INSTALLATION MANUAL

Outdoor unit multi connection piping kit (R32 models)

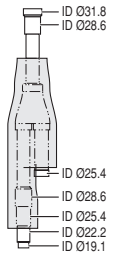
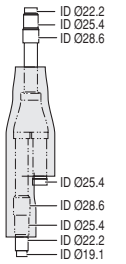
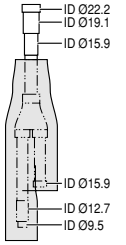
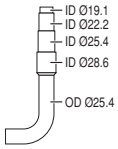
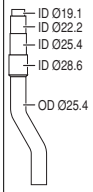
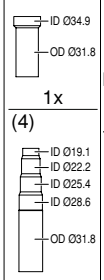
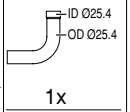
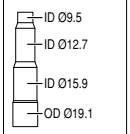
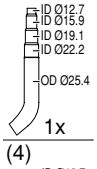
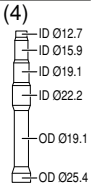
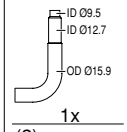
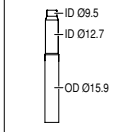
BHFQ23P907
BHFQ23P907A

IMPROPER INSTALLATION OR ATTACHMENT OF EQUIPMENT OR ACCESSORIES COULD RESULT IN ELECTRIC SHOCK, SHORT-CIRCUIT, LEAKS, FIRE OR OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY TO USE ACCESSORIES MADE BY DAIKIN WHICH ARE SPECIFICALLY DESIGNED FOR USE WITH THE EQUIPMENT AND HAVE THEM INSTALLED BY A PROFESSIONAL.

IF UNSURE OF INSTALLATION PROCEDURES OR USE, ALWAYS CONTACT YOUR DAIKIN DEALER FOR ADVICE AND INFORMATION.

This kit includes the following parts

Table 1

Kit name	Shape											
	Suction gas joint	HP/LP gas joint	Liquid joint	Equalizer joint	Suction gas reducer			HP/LP gas reducer		Liquid reducer	Insulation Gas[a]	Insulation Liquid
BHFQ23P907+907A	 1x	 1x	 1x	—	(1)  1x	(2)  1x	(3)  1x (4) 1x	(1)  1x (3)  1x	(2)  1x (4)  1x	(1)  1x (2)  1x	 2x	 1x

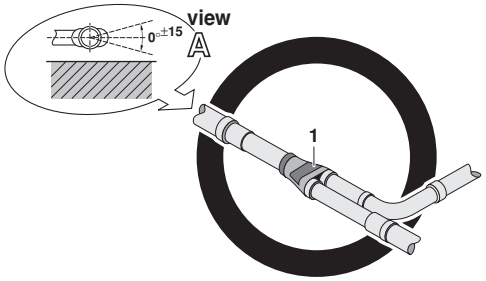
(a) For both suction gas pipes and HP/LP gas pipes

NOTE

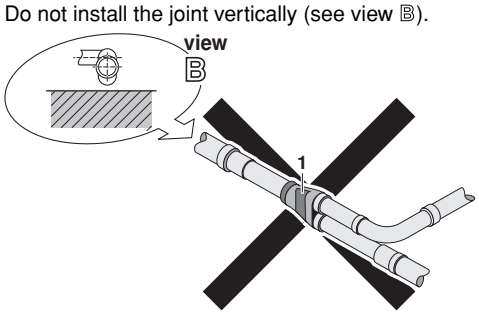
- Do not throw away any of the accessories until installation is completed.
- Be sure to read this manual before installation and follow the instructions carefully when performing installation.
- For installation of the outdoor units, refer to the installation manual of the outdoor unit.
- The installation of refrigerant pipes between outdoor and indoor units needs to be arranged by refnet joints and refnet headers, and is to be purchased separately.
- For combination of outdoor units follow Engineering Data.

