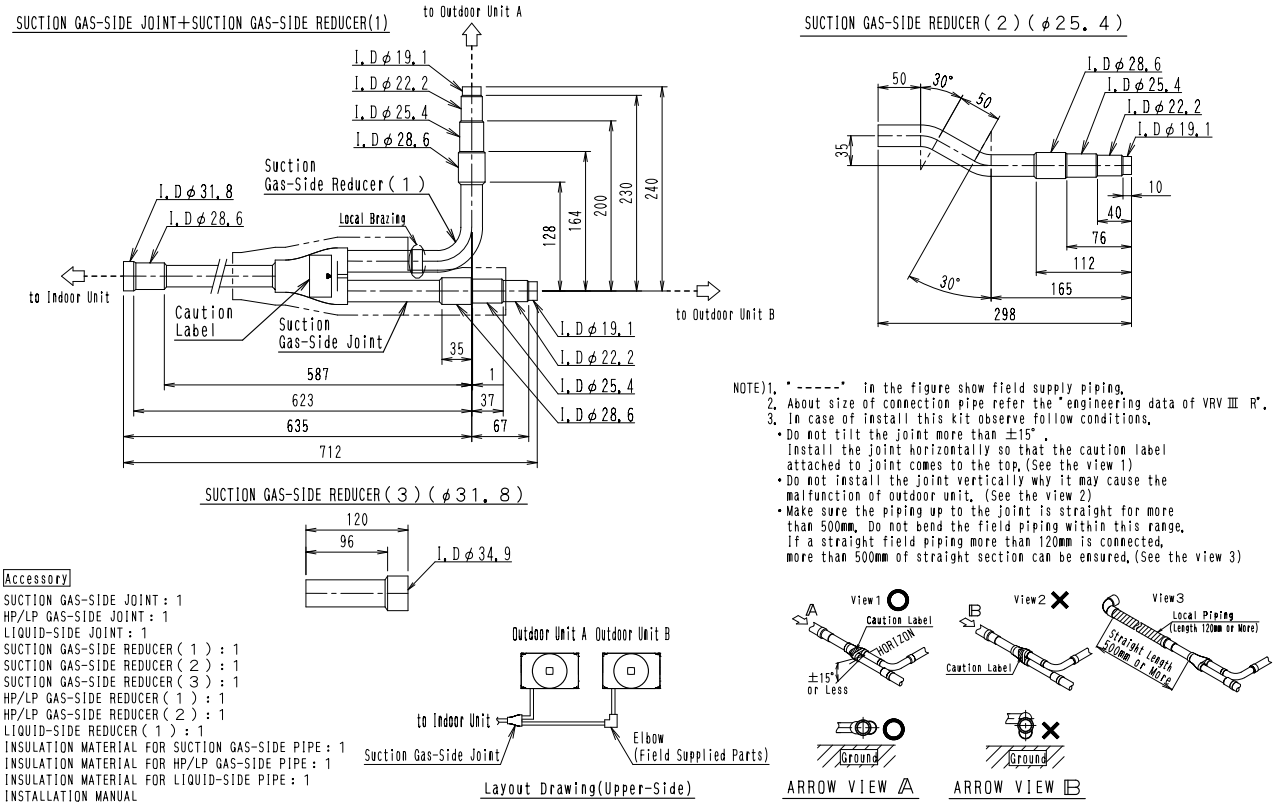
Insulation of joints

• See "The work after the kit is connected" for a front connection in "BHFP22P100 Installation Instructions."

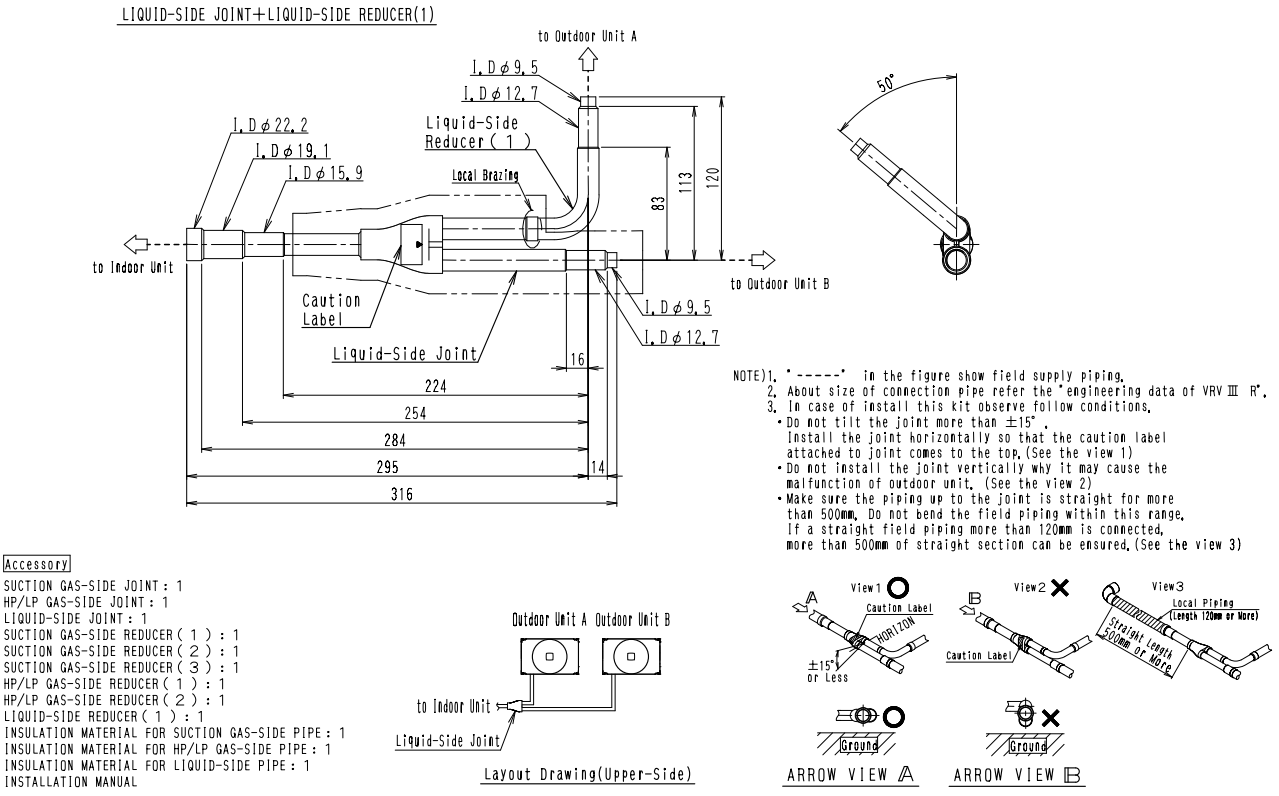
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5.3 BHFP26P90 / 136

5.3.1 BHFP26P90

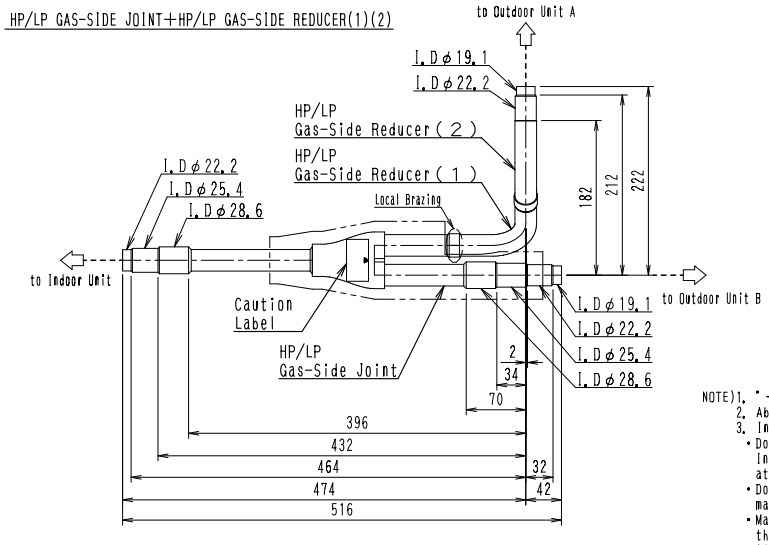


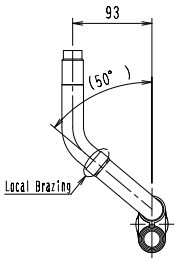
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HP/LP GAS-SIDE JOINT+HP/LP GAS-SIDE REDUCER(1)(2)

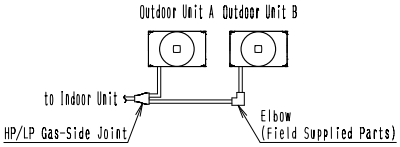




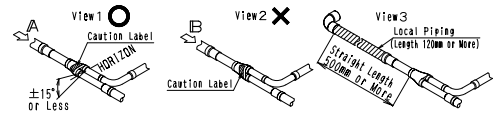
NOTE)1. "------" in the figure show field supply piping.
2. About size of connection pipe refer the "engineering data of VRV Ⅲ R".
3. In case of install this kit observe follow conditions.
- Do not tilt the joint more than ±15°.
Install the joint horizontally so that the caution label attached to joint comes to the top.(See the view 1)
- Do not install the joint vertically why it may cause the malfunction of outdoor unit. (See the view 2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured.(See the view 3)

Accessory

SUCTION GAS-SIDE JOINT : 1
HP/LP GAS-SIDE JOINT : 1
LIQUID-SIDE JOINT : 1
SUCTION GAS-SIDE REDUCER (1) : 1
SUCTION GAS-SIDE REDUCER (2) : 1
SUCTION GAS-SIDE REDUCER (3) : 1
HP/LP GAS-SIDE REDUCER (1) : 1
HP/LP GAS-SIDE REDUCER (2) : 1
LIQUID-SIDE REDUCER (1) : 1
INSULATION MATERIAL FOR SUCTION GAS-SIDE PIPE : 1
INSULATION MATERIAL FOR HP/LP GAS-SIDE PIPE : 1
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 1
INSTALLATION MANUAL



Layout Drawing(Upper-Side)



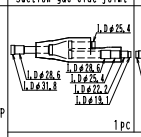
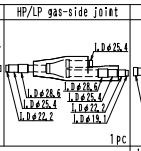
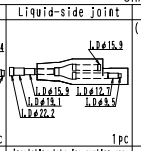
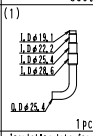
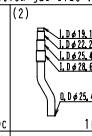
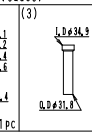
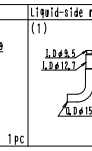
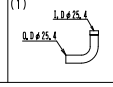
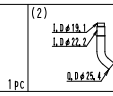


ARROW VIEW Ⓐ ARROW VIEW Ⓑ

3D058278

Component parts

■This kit contains the following parts. **<Do not throw away any of the accessories until installation is complete.>**

Kit name	SHAPE					
	Suction gas-side joint	HP/LP gas-side joint	Liquid-side joint	Suction gas-side reducer		Liquid-side reducer
BHFP26P90	 1pc	 1pc	 1pc	(1)  1pc (2)  1pc (3)  1pc		(1)  1pc
	HP/LP gas-side reducer		Insulating tube for suction gas pipe or HP/LP gas pipe	Insulating tube for liquid pipe		
	(1)  1pc (2)  1pc		2pc	1pc		

Caution
- Please be sure to read this manual before installation and follow the instruction carefully when performing installation work.
- See the outdoor unit's installation manual for outdoor unit installation.
- Installation of interconnecting piping between the outdoor and indoor units, REFNET joint or REFNET header will be needed separately).

Selection Procedure

Number of outdoor units connected	2 units
Outdoor unit Multi Connection Piping Kit	BHFP26P90

- 2 outdoor units can be connected.
- There are restrictions on the combination and the installation order of outdoor units, so please refer to "the Engineering Data of VRV Ⅲ R" and "the Installation manual" (attached sheet of outdoor unit) for details.

Field supply parts

■The following parts are needed to connect this kit and are not included.

Field supply parts			
Name		Q'ty	Selection Procedure
Insulation for piping		1set	See the "Connecting Pipe sizes and location of cutting the joint " for details on the necessary size.
Connection piping			
Elbow	Suction gas-pipe	1pc	Prepare a gas pipe diameter for the upper outdoor unit as listed in "Connecting Pipe Sizes and location of cutting the joint."
	HP/LP gas-pipe	2pc	
	Equalizer pipe	4pc	
Tape		1set	For insulation materials

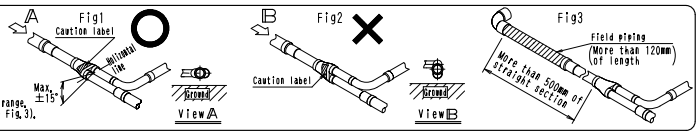
Caution
- Quantity and selection procedure of elbow only applies to a front connection.
- For a lower front connection, the quantity and selection procedure are different, so please refer to the instructions for a lower front connection.
- Straight size joints is needed only for a bottom connection. See the instructions for the bottom connection for details on quantity and specifications.

⚠To the piping installer When installing this kit, please apply the following restrictions.

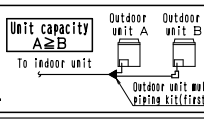
Restrictions on Installing Multi Connection Piping Kit

- Install the joint horizontally so that the caution label attached to joint comes to the top. Do not tilt the joint more than ±15° (See Fig. 1). In addition, do not install the joint vertically(See Fig. 2).
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured(See Fig. 3).
- Improper installation may lead to malfunction of the outdoor unit.

Fig1 / Fig2 / Fig3



<Caution>
- When installing the multi system, connect the units as shown in the figure at the right order. If install the system with different order, the Outdoor unit multi connection piping kit may not suit and some pipe size reducer(field supply) may be required.
- If the total capacity of the connected indoor units exceeds the capacity of the outdoor unit, cooling and heating performance may drop when running the indoor units. See the capacity table in the Engineering Data Book for details.



Connecting pipe sizes and location of cutting the joint

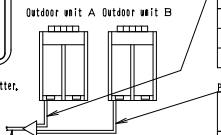
Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

- If the pipe size of φ19.1 or larger is used, the O material may be insufficient to withstand the specified pressure. Therefore, make sure to use the 1/2H material with thickness of 1.0mm or more. When using the O material for the pipe size of φ19.1, a thickness of 1.2 or more is required. In this case, the connection must be brazed.

● Select the pipe size according to the total capacity of outdoor unit. (units : mm)

Outdoor unit total capacity type	Pipe size (O, 1/2H × min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
18HP	φ28.6×1.0(1/2H)	φ22.2×1.0(1/2H)	φ15.9×1.0(O)
20・22HP			
24HP	φ34.9×1.21(1/2H)	φ28.6×1.0(1/2H)	φ19.1×1.0(1/2H)
26~32HP			

Main pipe



Pipe between the joint and the outdoor unit A (units : mm)

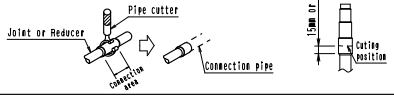
Outdoor unit total capacity type	Pipe size (O, 1/2H × min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
18HP	φ22.2×1.0(1/2H)	φ19.1×1.0(1/2H)	φ 9.5×0.8[O]
20~24HP	φ28.6×1.0(1/2H)		φ12.7×0.8[O]
26~32HP		φ22.2×1.0(1/2H)	

Pipe between the joint and the outdoor unit B (units : mm)

Outdoor unit total capacity type	Pipe size (O, 1/2H × min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
18~22・26HP	φ22.2×1.0(1/2H)	φ19.1×1.0(1/2H)	φ 9.5×0.8[O]
24・28HP	φ28.6×1.0(1/2H)		φ12.7×0.8[O]
30・32HP		φ22.2×1.0(1/2H)	

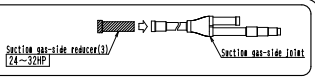
Cutting procedure

- Use pipe cutter for cutting.
- Cut a joint and reducer in order that their fit depths should be 15mm or more.



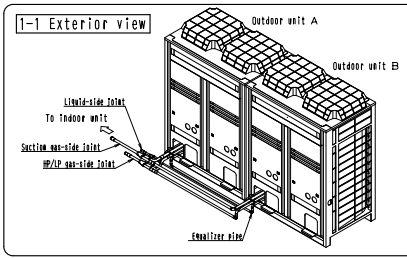
When reducer is used

- Suction gas-side reducer(3) may be used on the Suction gas-side joint see the figure at the right for details of connection.



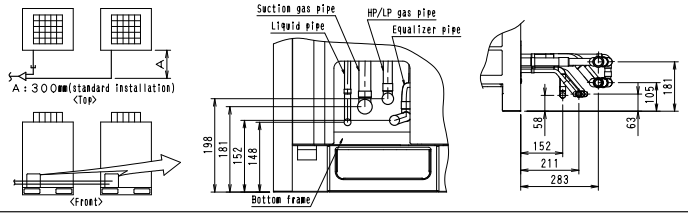
❶ Installation examples — Procedure for Front Connection

1-1 Exterior view



1-2 Finished dimensions

・For installations where the A dimensions exceed 300mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.



❷ Connection of suction gas-side and HP/LP gas-side pipe

2-1 Cutting the field supply Suction gas-side and HP/LP gas-side pipe

- Cut the Suction gas pipe or HP/LP gas pipe(field supply) according to Table 1, 2.

