



# Check Of Limit Density - Sanyo SPW-CR365GXH56 Technical Data Manual

Mini eco-i system



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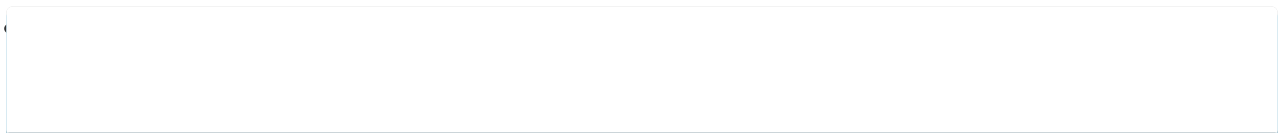
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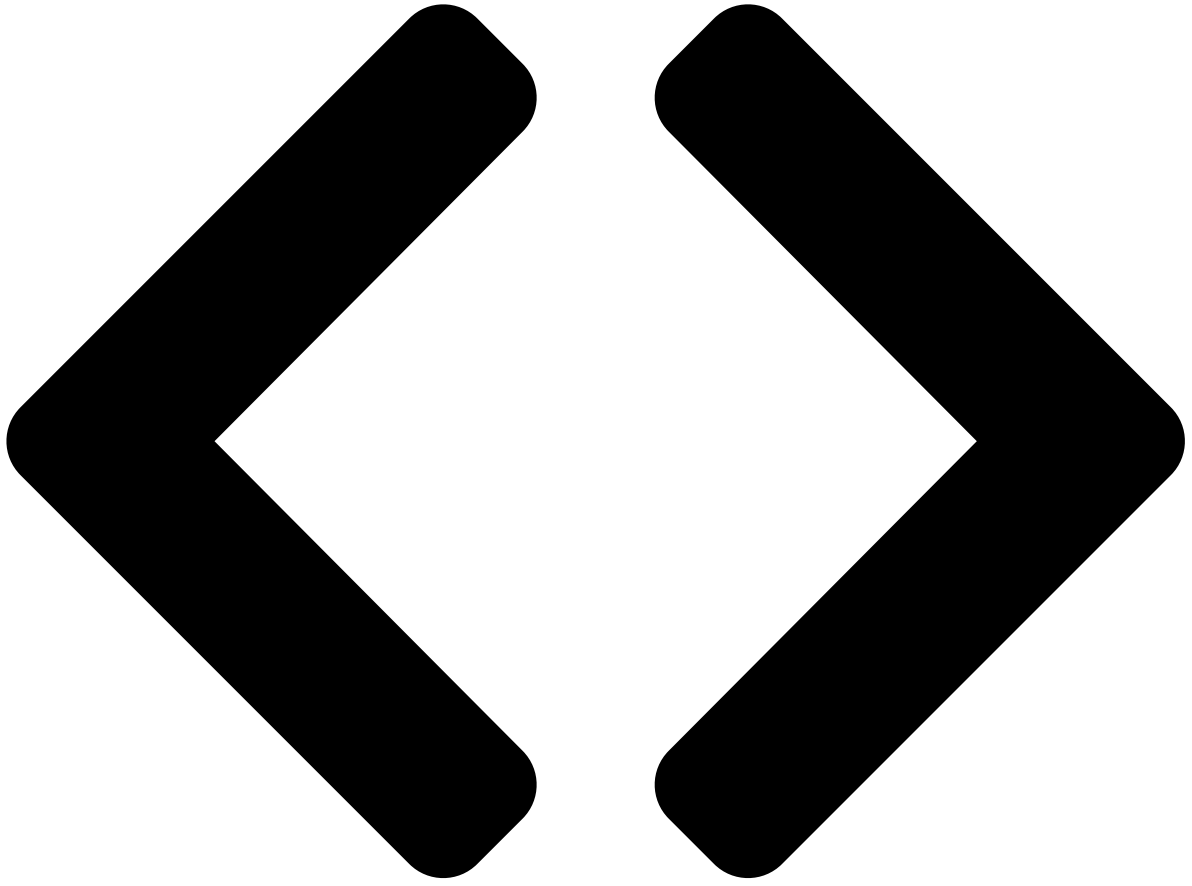
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Troubleshooting

