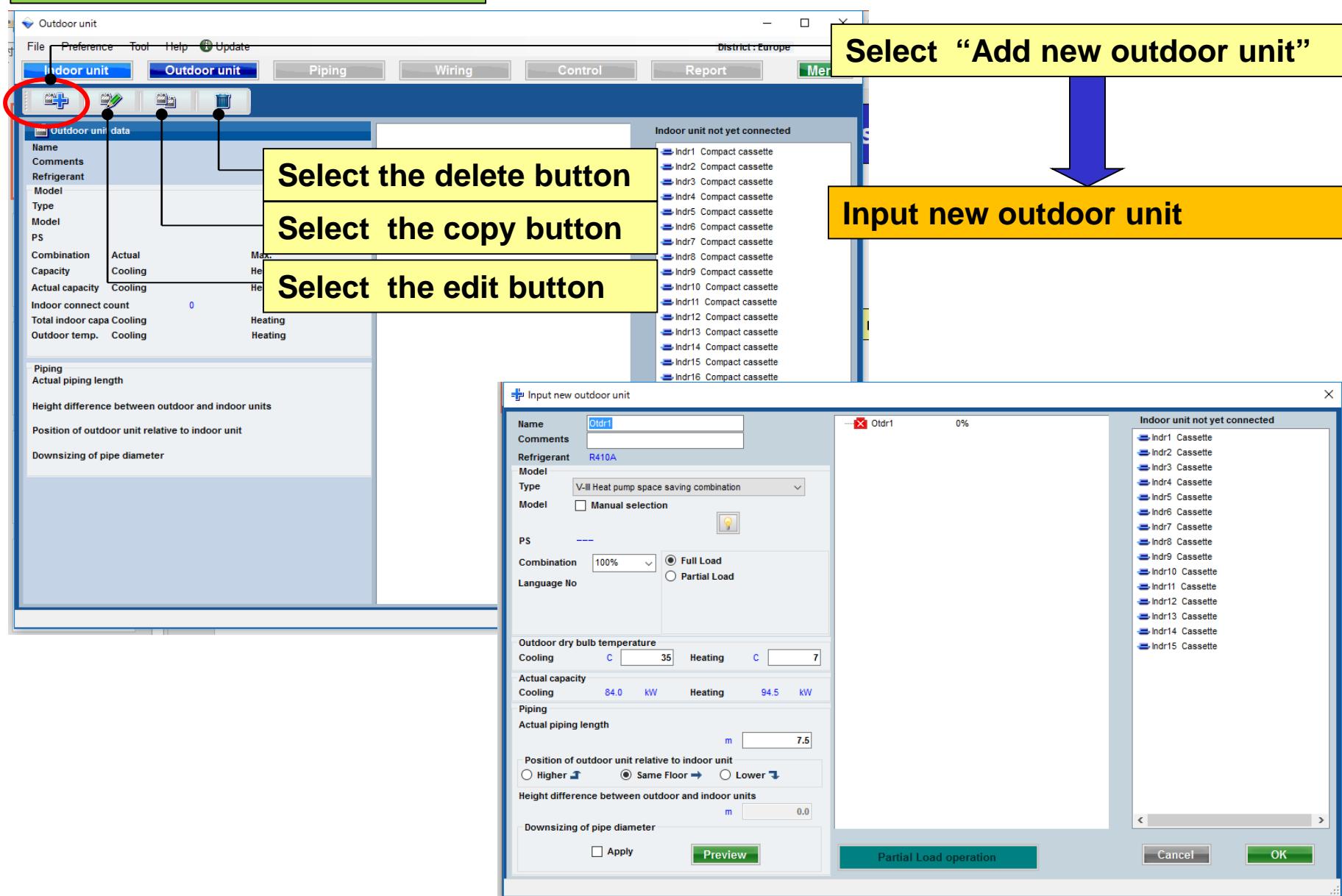


Outdoor unit settings

Design Simulator

Outdoor unit (1/4)



Outdoor unit settings

Design Simulator

Outdoor unit (2/4)

 Input new outdoor unit

Name Otdr1

Comments

Refrigerant R410A

Model

Type V-III Heat pump space saving combination

Model Manual selection

PS ---

Combination 100%

Full Load

Partial Load

Language No

Outdoor dry bulb temperature

Cooling C 35

Heating C 7

Actual capacity

Cooling 84.0 kW

Heating 94.5 kW

Piping

Actual piping length

m 7.5

Position of outdoor unit relative to indoor unit

Higher  Same Floor  Lower 

Height difference between outdoor and indoor units

m 0.0

Downsizing of pipe diameter

Apply

Preview

Preference input name display

Input comments. (Limitation ten characters)

It is possible to write freely. (Ex. : Roof top, 1F)

Select type of outdoor unit

Select Model of outdoor unit

Outdoor capacity list

Select connected limitation. If connected limitation is exceeded, outdoor unit is automatically changed to the model above.

