Claims:

1. A bridging front opening unified pod (FOUP), comprising:

a bottom floor, a first side wall, a second side wall, a ceiling and a back wall that forms an enclosure volume having a front opening;

a plurality of first supports coupled to the first side wall and extending into the enclosure volume, and a corresponding plurality of second supports coupled to the second side wall and extending into the enclosure volume, wherein each corresponding pair of first and second supports form a storage slot this is configured to support a substrate carrier when disposed thereon;

a base plate assembly coupled to the bottom floor including a plurality of lift pins is configured to support a substrate when disposed thereon; and

a docking slot disposed proximate the base plate assembly and configured to support a substrate carrier when disposed thereon.

2. The bridging FOUP of claim 1, wherein the storage slot and the docking slot are configured to support a 300 mm substrate carrier, and wherein the substrate carrier is configured to hold a 200 mm substrate.

3. The bridging FOUP of claim 1, wherein the storage slot and the docking slot are configured to support a 450 mm substrate carrier, and wherein the substrate carrier is configured to hold a 200 mm or 300 mm substrate.

4. The bridging FOUP of claim 1, wherein the storage slot and the docking slot are configured to support at least one of a 200 mm, 300 mm or 450 mm substrate.

5. The bridging FOUP of claim 1, wherein the bridging FOUP includes 15 storage slots configured to support 15 substrate carriers when disposed thereon.

6. The bridging FOUP of claim 5, wherein the storage slots are equidistantly spaced from each other.

7. The bridging FOUP of claim 5, wherein a vertical distance between the storage

slots is about 12 mm to about 15 mm.

8. The bridging FOUP of claim 1, wherein the docking slot includes a first docking support coupled to the first side wall and extending into the enclosure volume, and a second docking support coupled to the second side wall and extending into the enclosure volume.

9. The bridging FOUP of claim 8, wherein each of the plurality of first supports, the plurality of second supports, and the first and second docking supports includes a support ledge that supports the substrate carrier along a portion of an outer diameter of the substrate carrier when disposed thereon.

10. The bridging FOUP of claim 8, wherein each of the plurality of first supports, the plurality of second supports, and the first and second docking supports is fabricated from one of Aluminum, Aluminum alloys, steel, Polyether ether ketone, or composite materials.

11. The bridging FOUP of claim 8, wherein each of the plurality of first supports, the plurality of second supports, and the first and second docking supports are removable and can be individually replaced.

12. A bridging front opening unified pod (FOUP), comprising:

a bottom floor, a first side wall, a second side wall, a ceiling and a back wall that forms an enclosure volume having a front opening;

a plurality of storage slots configured to support a substrate carrier when disposed thereon;

a base plate assembly comprising:

a base plate coupled to the bottom floor;

a pair of L-brackets coupled to the base plate, wherein each L-bracket includes a first lift pin;

a second lift pin coupled to the base plate, wherein a height of each of the first lift pins and the second lift pin is selected such that the substrate is supported in a horizontally level position when disposed thereon; and

a docking slot disposed proximate the base plate assembly and configured to support a substrate carrier when disposed thereon.

13. The bridging FOUP of claim 12, wherein the first lift pins are shorter than the second lift pin.

14. The bridging FOUP of claim 12, wherein the first lift pins and the second lift pin are stationary lift pins.

15. The bridging FOUP of claim 12, wherein the first lift pins are removably coupled to the L-brackets.

16. The bridging FOUP of claim 12, wherein the first lift pins and the second lift pin form a 180 mm support circumference and are 120.degree. apart from each other.

17. The bridging FOUP of claim 12, wherein the placement of the L-brackets, first lift pins, and the second lift pin is selected to allow a robot blade end effector to place substrates on the first and second lift pins, and substrate carriers on the docking slot with sufficient clearance.

18. The bridging FOUP of claim 12, wherein each of the first lift pins and the second lift pin includes a circular protrusion on a top portion such that each of the first lift pins and the second lift pin provides point contact support with a backside of a substrate when disposed thereon.

19. A bridging front opening unified pod (FOUP), comprising:

a bottom floor, a first side wall, a second side wall, a ceiling and a back wall that forms an enclosure volume having a front opening;

a plurality of first supports coupled to the first side wall and extending into the enclosure volume, and a corresponding plurality of second supports coupled to the second side wall and extending into the enclosure volume, wherein each corresponding pair of first and second supports form a storage slot this is configured to support a substrate carrier when disposed thereon;

a base plate assembly comprising:

a base plate coupled to the bottom floor;

a pair of L-brackets coupled to the base plate, wherein each L-bracket includes a first lift pin;

a second lift pin coupled to the base plate, wherein a height of each of the first lift pins and the second lift pin is selected such that the substrate is supported in a horizontally level position when disposed thereon; and

a docking slot disposed proximate the base plate assembly and configured to support a substrate carrier when disposed thereon.

20. The bridging FOUP of claim 19, wherein the storage slot and the docking slot are configured to support a 300 mm substrate carrier that is configured to hold a 200 mm substrate, and wherein the first lift pins and the second lift pin is configured to support a 200 mm substrate.