



# Tubing Data For Models (Single); Connection Tube Sizes; Amount Of Additional Refrigerant Charge (G) - Sanyo SPW-C256VH Technical Data & Service Manual

4-way air discharge semi-concealed wall-mounted ceiling-mounted concealed-duct



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### 1-2 Tubing Data for Models (Single)

Data				
Tube mm (in.)				
Size outer				
or				
Gas tube mm (in.)				
Limit of tubing length (m)				
Limit of elevation				
placed higher (m)				
difference				
between the 2				
units				
placed lower (m)				
Max. allowable tubing length at shipment (m)				
Required additional refrigerant (g/m)				
Refrigerant charged at shipment (kg)				

Additional charge of compressor oil is necessary.

If tubing length becomes 30 to 50 m, charge additional refrigerant by 40 g/m.

For single connection, limit of tubing length is 50 m.

For twin connection, limit of tubing length is 40 m.

### 1-3 Connection Tube Sizes

Capacity of indoor unit			
Gas tube			
Liquid tube			
Amount of Additional change per 1 m			
Change with the amount of additional refrigerant calculated using the formula below, based on the values in Table 1-3 and the size and length of the liquid tubing			
<b>Amount of additional refrigerant charge (g) (Twin, Triple, Double-Twin)</b>			
Do not remove refrigerant from the system, even if the result of the calculation is negative.			
Additional refrigerant amount (g) = Additional refrigerant for main tubing (g) + Additional refrigerant for distribution tubing (g)			
*1			
In case of twin connection, 25 type of outdoor unit is 400 g.			
(Use with the current refrigerant charge.)			

- (a) Actual length (m) of main tubing (ø9.52)
- (b) Total length of distribution tubing (ø9.52)
- (c) Total length of distribution tubing (ø6.35)

#### Example

Sample tubing lengths

- L = 35 m
- 1 = 5 m
- L1 = 10 m
- 2 = 5 m
- L2 = 5 m
- 3 = 5 m
- 4 = 10 m

Find the liquid tube size from Table 1-3.

L			
: ø9.52			
(48 type)			
L1			
: ø9.52			
(Total type capacity of indoor unit 24)			
L2			
: ø9.52			
(Total type capacity of indoor unit 24)			
1 - 4 : ø6.35			

The amount of additional on-site refrigerant charge is found by subtracting the outdoor unit charge-less refrigerant amount from the total charge amount for all tube size.

ø9.52

L

ø9.52

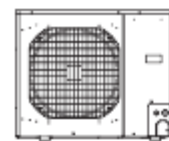
L1 + L2

ø6.35

1 - 4

Outdoor unit charge-less refrigerant amount

The amount of additional on-site refrigerant charge is 1,300 g.



For type 18, the additional refrigerant charge for tubing length (d) of 30 to 40 m is the following:

Additional refrigerant amount (g) = 20X (d) - 600



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56VH

56VH8

(8)

(5/8)

unit is

30

Outdoor unit is

15

3 - 20

/ 3 - 30 (VH8)

\*1

40

1.7 / 1.9 (VH8)

Main tubing (L)

25 - 60

ø 15.88

ø 9.52

40 g

- Outdoor unit charge-less refrigerant amount (g)

= 40X (a) + 40X (b) + 20X (c) - 1200

Refrigerant charge per 1 m of actual length = 40 g/m (25 - 60 type)

Refrigerant charge per 1 m of actual length = 40 g/m

Refrigerant charge per 1 m of actual length = 20 g/m

: 35 m

× 40 g / m = 1400

: (10 + 5) m

× 40 g / m =

: (5 + 5 + 5 + 10) m × 20 g / m =

Total

SPW-C366VH

SPW-C486VH

SPW-C366VH8

SPW-C486VH8

9.52 (3/8)

15.88 (5/8)

15.88 (5/8)

50

30

15

5 - 30

\*1

40

2.6 / 2.8 (VH8)

Double-Twin distribution tube (L1, L2)

Total type capacity of indoor unit connected after the branch

25

ø 15.88

ø 9.52

40 g

\*1

(36, 48, 60 types)

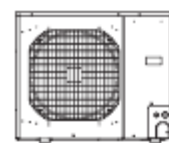
Outdoor unit

1

600

500

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06VH8

(8)

(8)

(5/8)

50

50

30

30

15

15

5 - 30

5 - 30

\*1

\*1

40

40

2.75

2.75

Indoor unit connection tube

(*l1*, *l2*, *l3*, *l4*)

25 - 60

∅ 15.88

∅ 9.52

40 g

L

L2

L1

2

Indoor unit (12 type x 4)

12 - 18

∅ 12.7

∅ 6.35

20 g

4

3



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