Caution
- This table shows where A dimension is 300mm by 1-2 finished dimensions. If its installation exceeds 300mm, see Table 1 and 2 and adjust Suction gas pipe 1 and 2 and HP/LP gas pipe 1, 2, and 3.
- The L dimensions of the Suction gas pipe 1 and 2 in Table 1 and HP/LP gas pipe 1, 2, and 3 in Table 2 are applied to where B dimensions of elbows are shown as in Table 3 or Table 4. If B dimension is different from the dimensions in the table, see Table 1 and 2 and adjust them.

■ Table1

Model type	Suction gas pipe 1(field supply) L (mm)	Suction gas pipe 2(field supply) L (mm)
18HP	61	238
20・22HP	135	238
24HP	135	234
26HP	135	238
28~32HP	135	234

■ Table2

Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)
18~24HP	50	245	59
26・28HP	80	245	59
30・32HP	80	239	47

■ Table3

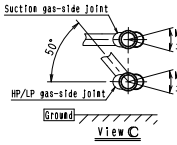
Model type	Elbow 1(field supply) B (mm)
18~22HP	23
24HP	29
26HP	23
28~32HP	29

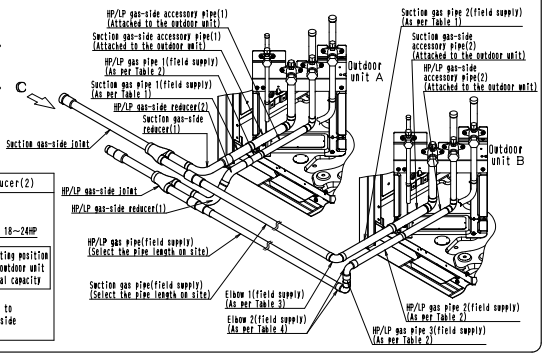
■ Table4

Model type	Elbow 2(field supply) B (mm)
18~28HP	17
30・32HP	23

2-2 Connection of pipes

- Connect the Suction gas-side and HP/LP gas-side pipes as following the procedure on the below figure. (For connection of pipes, at first, connect Suction gas-side joint with Suction gas-side reducer (1) and HP/LP gas-side joint with HP/LP gas-side reducer (1) and (2).)
- See 1-2 finished dimensions for the location (height) of the joints.
- See the caution section in the Installation manual attached to the outdoor unit for brazing pipes.
- Install the joints so that an attached face of the caution label keeps horizontal. (See the view C)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.





Suction gas-side reducer(1)	HP/LP gas-side reducer(2)
Connection to Suction gas pipe 1 (field supply) 18HP 20~32HP Cutting position by outdoor unit total capacity Connection to Suction gas-side joint	Connection to HP/LP gas pipe 1(field supply) No cutting for 18~24HP 26~32HP Cutting position by outdoor unit total capacity Connection to HP/LP gas-side reducer(1)

1P206370B

❸ Connection of Liquid-side and equalizer pipe

3-1 Cutting the field supply Liquid-side and equalizer pipe

- Cut the equalizer pipe(field supply) according to Table 1.

Caution • This table shows the case when the A dimensions shown in 1-2 Finished dimensions is 300mm, If the A dimensions exceed 300mm, see Table 1 and adjust the dimensions of the equalizer pipe 1 and 2.
• The L dimensions of the equalizer pipe 1 and 2 in Table 1 show those when the field supply elbows have B dimension in Table 2, If the B dimension is not same with Table 2, see Table 1, and adjust them accordingly.

3-2 Connection of pipes

- Connect the liquid-side and equalizer pipes as shown in the right figure, (For connection of pipes, at first, connect Liquid-side joint with Liquid-side reducer (1),)
- See 1-2 Finished dimensions for the location (height) of the joint.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Connect Liquid-side reducer (1) as at about 40° inclination and bend the field supplied liquid pipe up to the stop valve as following the procedure on right figure.
- Refer of both Cutting procedure for the cutting position of both joint and reducer.

Caution • If the liquid side reducer is connected horizontally without bending the liquid pipes, the insulation will not fit.

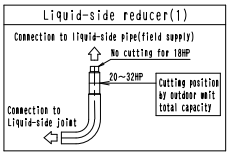
■ Table1

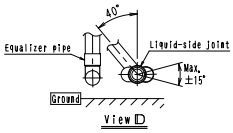
Equalizer pipe 1(field supply) L (mm)	Equalizer pipe 2(field supply) L (mm)
95	60

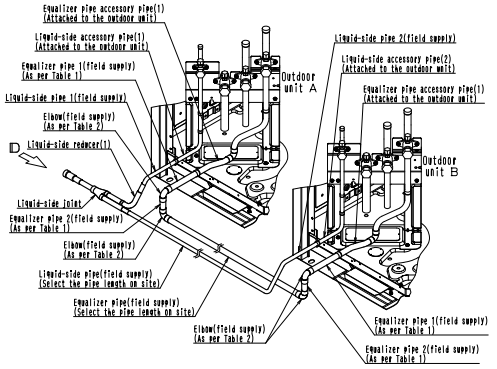
■ Table2

Elbow(field supply) B (mm)
17

Liquid-side reducer(1)







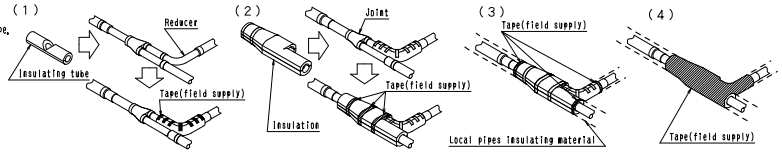
❹ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit } Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

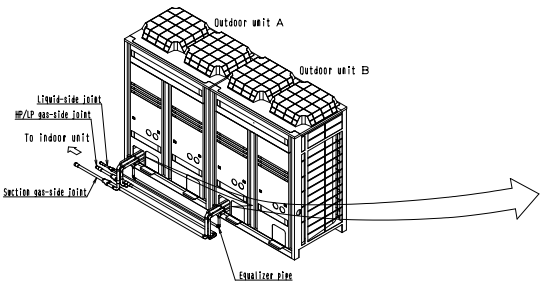
Insulation of joints

(1) Fit the insulating tube to the reducer and temporarily keep it in place with tape.
(2) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces. (See the figure at the right.)
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (section shown in the figure at the right.)



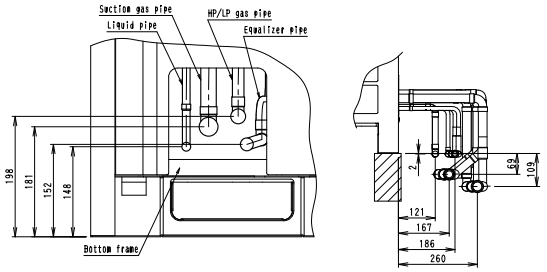
❶ Installation examples Procedure for Lower Front Connection

1-1 Exterior view



1-2 Finished dimensions

- A standard installation has the following dimensions.
- When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint(field supply).



❷ Connection of suction gas-side and HP/LP gas-side pipe

2-1 Cutting the field supply Suction gas-side and HP/LP gas-side pipe

- Cut the according to Table 1, 2.

Caution • The L dimensions of Suction gas pipe 1~4 in Table 1 and HP/LP gas pipe 1~5 in Table 2 show those when the field supply elbows have B dimension in Table 3 and Table 4, If the B dimension is not same with Table 3 and Table 4, see Table 1 and 2, and adjust them accordingly.

■ Table1

Model type	Suction gas pipe 1(field supply) L (mm)	Suction gas pipe 2(field supply) L (mm)	Suction gas pipe 3(field supply) L (mm)	Suction gas pipe 4(field supply) L (mm)
18HP	216	181	102	244
20・22HP	212	177	168	232
24HP		181		244
26HP		177		232
28~32HP				

■ Table2

Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)	HP/LP gas pipe 4(field supply) L (mm)	HP/LP gas pipe 5(field supply) L (mm)
18~24HP	223	193	73	233	64
26・28HP	217	187	97	221	52
30・32HP					

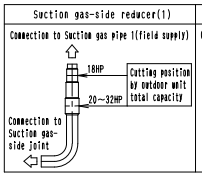
■ Table3

Model type	Elbow 1(field supply) B (mm)	Elbow 2(field supply) B (mm)
18HP	23	23
20・22HP	29	29
24HP		23
26HP		29
30~32HP		

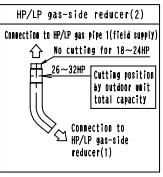
■ Table4

Model type	Elbow 3(field supply) B (mm)	Elbow 4(field supply) B (mm)
18~24HP	17	17
26・28HP	23	23
30・32HP		

Suction gas-side reducer(1)

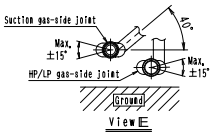


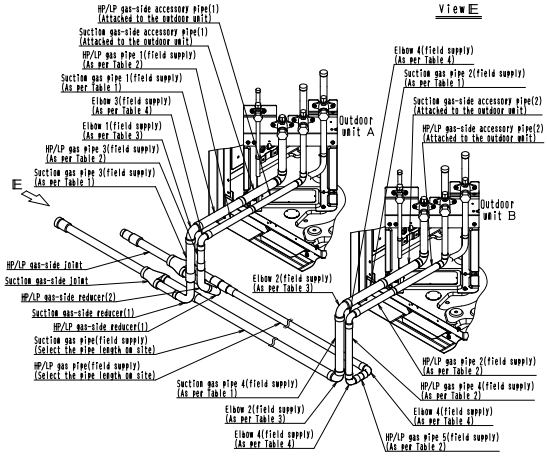
HP/LP gas-side reducer(2)



2-2 Connection of pipes

- Connect the suction gas-side and HP/LP gas-side pipes as shown in the below figure, (When connecting the pipes, first connect Suction gas-side joint and Suction gas-side reducer(1), HP/LP gas-side joint and HP/LP gas-side reducer(1),)
- See 1-2 Finished dimensions for the location(height) of the joints.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint so that an attached face of the caution label keeps horizontal(See the View E).
- Refer of both Cutting procedure for the cuting position of both joint and reducer.





continue to reverse side

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❸ Connection of Liquid-side and equalizer pipe

3-1 Cutting the field supply Liquid-side and equalizer pipe

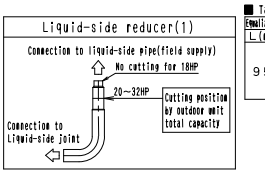
- Cut the equalizer pipe(ffield supply) according to Table 1.

Caution
- This table shows the case when the A dimensions shown in 1-2 Finished dimensions is 300mm. If the A dimensions exceed 300mm, see Table 1 and adjust the dimensions of Equalizer pipe 1 and 2.
- The L dimensions of Equalizer pipe 1 and 2 in Table 1 show those when the field supply elbows have B dimension in Table 2 shown in "procedure for front connection" and "connection of Liquid-side and equalizer pipe". If the B dimension is not same with Table, see Table 1 and 2, and adjust them accordingly.

3-2 Connection of pipes

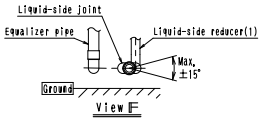
- Connect the liquid-side and equalizer pipe as shown in the right figure. (When connecting the pipes, first connect Liquid-side joint and Liquid side reducer(1).)
- See 1-2 Finished dimensions for the location(height) of the joint.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint in such a way that the attached face of the caution label becomes horizontal(See the View F).
- Connect the liquid side reducer(1) tilting approx. 90° and bend the field supplied liquid pipe up to the stop valve as shown in the figure below. (See the view F)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

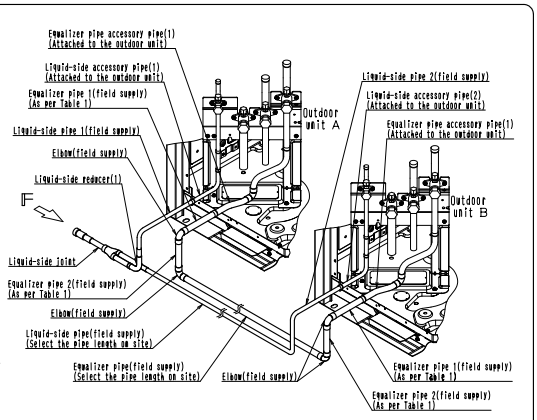
Caution • If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.



■ Table 1

Equalizer pipe 1(field supply) L (mm)	Equalizer pipe 2(field supply) L (mm)
95	120





❹ The work after the kit is connected

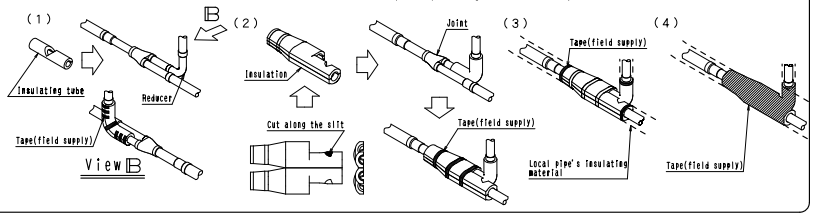
Connection of piping between the outdoor unit and the indoor unit

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

Insulation of joints

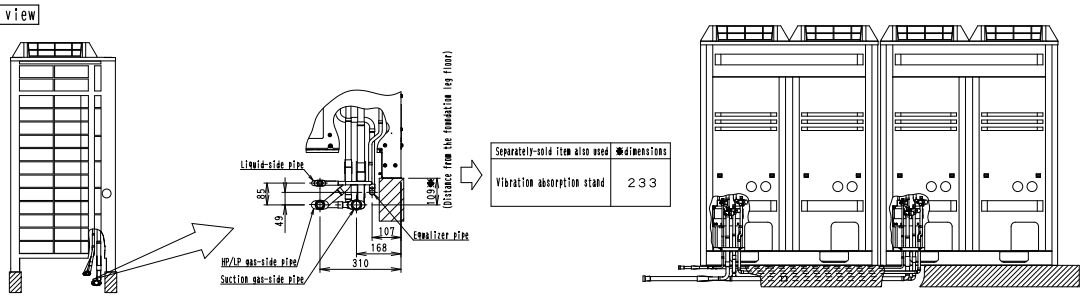
(1) Fit the insulating tube to the reducer and temporarily keep it in place with tape.
(2) Cut insulating tube along the slit. (See the figure at the right.) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



❶ Installation examples Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized vibration proof base are used, the dimensions marked with "✽" in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view



Separately-sold item also used	✽dimensions
Vibration absorption stand	233

❷ Connection of suction gas-side and HP/LP gas-side pipe

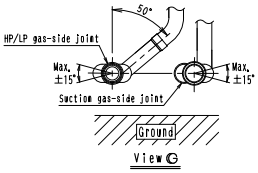
2-1 Cutting the field supply suction gas-side pipe and HP/LP gas-side pipe and the suction gas-side accessory pipe(2) attached to the outdoor unit

- Cut the pipes according to Table 1 or 2.

Caution
- The "L" dimensions of Suction gas pipe 1 in Table 1 and the HP/LP gas pipe 1~3 in Table 2 are identical to the "B" dimensions in Table 3 and Table 4, those of "field supply elbows" shown in "Procedure for Front Connection" and "Connection of suction gas-side and HP/LP gas-side pipe", which are equivalent to "straight size joint" with stopper. If the "B" dimensions are not identical to table or "straight size joint" is without sttoper, adjust them as Table 1 and Table 2 show.

■ Table 1 (For Outdoor unit B Side)

Model type	Suction gas-side accessory pipe(2) (Attached to the outdoor unit) L (mm)	Suction gas pipe 1(field supply) L (mm)
18~22HP	0 (no cutting)	137
24HP	41	98
26HP	0 (no cutting)	137
28~32HP	41	98



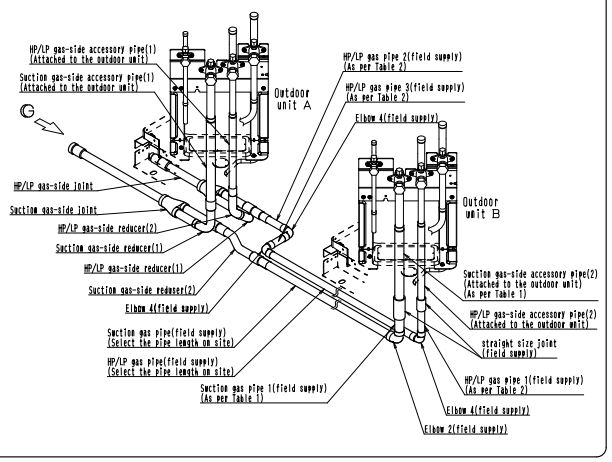
■ Table 2

Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)
18~28HP	155	86	94
30・32HP	119	110	82

Suction gas-side reducer(1)	HP/LP gas-side reducer(2)	Suction gas-side reducer(2)
Connection to Suction gas pipe 1 (field supply) 18HP 20~32HP Cutting position by outdoor unit total capacity Connection to Suction gas-side joint	Connection to HP/LP gas pipe 1(field supply) No cutting for 18~24HP 26~32HP Cutting position by outdoor unit total capacity Connection to HP/LP gas-side reducer(1)	Connection to Suction gas pipe (field supply) 18~22・26HP 24・28~32HP Cutting position by outdoor unit total capacity Connection to Suction gas-side joint

2-2 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the suction gas-side and HP/LP gas-side pipe as shown in the figure below. (When connecting the pipes, first connect the suction gas-side joint and the suction gas-side reducer(1), the HP/LP gas-side joint and the HP/LP gas-side reducer (1))
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint so that an attached face of the caution label keeps horizontal. (See the view G)
- Connect HP/LP gas-side reducer(1) as at about. 50° inclination and connect HP/LP gas-side reducer(2). (See the view G)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.



