

## WHAT IS CLAIMED IS:

1. An apparatus comprising:

a base;

a drive device disposed on the base, the drive device having an output shaft with a wafer receiving surface, the drive device being configured to rotate the output shaft about an axis of rotation;

a sensor unit disposed on the base, the sensor unit being configured to sense a wafer received on the wafer receiving surface; and

an engagement device configured to engage and disengage a translational mechanism between the drive device and the sensor unit,

wherein, when the engagement device engages the translational mechanism, rotation of the output shaft about the axis of rotation by the drive device changes a relative positional relationship between the sensor unit and the axis of rotation.

2. The apparatus according to claim 1, wherein, when the engagement device disengages the translational mechanism, rotation of the output shaft about the axis of rotation by the drive device does not change the relative positional relationship between the sensor unit and the axis of rotation.

3. The apparatus according to claim 1,

wherein the translational mechanism includes:

a rotational member coupled to the output shaft;

a carriage slidably coupled the base, the sensor unit being mounted on the carriage; and

a linear member connected to the carriage, and

wherein an outer circumferential surface of the rotational member is engageable with the linear member upon actuation of the engagement device such that rotation of the rotational member moves the carriage in relation to the axis of rotation.

4. The apparatus according to claim 3, wherein the engagement device includes an actuator configured to move the linear member into contact with the outer circumferential surface to engage the linear member to the rotational member.

5. The apparatus according to claim 4, wherein the linear member is mounted to the carriage by flexure members such that actuation of the actuator bends the flexure members to move the linear member into contact with the outer circumferential surface to engage the linear member to the rotational member.

6. The apparatus according to claim 5, wherein the carriage, the linear member, and the flexure members form a four-bar linkage.

7. The apparatus according to claim 4,

wherein the rotational member is a gear, and

wherein the linear member is a rack having a linear arrangement of teeth, the gear being engageable with the teeth.

8. The apparatus according to claim 4,

wherein the outer circumferential surface of the rotational member is frictionally engageable with a surface of the linear member.

9. The apparatus according to claim 1, further comprising a rotational member coupled to the output shaft,

wherein the engagement device is a clutch configured to engage and disengage transmission of rotation of the output shaft to rotation of the rotational member,

wherein the translational mechanism includes a carriage slidably coupled the base, the sensor unit being mounted on the carriage, and

wherein the translational mechanism further includes a drive member connecting the rotational member to the carriage such that rotation of the rotational member moves the carriage in relation to the axis of rotation.

10. The apparatus according to claim 9,

wherein the drive member is a linear member connected to the carriage, the linear member being engaged to an outer circumferential surface of the rotational member such that rotation of the rotational member moves the carriage in relation to the axis of rotation.

11. The apparatus according to claim 10,  
wherein the rotational member is a gear, and  
wherein the linear member is a rack having a linear arrangement of teeth, the gear  
being engaged to the teeth.

12. The apparatus according to claim 10,  
wherein the outer circumferential surface of the rotational member is frictionally  
engaged with a surface of the linear member.

13. The apparatus according to claim 9, wherein:  
the drive member is a belt and pulley arrangement, the belt being driven by the  
rotational member, and the belt being connected to the carriage;  
the drive member is a linkage including an arm member having a first end pivotally  
connected to the rotational member and a second end pivotally connected to the carriage; or  
the drive member is a drive arm having a cam slot, and the carriage includes a cam  
follower disposed within the cam slot.

14. An apparatus comprising:  
a base;  
a drive device disposed on the base, the drive device having an output shaft with a  
wafer receiving surface, the drive device being configured to rotate the output shaft about an  
axis of rotation;

a sensor unit disposed on the base, the sensor unit being configured to sense a wafer received on the wafer receiving surface;

a carriage slidably coupled the base, the sensor unit being mounted on the carriage;  
and

an engagement device configured to engage and disengage a coupling between the drive device and the carriage,

wherein, when the engagement device engages the coupling, rotation of the output shaft about the axis of rotation by the drive device changes a relative positional relationship between the sensor unit and the axis of rotation.

15. The apparatus according to claim 14, wherein, when the engagement device disengages the coupling, rotation of the output shaft about the axis of rotation by the drive device does not change the relative positional relationship between the sensor unit and the axis of rotation.

16. The apparatus according to claim 14,

wherein the coupling includes:

a rotational member coupled to the output shaft, and

a linear member connected to the carriage, and

wherein an outer circumferential surface of the rotational member is engageable with the linear member upon actuation of the engagement device such that rotation of the rotational member moves the carriage in relation to the axis of rotation.

17. The apparatus according to claim 14,  
wherein the coupling includes a rotational member coupled to the output shaft,  
wherein the engagement device is a clutch configured to engage and disengage  
transmission of rotation of the output shaft to rotation of the rotational member, and  
wherein the coupling further includes a drive member connecting the rotational  
member to the carriage such that rotation of the rotational member moves the carriage in  
relation to the axis of rotation.

18. A method comprising:  
providing an apparatus comprising:  
a base;  
a drive device disposed on the base, the drive device having an output shaft  
with a wafer receiving surface, the drive device being configured to rotate the output shaft  
about an axis of rotation;  
a sensor unit disposed on the base, the sensor unit being configured to sense  
a wafer received on the wafer receiving surface, and  
an engagement device configured to engage and disengage a translational  
mechanism between the drive device and the sensor unit;  
engaging the translational mechanism between the drive device and the sensor unit,  
and rotating the output shaft about the axis of rotation by the drive device to change a relative  
positional relationship between the sensor unit and the axis of rotation; and

disengaging the translational mechanism between the drive device and the sensor unit, and rotating the output shaft about the axis of rotation by the drive device to rotate the wafer on the wafer receiving surface.

19. The method according to claim 18, wherein, when the translational mechanism is disengaged, rotation of the output shaft about the axis of rotation by the drive device does not change the relative positional relationship between the sensor unit and the axis of rotation.

20. The method according to claim 18, further comprising:

using the sensor unit to sense alignment of the wafer when the translational mechanism is disengaged and the output shaft is rotated by the drive device.