Claims

1. A shutter disk system, comprising:

a body comprising a plurality of faces, a base, and a top, wherein the body comprises:

an interior volume, wherein the interior volume comprises:

an interlock region configured to receive at least one shutter disk, and

an operational region adjacent to the interlock region, the operational region separate from the interlock region by an isolator plate;

a shutter disk stack disposed in the operational region, wherein the shutter disk stack comprises at least a storage rack configured to receive two or more shutter disks;

a first door disposed on a face of the plurality of faces proximal to the operational region;

a second door disposed proximal to the interlock region; and

a third door disposed proximal to a portion of the interlock region and a portion of the operational region.

2. The shutter disk system of claim 1, wherein the operational region and the interlock region comprise different pressures.

3. The shutter disk system of claim 1, wherein the operational region and the interlock region comprise equal pressures.

4. The shutter disk system of claim 1, further comprising a cooling system comprising a heat exchanging device disposed on at least one of the plurality of faces, a base, and a top.

5. The shutter disk system of claim 4, wherein the cooling system comprises a purge gas system or a cooling plate.

6. The shutter disk system of claim 1, further comprising a radiative heater source or a resistive heater source.

7. The shutter disk system of claim 1, wherein the shutter disk stack comprises a rack identifier.

8. The shutter disk system of claim 1, the operational region comprises a pressure of about 1 Torr to about 780 Torr and the interlock region comprises a pressure of about 1 Torr to about 780 Torr. .

9. The shutter disk system of claim 1, wherein the interior volume comprises one or more sensors.

10. The shutter disk system of claim 9, wherein the one or more sensors comprises a temperature sensor or a metrology sensor.

11. A substrate processing system, comprising:

two or more process stations;

a factory interface coupled to the two or more process stations; and

a shutter disk system coupled to the factory interface, wherein the factory interface is disposed between the two or more process stations and the shutter disk system, and the shutter disk system comprises:

a body comprising a plurality of faces, a base, and a top, wherein the body comprises:

an interior volume, wherein the interior volume comprises:

an interlock region configured to receive at least one shutter disk, and

an operational region adjacent to the interlock region, the operational region separate from the interlock region by an isolator plate;

a shutter disk stack disposed in the operational region, wherein the shutter disk stack comprises at least a storage rack configured to receive at least two or more shutter disks;

a first door disposed on a face of the plurality of faces proximal to the operational region;

a second door disposed on the top proximal to the interlock region; and

a third door disposed proximal to a portion of the interlock region and a portion of the operational region.

12. The substrate processing system of claim 11, wherein the third door comprises an actuator configured to separate the shutter disk system from the factory interface.

13. The substrate processing system of claim 11 , wherein the factory interface is configured to transfer a shutter disk from the shutter disk system to the at least one of the two or more process stations.

14. The substrate processing system of claim 11, wherein the shutter disk system further comprises a cooling system comprising a heat exchanging device disposed on at least one of the plurality of faces, a base, and a top.

15. The substrate processing system of claim 14, wherein the cooling system comprises a purge gas system or a cooling plate.

16. The substrate processing system of claim 11, wherein the shutter disk system further comprises a radiative heater source or a resistive heater source.

18. The substrate processing system of claim 11, wherein the shutter disk stack further comprises a rack identifier.

19. The substrate processing system of claim 11, the operational region comprises a pressure of about 1 Torr to about 780 Torr and the interlock region comprises a pressure of about 1 Torr to about 780 Torr.

20. The substrate processing system of claim 11, wherein the interior volume comprises one or more sensors and the one or more sensors comprise a temperature sensor or a metrology sensor.