CLAIMS

[Claim 1]

A grasping device comprising:

a grasping device body;

an upper-surface suction portion that is removably mounted to the grasping device body and has a first suction surface that is capable of holding an upper surface of an item by suction;

a side-surface grasp portion that is removably mounted to the grasping device body and has a first grasp portion and a second grasp portion that are capable of grasping an outside surface of the item; and

a control device that selects any one of the upper-surface suction portion and the side-surface grasp portion based on transport target data of the item, and sets transport parameters for the selected upper-surface suction portion or side-surface grasp portion.

[Claim 2]

The grasping device according to claim 1, further comprising an accumulation unit that accumulates actual transport data as characteristic data of the item,

wherein the control device selects any one of the upper-surface suction portion and the side-surface grasp portion, based on the actual transport data.

[Claim 3]

The grasping device according to claim 1 or 2, further comprising a moisture detector that acquires moisture amount data as the characteristic data of the item,

wherein the control device selects any one of the upper-surface suction portion and the side-surface grasp portion, based on the moisture amount data.

[Claim 4]

The grasping device according to claim 1 or 2, further comprising a shape detector that acquires deformation amount data as the characteristic data of the item,

wherein the control device selects any one of the upper-surface suction portion and the side-surface grasp portion, based on the deformation amount data.

[Claim 5]

The grasping device according to claim 1, wherein the control device calculates a determination index using suction difficulty in suction of the item by the upper-surface suction portion as an index, based on the transport target data of the item, and selects any one of the upper-surface suction portion and the side-surface grasp portion, based on the determination index.

[Claim 6]

The grasping device according to claim 1, wherein the control device generates a selection processing map according to hardness of the item and unevenness of the upper surface of the item, and selects any one of the upper-surface suction portion and the side-surface grasp portion, based on the selection processing map.

[Claim 7]

The grasping device according to claim 1, further comprising a side surface suction portion that is removably mounted to the grasping device body and has a second suction surface that is capable of holding a side surface of the item by suction,

wherein the control device determines necessity of the side surface suction portion based on the transport target data of the item.

[Claim 8]

The grasping device according to claim 1, further comprising a lower-surface support portion that is removably mounted to the grasping device body and has a support portion that is capable of supporting a lower surface of the item,

wherein the control device determines necessity of the lower-surface support portion based on the transport target data of the item.

[Claim 9]

The grasping device according to claim 8, further comprising a moisture detector that acquires moisture amount data as characteristic data of the item,

wherein the control device determines the necessity of the lower-surface support

portion based on the moisture amount data.

[Claim 10]

The grasping device according to claim 8, further comprising a shape detector that acquires deformation amount data as the characteristic data of the item,

wherein the control device determines the necessity of the lower-surface support portion based on the deformation amount data.

[Claim 11]

A grasping method using a grasping device including:

a grasping device body;

an upper-surface suction portion that is capable of being removably mounted to the grasping device body and has a first suction surface that is capable of holding an upper surface of an item by suction; and

a side-surface grasp portion that is capable of being removably mounted to the grasping device body and has a first grasp portion and a second grasp portion that are capable of grasping an outside surface of the item,

the grasping method comprising the steps of:

selecting any one of the upper-surface suction portion and the side-surface grasp portion based on transport target data of the item;

setting transport parameters for the selected upper-surface suction portion or side-surface grasp portion; and

mounting the selected upper-surface suction portion or side-surface grasp portion to the grasping device body.