RESTRICTIONS ON INSTALLING THE MULTI CONNECTION PIPING KIT

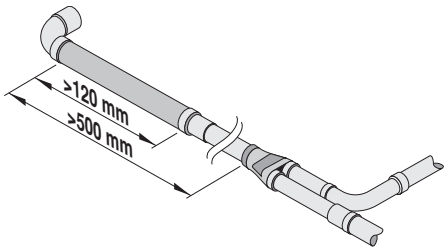
- Install the joints horizontally, so that the caution label (1) attached to the joint comes to the top.
  Do not tilt the joint more than ±15° (see view Ⓐ).



  Do not install the joint vertically (see view Ⓑ).



- Make sure that the total length of the piping connected to the joint is absolute straight for more than 500 mm. Only if a straight field piping of more than 120 mm is connected, more than 500 mm of straight section can be ensured.

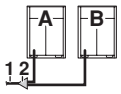


- Improper installation may lead to malfunction of the outdoor unit.

- When installing the multi outdoor system, connect the units as shown in the figure below.
  If installed in a different order, the outdoor unit multi connection piping kit may not fit properly and some additional field supplied pipe size reducers may be required.

  Outdoor unit multi connection piping kit type: BHFQ23P907+907A

  Unit capacity: A≥B



  1 To indoor unit

  2 Outdoor unit multi connection piping kit (first branch)

- If the total capacity of the connected indoor units exceeds the total capacity of the outdoor units, cooling and heating performance may be reduced when running the indoor units. Refer to the capacity table in the Engineering Data Book for more details.

- Use piping with temper grade in function of the pipe diameter as listed in the table below.
- The pipe thickness of the refrigerant piping must comply with relevant local and national regulations. The minimum pipe thickness for R32 piping must be in accordance with the table below (for design pressure of 4.0 MPa (40 bar)).

	Temper grade											
	O type				1/2H type							
Pipe Ø	6.4	9.5	12.7	15.9	19.1	22.2	25.4	28.6	31.8	34.9	38.1	41.3
Minimum thickness t (mm)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.10	1.21	1.32	1.43

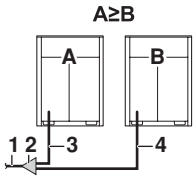
O = Annealed
1/2H = Half hard

FOR BHFQ23P907+907A

Refer to the installation manual of the outdoor unit for selection and restrictions for the piping between outdoor branches. Not observing restrictions on the interconnecting piping may result in malfunctioning of the unit.

Pipe size selection and cutting position of the joint

Select the correct pipe size according the tables below and cut the joints and reducers on the correct cutting point with a pipe cutter.



1 Main pipe, see table 2 on page 2

2 Joint (refer to "Restrictions on installing the multi connection piping kit" on page 1)

3 Pipe between joint and the outdoor unit **A**, see table 3 on page 2

4 Pipe between joint and the outdoor unit **B**, see table 3 on page 2

Table 2

Total capacity of outdoor units (A+B)	Pipe size[(a)]		
	Liquid	HP/LP gas	Suction gas
10 Hp = 5+5	Ø9.5x0.80 (O)	Ø15.9x1.0 (O)	Ø19.1x1.0 (1/2H)
13 Hp = 8+5	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
16 Hp = 8+8	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
18 Hp = 10+8	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
20 Hp = 12+8	Ø12.7x0.80 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)
22 Hp = 12+10	Ø12.7x0.80 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)
24 Hp = 16+8	Ø12.7x0.80 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)
26 Hp = 14+12	Ø15.9x1.0 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)
28 Hp = 16+12	Ø15.9x1.0 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)

Table 3

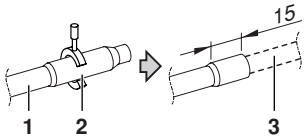
Individual outdoor unit capacity (A or B)	Pipe size[(a)]		
	Liquid	HP/LP gas	Suction gas
5	Ø9.5x0.80 (O)	Ø15.9x1.0 (O)	Ø19.1x1.0 (1/2H)
8	Ø9.5x0.80 (O)	Ø15.9x1.0 (O)	Ø19.1x1.0 (1/2H)
10	Ø9.5x0.80 (O)	Ø15.9x1.0 (O)	Ø19.1x1.0 (1/2H)
12	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
14	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
16	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
18	Ø12.7x0.80 (O)	Ø19.1x1.0 (1/2H)	Ø22.2x1.0 (1/2H)
20	Ø12.7x0.80 (O)	Ø22.2x1.0 (1/2H)	Ø28.6x1.0 (1/2H)

(a) OD x min. wall thickness (temper grade type)

NOTE The accessory pipes in the outdoor unit and the BHFQ23P907+907A kit's reducers and joints are designed to fit according to outdoor units combination shown in table 2. After pipe 1 onwards, follow the outdoor unit manual.

