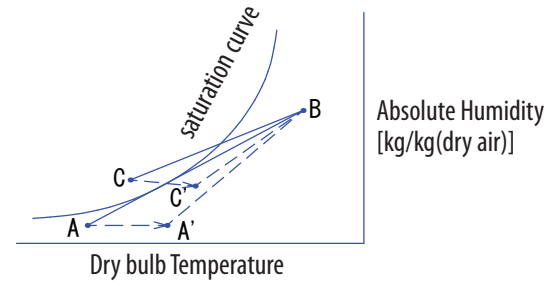


[Outdoor Air Intake Conditions Requiring Condensation Prevention]

As shown in the figure below, when the air conditions at the intake side, Points A and B, are plotted on a psychrometric chart, condensation or frost may occur on the heat exchange element if the high-temperature side air B, after heat exchange, reaches an air condition such as Point C that exceeds the saturation curve. In such cases, the low-temperature side air condition A shall be increased to Point A' so that the resulting air condition after heat exchange shifts from Point C to Point C', which remains below the saturation curve, before operating the unit. Based on the Winter Condensation

Limit Chart, appropriate measures such as preheating shall be applied to ensure that the outdoor air intake temperature does not fall below the limit defined by return air from room (RA) temperature and relative humidity.



If the heat exchange element becomes wet due to condensation, the element may deteriorate, resulting in a reduction of enthalpy exchange efficiency. In the case of frosting, heat exchange will not be performed. As a countermeasure, preheating of the low-temperature side air is recommended.

[Ambient Temperature and Humidity Conditions Requiring Condensation Prevention]

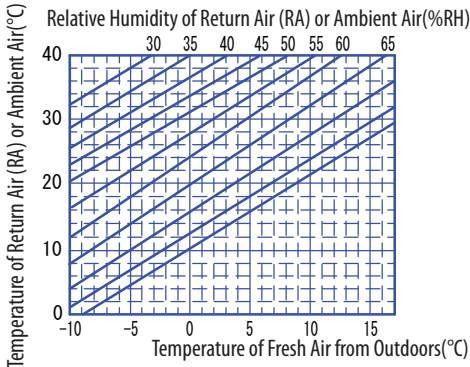
Depending on the ambient temperature and humidity conditions surrounding the unit, condensation may occur on the unit casing and ductwork, which may result in water leakage outside the unit. Therefore, the following precautions shall be observed.

- The unit shall not be used in high-humidity environments such as indoor swimming pools with warm water, bathrooms, mushroom cultivation rooms, or heated stone spa facilities.
- The figure below assumes indoor installation of the unit; therefore, the term “Return air from room(RA) or ambient conditions” is used.
- The unit and all connected ductwork shall be installed within the insulated envelope of the building.

Winter Condensation Limit Chart

- Refer to the Winter Condensation Limit Chart, and operate the unit under conditions where, based on the fresh air from outdoors (OA) temperature, the ambient temperature surrounding the unit and the relative humidity of the return air from room (RA) do not exceed the specified limit lines.
- When the unit is operated for extended periods exceeding 10 hours per day, condensation may occur even within the range shown in the condensation limit chart. If the temperature of fresh air from outdoors (OA) falls below 0°C, operate the unit under conditions where the dew point temperature of the ambient air surrounding the unit does not exceed 10°C.

Winter Condensation Limit Chart



Summer Condensation Limit Chart

- Refer to the Summer Condensation Limit Chart, and operate the unit under conditions where the ambient temperature surrounding the unit does not exceed the limit lines defined by the temperature and relative humidity of fresh air from outdoors (OA).
- When the unit is operated for extended periods exceeding 10 hours per day, condensation may occur even within the range shown in the condensation limit chart.

Summer Condensation Limit Chart