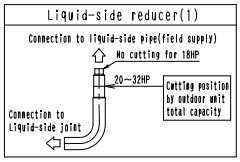
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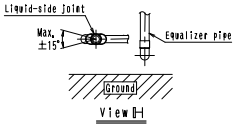
❸ Connection of Liquid-side and equalizer pipe

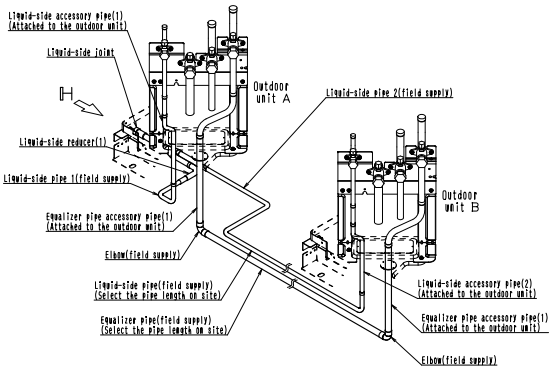
3-1 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the liquid and equalizer pipes as shown in the figure below. (When connecting the pipes, first connect Liquid-side joint and Liquid-side reducer (1))
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint so that an attached face of the caution label keeps horizontal. (See the view H)
- Bend the field supplied liquid pipe up to the stop valve as shown in the right figure. (See the view H)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

Caution • If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.







❹ The work after the kit is connected

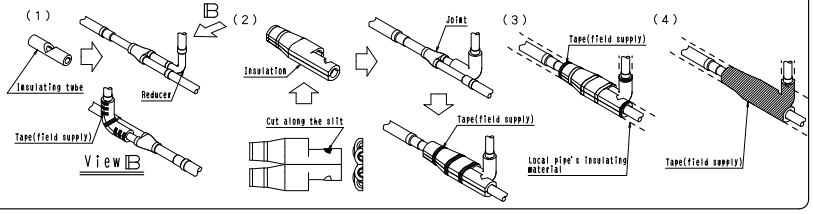
Connection of piping between the outdoor unit and the indoor unit

Air tight test

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

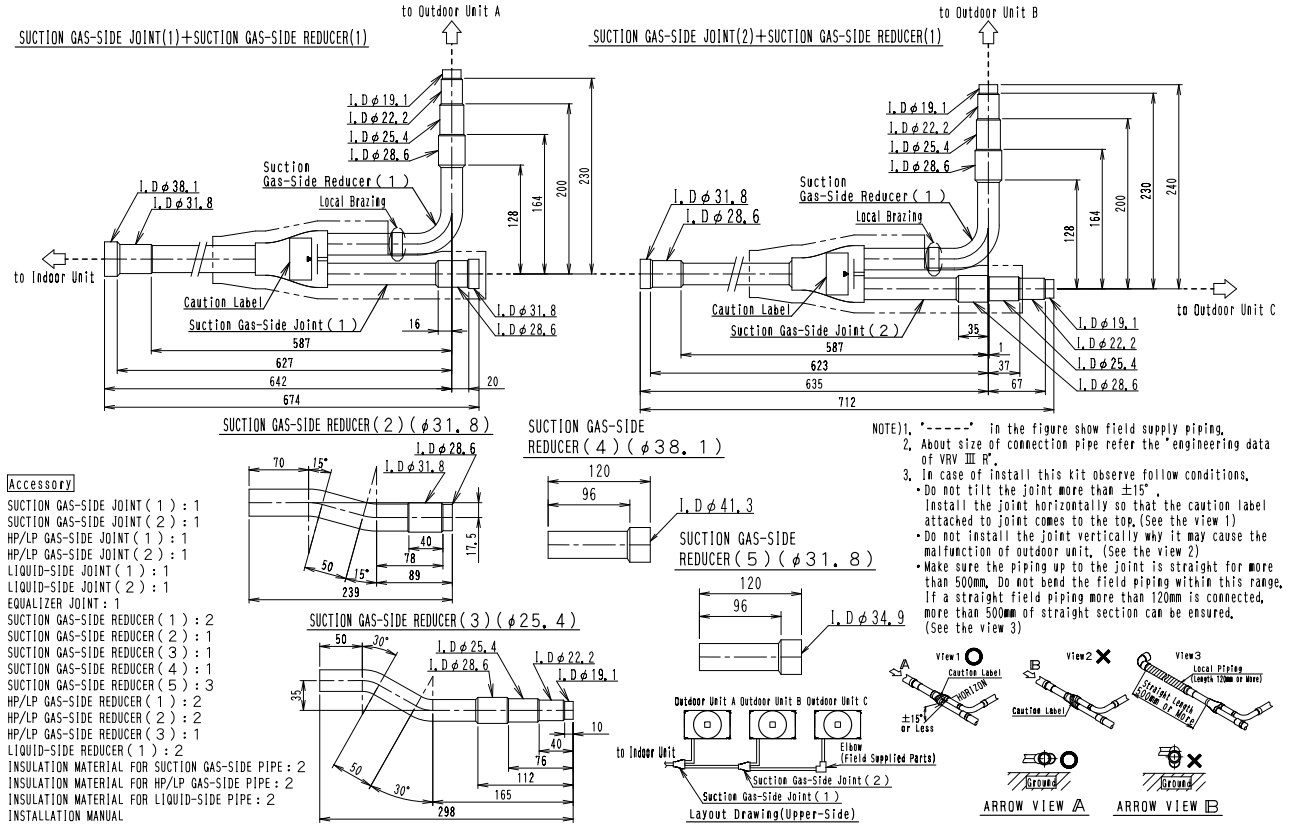
Insulation of joints

(1) Fit the insulating tube to the reducer and temporarily keep it in place with tape.
(2) Cut insulating tube along the slit. (See the figure at the right.)
Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



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5.3.2 BHFP26P136

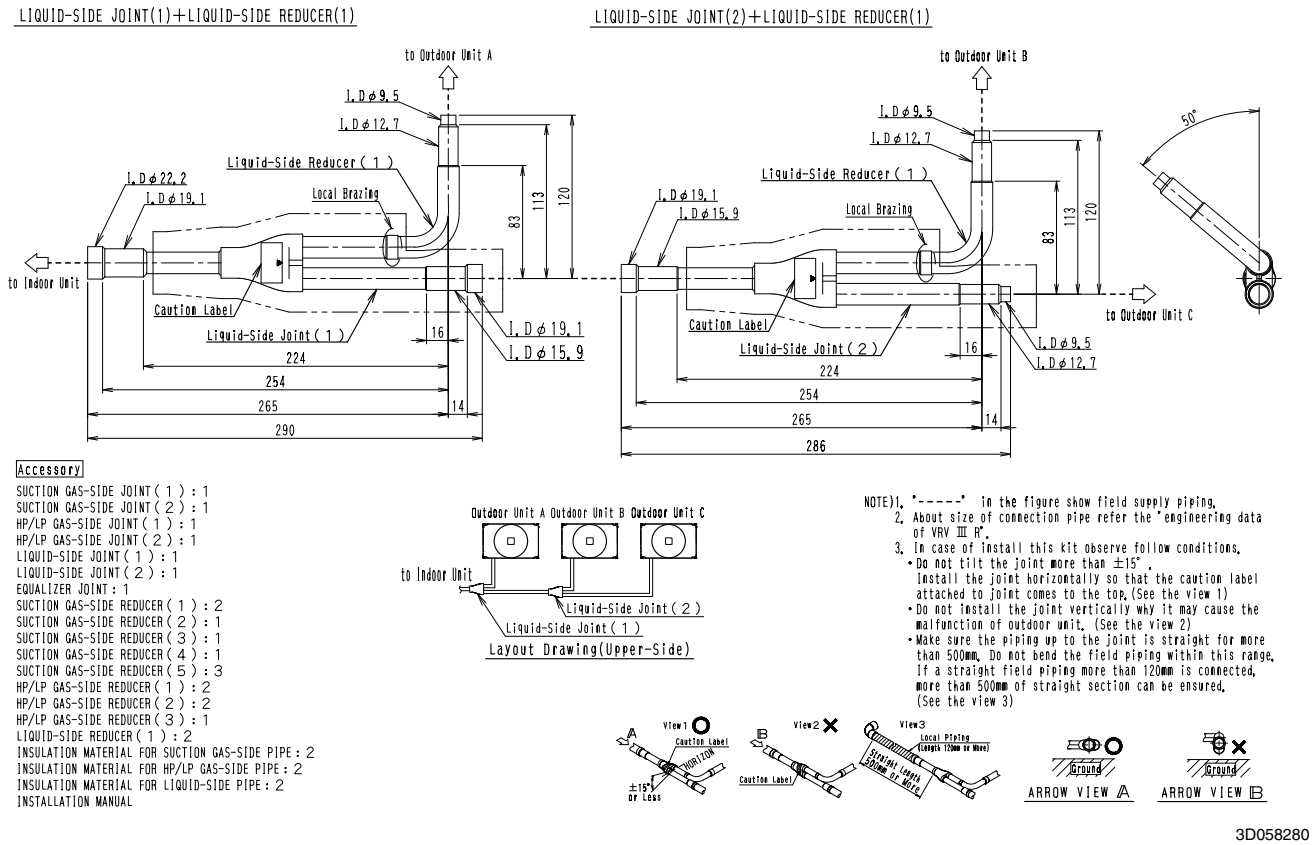


Accessory

SUCTION GAS-SIDE JOINT (1) : 1
SUCTION GAS-SIDE JOINT (2) : 1
HP/LP GAS-SIDE JOINT (1) : 1
HP/LP GAS-SIDE JOINT (2) : 1
LIQUID-SIDE JOINT (1) : 1
LIQUID-SIDE JOINT (2) : 1
EQUALIZER JOINT : 1
SUCTION GAS-SIDE REDUCER (1) : 2
SUCTION GAS-SIDE REDUCER (2) : 1
SUCTION GAS-SIDE REDUCER (3) : 1
SUCTION GAS-SIDE REDUCER (4) : 1
SUCTION GAS-SIDE REDUCER (5) : 3
HP/LP GAS-SIDE REDUCER (1) : 2
HP/LP GAS-SIDE REDUCER (2) : 2
HP/LP GAS-SIDE REDUCER (3) : 1
LIQUID-SIDE REDUCER (1) : 2
INSULATION MATERIAL FOR SUCTION GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR HP/LP GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 2
INSTALLATION MANUAL

NOTE)1. "-----" in the figure show field supply piping.
2. About size of connection pipe refer the "engineering data of VRV Ⅲ R".
3. In case of install this kit observe follow conditions.
- Do not tilt the joint more than ±15°, Install the joint horizontally so that the caution label attached to joint comes to the top. (See the view 1)
- Do not install the joint vertically why it may cause the malfunction of outdoor unit. (See the view 2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See the view 3)

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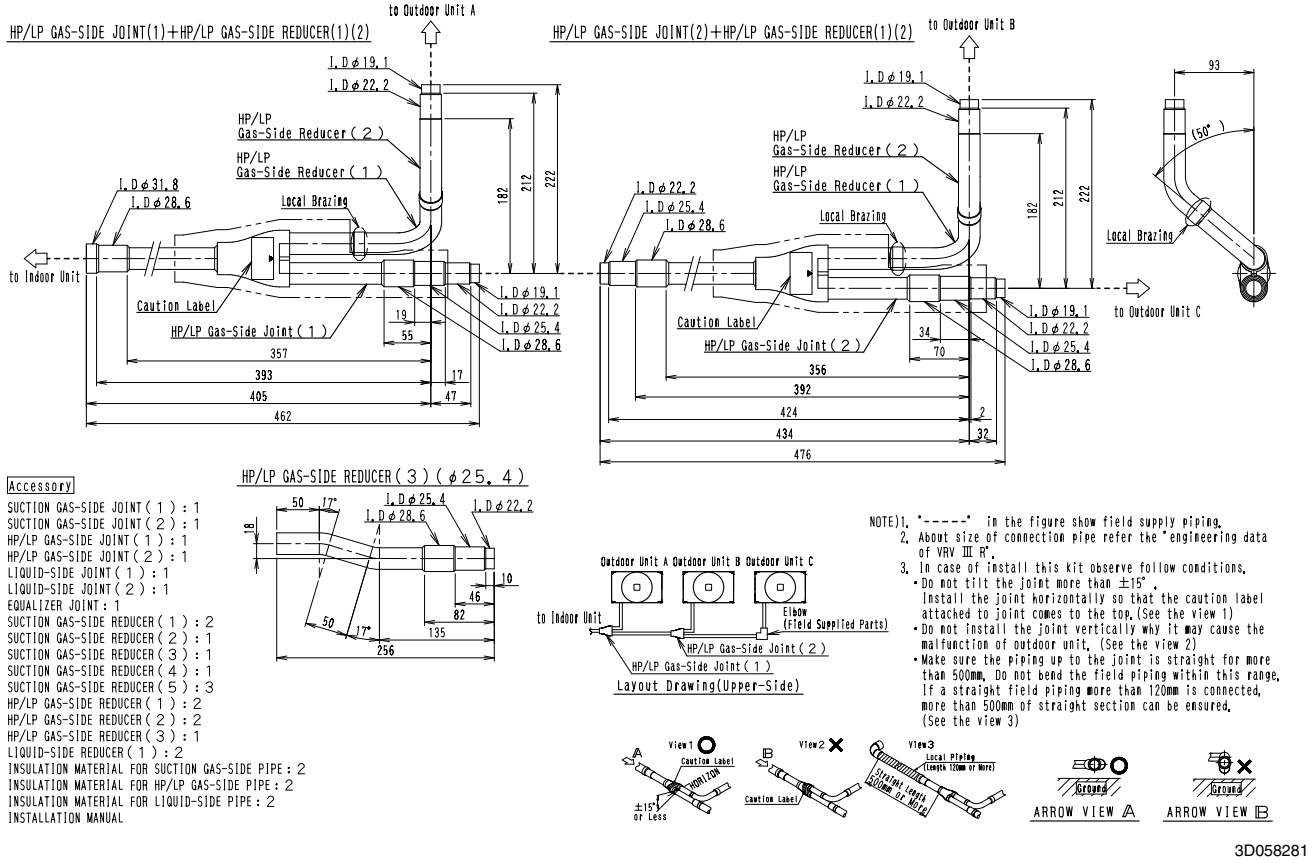


Accessory

SUCTION GAS-SIDE JOINT (1) : 1
SUCTION GAS-SIDE JOINT (2) : 1
HP/LP GAS-SIDE JOINT (1) : 1
HP/LP GAS-SIDE JOINT (2) : 1
LIQUID-SIDE JOINT (1) : 1
LIQUID-SIDE JOINT (2) : 1
EQUALIZER JOINT : 1
SUCTION GAS-SIDE REDUCER (1) : 2
SUCTION GAS-SIDE REDUCER (2) : 1
SUCTION GAS-SIDE REDUCER (3) : 1
SUCTION GAS-SIDE REDUCER (4) : 1
SUCTION GAS-SIDE REDUCER (5) : 3
HP/LP GAS-SIDE REDUCER (1) : 2
HP/LP GAS-SIDE REDUCER (2) : 2
HP/LP GAS-SIDE REDUCER (3) : 1
LIQUID-SIDE REDUCER (1) : 2
INSULATION MATERIAL FOR SUCTION GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR HP/LP GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 2
INSTALLATION MANUAL

NOTE)1. "-----" in the figure show field supply piping.
2. About size of connection pipe refer the "engineering data of VRV Ⅲ R".
3. In case of install this kit observe follow conditions.
- Do not tilt the joint more than ±15°, Install the joint horizontally so that the caution label attached to joint comes to the top. (See the view 1)
- Do not install the joint vertically why it may cause the malfunction of outdoor unit. (See the view 2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See the view 3)

3D058280



Accessory

SUCTION GAS-SIDE JOINT (1) : 1
SUCTION GAS-SIDE JOINT (2) : 1
HP/LP GAS-SIDE JOINT (1) : 1
HP/LP GAS-SIDE JOINT (2) : 1
LIQUID-SIDE JOINT (1) : 1
LIQUID-SIDE JOINT (2) : 1
EQUALIZER JOINT : 1
SUCTION GAS-SIDE REDUCER (1) : 2
SUCTION GAS-SIDE REDUCER (2) : 1
SUCTION GAS-SIDE REDUCER (3) : 1
SUCTION GAS-SIDE REDUCER (4) : 1
SUCTION GAS-SIDE REDUCER (5) : 3
HP/LP GAS-SIDE REDUCER (1) : 2
HP/LP GAS-SIDE REDUCER (2) : 2
HP/LP GAS-SIDE REDUCER (3) : 1
LIQUID-SIDE REDUCER (1) : 2
INSULATION MATERIAL FOR SUCTION GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR HP/LP GAS-SIDE PIPE : 2
INSULATION MATERIAL FOR LIQUID-SIDE PIPE : 2
INSTALLATION MANUAL

3D058281

Component parts

■This kit contains the following parts. <Do not throw away any of the accessories until installation is complete.>

Kit name	SHAPE				
	Suction gas-side joint	HP/LP gas-side joint	Liquid-side joint	Suction gas-side reducer	
BHFP26P 136	(1) I.D ϕ25.4, I.D ϕ31.8, I.D ϕ28.6, I.D ϕ38.1, I.D ϕ31.8 — 1pc	(1) I.D ϕ25.4, I.D ϕ28.6, I.D ϕ31.8, I.D ϕ28.6, I.D ϕ25.4, I.D ϕ22.2, I.D ϕ19.1 — 1pc	(1) I.D ϕ15.9, I.D ϕ19.1, I.D ϕ15.9, I.D ϕ22.2, I.D ϕ19.1 — 1pc	(1) I.D ϕ19.1, I.D ϕ22.2, I.D ϕ25.4, I.D ϕ28.6, O.D ϕ25.4 — 2pc	(3) I.D ϕ19.1, I.D ϕ22.2, I.D ϕ25.4, I.D ϕ28.6, O.D ϕ25.4 — 1pc
	(2) I.D ϕ25.4, I.D ϕ28.6, I.D ϕ31.8, I.D ϕ28.6, I.D ϕ25.4, I.D ϕ22.2, I.D ϕ19.1 — 1pc	(2) I.D ϕ25.4, I.D ϕ28.6, I.D ϕ25.4, I.D ϕ22.2, I.D ϕ22.2, I.D ϕ19.1 — 1pc	(2) I.D ϕ15.9, I.D ϕ15.9, I.D ϕ12.7, I.D ϕ19.1, I.D ϕ9.5 — 1pc	(2) I.D ϕ28.6, I.D ϕ31.8, O.D ϕ31.8 — 1pc	(4) I.D ϕ41.3, O.D ϕ38.1 — 1pc
	Suction gas-side reducer	HP/LP gas-side reducer		Liquid-side reducer	Equalizer pipe joint	Insulating tube for suction gas pipe or HP/LP gas pipe	Insulating tube for liquid pipe
	(5) I.D ϕ34.9, O.D ϕ31.8 — 3pc	(1) I.D ϕ25.4, O.D ϕ25.4 — 2pc	(2) I.D ϕ19.1, I.D ϕ22.2, O.D ϕ25.4 — 2pc	(3) I.D ϕ22.2, I.D ϕ25.4, I.D ϕ28.6, O.D ϕ25.4 — 1pc	(1) I.D ϕ9.5, I.D ϕ12.7, O.D ϕ15.9 — 2pc	1pc	4pc	2pc

Caution
- Please be sure to read this manual before installation and follow the instruction carefully when performing installation work.
- See the outdoor unit's installation manual for outdoor unit installation.
- Installation of interconnecting piping between the outdoor and indoor units, REFNET joint or REFNET header will be needed separately.