Select Load type

Input design conditions of outdoor unit .

If you don't decide design conditions, input it under the ratings condition of cooling "35C" and heating "7C".

Input the value of "Actual piping Length" and "Height difference".

Select position of outdoor unit relative to indoor unit. (*1)

Downsizing of pipe diameter (*1)

Partial Load operation

Cancel

OK

Partial load operation

(*1) The loss coefficient is automatically calculated.

Outdoor unit settings

Design Simulator

Outdoor unit (3/4)

Input new outdoor unit

Name: Otdr1
Comments:
Refrigerant: R410A
Model: VR-II Heat Recovery space saving combination
Type: VR-II Heat Recovery space saving combination
Model: Manual selection
PS:
Combination: 100% Full Load Partial Load
Language No:

Outdoor dry bulb temperature
Cooling: C Heating: C
Actual capacity
Cooling: 84.0 kW Heating: 94.5 kW
Piping
Actual piping length: m
Position of outdoor unit relative to indoor unit
 Higher Same Floor Lower
Height difference between outdoor and indoor units: m

Indoor unit not yet connected

- Otdr1
- Indr1 Cassette
- Indr2 Cassette
- Indr3 Cassette
- Indr4 Cassette
- Indr5 Cassette
- Indr6 Cassette
- Indr7 Cassette
- Indr8 Cassette
- Indr9 Cassette
- Indr10 Cassette
- Indr11 Cassette
- Indr12 Cassette
- Indr13 Cassette
- Indr14 Cassette
- Indr15 Cassette

Input new outdoor unit

Name: Otdr1
Comments:
Refrigerant: R410A
Model: VR-II Heat Recovery space saving combination
Type: VR-II Heat Recovery space saving combination
Model: Manual selection
AJY270GALH
PS: 3N, 400V, 50Hz
Combination: 100% Full Load Partial Load
Language No: 100 %

Outdoor dry bulb temperature
Cooling: C Heating: C
Actual capacity
Cooling: 84.0 kW Heating: 94.5 kW
Piping
Actual piping length: m
Position of outdoor unit relative to indoor unit
 Higher Same Floor Lower
Height difference between outdoor and indoor units: m

Indoor unit not yet connected

- Otdr1 AJY270GALH 98.8%
- Indr1 AUXD18GALH
- Indr2 AUXD18GALH
- Indr3 AUXD18GALH
- Indr4 AUXD18GALH
- Indr5 AUXD18GALH
- Indr6 AUXD18GALH
- Indr7 AUXD18GALH
- Indr8 AUXD18GALH
- Indr9 AUXD18GALH
- Indr10 AUXD18GALH
- Indr11 AUXD18GALH
- Indr12 AUXD18GALH
- Indr13 AUXD18GALH
- Indr14 AUXD18GALH
- Indr15 AUXD18GALH

Partial Load operation

Red mark means outside design conditions.

Use the indoor unit registration screen to set the indoor unit to be grouped. (Drag&drop)

The model of outdoor unit and Indoor unit are selected automatically.

Outdoor unit settings

Design Simulator

Outdoor unit (4/4)

Input new outdoor unit

Name	0tdr1
Comments	
Refrigerant	R410A
Model	
Type	VR-VII Heat Recovery space saving combination
Model	<input type="checkbox"/> Manual selection AJY270GALH 
PS	3N, 400V, 50Hz
Combination	100% <input type="button" value="▼"/>
Language No	<input checked="" type="radio"/> Full Load <input type="radio"/> Partial Load 100 %

The screenshot shows a software interface for managing HVAC systems. On the left, a tree view displays a root node 'Otdr1 AJY270GALH' with a status of '98.8%' and 15 child nodes, all labeled 'Indr1' through 'Indr15' followed by 'AUXD18GALH'. On the right, a large text box displays the message 'Indoor unit not yet connected'. At the bottom right, there is a red circle highlighting a 'Cancel' button and an 'OK' button. At the bottom left, a green button labeled 'Partial Load operation' is visible.

Select “OK”

Outdoor unit and indoor unit product information and image display.