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## Bookmarks







## 2. System Design

**Table 2-10 Ranges that Apply to Refrigerant Tubing Lengths and to Differences in Installation Heights**

**Items**

Allowable tubing length

Allowable elevation

difference L = Length, H = Height			
<b>2-10. Check of Limit Density</b>	$\Delta$		
When installing an air conditioner in a room, it is necessary to ensure that even if the refrigerant gas			

accidentally leaks out, its density does not exceed the limit level for that room.

If the density could exceed the limit level, it is necessary to provide an opening between the unit and the adjacent room, or to install mechanical ventilation which is interlocked with the leak detector.

**(Total refrigerant charged amount: kg)**

**(Min. indoor volume where the indoor unit is installed: m<sup>3</sup>)**

**< Limit density 0.3 (kg/m<sup>3</sup>)**

The limit density of refrigerant which is used in this unit is 0.3 kg/m<sup>3</sup> (ISO 5149).

The shipped outdoor unit comes charged with the amount of refrigerant fixed for each type, so add it to the amount that is charged in the field. (For the refrigerant charge amount at shipment, refer to the unit's nameplate.)

**CAUTION**  
Marks

L1  
Max. tubing length

Difference between max. length and min. length from the No.1 distribution joint

Max. length of each distribution tube



Total max. tubing length including length of

+  
+ -  
+L1  
2  
1  
n-1

each distribution tube (only liquid tubing)

When outdoor unit is installed higher than indoor unit

H1

When outdoor unit is installed lower than indoor unit

H2

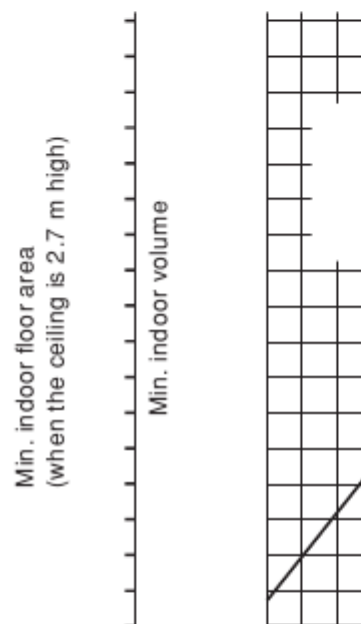
Max. difference between indoor units

**Always check the gas density limit for the room in which the unit is installed.**

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**Pay special attention to any location, such as a basement, etc., where leaking refrigerant can accumulate, since refrigerant gas is heavier than air.**

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**Contents**

Actual length  
 Equivalent length  
 Minimum indoor volume & floor area as against the amount of refrigerant is roughly as given in the following table.

2  
 3  
 m  
 m  
 100  
 270.0  
 95  
 256.5  
 90  
 243.0  
 85  
 229.5  
 80  
 216.0  
 75  
 202.5  
 70  
 189.0  
 65  
 175.5  
 60  
 162.0  
 5

	Δ	
	ℓ ℓ ℓ	
	ℓ ℓ ℓ	



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)  
 55  
 148.5  
 50  
 135.0  
 45  
 121.5  
 40  
 108.0  
 35  
 94.5  
 30  
 81.0  
 25  
 67.5  
 20  
 54.0  
 15  
 40.5  
**2 - 16**  
*Design of Mini ECO-i SYSTEM*  
**Length (m)**  
 >  
 150  
 >  
 175  
 >  
 40  
 >  
 30  
 >



200  
>  
50  
>  
40  
>

15  
Range below the  
density limit of

<sup>3</sup>  
0.3 kg/m

(Countermeasures  
not needed)

Range above the  
density limit of

<sup>3</sup>  
0.3 kg/m

(Countermeasures  
needed)

20

30

40

50

60

Total amount of refrigerant

70

80 kg

	Δ		
	ℓ ℓ ℓ		
	ℓ ℓ ℓ		

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