Selection Procedure

Number of outdoor units connected	3 units
Outdoor unit Multi Connection Piping Kit	BHFP26P136

- 3 outdoor units can be connected.
- There are restrictions on the combination and the installation order of outdoor units, so please refer to "the Engineering Data of VRV Ⅲ-H" and "the Installation manual" (attached sheet of outdoor unit) for details.

Field supply parts

■The following parts are needed to connect this kit and are not included.

Field supply parts		
Name	Q'ty	Selection Procedure
Insulation for piping	1set	See the "Connecting Pipe sizes and location of cutting the joint" for details on the necessary size.
Connection piping		
Elbow Suction gas-pipe	1pc	Prepare a gas pipe diameter for the upper outdoor unit as listed in "Connecting Pipe Sizes and location of cutting the joint."
Elbow HP/LP gas-pipe	2pc	
Elbow Equalizer pipe	5pc	
Tape	1set	For insulation materials

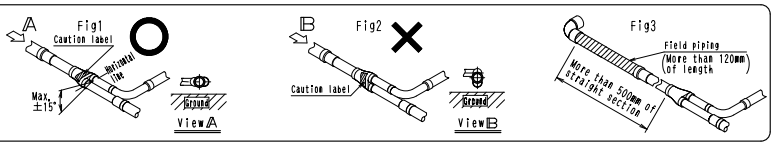
Caution
- Quantity and selection procedure of elbow only applies to a front connection.
- For a lower front connection, the quantity and selection procedure are different, so please refer to the instructions for a lower front connection.
- Straight size joints is needed only for a bottom connection. See the instructions for the bottom connection for details on quantity and specifications.

To the piping installer

When installing this kit, please apply the following restrictions.

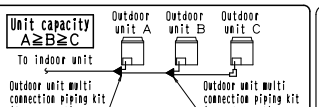
Restrictions on Installing Multi Connection Piping Kit

- Install the joint horizontally so that the caution label attached to joint comes to the top. Do not tilt the joint more than ±15° (See Fig. 1). In addition, do not install the joint vertically(See Fig.2).
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured(See Fig.3).
- Improper installation may lead to malfunction of the outdoor unit.



<Caution>
- When installing the multi system, connect the units as shown in the figure at the right order. If install the system with different order, the Outdoor unit multi connection piping kit may not suit and some pipe size reducer(field supply) may be required.
- If the total capacity of the connected indoor units exceeds the capacity of the outdoor unit, cooling and heating performance may drop when running the indoor units. See the capacity table in the Engineering Data Book for details.

Unit capacity A≧B≧C



Pipe between the joint and the outdoor unit A (units : mm)

Outdoor unit total capacity type	Pipe size (O.D. x min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
34~48HP	ϕ28.6X1.0[1/2H]	ϕ22.2X1.0[1/2H]	ϕ12.7X0.8[O]

Pipe between the joint 2 and the outdoor unit B (units : mm)

Outdoor unit total capacity type	Pipe size (O.D. x min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
34HP	ϕ22.2X1.0[1/2H]	ϕ19.1X1.0[1/2H]	ϕ 9.5X0.8[O]
36~40HP	ϕ28.6X1.0[1/2H]		ϕ12.7X0.8[O]
42~48HP		ϕ22.2X1.0[1/2H]	

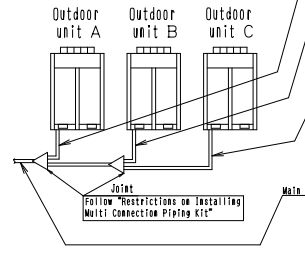
Pipe between the joint 2 and the outdoor unit C (units : mm)

Outdoor unit total capacity type	Pipe size (O.D. x min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
34~38・42HP	ϕ22.2X1.0[1/2H]	ϕ19.1X1.0[1/2H]	ϕ 9.5X0.8[O]
40・44HP	ϕ28.6X1.0[1/2H]		ϕ12.7X0.8[O]
46・48HP		ϕ22.2X1.0[1/2H]	

Connecting pipe sizes and location of cutting the joint

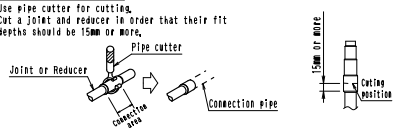
Select cutting point of a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

- If the pipe size of ϕ19.1 or larger is used, the O material may be insufficient to withstand the specified pressure. Therefore, make sure to use the 1/2H material with thickness of 1.0mm or more. When using the O material for the pipe size of ϕ19.1, a thickness of 1.2 or more is required. In this case, the connection must be brazed.



Cutting procedure

- Use pipe cutter for cutting.
- Cut a joint and reducer in order that their fit depths should be 15mm or more.

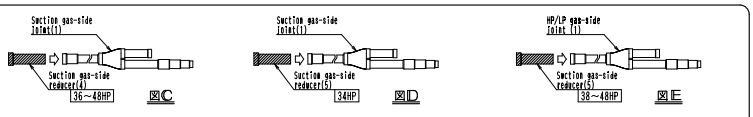


● Select the pipe size according to the total capacity of outdoor unit. (units : mm)

Outdoor unit total capacity type	Pipe size (O.D. x min. thickness [temper grade])		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
34HP	ϕ34.9X1.21[1/2H]	ϕ28.6X1.0[1/2H]	ϕ19.1X1.0[1/2H]
36HP	ϕ41.3X1.43[1/2H]		
38~48HP		ϕ34.9X1.21[1/2H]	

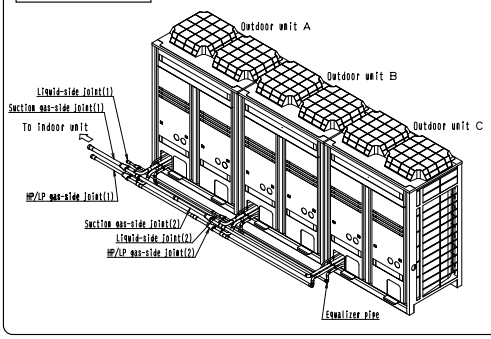
When reducer is used

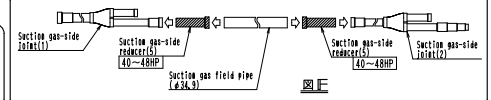
- Suction gas-side reducer(4) may be used during the construction on this installition see right figure C for the connection detail.
- Suction gas-side reducer(5) may be used during the construction on this installition see right figure D, E, or F for the connection detail.



❶ Installation examples — Procedure for Front Connection

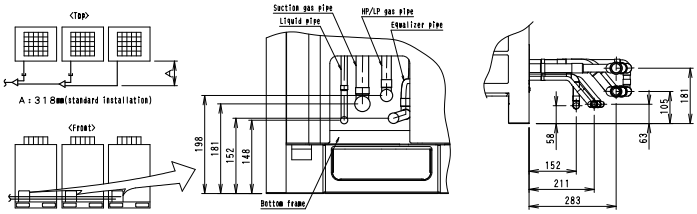
1-1 Exterior view





1-2 Finished dimensions

- For installations where the A dimensions exceed 318mm, extend the field supply interconnecting pipe between the joint and the outdoor unit.



1P206372B

❷ Connection of suction gas-side and HP/LP gas-side pipe

2-1 Cutting the field supply Suction gas-side and HP/LP gas-side pipe

- Cut the Suction gas pipe or HP/LP gas pipe(field supply) according to Table 1, 2.

Caution
- This table shows where A dimension is 318mm by 1-2 finished dimensions, If its Installation exceeds 318mm, see table 1 and 2 and adjust Suction gas-side pipe 1, 2, 3 and HP/LP gas-side pipe 1, 2, 3, 4.
- The L dimensions of the suction gas-side pipe 1, 2, 3 in Table 1 and HP/LP gas-side pipe 1, 2, 3, 4 in Table 2 are applied to where B dimensions of elbows are shown as in Table 3 and 4, If B dimension is different from the dimensions in the table, see Table 1 and 2 and adjust them.

■ Table1

Model type	Suction gas pipe 1(field supply) L (mm)	Suction gas pipe 2(field supply) L (mm)	Suction gas pipe 3(field supply) L (mm)
34HP	135	79	256
36・38HP		153	252
40HP			256
42HP			252
44~48HP			

■ Table3

Model type	Elbow 1(field supply) B (mm)
34~38HP	23
40HP	29
42HP	23
44~48HP	29

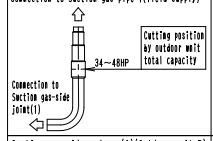
■ Table4

Model type	Elbow 2(field supply) B (mm)
34~44HP	17
46・48HP	23

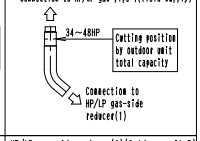
■ Table2

Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)	HP/LP gas pipe 4(field supply) L (mm)
34~40HP	80	67	262	59
42・44HP	80	97	262	59
46・48HP	80	97	256	47

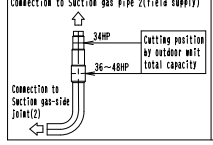
Suction gas-side reducer(1)(Outdoor unit A)



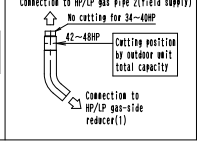
HP/LP gas-side reducer(1)(Outdoor unit A)



Suction gas-side reducer(1)(Outdoor unit B)

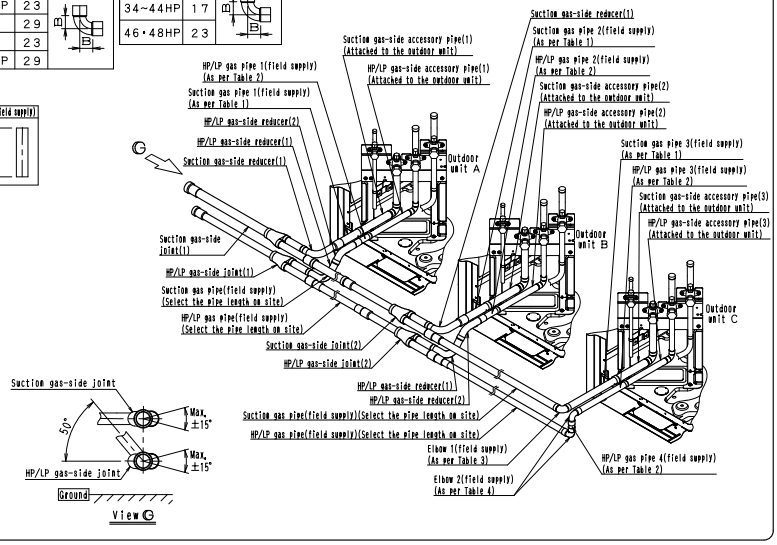


HP/LP gas-side reducer(1)(Outdoor unit B)



2-2 Connection of pipes

- Connect suction gas-side and HP/LP gas-side pipes as following the procedure on the below figure, (For connection of pipes, at first, connect Suction gas-side joint with Suction gas-side reducer (1) and HP/LP gas-side joint with HP/LP gas-side reducers (1) and (2).)
- See 1-2 finished dimensions for the location (height) of the joints.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joints so that an attached face of the caution label keeps horizontally. (See the view G)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.



❸ Connection of Liquid-side and equalizer pipe

3-1 Cutting the field supply Liquid-side and equalizer pipe

- Cut the equalizer pipe(field supply) according to Table 1.

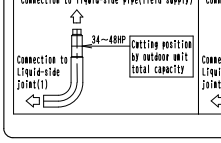
Caution
- This table shows the case when the A dimensions shown in 1-2 Finished dimensions is 318mm, If the A dimensions exceed 318mm, see Table 1 and adjust the dimensions of Equalizer pipe 1 and 2.
- The L dimensions of Equalizer pipe 1 and 2 in Table 1 show those when the field supply elbows have B dimension in Table 2, If the B dimension is not same with Table 2, see Table 1 and adjust them accordingly.

3-2 Connection of pipes

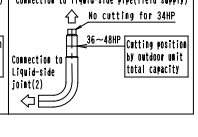
- Connect liquid-side and equalizer pipes as following the procedure on right figure, (For connection of pipes, at first, connect Liquid-side joint with Liquid-side reducer (1).)
- See 1-2 finished dimensions for the location (height) of the joints.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Connect Liquid-side reducer (1) as at about 40° inclination and bend the field supplied liquid pipe up to the stop valve as following the procedure on right figure.
- If the liquid-side reducer is connected with liquid-side pipes not bent vertically, the insulation will not be fitted.
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

Caution
- If the liquid side reducer is connected horizontally without bending the liquid pipes, the insulation will not fit.

Liquid-side reducer(1)(Outdoor unit A)



Liquid-side reducer(1)(Outdoor unit B)

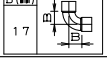


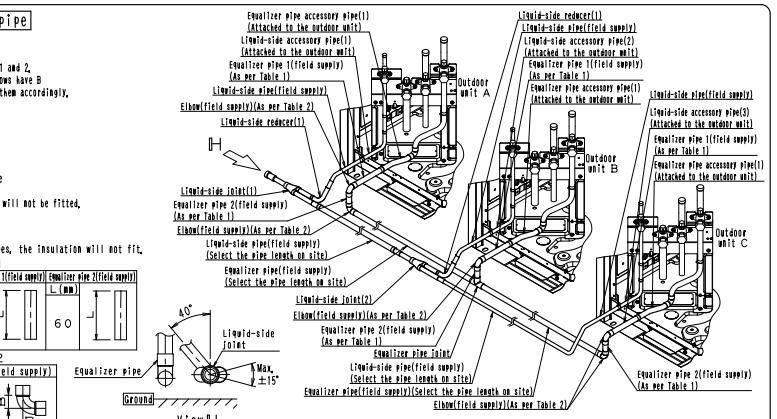
■ Table1

Equalizer pipe 1(field supply) L (mm)	Equalizer pipe 2(field supply) L (mm)
95	60

■ Table2

Elbow(field supply) B (mm)
17





❹ The work after the kit is connected

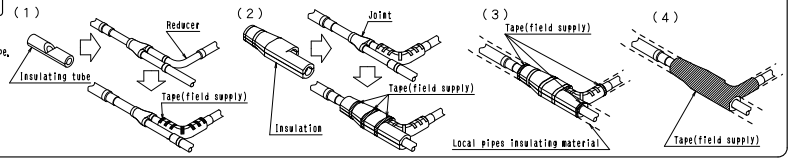
Connection of piping between the outdoor unit and the indoor unit

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Air tight test

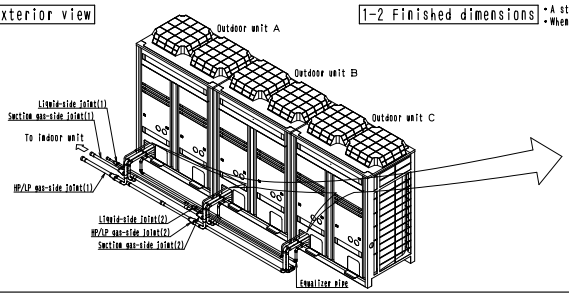
Insulation of joints

(1) Fit the insulating tube to the reducer and temporarily keep it in place with tape.
(2) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces. (See the figure at the right.)
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)



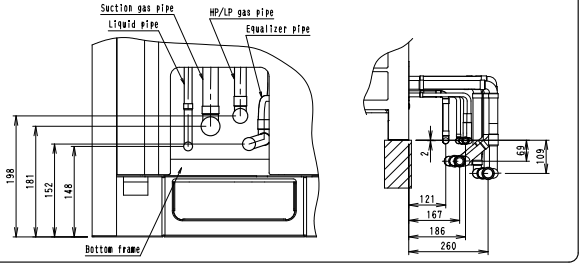
❶ Installation examples Procedure for Lower Front Connection

1-1 Exterior view



1-2 Finished dimensions

- A standard installation has the following dimensions.
- When the dimensions exceed the standard installation, extend the pipes between the outdoor unit and the joint(field supply).



continue to reverse side

1P206372B

❷ Connection of suction gas-side and HP/LP gas-side pipe

2-1 Cutting the field supply Suction gas-side and HP/LP gas-side pipe

- Cut the according to Table 1, 2.