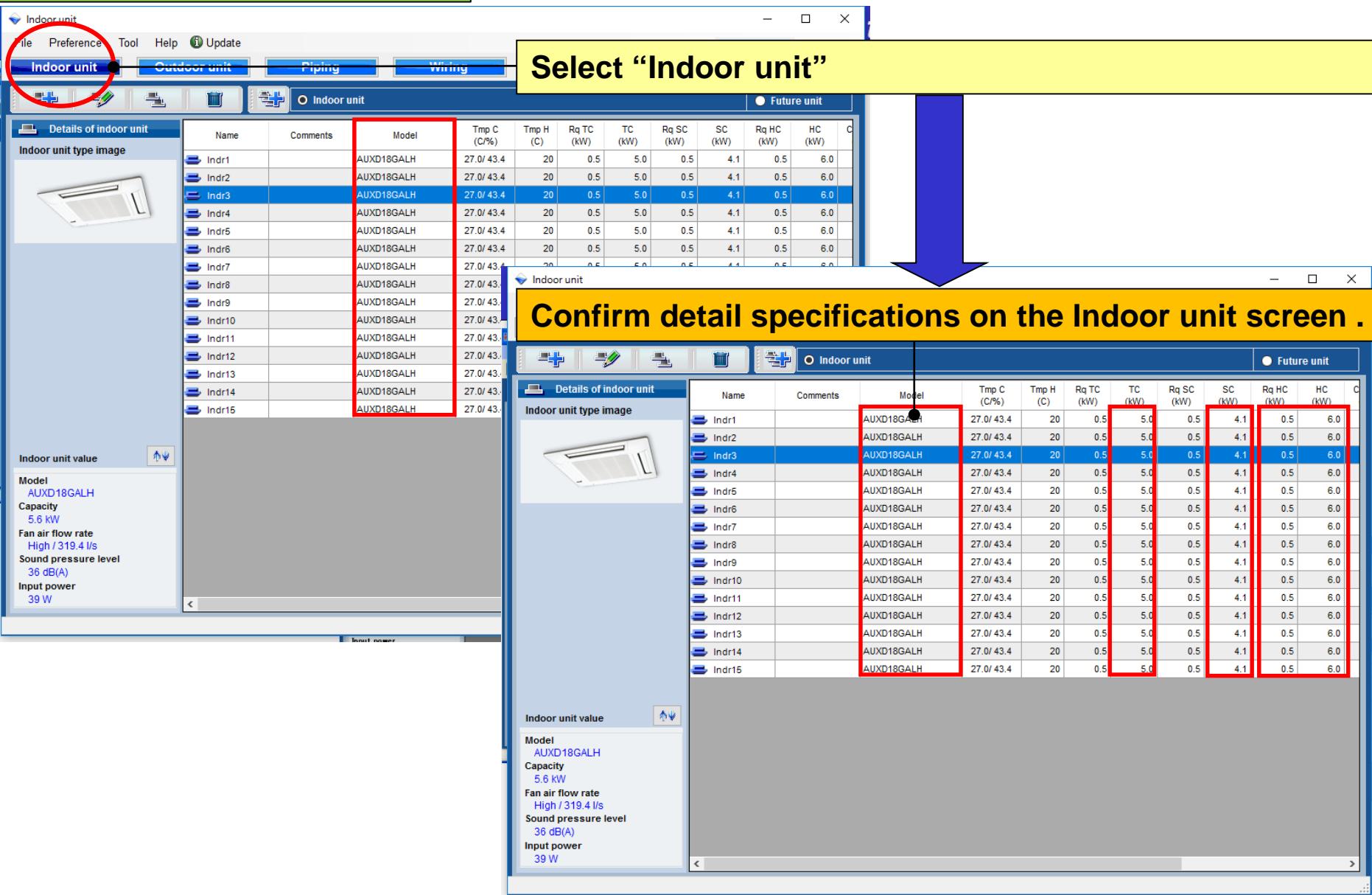
Model				
Type	VR-II Heat Recovery space saving combination			
Model	AJY270GALH			
PS	3N, 400V, 50Hz			
Combination	Actual	98.8%	Max.	100%
Capacity	Cooling	85.0 kW	Heating	95.0 kW
Actual capacity	Cooling	84.0 kW	Heating	94.5 kW
Indoor connect count	15			
Total indoor capa	Cooling	84.0 kW	Heating	94.5 kW
Outdoor temp.	Cooling	35C	Heating	7C
 Piping				
Actual piping length				
7.5m				
Height difference between outdoor and indoor units				
0.0m				
Position of outdoor unit relative to indoor unit				
Same Floor				



Outdoor unit settings

Design Simulator

Indoor unit



Outdoor unit settings

Design Simulator

Outdoor capacity list (1/3)

The connection % and capacity are calculated and the largest outdoor unit from the combination value is selected when connected.

