

CLAIMS

1. A substrate processing apparatus comprising
a first processing unit and a second processing unit
placed in upper and lower two stages, wherein
each of the first processing unit and the second
processing unit has:
a plurality of processing tanks arranged in series;
a partition wall defining a conveyance space extending
along an arrangement direction outside the plurality of
processing tanks;
a conveyance mechanism placed in the conveyance space,
the conveyance mechanism being configured to convey a substrate
between the processing tanks along the arrangement direction,
wherein
the conveyance mechanism has:
a pair of arms configured to be opened and closed and grasp
the substrate,
an upward/downward movement mechanism configured to move
the pair of arms upward and downward,
a turn mechanism configured to turn the pair of arms about
a rotation axis parallel to a direction in which the pair of
arms is opened or closed,
an arrangement-direction movement mechanism configured
to move the pair of arms linearly along the arrangement
direction,

the arrangement-direction movement mechanism is covered with a cover extending along the arrangement direction, and

the cover is connected with a second exhaust duct;
and

an air guide duct provided so as to extend along the arrangement direction in the conveyance space, wherein

the air guide duct is connected with a fan filter unit,
each of the processing tanks is connected with an exhaust duct,

an opening is formed in each of parts facing the processing tank in the air guide duct, and

the conveyance space of the first processing unit and the conveyance space of the second processing unit are separated into upper and lower segments by the partition wall.

2. The substrate processing apparatus according to claim 1, wherein the air guide duct is placed above the plurality of processing tanks.

3. The substrate processing apparatus according to claim 1, wherein

the arrangement-direction movement mechanism is placed above the plurality of processing tanks, and

a set formed of the pair of arms, the upward/downward movement mechanism, and the turn mechanism is placed below the arrangement-direction movement mechanism so as to hang.

4. The substrate processing apparatus according to claim 3, wherein the air guide duct is placed between the plurality of processing tanks and the arrangement-direction movement mechanism.

5. The substrate processing apparatus according to any of claims 1 to 4, wherein

the fan filter unit is connected with one end of the air guide duct, and

a plurality of the openings located closer to the one end is formed so as to be smaller.

6. The substrate processing apparatus according to claim 5, wherein,

along the arrangement direction, a center of the opening is aligned to a position closer to the one end than a center

in a corresponding processing tank of the processing tanks.

7. The substrate processing apparatus according to any of claims 1 to 6, wherein

the processing tank is a cleaning module.

8. A substrate processing apparatus comprising:

a plurality of processing tanks arranged in series;

a partition wall defining a conveyance space extending along an arrangement direction outside the plurality of processing tanks;

a conveyance mechanism placed in the conveyance space, the conveyance mechanism being configured to convey a substrate between the processing tanks along the arrangement direction, wherein

the conveyance mechanism has:

a pair of arms configured to be opened and closed and grasp the substrate,

an upward/downward movement mechanism configured to move the pair of arms upward and downward,

a turn mechanism configured to turn the pair of arms about a rotation axis parallel to a direction in which the pair of arms is opened or closed,

an arrangement-direction movement mechanism configured to move the pair of arms linearly along the arrangement

direction,

the arrangement-direction movement mechanism is covered with a cover extending along the arrangement direction, and

the cover is connected with a second exhaust duct;

and

an air guide duct provided so as to extend along the arrangement direction in the conveyance space, wherein

the air guide duct is connected with a fan filter unit,

each of the processing tanks is connected with an exhaust duct, and

an opening is formed in each of parts facing the processing tank in the air guide duct.