Caution • The L dimensions of Suction gas pipe 1~6 in Table 1 and HP/LP gas pipe 1~7 in Table 2 are applied to where B dimensions of elbows are shown as in Table 3, 4. If B dimension is different from the dimensions in the table, see Table 1 and 2 and adjust them.

■ Table1

Model type	Suction gas pipe 1(field supply) L (mm)	Suction gas pipe 2(field supply) L (mm)	Suction gas pipe 3(field supply) L (mm)	Suction gas pipe 4(field supply) L (mm)	Suction gas pipe 5(field supply) L (mm)	Suction gas pipe 6(field supply) L (mm)
34HP	212	199	164	168	102	244
36・38HP						
40HP		195	160		168	232
42HP			164			244
44~48HP			160			232

■ Table2

Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)	HP/LP gas pipe 4(field supply) L (mm)	HP/LP gas pipe 5(field supply) L (mm)	HP/LP gas pipe 6(field supply) L (mm)	HP/LP gas pipe 7(field supply) L (mm)
34~40HP	217	206	176	97	73	233	64
42・44HP	217	200	176	97	97	233	64
46・48HP	217	200	170	97	97	221	52

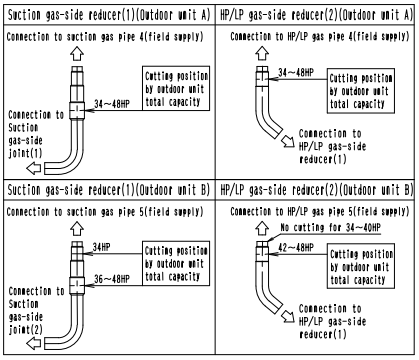
■ Table3

Model type	Elbow 1(field supply) B (mm)	Elbow 2(field supply) B (mm)	Elbow 3(field supply) B (mm)
34HP	29	23	23
36・38HP			
40HP		29	29
42HP			23
44~48HP			29

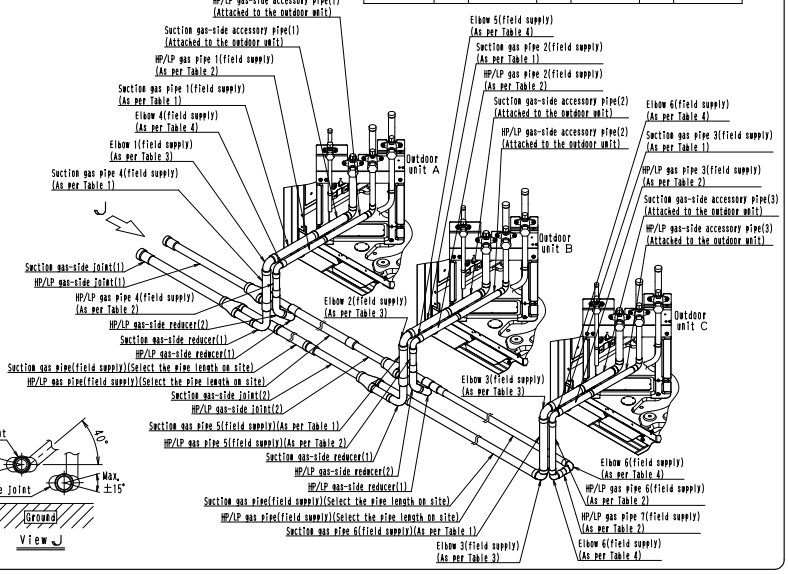
■ Table4

Model type	Elbow 4(field supply) B (mm)	Elbow 5(field supply) B (mm)	Elbow 6(field supply) B (mm)
34~40HP	23	17	17
42・44HP		23	
46・48HP			23

Suction gas-side reducer(1)(Outdoor unit A) / HP/LP gas-side reducer(2)(Outdoor unit A)



Suction gas-side reducer(1)(Outdoor unit B) / HP/LP gas-side reducer(2)(Outdoor unit B)



2-2 Connection of pipes

- Connect suction gas-side and HP/LP gas-side pipes as following the procedure on the right figure. (For connection of pipes, at first, connect Suction gas-side joint with Suction gas-side reducer (1) and HP/LP gas-side joint with HP/LP gas-side reducers (1) and (2).)
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joints so that an attached face of the caution label keeps horizontally. (See the view J)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

❸ Connection of Liquid-side and equalizer pipe

3-1 Cutting the field supply Liquid-side and equalizer pipe

- Cut the equalizer pipe(field supply) according to Table 1.

Caution • This table shows where A dimension is 316mm by 1-2 finished dimensions. If its installation exceeds 316mm, see Table 1 and adjust Equalizer pipe 1 and 2.
• The L dimensions of Equalizer pipe 1 and 2 in Table 1 are applied to where elbows are the B dimension in Table 2 on "procedure for front connection" and " connection of Liquid-side and equalizer pipe." If B dimension is different from the dimensions in the table, see Table 1 and adjust them.

3-2 Connection of pipes

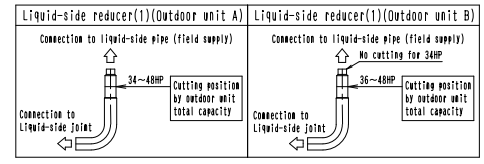
- Connect liquid-side and equalizer pipes as following the procedure on the right figure. (For the connection, at the first, connect Liquid-side joint with Liquid-side reducer (1).)
- See 1-2 finished dimensions for the location (height) of the joints.
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joints so that an attached face of the caution label keeps horizontally. (See the view K)
- Connect Liquid-side reducer(1) as at about 90° inclination and bend the field supplied liquid pipe up to the stop valve as following the procedure on right figure. (See the view K)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

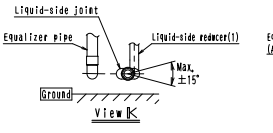
Caution • If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.

■ Table 1

Equalizer pipe 1(field supply) L (mm)	Equalizer pipe 2(field supply) L (mm)
65	120

Liquid-side reducer(1)(Outdoor unit A) / Liquid-side reducer(1)(Outdoor unit B)





❹ The work after the kit is connected

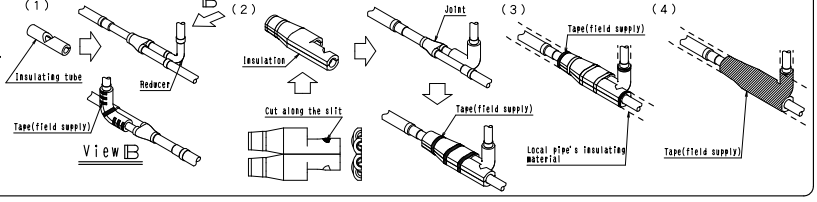
Connection of piping between the outdoor unit and the indoor unit

Air tight test

Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

Insulation of joints

(1) Fit the Insulating tube to the reducer and temporarily keep it in place with tape.
(2) Cut insulating tube along the slit. (See the figure at the right.) Fit the insulation to the joint and temporarily keep it in place with tape without leaving a gap between the insulation mating faces.
(3) Seal the seam between the insulation and the field supply piping insulation with the field supply tape.
(4) Wrap the tape around the insulation attached to the joint without leaving a gap. (▨ section shown in the figure at the right.)

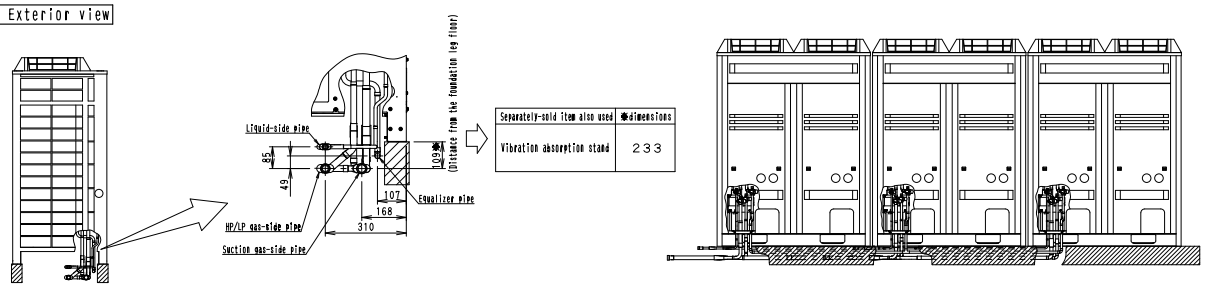


1P206373B

❶ Installation examples Procedure for Bottom Connection

Caution This installation is only possible if there is enough space to perform brazing and racking underneath the outdoor unit. If a centralized vibration proof base are used, the dimensions marked with "✻" in the figure below will vary, so see the table below and determine the length of the field pipes.

1-1 Exterior view



Separately-sold item also used	✻dimensions
Vibration absorption stand	233

❷ Connection of suction gas-side and HP/LP gas-side pipe

2-1 Cutting the field supply suction gas-side pipe and HP/LP gas-side pipe and the suction gas-side accessory pipe(2) attached to the outdoor unit

- Cut the pipes according to Table 1 or 2.

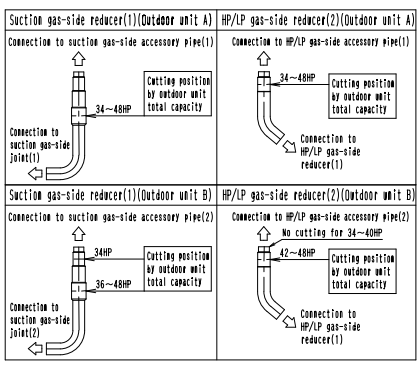
Caution
- The "L" dimensions of the suction gas pipe 1 in Table 1 and the HP/LP gas pipe 1~3 in Table 2 are identical to the "B" dimensions in Table 3 and Table 4 those of "field supply elbows" shown in the procedure of front connection, which are equivalent to "straight size joint" with stopper. If the "B" dimentions are not identical to Table 3 and Table 4 or "straight size joint" is without stopper, adjust them as Table 1 and 2 show.

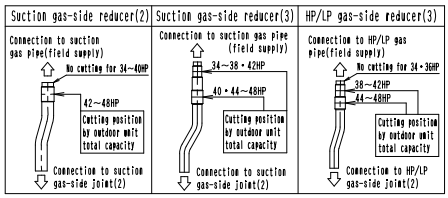
■ Table 1 (For Outdoor unit C Side)

Model type	Suction gas-side accessory pipe(3) (Attached to the outdoor unit) L (mm)	(Cutting position)	Suction gas pipe 1(field supply) L (mm)
34~38HP	0 (no cutting)		137
40~46HP			102
48HP	41		98

■ Table2

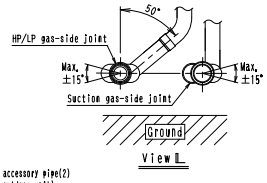
Model type	HP/LP gas pipe 1(field supply) L (mm)	HP/LP gas pipe 2(field supply) L (mm)	HP/LP gas pipe 3(field supply) L (mm)
34~44HP	155	86	94
46・48HP	119	110	82

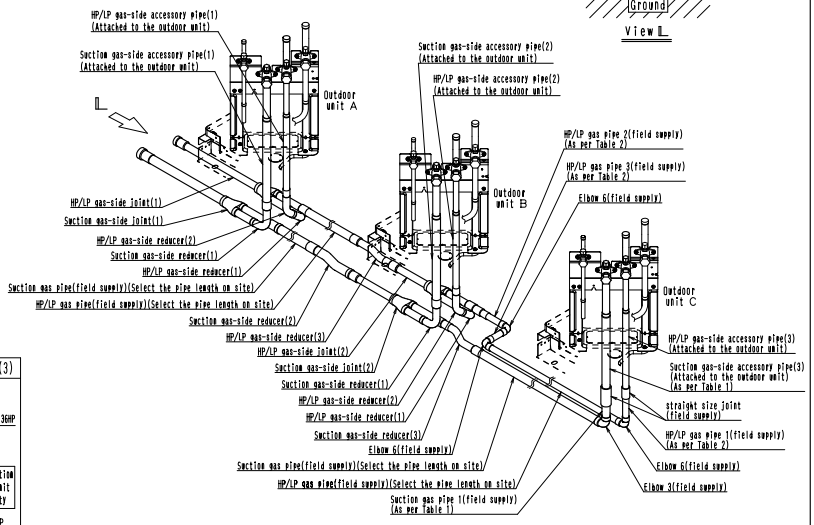




2-2 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the suction gas-side and HP/LP gas-side pipes as shown in the figure below. (When connecting the pipes, first connect Suction gas-side joint and the suction gas-side reducer(1), the HP/LP gas-side joint and the HP/LP gas-side reducer (1)(2))
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint so that an attached face of the caution label keeps horizontal. (See the view L)
- Connect the HP/LP gas-side reducer(1) as at about, 50° inclination and connect HP/LP gas-side reducer(2)(See the view L)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.



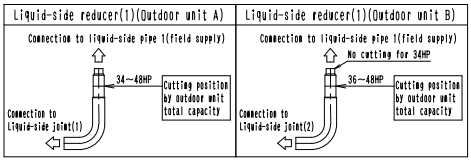


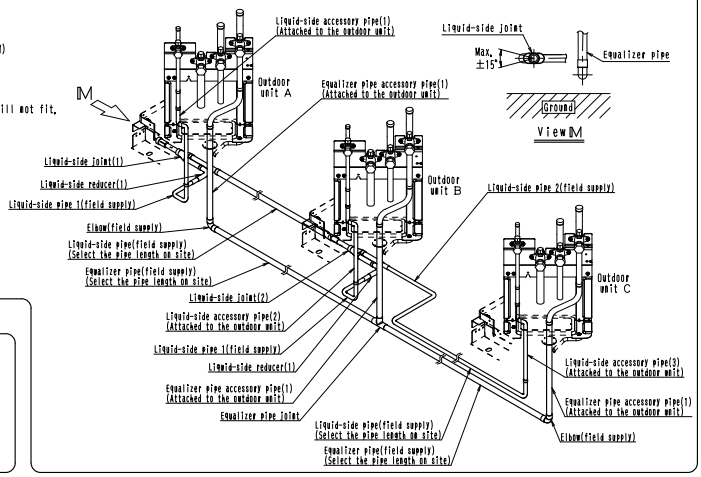
❸ Connection of Liquid-side and equalizer pipe

3-1 Connection of pipes

- Remove the knockout plate on the bottom frame. (See the installation manual attached to the outdoor unit)
- Connect the liquid side and equalizer pipe as shown in the figure right. (When connecting the pipes, first connect Liquid-side joint and Liquid-side reducer (1))
- See the caution section in the installation manual attached to the outdoor unit for brazing pipes.
- Install the joint in such a way that the attached face of the caution label becomes horizontal. (See the view M)
- Bend the field supplied liquid pipe up to the stop valve as shown in the right figure. (See the view M)
- Refer of both Cutting procedure for the cuting position of both joint and reducer.

Caution
- If the liquid side reducer is connected vertically without bending the liquid pipes, the insulation will not fit.





