

4 System Design and Unit Selection

4.1 Selection Procedure

Step 1: Total heat load calculation

Calculate conditioned surface area
Select the heat emitters (type, quantity, water temperature and heat load)

Step 2: System configuration

Decide whether to include AHS and set AHS's switching temperature
Decide whether backup electric heater is enabled or disabled

Step 3: Selection of outdoor units

Determine required total heat load on outdoor units
Set capacity safety factor
Select power supply

Provisionally select Mono unit capacity based on nominal capacity

Correct capacity of the outdoor units for the following items:
Outdoor air temperature / Outdoor humidity / Water outlet temperature¹ /
Altitude / Anti-freeze fluid

Is corrected Mono unit capacity \geq Required total heat load on outdoor units²

Yes

Mono system selection
is complete

No

Select a larger model or enable
backup electric heater operation

Notes:

1. If the required water temperatures of the heat emitters are not all the same, the Mono's outlet water temperature setting should be set at the highest of the heat emitter required water temperatures. If the water outlet design temperature falls between two temperatures listed in the outdoor unit's capacity table, calculate the corrected capacity by interpolation.
2. If the outdoor unit selection is to be based on total heating load and total cooling load, select Mono units which satisfy not only the total heating load requirements but also the total cooling load requirements.