【Claims】

【Claim 1】

A module for composition to be sprayed with refrigerant, the module comprising:

a mixing unit providing a space for the refrigerant and the composition to be met, the mixing unit including an inflow hole formed on an inner surface of the mixing unit and an insertion hole receiving a refrigerant spraying unit;

a composition storage unit configured to store the composition;

a tube configured to fluidically connect the composition storage unit and the mixing unit, the composition flowing from the composition storage unit to the space of the mixing unit through the tube when negative air pressure is formed at the inflow hole as the refrigerant is sprayed through the mixing unit; and

a guide member arranged in the space of the mixing unit, the guide member including a first part;

wherein one end of the first part is positioned adjacent to the inflow hole and the first part is inclined to a virtual plane containing the inflow hole, such that portion of the composition passed the inflow hole is guided to move along the first part, and

wherein a height of the guide member with respect to the virtual plane is greater than or equal to a height of a center of the insertion hole with respect to the virtual plane.

【Claim 2】

The module of claim 1,

wherein the first part has a first angle with respect to the virtual plane, and

wherein the first angle is between 10 to 90 degrees.

【Claim 3】

The module of claim 1,

wherein the guide member includes a curved part extending from the first part, and
wherein the height of the guide member is determined by a height of an end of the curved part with respect to the virtual plane.

【Claim 4】
The module of claim 1,
wherein the guide member further includes a contact part contact with a particular area of the inner surface.

【Claim 5】
The module of claim 4,
wherein the contact part has a first groove such that the composition passed the inflow hole reaches the first part through the first groove.

【Claim 6】
The module of claim 1,
wherein the guide member further includes a second part,
wherein one end of the second part is positioned adjacent to the inflow hole and the second part is inclined to the virtual plane, such that portion of the composition passed the inflow hole is guided to move along the second part, and
wherein the inflow hole is positioned between the one end of the first part and the one end of the second part.

【Claim 7】
The module of claim 6,
wherein the guide member includes a third part connecting the first part and the second part.

【Claim 8】
The module of claim 7,
wherein the mixing unit has a virtual central axis,

wherein the guide member is elongated in a direction parallel to the virtual central axis of the mixing module, and
wherein a vent hole is formed on the first part, the second part, or both the first part and the second part.

【Claim 9】
The module of claim 8,
wherein the vent hole is positioned between the inflow hole and the insertion hole in a direction parallel to the virtual central axis of the mixing unit.

【Claim 10】
The module of claim 1,
wherein a height of the first part with respect to the virtual plane is smaller than or equal to the height of the center of the insertion hole with respect to the virtual plane.

【Claim 11】
The module of claim 1,
wherein the mixing unit is divided by at least a side part and a bottom part,
wherein the side part defines the inner surface where the inflow hole is formed and the bottom part is where the insertion hole is formed, and,
wherein a virtual central axis of the side part is perpendicular to the bottom part.

【Claim 12】
The module of claim 1,
wherein the mixing unit has a virtual central axis,
wherein the first part of the guide member extends from a first end to a second end in a direction parallel to the virtual central axis of the mixing unit, and
wherein the inflow hole is positioned between the first end and the second end of the first part.

【Claim 13】

The module of claim 1, further comprising:

a coupling unit extending from the mixing unit, the coupling unit including at least one fixing part;

wherein the coupling unit is configured to couple with the refrigerant spraying unit by the fixing part.

【Claim 14】

A device for spraying composition and refrigerant, the device comprising:

a cartridge connecting unit configured to receive a cartridge where the refrigerant is stored;

a valve fluidically connected to the cartridge connecting unit, the valve configured to control flow of the refrigerant;

a refrigerant spraying unit configured to spray the refrigerant;

a mixing unit providing a space for the refrigerant and the composition to be met, the mixing unit including an inflow hole formed on an inner surface of the mixing unit;

a composition storage unit configured to store the composition;

a tube configured to fluidically connect the composition storage unit and the mixing unit, the composition flowing from the composition storage unit to the space of the mixing unit through the tube when negative air pressure is formed at the inflow hole as the refrigerant is sprayed through the mixing unit; and

a guide member arranged in the space of the mixing unit, the guide member including a first part;

wherein one end of the first part is positioned adjacent to the inflow hole and the first part is inclined to a virtual plane containing the inflow hole, such that portion of the composition passed the inflow hole is guided to move along the first part, and

wherein a height of the guide member with respect to the virtual plane is greater than or equal to a height of a center of the insertion hole with respect to the virtual plane.

【Claim 15】
The device of claim 14,
wherein the mixing unit includes a first coupling member and the refrigerant spraying unit includes a second coupling member to be coupled the first coupling member, and
wherein the mixing unit is detachable to the refrigerant spraying unit.

【Claim 16】
The device of claim 14,
wherein the first part has a first angle with respect to the virtual plane, and
wherein the first angle is between 10 to 90 degrees.

【Claim 17】
The device of claim 14,
wherein the guide member includes a curved part extending from the first part, and
wherein the height of the guide member is determined by an end of the curved part.

【Claim 18】
The device of claim 14,
wherein the guide member further includes a contact part contact with a particular area of the inner surface.

【Claim 19】
The device of claim 18,
wherein the contact part has a first groove such that the composition passed the inflow hole reaches the first part through the first groove.

【Claim 20】
The device of claim 14,
wherein the guide member further includes a second part,
wherein one end of the second part is positioned adjacent to the inflow hole and the second part is incline to the virtual plane, such that portion of the composition passed the inflow hole is guided to move along the second part, and
wherein the inflow hole is positioned between the one end of the first part and the one end of the second part.

【Claim 21】
The device of claim 20,
wherein the guide member includes a third part connecting the first part and the second part.

【Claim 22】
The device of claim 21,
wherein the mixing unit has a virtual central axis,
wherein the guide member is elongated in a direction parallel to the virtual central axis of the mixing module, and
wherein a vent hole is formed on the first part, the second part, or both the first part and the second part.

【Claim 23】
The device of claim 21,
wherein the vent hole is positioned between the inflow hole and the insertion hole in a direction parallel to the virtual central axis of the mixing unit.