❹ The work after the kit is connected

Connection of piping between the outdoor unit and the indoor unit
Air tight test
Insulation of joints

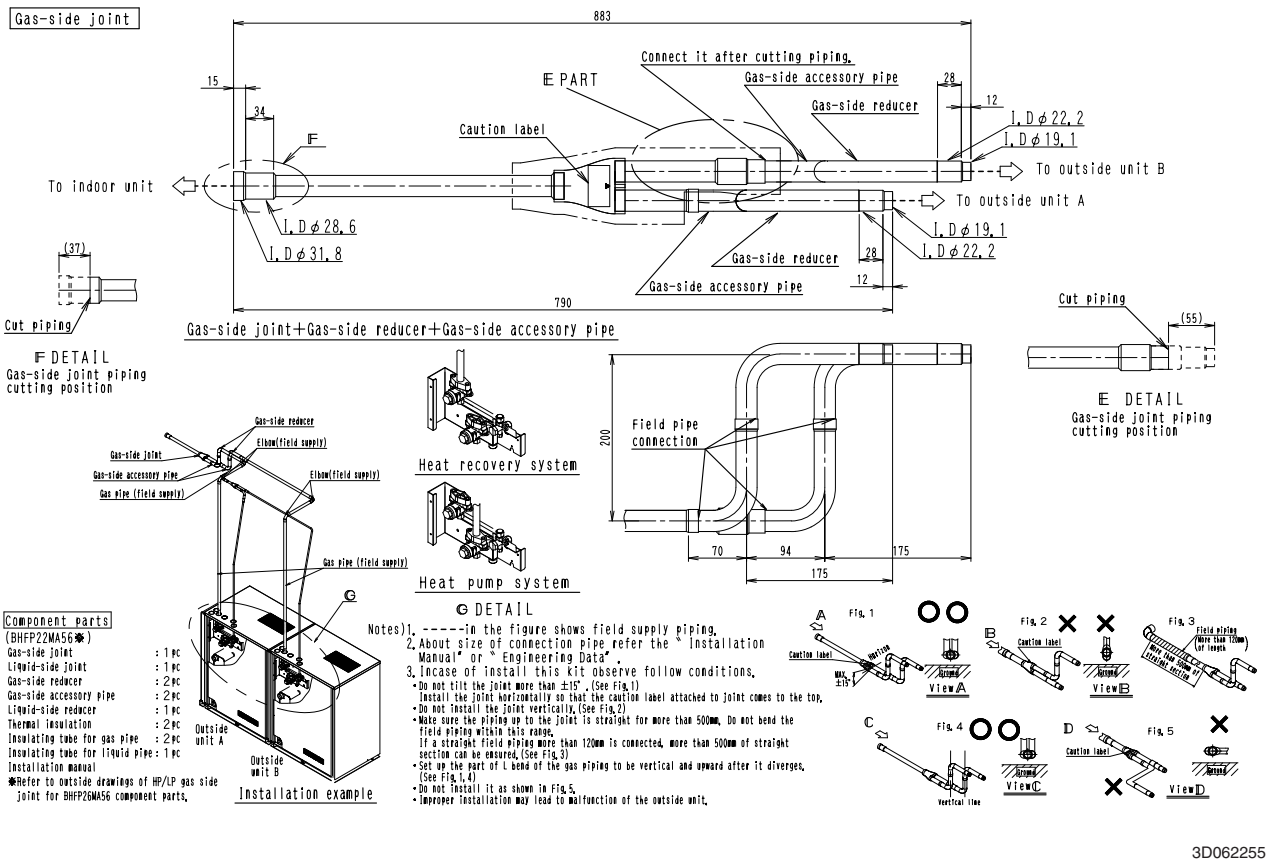
} Follow the instructions in the installation manual included with the outdoor unit, when performing installation work.

- See "The work after the kit is connected" for a Lower front connection."

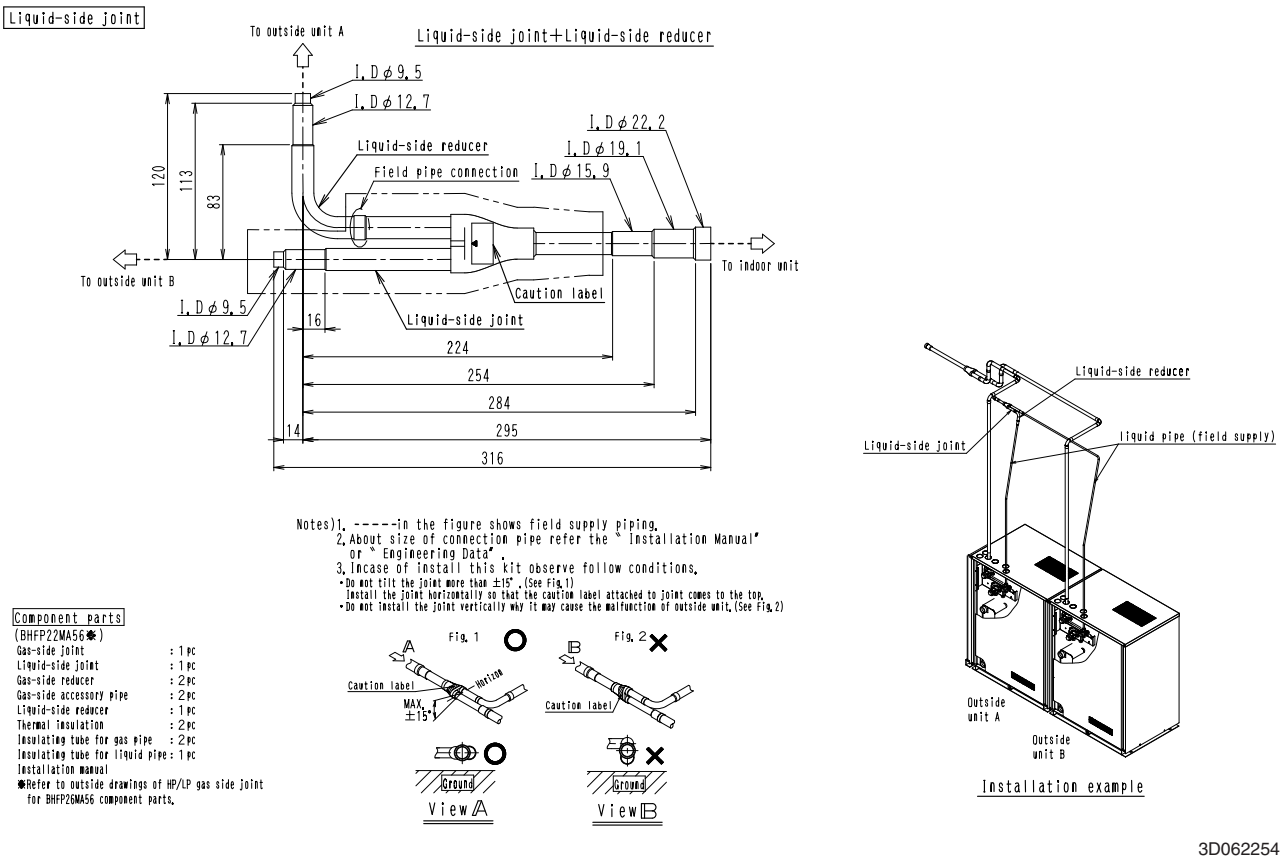
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5.4 BHFP22MA56 / 84, BHFP26MA56 / 84

BHFP22MA56 / BHFP26MA56

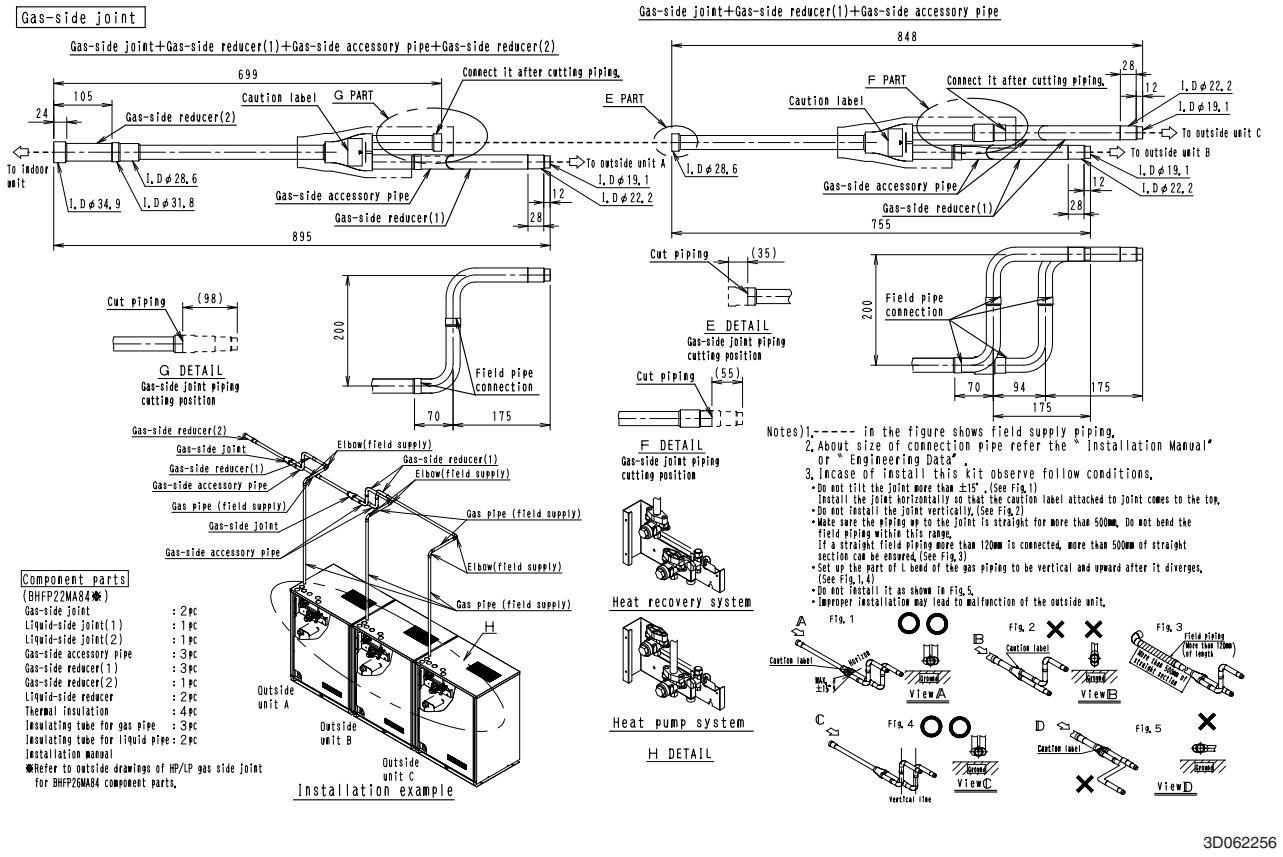


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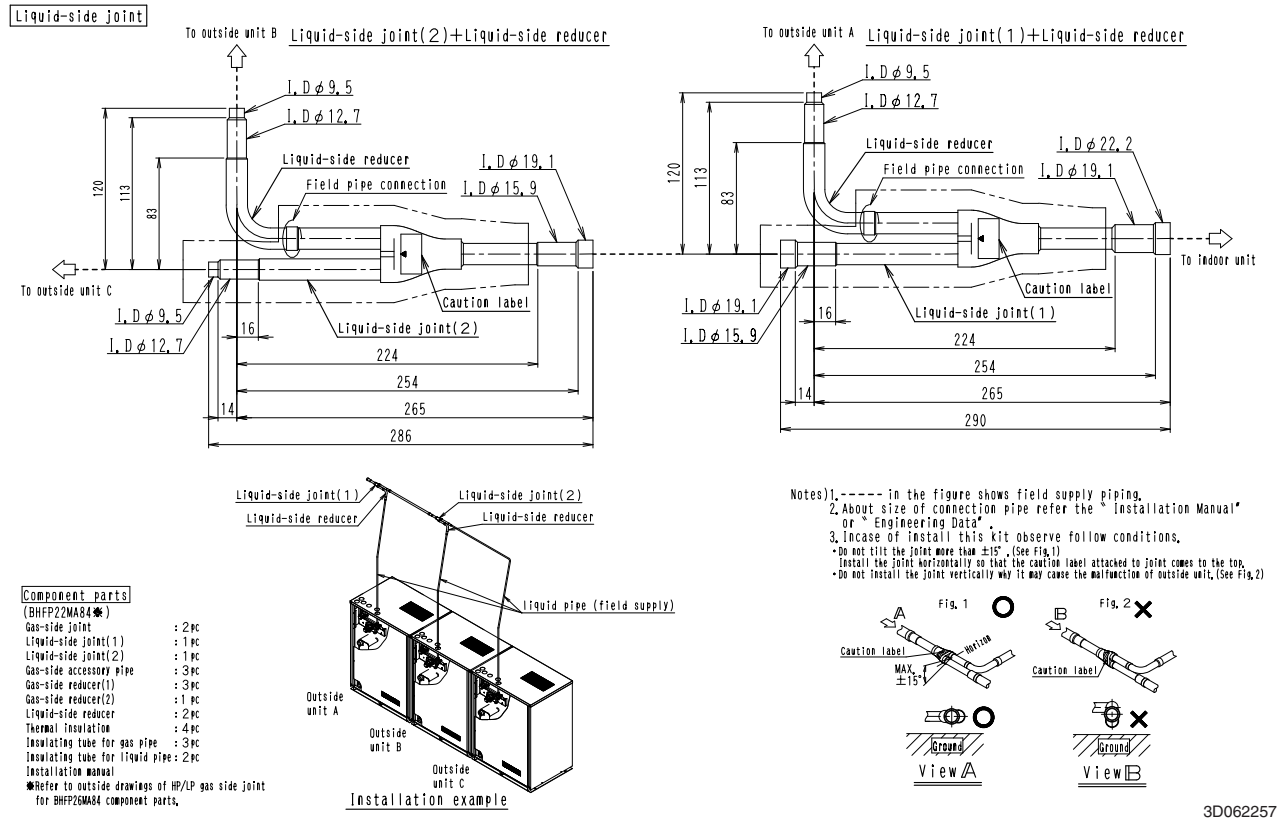


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BHFP22MA84 / BHFP26MA84

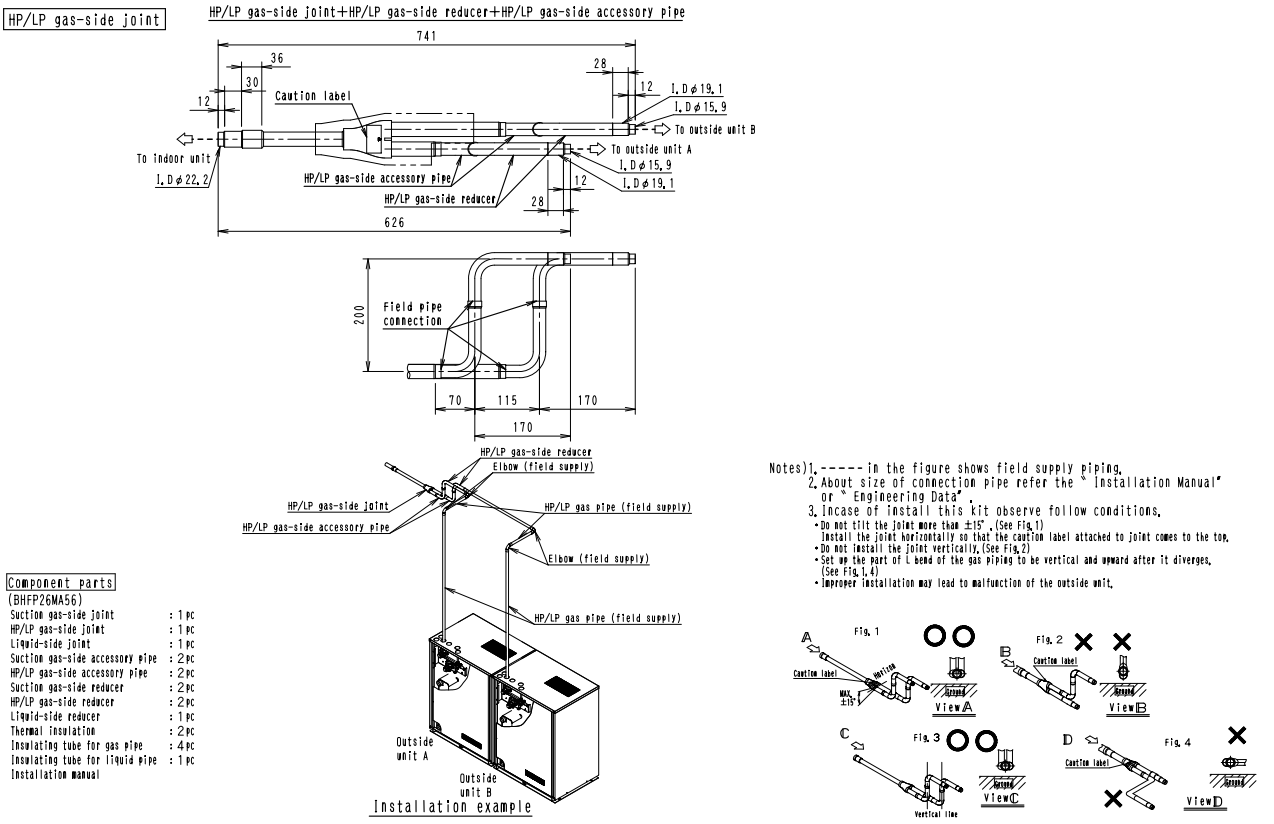


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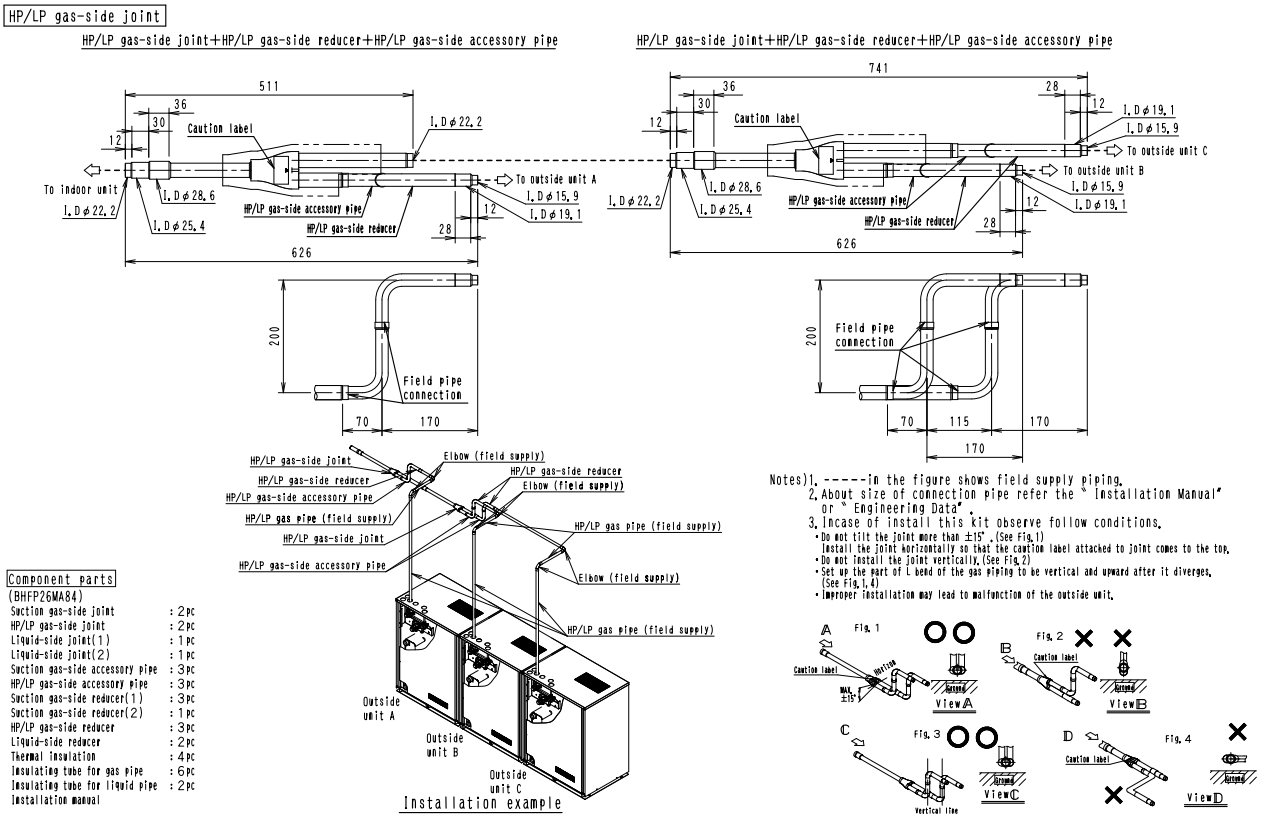
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BHFP26MA56