Use the “outdoor capacity list” to be able to specify the range of the connection % and capacity calculation ratio and to be able to select the outdoor unit from several candidates

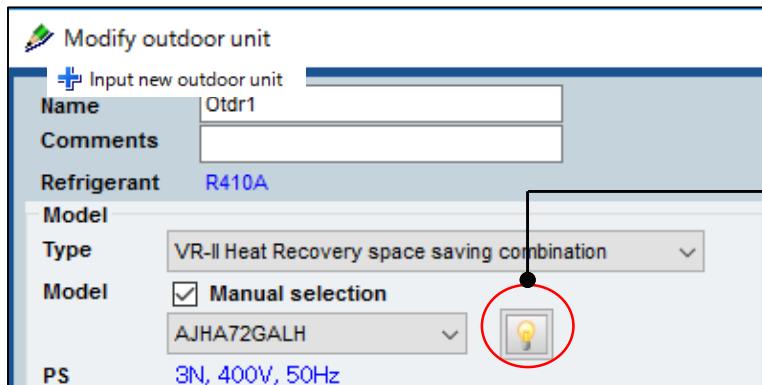
Combination (%)	HP	Capacity (kW)	Model name	Outdoor unit	Outdoor unit	Outdoor unit
100.0	10	28.0	AJYA90GALH	AJYA90GALH		
83.6	12	33.5	AJY108GALH	AJY108GALH		
70.0	14	40.0	AJY126GALH	AJY126GALH		

Upper bound
100%
Lower bound
70%
Calculate
Cancel OK

Outdoor unit settings

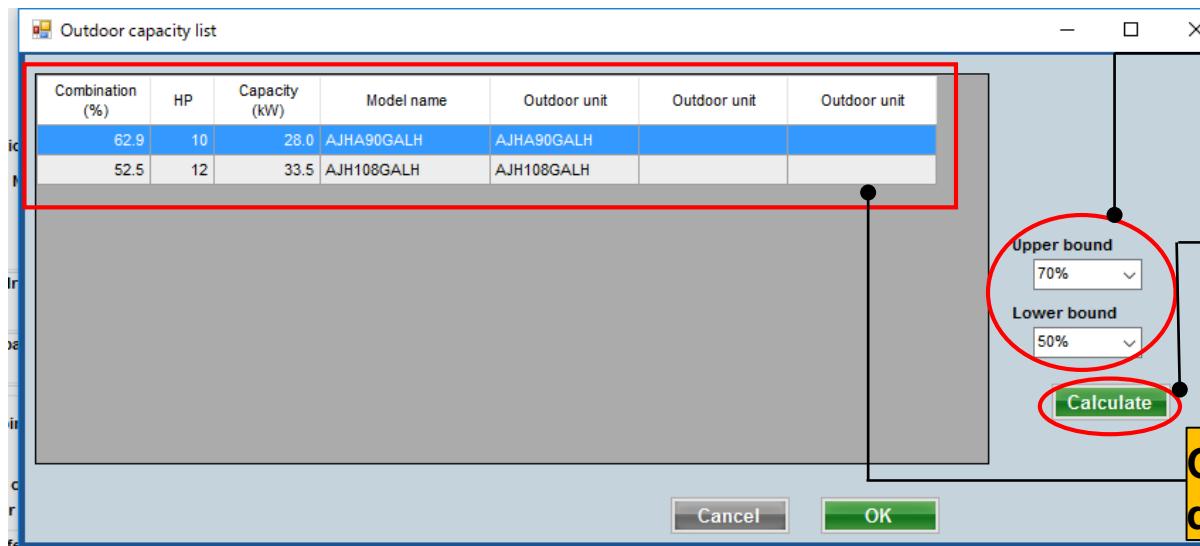
Design Simulator

Outdoor capacity list (2/3)



Select “Outdoor capacity list”

Open “Outdoor capacity list”



Select “bound”

Select “Calculation”

Outdoor units in the range are displayed in the list.

Outdoor unit settings

Design Simulator

Outdoor capacity list (3/3)

Outdoor capacity list (3/3)

Combination (%)	HP	Capacity (kW)	Model name	Outdoor unit	Outdoor unit	Outdoor unit
62.9	10	28.0	AJHA90GALH	AJHA90GALH		
52.5	12	33.5	AJH108GALH	AJH108GALH		

Modify outdoor unit

Name: Otdr1
Comments:
Refrigerant: R410A

Model
Type: VR-II Heat Recovery space saving combination
Model: Manual selection
AJHA90GALH 

PS: 3N, 400V, 50Hz

Combination: 70% Full Load Partial Load

Language No: 70 %

Outdoor dry bulb temperature
Cooling: 35.0 Heating: 7.0

Actual capacity
Cooling: 17.6 kW Heating: 20.8 kW

Piping
Actual piping length: 7.5 m

Position of outdoor unit relative to indoor unit
 Higher  Same Floor  Lower 

Height difference between outdoor and indoor units: 0.0 m

Select “Optimal outdoor model”

OK

Partial load function (1/6)

When Partial load is used, outdoor unit capacity can be lowered by adjusting indoor unit operation rate.

① When selected indoor unit performs 100% operation
→ Use Full load.

