CLAIMS

1. A measurement unit for measuring a flow rate of a purge gas supplied from a nozzle of a shelf support in a rack to a carrier, comprising:

a substrate;

a gas introduction section provided on a bottom surface of the substrate and configured to introduce the purge gas when coming into contact with the nozzle of the shelf support, while keeping a contact portion between the gas introduction section and the nozzle airtight with a load from the substrate;

a circuit unit that at least including a flowmeter for measuring the flow rate in the gas introduction section and a power supply; and

a plurality of legs displacable in the vertical direction with respect to the substrate and making a part of a weight of the measurement unit supported on the shelf support.

2. The measurement unit according to claim 1,

wherein the substrate is a first substrate, further comprising a second substrate supporting at least a part of the circuit unit and provided above the first substrate , and

wherein the legs are attached to the second substrate and extend onto the shelf support avoiding the first substrate, and are configured to make the weight of the second substrate supported on the shelf support.

3. The measurement unit according to claim 1, further comprising:

elastic bodies applying elastic forces downward to the legs; and

adjustment members adjusting the elastic forces from the elastic bodies.

4. A purge gas flow rate measuring method in which a measurement unit measures a flow rate of a purge gas supplied from a nozzle of a shelf support in a rack

to a carrier, the measurement unit including:

a substrate;

a gas introduction section provided on a bottom surface of the substrate and configured to introduce the purge gas while keeping a contact portion between the gas introduction section and the nozzle airtight with a load from the substrate;

a circuit unit at least including a flowmeter and a power supply; and

a plurality of legs displacable in the vertical direction with respect to the substrate, the method comprising:

a distributing step for distributing a load of the measurement unit into a part for the plurality of legs and a part for the gas introduction section by the plurality of legs supported on the shelf support and the gas introduction section in contact with the nozzle of the shelf support; and

a measuring step for the flowmeter measuring the flow rate of the purge gas flowing to the flowmeter via the gas introduction section.

5. The purge gas flow rate measuring method according to claim 4,

wherein the substrate is a first substrate, the measurement unit includes a second substrate for supporting at least a part of the circuit unit above the first substrate, the legs are attached to the second substrate and extend onto the shelf support avoiding the first substrate, and

in the distributing step, the legs make a load from the second substrate supported on the shelf support.

6. The purge gas flow rate measuring method according to claim 4,

wherein the measurement unit further includes:

elastic bodies applying elastic forces downward to the legs; and

adjustment members adjusting the elastic forces, and the method further includes:

an adjustment step for the adjustment members adjusting the load applied to the nozzle via the substrate from the gas introduction section.