3D062252

BHFP26MA84



3D062253

BHFP22MA56 / BHFP22MA84

VRV-W Series

Please be sure to read before installation and follow the instructions carefully when performing installation works.

1P236136-1

Outside unit Multi Connection Piping Kit Installation Manual

BHFP22MA56・84

Component parts

■This kit contains the follwing parts.

〈Do not throw away any of the accessories until installation is complete.〉

Kit name	SHAPE						
	Gas-side joint	Liquid-side joint	Gas-side reducer	Gas-side accessory pipe	Liquid-side reducer	Insulating tube for gas pipe	Insulating tube for liquid pipe
BHFP22P56	1pc	1pc	2pc	2pc	1pc	2pc	1pc
BHFP22P84	2pc	(1) 1pc (2) 1pc	(1) 3pc (2) 1pc	3pc	2pc	3pc	2pc

Notes
- Please be sure to read this manual before installation and follow the instructions carefully when performing installation works.
- See the attached installation manual for the installation of outside unit.
- For installation of interconnecting pipes between the outside and indoor units, REFNET joint or REFNET header will be needed.

(units : mm)

Temper grade	O Type				1/2H Type				
Copper tube O.D.	ø6.4	ø9.5	ø12.7	ø15.9	ø19.1	ø22.2	ø25.4	ø28.6	ø31.8	ø34.9
Copper tube t (Minimum requirement)	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.99	1.10	1.21

Selection Procedure

Number of outside units connected	2 units	3 units
Outside unit Multi Connection Piping Kit	BHFP22MA56	BHFP22MA84

- 2 or 3 outside units can be connected.
- There are restrictions on the combination of outside units, so please refer to the Engineering Data for details.

Field supply parts

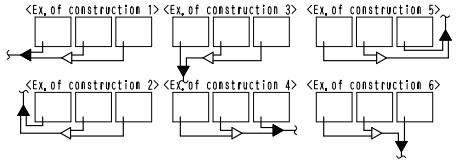
■The following parts are needed to connect this kit and are not included.

Field supply parts		
Name	Q'ty	Selection Procedure
Insulation for piping	1set	See the "Connecting Pipe Sizes and location of cutting the joint" for details on the necessary size.
Connection piping		
Elbow		Prepare a gas pipe diameter for the upper outside unit as listed in "Connecting Pipe Sizes and location of cutting the joint."
	4pc	BHFP22MA56
	6pc	BHFP22MA84
Tape	1set	For insulation materials

Notes
- Quantities and selection procedure of elbows are only applicable upper connections, (see the right page)
- The quantities and selection procedure shall be changed according to refrigerant piping.
- The min. thickness of the pipes in this manual shows the requirements of Japanese High Pressure Gas Control law, (As of Jan, 2003) And the temper grade (O, 1/2H) shows the material type of JIS H 3300. The thickness and material shall be selected in accordance with local code for the design pressure 4.0MPa(40bar).

Installation examples

- The figure at the right shows a typical connection. Make sure to follow the installation restrictions and carry out installation taking the field requirements into consideration.

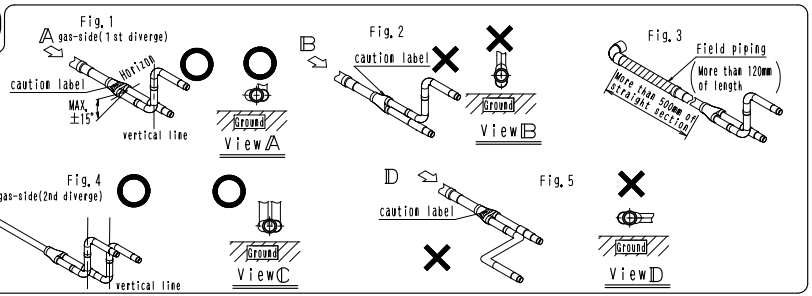


⚠To the piping installer

When installing this kit, please apply the following restrictions.

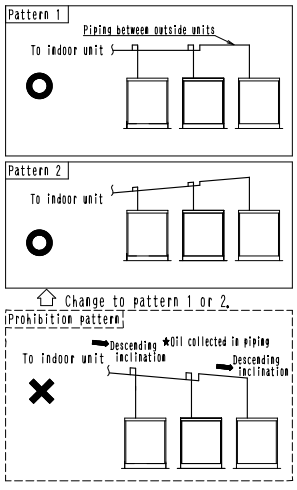
Restrictions on installing multi connection piping kit

- Do not tilt the joint more than ±15°. (See Fig.1) Install the joint horizontally so that the caution label attached to joint comes to the top.
- Do not install the joint vertically. (See Fig.2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See Fig.3)
- Set up the part of L bend of the gas piping to be vertical and upward after it diverges. (See Fig.1, 4)
- Do not install it as shown in Fig.5.
- Improper installation may lead to malfunction of the outside unit.

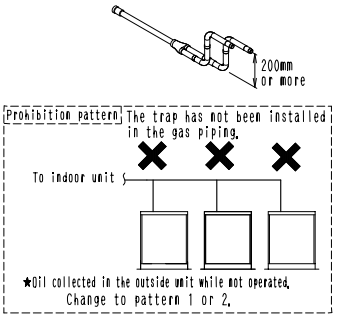


Restrictions on piping between outside units

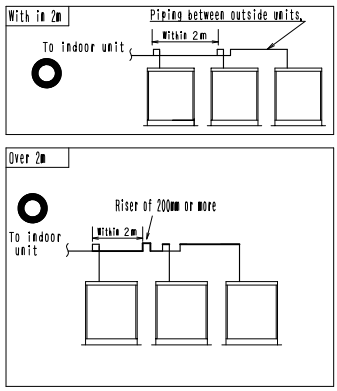
1. Piping between outside units be located either in level or up-graded in order to prevent oil from being collected in the pipe.



2. Make traps of 200mm or more after take-off of the gas pipe by using accessory pipe in this kit. Collected refrigerant may cause the outside unit breakdown.



3. If the distance between outside unit connection piping kits exceeds 2m, 200mm or more of a riser is required within 2m from the kit only on the gas side.



BHFP22MA56 Installation Instructions

⚠Caution There are some restrictions on the interconnecting pipes between the outside units. See the installation manual attached to the outside units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in breakdown of the unit.

Connecting pipe sizes and location of cutting the joint

Select either a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Main pipe
- Select according to system capacity of the outside unit.

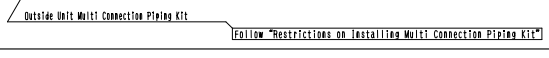
(units : mm)

System capacity of outside unit	Pipe size (outer diameter X Min thickness)	
	Gas pipe	Liquid pipe
RWEYQ16 type	ø28.6X0.99	ø12.7X0.80
RWEYQ18, 20 type		ø15.9X0.99

Pipe between the kit and the outside unit
- Select according to capacity of each unit.

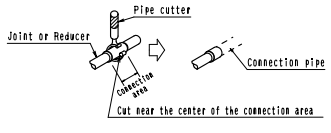
(units : mm)

Capacity type of outside unit	Pipe size (outer diameter X Min thickness)	
	Gas pipe	Liquid pipe
RWEYQ8 type	ø19.1X0.80	ø9.5X0.80
RWEYQ10 type	ø22.2X0.80	



Cutting procedure

- Use pipe cutter for cutting.



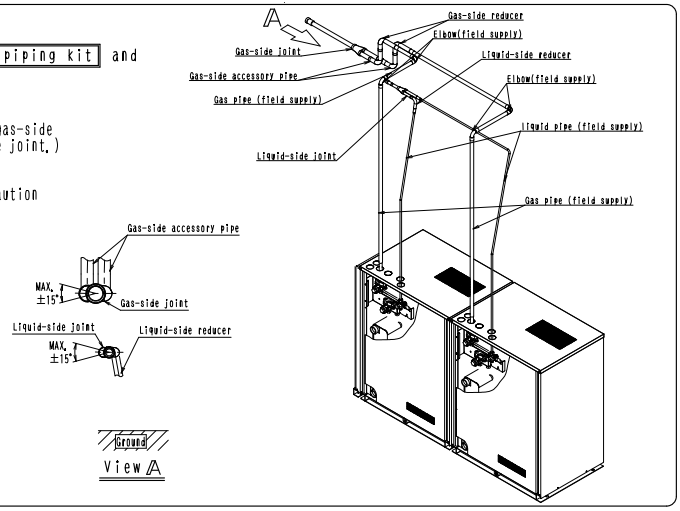
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❶ Installation examples Procedure for upper connection

1 — 1 Connection of gas and liquid pipes

Plese be sure to read Restrictions on installing multi connection piping kit and Restriction on piping between outside units.

- Connect the gas and liquid pipes as shown on the right figure. (When connecting the pipes, first connect the gas-side accessory pipe and the gas-side reducer to the gas-side joint, and the liquid-side reducer to the liquid-side joint.)
- See the caution section in the installation manual attached to the outside unit for brazing pipes.
- When mounting the joints, place them horizontal to the ground by facing the caution label (See View A).



❷ The work after the kit is connected

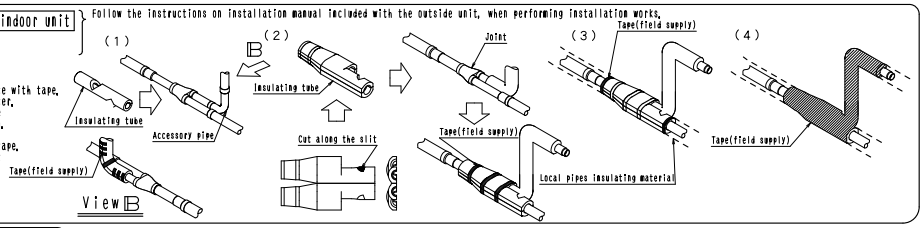
Connection of piping between the outside unit and the indoor unit

Air tight test

Insulation of joints

(1) Fit the insulation on the reducer and temporarily keep it in place with tape.
(2) • Cut -off the slit on insulation to match direction of the reducer.
• Fit the insulation on the joint and temporarily keep it in place with tape (field supply) without any gap between the insulation. (See the right figure)
(3) Seal between the insulation and the field supply pipes with the tape.
(4) Wrap the tape around the insulation attached to the joint without leaving any gap.
(▨ part on the right figure(4))

Follow the instructions on installation manual included with the outside unit, when performing installation works.



BHFP22MA84 Installation Instructions

⚠Caution There are some restrictions on the interconnecting pipes between the outside units. See the installation manual attached to the outside units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in breakdown of the unit.

Connecting pipe sizes and location of cutting the joint

Select either a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Main pipe
• Select according to system capacity of the outside unit.

System capacity of outside unit	Pipe size (outer diameter X Min thickness) (units : mm)	
	Gas pipe	Liquid pipe
RWEYQ24 type	ϕ34.9X1.21	ϕ15.9×0.99
RWEYQ26-30 type		ϕ19.1×0.80

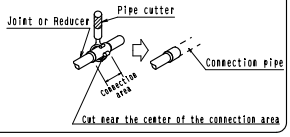
Pipe between the kits
• Select according to total capacity of the combination of units.

Total capacity of outside unit	Pipe size (outer diameter X Min thickness) (units : mm)	
	Gas pipe	Liquid pipe
16HP	ϕ28.6X0.99	ϕ12.7X0.80
18, 20HP		ϕ15.9X0.99

Capacity type of outside unit	Pipe size (outer diameter X Min thickness) (units : mm)	
	Gas pipe	Liquid pipe
RWEYQ8 type	ϕ19.1X0.80	ϕ9.5X0.80
RWEYQ10 type	ϕ22.2X0.80	

Outside unit A Outside unit B Outside unit C

Cutting procedure
• Use pipe cutter for cutting.

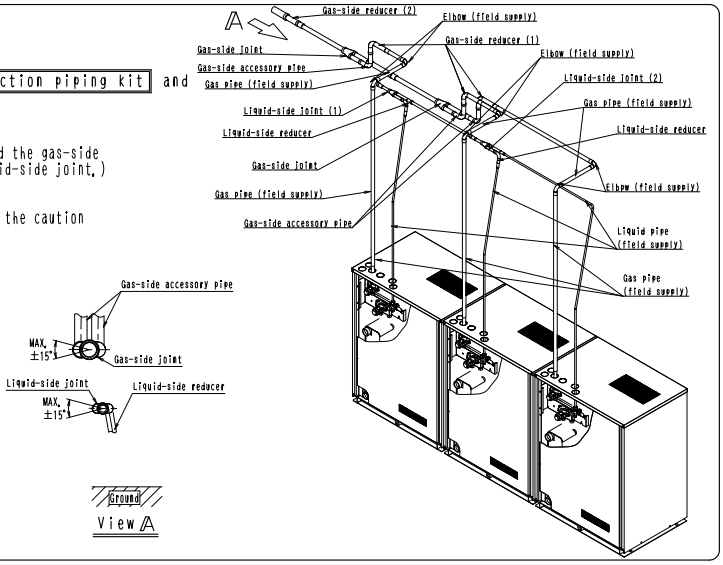


❶ Installation examples Procedure for upper connection

1 — 1 Connection of gas and liquid pipes

Plese be sure to read Restrictions on installing multi connection piping kit and Restriction on piping between outside units.

- Connect the gas and liquid pipes as shown on the right figure. (When connecting the pipes, first connect the gas-side accessory pipe and the gas-side reducer to the gas-side joint, and the liquid-side reducer to the liquid-side joint.)
- See the caution section in the installation manual attached to the outside unit for brazing pipes.
- When mounting the joints, place them horizontal to the ground by facing the caution label (See View A).



❷ The work after the kit is connected

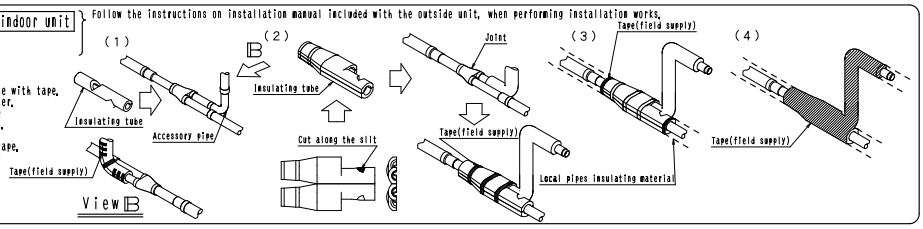
Connection of piping between the outside unit and the indoor unit

Air tight test

Insulation of joints

(1) Fit the insulation on the reducer and temporarily keep it in place with tape.
(2) • Cut -off the slit on insulation to match direction of the reducer.
• Fit the insulation on the joint and temporarily keep it in place with tape (field supply) without any gap between the insulation. (See the right figure)
(3) Seal between the insulation and the field supply pipes with the tape.
(4) Wrap the tape around the insulation attached to the joint without leaving any gap.
(▨ part on the right figure(4))

Follow the instructions on installation manual included with the outside unit, when performing installation works.