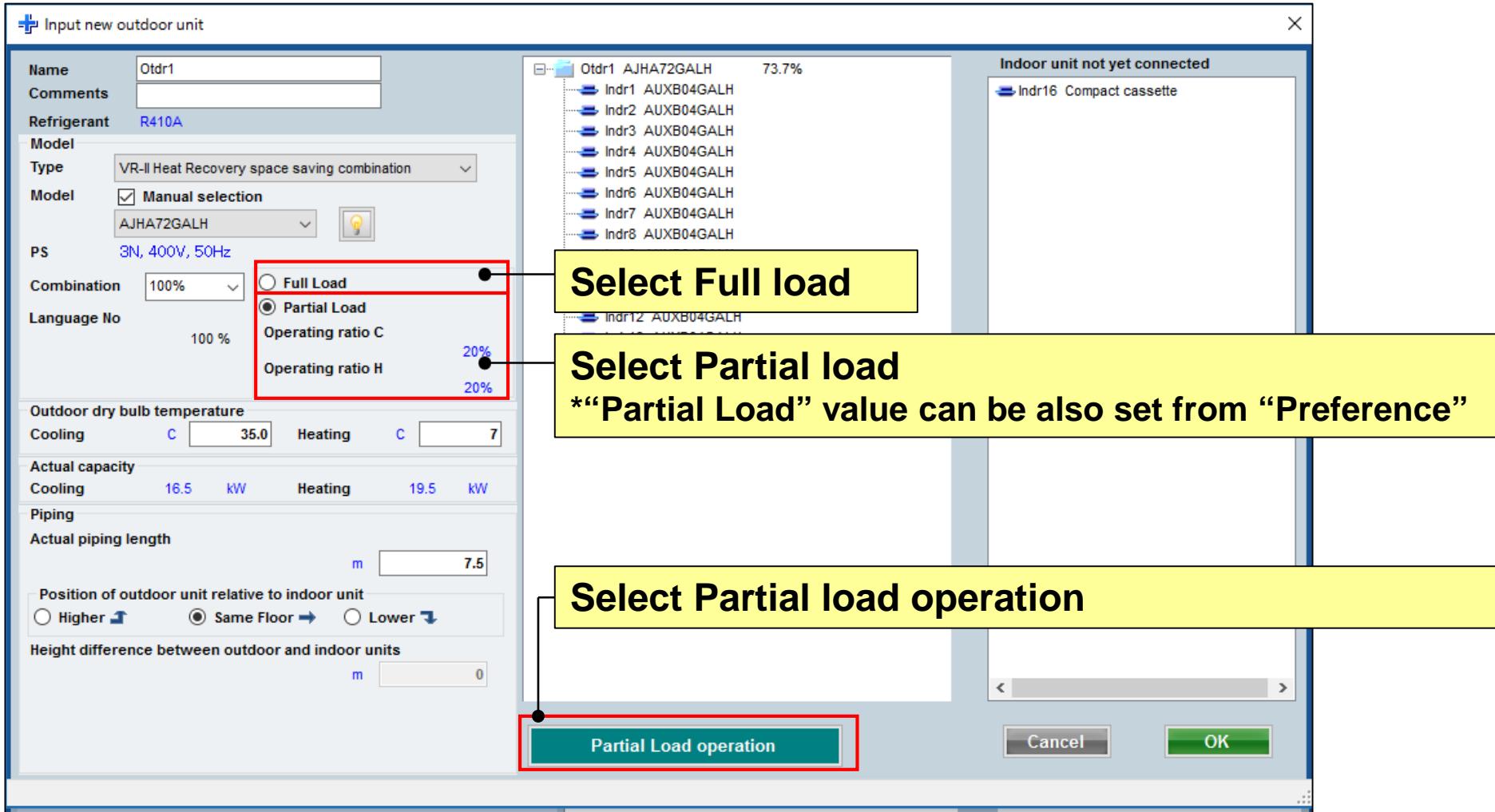
② Select when models are selected in consideration of non-operating indoor unit from all air conditioners. Operating ratio (%) can be set for cooling and heating.
→ Use Partial load.

③ Models are selected on the assumption that there are partial operating indoor units and 100% operating indoor units for each room.
→ Use Partial load operation.

Outdoor unit settings

Design Simulator

Partial load operation (2/6)



Outdoor unit settings

Design Simulator

Partial load operation (3/6)

Select “Partial load operation”

Open “Partial load operation”

The “Indoor / Outdoor” operating ratio can be changed

The operation ratio of all indoor units can be changed

Input new outdoor unit

Name: Otdr1
Comments:
Refrigerant: R410A

Model: VR-II Heat Recovery space saving combination
Type: Manual selection
Model: AJH-A72GALH
PS: 3N, 400V, 50Hz

Combination: 100% (radio button selected)
Operating ratio C: 20%
Operating ratio H: 20%

Language No: 100 %

Outdoor dry bulb temperature
Cooling: 35.0 Heating: 7

Actual capacity
Cooling: 16.5 kW Heating: 19.5 kW

Piping
Actual piping length: 7.5 m

Position of outdoor unit relative to indoor unit
Higher (radio button selected) Same Floor Lower