NOTE For other combinations of outdoor units than shown in table 2, the tables above (table 2 and table 3) can still be followed, but the reducers and joint might not be compatible. In such cases, please foresee field supply parts (reducers and expanders).

- Cut the pipe with a pipe cutter.



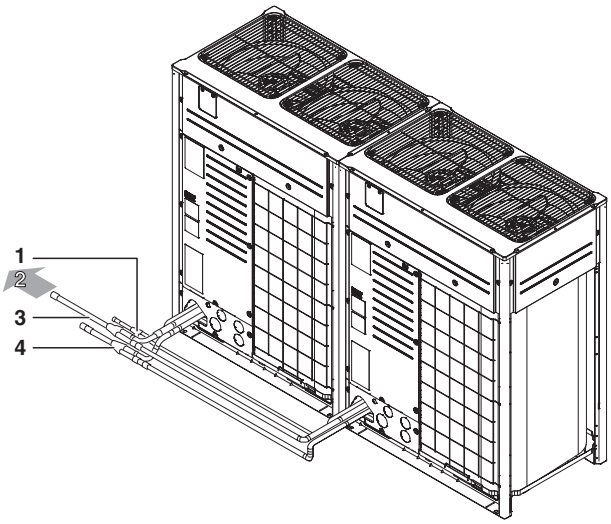
1 Joint or reducer

2 Cut in order to have a fitting depth of ≥15 mm

3 Field pipe

In case of front piping

1. Exterior



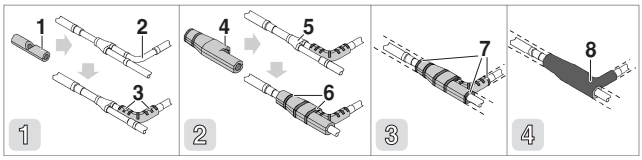
1	Liquid joint	**3**	Suction gas joint
2	To indoor unit	**4**	HP/LP gas joint

2. After connection of the piping

Connection piping between the outdoor and indoor unit

All piping must be executed according to instructions in the installation manual of the outdoor unit and an air tight test must be performed after complete installation of the piping.

Insulation of joints



Step 1: Fit the insulation (1) around the reducer (2) and keep it in place with tape (▬) (3).

Step 2: Fit the insulation (4) around the joint (5) and keep it in place with tape (▬) (6) without leaving a gap between the two insulated parts.

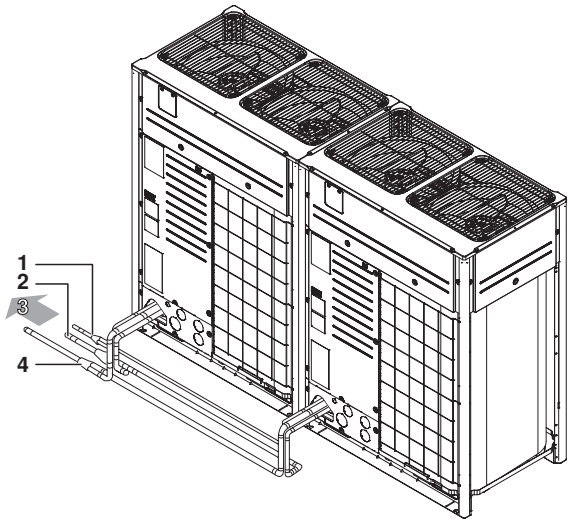
Step 3: Seal the seam between the insulation and the field piping insulation (- - -) with tape (▬) (7).

Step 4: Cover the insulated parts completely with tape (▬) without leaving any gaps (8).