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BHFP26MA56 / BHFP26MA84

VRV-W Series

Please be sure to read before installation and follow the instructions carefully when performing installation works.

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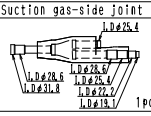
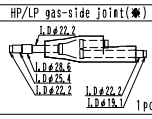
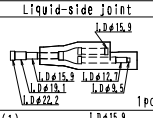
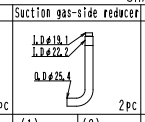
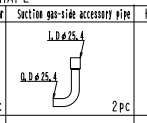
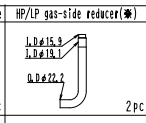
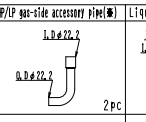
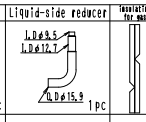
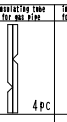
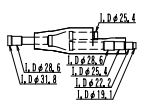
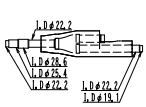
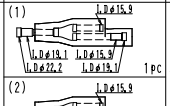
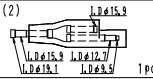
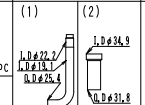
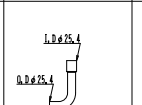
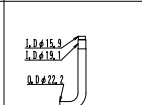
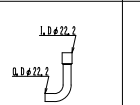
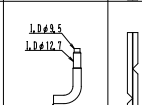
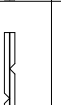
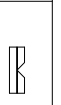
Outside unit Multi Connection Piping Kit Installation Manual

BHFP26MA56・84

Component parts

■This kit contains the follwing parts.

<Before Installation>
- This kit is a common opptional accessory for VRV-W Series in general. When connecting to VRV-WII Series (RWEYQ-M type), replace the (✱) marked word "HP/LP gas" with "Discharge gas".
- Do not throw away any of the accessories until installation is complete.

Kit name	SHAPE									
	Suction gas-side joint	HP/LP gas-side joint(✱)	Liquid-side joint	Suction gas-side reducer	Suction gas-side accessory pipe	HP/LP gas-side reducer(✱)	HP/LP gas-side accessory pipe(✱)	Liquid-side reducer	Insulating tube for gas pipe	Insulating tube for liquid pipe
BHFP26MA56	 1pc	 1pc	 1pc	 2pc	 2pc	 2pc	 2pc	 1pc	 4pc	 1pc
BHFP26MA84	 2pc	 2pc	 1pc  1pc	 3pc 1pc	 3pc	 3pc	 3pc	 2pc	 6pc	 2pc

Selection Procedure

Number of outside units connected	2 units	3 units
Outside unit Multi Connection Piping Kit	BHFP26MA56	BHFP26MA84

- 2 or 3 outside units can be connected.
- There are restrictions on the combination of outside units, so please refer to the Engineering Data for details.

(units : mm)

Temper grade	O Type				1/2H Type					
Copper tube O.D.	ø6.4	ø9.5	ø12.7	ø15.9	ø19.1	ø22.2	ø25.4	ø28.6	ø31.8	ø34.9
Copper tube t (Minimum reinforcement)	0.80	0.80	0.80	0.99	0.80	0.80	0.80	0.88	0.99	1.10	1.21

Field supply parts

■The following parts are needed to connect this kit and are not included.

Field supply parts		
Name	Q'ty	Selection Procedure
Insulation for piping	1 set	See the "Connecting Pipe Sizes and location of cutting the joint" for details on the necessary size.
Connection piping		
Elbow		Prepare a gas pipe diameter for the upper outside unit as listed in "Connecting Pipe Sizes and location of cutting the joint."
	4pc	BHFP26MA56
	6pc	BHFP26MA84
Tape	1set	For insulation materials

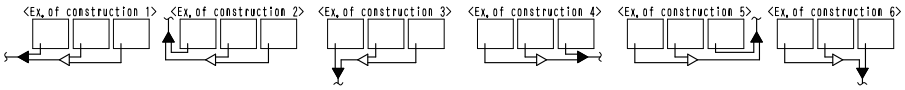
Notes
- Please be sure to read this manual before installation and follow the instructions carefully when performing installation works.
- See the attached installation manual for the installation of outside unit.
- For installation of interconnecting pipes between the outside and indoor units, REFNET joint or REFNET header will be needed.

Notes
- Quantities and selection procedure of elbows are only applicable upper connections. (see the right page)
- The quantities and selection procedure shall be changed according to refrigerant piping.
- The min. thickness of the pipes in this manual shows the requirements of Japanese High Pressure Gas Control law, (As of Jan, 2003) And the temper grade (O, 1/2H) shows the material type of JIS H 3300. The thickness and material shall be selected in accordance with local code for the design pressure 4.0MPa(40bar).

Installation examples

- The figure at the right shows a typical connection. Make sure to follow the installation restrictions and carry out installation taking the field requirements into consideration.

<Ex. of construction 1> <Ex. of construction 2> <Ex. of construction 3> <Ex. of construction 4> <Ex. of construction 5> <Ex. of construction 6>

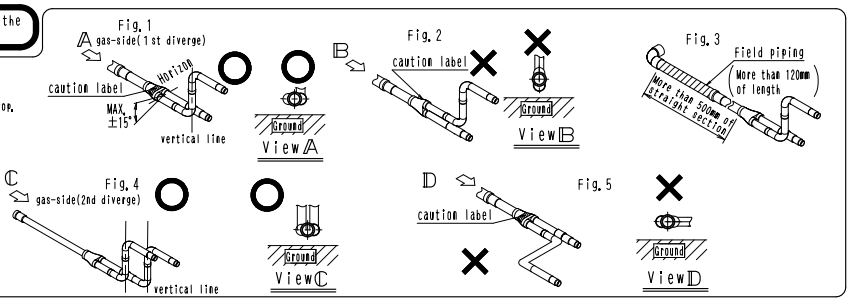


⚠To the piping installer

When installing this kit, please apply the following restrictions.

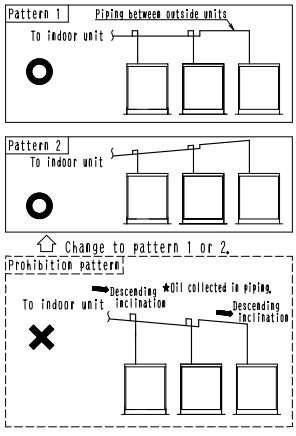
Restrictions on installing multi connection piping kit

- Do not tilt the joint more than ±15°. (See Fig.1) Install the joint horizontally so that the caution label attached to joint comes to the top.
- Do not install the joint vertically. (See Fig.2)
- Make sure the piping up to the joint is straight for more than 500mm. Do not bend the field piping within this range. If a straight field piping more than 120mm is connected, more than 500mm of straight section can be ensured. (See Fig.3)
- Set up the part of L bend of the gas piping to be vertical and upward after it diverges. (See Fig.1,4)
- Do not install it as shown in Fig.5.
- Improper installation may lead to malfunction of the outside unit.

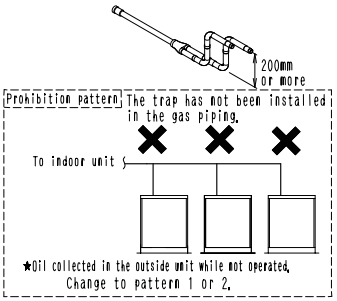


Restrictions on piping between outside units

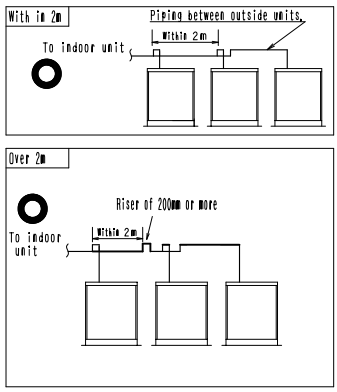
1. Piping between outside units be located either in level or up-graded in order to prevent oil from being collected in the pipe.



2. Make traps of 200mm or more after take-off of the gas pipe by using accessory pipe in this kit. Collected refrigerant may cause the outside unit breakdown.



3. If the distance between outside unit connection piping kits exceeds 2m, 200mm or more of a riser is required within 2m from the kit only on the gas side.



BHFP26MA56 Installation Instructions

⚠Caution There are some restrictions on the interconnecting pipes between the outside units. See the installation manual attached to the outside units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in breakdown of the unit.

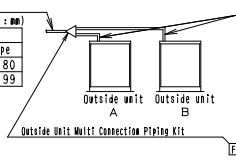
Connecting pipe sizes and location of cutting the joint Select either a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Main pipe
- Select according to system capacity of the outside unit. (units : mm)

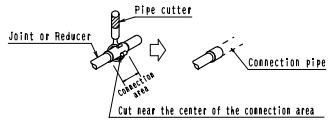
System capacity of outside unit	Pipe size (outer diameter X Min thickness)		
	Suction gas pipe	HP/LP gas pipe(✱)	Liquid pipe
RWEYQ16 type	ø28.6X0.99	ø22.2X0.80	ø12.7X0.80
RWEYQ18,20 type			ø15.9X0.99

Pipe between the kit and the outside unit
- Select according to capacity of each unit. (units : mm)

Capacity type of outside unit	Pipe size (outer diameter X Min thickness)		
	Suction gas pipe	HP/LP gas pipe(✱)	Liquid pipe
RWEYQ8 type	ø19.1X0.80	ø15.9X0.99	ø9.5X0.80
RWEYQ10 type	ø22.2X0.80	ø19.1X0.80	



Cutting procedure
- Use pipe cutter for cutting.



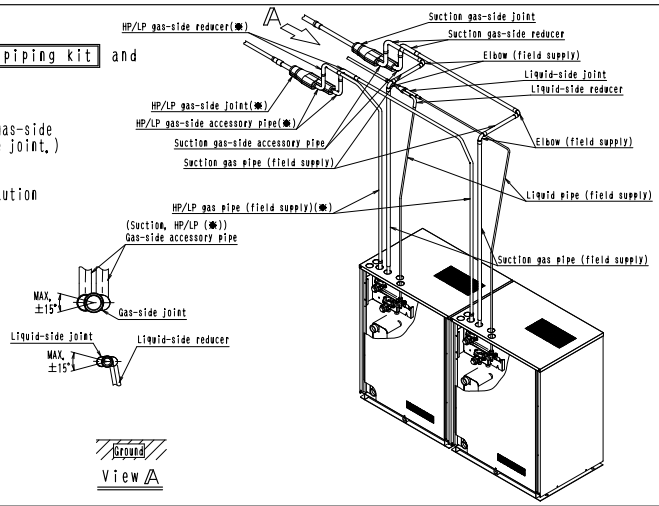
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❶ Installation examples Procedure for upper connection

1 — 1 Connection of gas and liquid pipes

Plese be sure to read Restrictions on installing multi connection piping kit and Restriction on piping between outside units.

- Connect the gas and liquid pipes as shown on the right figure. (When connecting the pipes, first connect the gas-side accessory pipe and the gas-side reducer to the gas-side joint , and the liquid-side reducer to the liquid-side joint.)
- See the caution section in the installation manual attached to the outside unit for brazing pipes.
- When mounting the joints , place them horizontal to the ground by facing the caution label (See View A).



❷ The work after the kit is connected

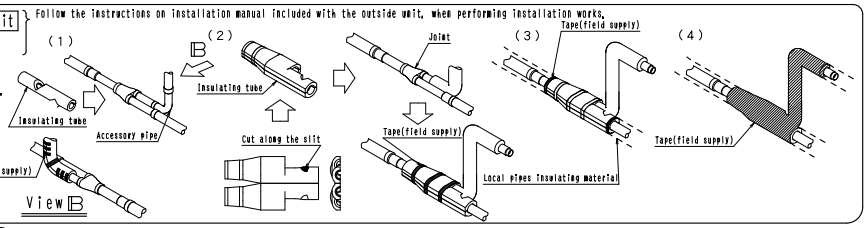
Connection of piping between the outside unit and the indoor unit

Follow the instructions on installation manual included with the outside unit, when performing installation works.

Air tight test

Insulation of joints

(1) Fit the insulation on the reducer and temporarily keep it in place with tape.
(2) • Cut -off the slit on insulation to match direction of the reducer.
• Fit the insulation on the joint and temporarily keep it in place with tape (field supply) without any gap between the insulation. (See the right figure)
(3) Seal between the insulation and the field supply pipes with the tape.
(4) Wrap the tape around the insulation attached to the joint without leaving any gap.
(▨ part on the right figure(4))



BHFP26MA84 Installation Instructions

⚠Caution There are some restrictions on the interconnecting pipes between the outside units. See the installation manual attached to the outside units and make sure to carry out proper piping. If the piping restrictions are not observed, it may result in breakdown of the unit.

Connecting pipe sizes and location of cutting the joint

Select either a joint or a reducer which is suitable for the size of the interconnecting pipes determined according to the table below and cut it with a pipe cutter.

Main pipe

• Select according to system capacity of the outside unit. (units : mm)

System capacity of outside unit	Pipe size (outer diameter X Min thickness)		
	Suction gas pipe	HP/LP gas pipe(✱)	Liquid pipe
RWEYQ24 type	⌀34.9X1.21	⌀28.6X0.99	⌀15.9X0.99
RWEYQ26-30 type			⌀19.1X0.80

Pipe between the kits

• Select according to total capacity of the combination of units. (units : mm)

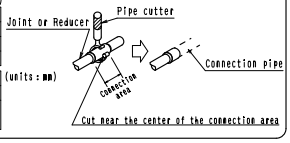
Total capacity of outside unit	Pipe size (outer diameter X Min thickness)		
	Suction gas pipe	HP/LP gas pipe(✱)	Liquid pipe
16HP	⌀28.6X0.99	⌀22.2X0.80	⌀12.7X0.80
18, 20HP			⌀15.9X0.99

Capacity type of outside unit	Pipe size (outer diameter X Min thickness)		
	Suction gas pipe	HP/LP gas pipe(✱)	Liquid pipe
RWEYQ8 type	⌀19.1X0.80	⌀15.9X0.99	⌀9.5X0.80
RWEYQ10 type	⌀22.2X0.80	⌀19.1X0.80	

Outside unit A Outside unit B Outside unit C

Cutting procedure

• Use pipe cutter for cutting.

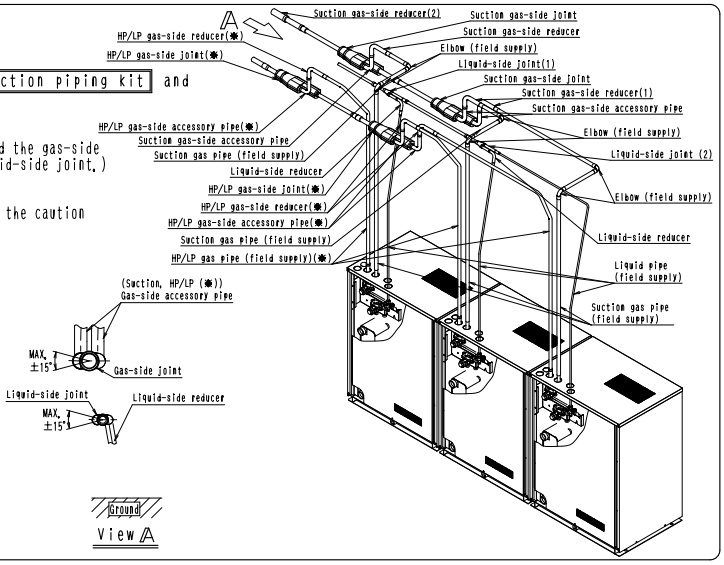


❶ Installation examples Procedure for upper connection

1 — 1 Connection of gas and liquid pipes

Plese be sure to read Restrictions on installing multi connection piping kit and Restriction on piping between outside units.

- Connect the gas and liquid pipes as shown on the right figure. (When connecting the pipes, first connect the gas-side accessory pipe and the gas-side reducer to the gas-side joint , and the liquid-side reducer to the liquid-side joint.)
- See the caution section in the installation manual attached to the outside unit for brazing pipes.
- When mounting the joints , place them horizontal to the ground by facing the caution label (See View A).



❷ The work after the kit is connected

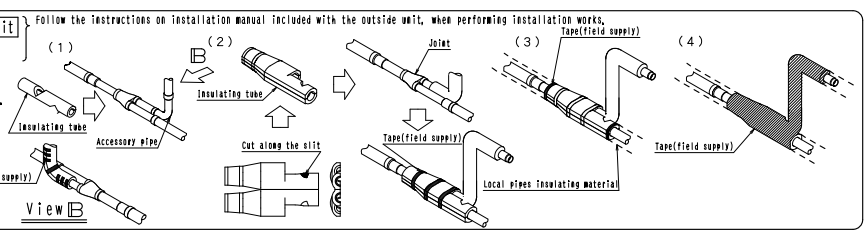
Connection of piping between the outside unit and the indoor unit

Follow the instructions on installation manual included with the outside unit, when performing installation works.

Air tight test

Insulation of joints

(1) Fit the insulation on the reducer and temporarily keep it in place with tape.
(2) • Cut -off the slit on insulation to match direction of the reducer.
• Fit the insulation on the joint and temporarily keep it in place with tape (field supply) without any gap between the insulation. (See the right figure)
(3) Seal between the insulation and the field supply pipes with the tape.
(4) Wrap the tape around the insulation attached to the joint without leaving any gap.
(▨ part on the right figure(4))



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