Height difference between outdoor and indoor units: 0 m

Partial Load operation

Partial Load operation

Outdoor Model
Combination
Rated Capacity
Cooling
Heating
Actual Capacity(outdoor)
Cooling
Heating

Partial load ratio
Combination: 150% (radio button selected)
Operating ratio designation (radio button selected)
Cooling: 88 %
Heating: 88 %
Partial Indoor designation

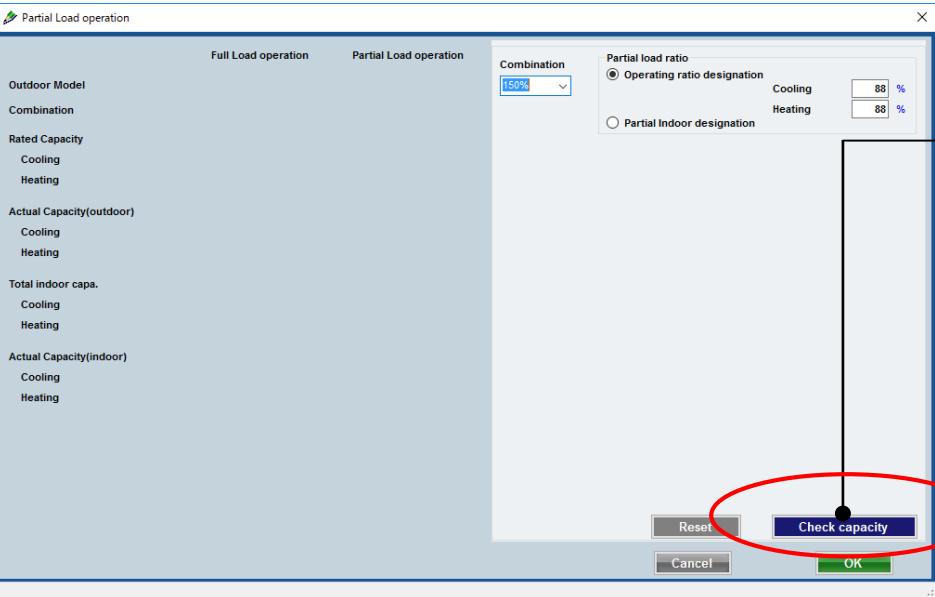
Actual Capacity(indoor)
Cooling
Heating

Reset Check capacity Cancel OK

Outdoor unit settings

Design Simulator

Partial load operation (4/6)



Select “Check capacity”

The calculation results appears.

Full Load operation		Partial Load operation	
Outdoor Model	AJY216LALBH	AJY198LALBH	
Combination	132.4%	144.2%	
Rated Capacity			150 %
Cooling	68.0 kW	62.4 kW	
Heating	76.5 kW	70.0 kW	
Actual Capacity(outdoor)			
Cooling	69.9 kW	65.2 kW	
Heating	60.6 kW	55.9 kW	
Total indoor capa.			
Cooling	74.5 kW	74.5 kW	
Heating	82.0 kW	82.0 kW	
Actual Capacity(indoor)			
Cooling	74.5 kW	74.5 kW	
Heating	60.5 kW	56 kW	

Check capacity

The calculation results are shown.