- All required tape is field supply.
- In case of indoor installation, make sure that the tape is of the fireproof type in order to comply with local regulations.

In case of lower front piping

1. Exterior



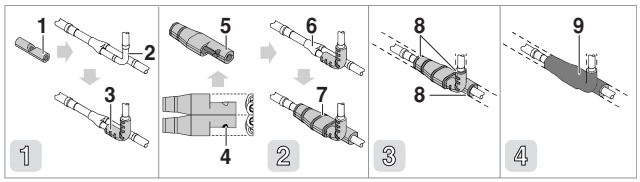
1	Liquid joint	**3**	To indoor unit
2	HP/LP gas joint	**4**	Suction gas joint

2. After connection of the piping

Connection piping between the outdoor and indoor unit

All piping must be executed according to instructions in the installation manual of the outdoor unit and an air tight test must be performed after complete installation of the piping.

Insulation of joints



Step 1: Fit the insulation (1) around the reducer (2) and keep it in place with tape (▬) (3).

Step 2: Cut the insulation (5) along the slit (4). Fit the insulation around the joint (6) and keep it in place with tape (▬) (7) without leaving a gap between the two insulated parts.

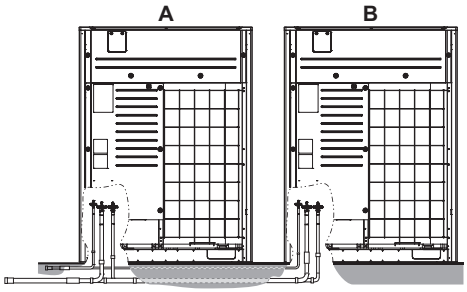
Step 3: Seal the seam between the insulation and the field piping insulation (- - -) with tape (▬) (8).

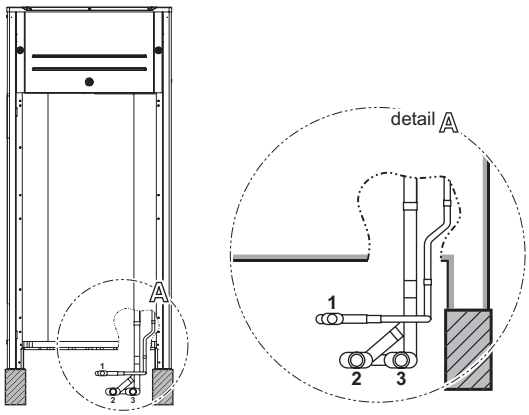
Step 4: Cover the insulated parts completely with tape (▬) without leaving any gaps (9).

- All required tape is field supply.
- In case of indoor installation, make sure that the tape is of the fireproof type in order to comply with local regulations.

IN CASE OF BOTTOM PIPING

1. EXTERIOR





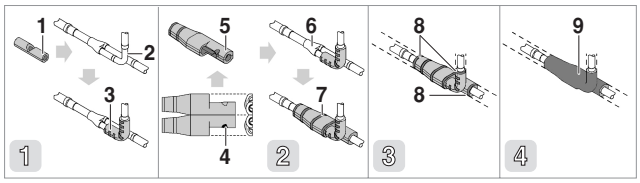
1 Liquid pipe
2 HP/LP gas pipe
3 Suction gas pipe

2. AFTER CONNECTION OF THE PIPING

Connection piping between the outdoor and indoor unit

All piping must be executed according to instructions in the installation manual of the outdoor unit and an air tight test must be performed after complete installation of the piping.

Insulation of joints



Step 1: Fit the insulation (1) around the reducer (2) and keep it in place with tape (▬) (3).

Step 2: Cut the insulation (5) along the slit (4). Fit the insulation around the joint (6) and keep it in place with tape (▬) (7) without leaving a gap between the two insulated parts.

Step 3: Seal the seam between the insulation and the field piping insulation (- - -) with tape (▬) (8).

Step 4: Cover the insulated parts completely with tape (▬) without leaving any gaps (9).

- All required tape is field supply.
- In case of indoor installation, make sure that the tape is of the fireproof type in order to comply with local regulations.

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