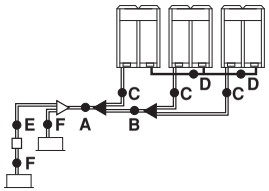
Pipe size selection
For an outdoor unit multi installation (REYQ18~48P + REYHQ16~24), select the pipe size in accordance with the following figure.



A. Piping between outdoor unit and refrigerant branch kit
B. Piping between outdoor unit multi connection piping units
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	HP/LP gas pipe	Liquid pipe
8	19.1	15.9	9.5
10	22.2	19.1	9.5
12	28.6	19.1	12.7
14+16	28.6	22.2	12.7
18	28.6	22.2	15.9
20+22	28.6	28.6	15.9
24	34.9	28.6	15.9
26~34	34.9	28.6	19.1
36	41.3	28.6	19.1
38~48	41.3	34.9	19.1

C. Piping between outdoor unit multi connection piping kit and outdoor unit
Choose from the following table in accordance with the capacity type of the connected outdoor unit.

Outdoor unit capacity type (Hp)	Piping outer diameter size (mm)		
	Suction gas pipe	HP/LP gas pipe	Liquid pipe
8+10	22.2	19.1	9.5
12	28.6	19.1	12.7
14+16	28.6	22.2	12.7

E. Piping between refrigerant branch kit and BS unit
Pipe size for direct connection to indoor unit must be the same as the connection size of indoor unit. Choose from the following table in accordance with the indoor unit total capacity type, connected downstream.

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

F. Piping between refrigerant branch kit or BS unit and indoor unit
Choose from the following table in accordance with the capacity type of the connected indoor unit.

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

D. Equalizer piping (outdoor units only)

Piping outer diameter size (mm)	19.1

How to calculate the additional refrigerant to be charged
Additional refrigerant to be charged R (kg)
R should be rounded off in units of 0.1 kg

The refrigerant charge of the system must be less than 100 kg. This means that in case the calculated refrigerant charge is equal to or more than 95 kg you must divide your multiple outdoor system into smaller independent systems, each containing less than 95 kg refrigerant charge.
For factory charge, refer to the unit name plate.

$$R = \left[\begin{array}{l} [(X_1 \times \mathbf{Ø22.2}) \times 0.37] + [(X_2 \times \mathbf{Ø19.1}) \times 0.26] + \\ [(X_3 \times \mathbf{Ø15.9}) \times 0.18] + [(X_4 \times \mathbf{Ø12.7}) \times 0.12] + \\ [(X_5 \times \mathbf{Ø9.5}) \times 0.059] + [(X_6 \times \mathbf{Ø6.4}) \times 0.022] \end{array} \right] \times 1.02 + \mathbf{A} + \mathbf{B}$$

$\mathbf{X}_{1...6}$ = Total length (m) of liquid piping size at **Øa**
A = Weight according to table A
B = Weight according to table B in function of indoor unit connection ratio

REYQ	A
18+20 Hp	**1.0** kg
22+24 Hp	**1.5** kg
26 Hp	**2.0** kg
28+30 Hp	**2.5** kg
32~40 Hp	**3.0** kg
42 Hp	**3.5** kg
44+46 Hp	**4.0** kg
48 Hp	**4.5** kg

REYHQ	A
16 Hp	**1.0** kg
20 Hp	**1.5** kg
22+24 Hp	**2.0** kg

REY(H)Q		B
16~32 Hp	>100% ≤130%	**0.5** kg
34~48 Hp	>100% ≤120%	**0.5** kg
	>120% ≤130%	**1.0** kg

Example for refrigerant branch using refnet joint and refnet header for REYQ34. REYQ34 = REMQ8+REMQ10+REMQ16, the indoor unit connection ratio = 120% and the piping lengths are as below.

a : Ø19.1x30 m	f : Ø9.5x10 m	k : Ø9.5x20 m	p : Ø6.4x10 m
b : Ø19.1x20 m	g : Ø9.5x10 m	l : Ø9.5x20 m	r : 12.7x3 m
c : Ø9.5x10 m	h : Ø9.5x10 m	m: Ø9.5x20 m	s : Ø9.5x3 m
d : Ø9.5x10 m	i : Ø9.5x10 m	n : Ø9.5x10 m	t : Ø9.5x3 m
e : Ø9.5x10 m	j : Ø9.5x10 m	o : Ø6.4x10 m	u : Ø15.9x1 m

R = [[50x0.26]+[1x0.18]+[3x0.12]+[156x0.059]+[20x0.022]]x1.02**+3.0+0.5**
= 27.148 ⇒ **R = 27.1 kg**