WHAT IS CLAIMED IS:

1. An unlocking mechanism of a semiconductor processing apparatus for opening or closing a lock body structure on a sealing door of a front opening unified pod, comprising a key and a driving device, wherein the key is able to move into or out of a key groove of the lock body structure and matches the key groove in an inserted manner;

the driving device is used for driving the key, when the sealing door is in a closed state, to rotate from an initial position to a first preset position which enables the sealing door to be in an openable state, and driving the key, when the sealing door is in the openable state, to rotate from the first preset position to a second preset position which enables the sealing door to be in the closed state; and

the driving device is further used for driving the key to rotate from the second preset position to the initial position after the driving device drives the key to rotate from the first preset position to the second preset position, and the key does not make contact with the groove at the initial position.

2. The unlocking mechanism according to claim 1, wherein the driving device comprises a telescoping mechanism and a connecting rod mechanism, wherein

the telescoping mechanism is used for driving the connecting rod mechanism to move according to a preset first travel and a preset second travel, and the connecting rod mechanism is connected with the key;

in the first travel, the telescoping mechanism always drives the connecting rod mechanism to move in a first linear direction, such that the connecting rod mechanism able to drive the key to rotate from the initial position to the second preset position in a first direction, and then from the second preset position to the first preset position in a second direction opposite to the first direction so as to switch the sealing door from the closed state to the openable state; and

in the second travel, the telescoping mechanism always drives the connecting rod mechanism to move in a second linear direction opposite to the first linear direction, such that the connecting rod structure is able to drive the key to rotate from the first preset position to the second preset position in the first direction, and then from the second preset position to the initial position in the second direction so as to switch the sealing door from the openable state to the closed state.

3. The unlocking mechanism according to claim 2, wherein the connecting rod mechanism comprises a first connecting rod and a second connecting rod, a first end of the first connecting rod being hinged with a telescoping rod of the telescoping mechanism, a second end of the first

connecting rod being hinged with a first end of the second connecting rod, and the key being connected with a second end of the second connecting rod; and

driven by the telescoping mechanism, the first connecting rod is able to drive the first end of the second connecting rod to rotate in the first direction or the second direction about the second end of the second connecting rod while the second connecting rod is able to drive concentric rotation of the key.

4. The unlocking mechanism according to claim 3, wherein the quantity of the key grooves, the keys and the second connecting rods is each at least two, the second connecting rods being connected in one-to-one correspondence with the keys, and each key being able to move into or out of the corresponding key groove; the unlocking mechanism further comprises a linkage mechanism, wherein at least two second connecting rods are connected by the linkage mechanism, the second end of the first connecting rod is hinged with the first end of one of the second connecting rods, and the first connecting rod is able to drive the at least two second connecting rods to rotate synchronously by the linkage mechanism when driven by the telescoping mechanism.

5. The unlocking mechanism according to claim 4, wherein each of the second connecting rods comprises a body and a connector, the second end of the first connecting rod is hinged with the body, and the linkage mechanism is connected to the connector of each of the second connecting rods.

6. The unlocking mechanism according to claim 5, wherein the linkage mechanism comprises a connecting bar, and each connector is hinged with the connecting bar.

7. The unlocking mechanism according to any one of claims 2 to 6, wherein the unlocking mechanism further comprises a limit part, and the limit part is used for limiting the distance that the telescopic rod of the telescopic mechanism moves according to the first travel or the second travel.

8. The unlocking mechanism according to claim 7, wherein the limit part comprises a limit block and a stop block, the limit block is fixedly arranged, and the stop block is arranged on the telescoping rod and being able to be in contact with the stop block during movement of the telescoping rod according to the first travel or the second travel so as to stop continued movement of the telescoping rod.

9. The unlocking mechanism according to any one of claims 2 to 6, wherein the telescoping mechanism is a linear motor or a cylinder.

10. The unlocking mechanism according to any one of claims 1 to 6, wherein the lock body

structure comprises a rotary table and a locking rod, wherein the locking rod is movably connected to the sealing door and is able to move to a locked position in which the sealing door is in the closed state, or an unlocked position in which the sealing door is in the openable state; and

the rotary table is movably connected to the locking rod and the rotary table is fixedly connected to a connecting piece, the connecting piece is provided with the key groove; when the driving device drives the key in the key groove to rotate, the key drives the rotary table to rotate so as to make the rotary table synchronously move the locking rod to either the locked position or the unlocked position.

11. The unlocking mechanism according to claim 10, wherein the rotary table is provided with an arc groove; the lock body structure further includes a sliding piece, one end of the sliding piece is movably connected with the rotary table, and is able to rotate along the arc groove, and the other end of the sliding piece is fixedly connected with the locking rod.

12. A semiconductor processing apparatus, comprising a sealing door of a front opening unified pod and an unlocking mechanism, a lock body structure being arranged on the sealing door, and the unlocking mechanism being used for opening or closing the lock body structure, wherein the unlocking mechanism employs the unlocking mechanism of any one of claims 1-12.