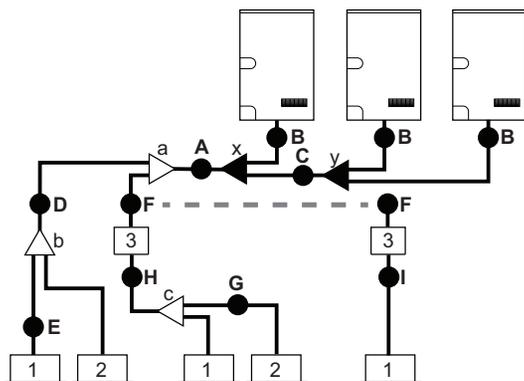


Selection of piping size

Determine the proper size referring to following tables and reference figure (only for indication).



- 1,2 VRF DX indoor unit
- 3 BS unit
- a,b,c Indoor branch kit
- x,y Multi outdoor unit connection kit



INFORMATION

- In case of heat recovery system:
Use 3 pipes (suction gas, HP/LP gas, liquid).
- In case of heat pump system:
Use 2 pipes (gas and liquid).
In case of gas pipe in heat pump system
Select the piping size in accordance with the suction gas piping size.
No BS unit can be used in case of heat pump system.

Piping between outdoor unit and (first) refrigerant branch kit: A, B, C

Choose from the following table in accordance with the outdoor unit total capacity type, connected downstream.

Outdoor unit capacity type (HP)	Piping outer diameter size (mm)		
	Suction gas pipe	Liquid pipe	HP/LP gas pipe
8	19.1	9.5	15.9
10	22.2		19.1
16	28.6	12.7	22.2
18+20		15.9	
24	34.9	19.1	28.6
26+30			

Piping between refrigerant branch kits: D

Piping between refrigerant branch kit and BS unit: F

Piping between BS unit and refrigerant branch kit: H

Choose from the following table in accordance with the indoor unit total capacity type, connected downstream. Do not let the connection piping exceed the refrigerant piping size chosen by the general system model name.

Indoor unit capacity index	Piping outer diameter size (mm)		
	Suction gas pipe	Liquid pipe	HP/LP gas pipe
<150	15.9	9.5	12.7
150≤x<200	19.1		15.9
200≤x<290	22.2		19.1
290≤x<420	28.6	12.7	
420≤x<640		15.9	28.6
640≤x<920	34.9		
≥920	41.3	19.1	

In case of heat pump system (or 2 pipe):

For the gas piping size: select the size of suction gas piping.

Example:

Downstream capacity for E=capacity index of unit 1

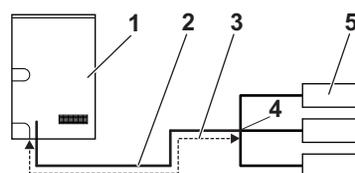
Downstream capacity for D=capacity index of unit 1+capacity index of unit 2

Piping between BS unit or refrigerant branch kit and indoor unit: E, G, I

Pipe size for direct connection to indoor unit must be the same as the connection size of the indoor unit.

Indoor unit capacity index	Piping outer diameter size (mm)	
	Suction gas pipe	Liquid pipe
15, 20, 25, 32, 40, 50	12.7	6.4
63, 80, 100, 125	15.9	9.5
200	19.1	
250	22.2	

- When the equivalent pipe length between outdoor and indoor units is 80 m or more, the size of the main liquid pipe must be increased. Depending on the length of the piping, the capacity may drop, but even in such a case it is possible to increase the size of the main pipe.



- 1 Outdoor unit
- 2 Main pipes
- 3 Increase only liquid pipe size
- 4 First refrigerant branch kit
- 5 Indoor unit

Piping between outdoor unit and (first) refrigerant branch kit: A, B, C

HP Class	Size up
	Liquid size (mm)
8+10	9.5 → 12.7
16	12.7 → 15.9
18+20+24	15.9 → 19.1
26+30	19.1 → 22.2

Never increase suction gas pipe and HP/LP gas pipe.

- The pipe thickness of the refrigerant piping shall comply with the applicable legislation. The minimal pipe thickness for R410A piping must be in accordance with the table below.

Pipe Ø (mm)	Minimal thickness t (mm)
6.4	0.80
9.5	
12.7	
15.9	0.99
19.1	0.80
22.2	
28.6	0.99
34.9	1.21
41.3	1.43

- In case the required pipe sizes (inch sizes) are not available, it is also allowed to use other diameters (mm sizes), taken the following into account:

- Select the pipe size nearest to the required size.
- Use the suitable adapters for the change-over from inch to mm pipes (field supply).

In this case, the additional refrigerant calculation has to be adjusted as mentioned in "Calculating the additional refrigerant charge".