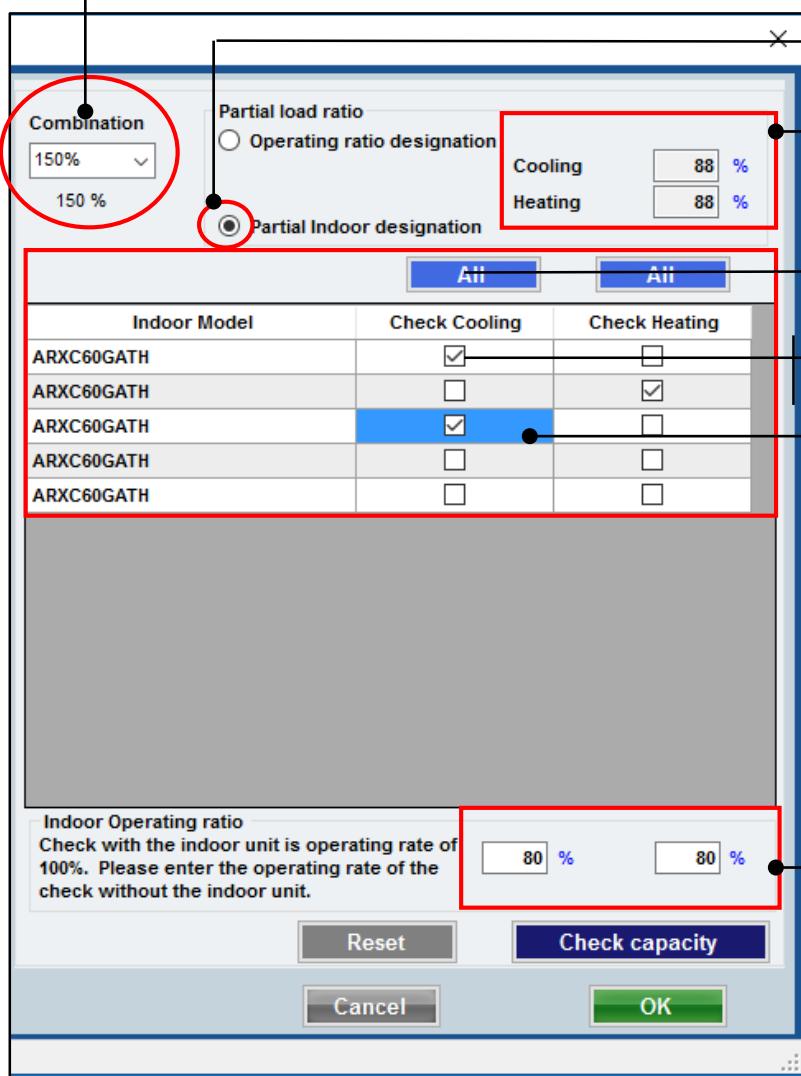
Left: Full load operation

Right: Partial load operation

Outdoor unit settings

Design Simulator

Partial load operation (5/6)



Select combination capacity

Select combination capacity

The operation ratio is re-calculated and displayed with the content set in “Partial indoor designation”

Check all

Select “Partial indoor designation”

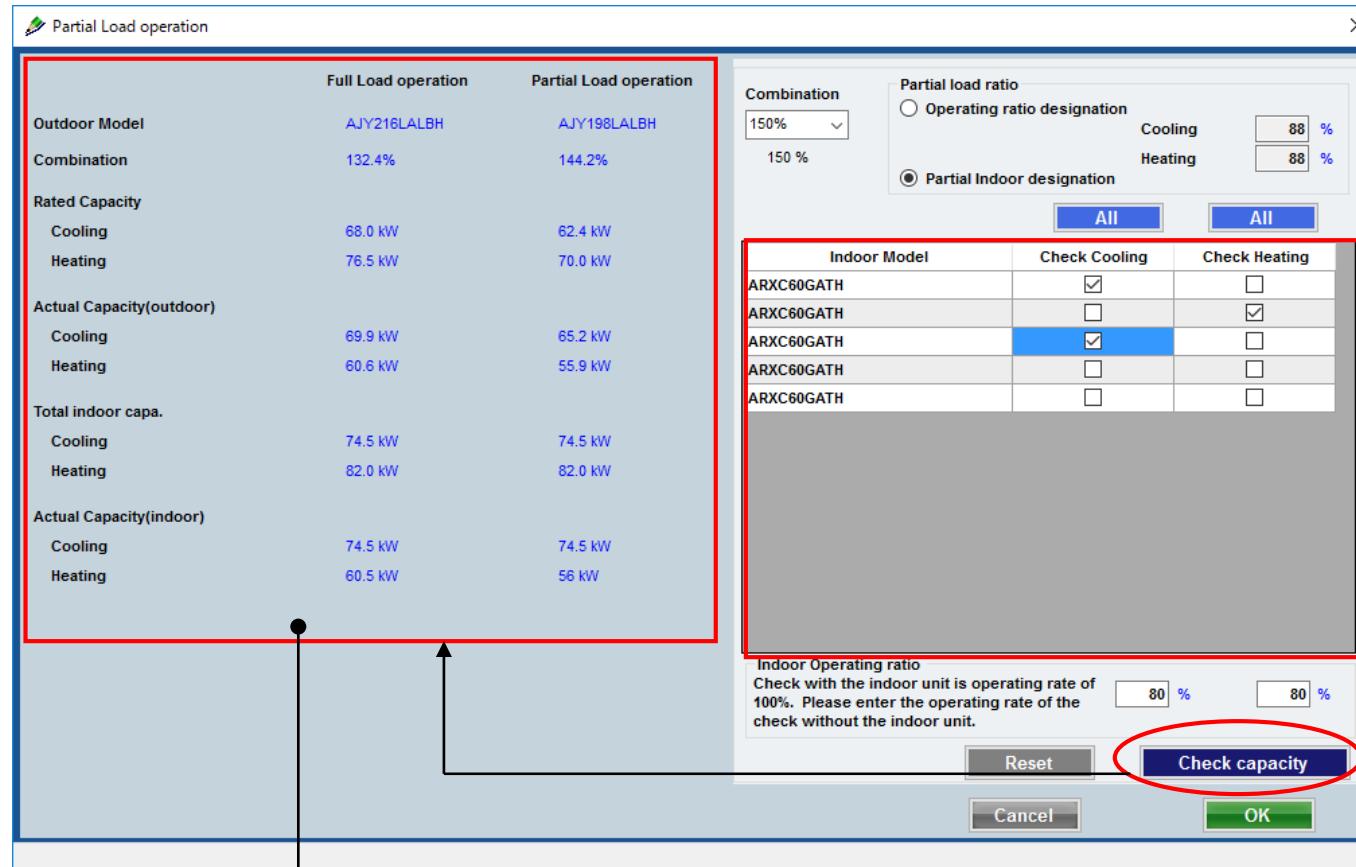
Check with the indoor unit is operating rate of 100%.

Please enter the operating rate of the check without the indoor unit.

Outdoor unit settings

Design Simulator

Partial load operation (6/6)

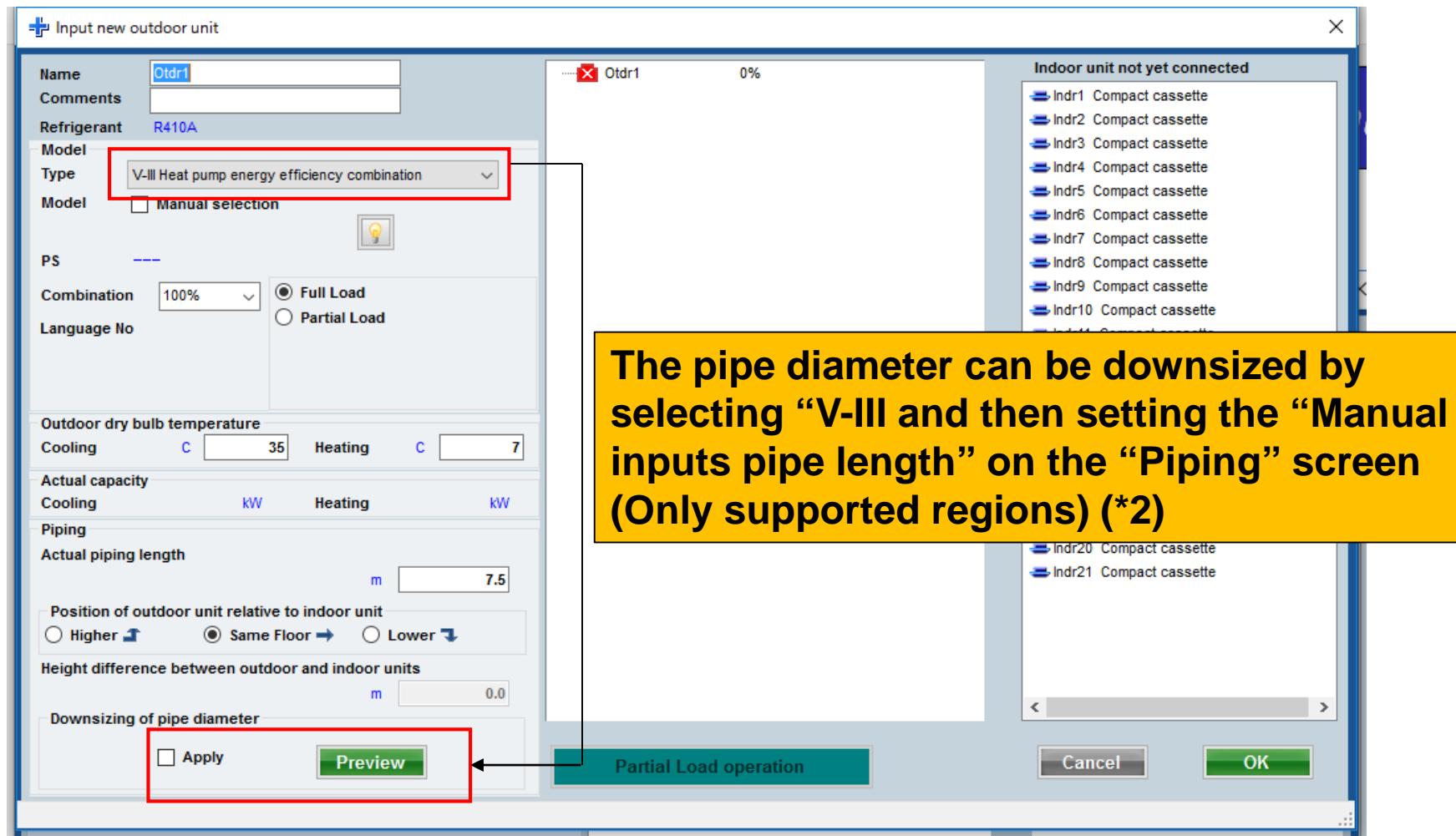


The calculation results are shown.
Left: Full load operation
Right: Partial load operation

Outdoor unit settings

Design Simulator

Downsizing of pipe diameter



*2: The description of the “Downsizing of pipe diameter” is described on the “Piping” screen