What is claimed is:

1. A pod for receiving a workpiece, comprising:

a base having an upper surface, a plurality of positioning members disposed on and protruded from the upper surface, the upper surface comprising:

a carrying surface defined on the upper surface, above which the workpiece is carried when the workpiece is received;

a peripheral trench structure having an enclosed planar loop profile, wherein a bottom of the peripheral trench structure is lower than the carrying surface; and

a first contacting surface, wherein the carrying surface, the peripheral trench structure, and the first contacting surface are sequentially distributed from a center towards an edge of the upper surface, and the first contacting surface is lower than the carrying surface, and the bottom of the peripheral trench structure is lower than the first contacting surface.

2. The pod of claim 1, wherein the peripheral trench structure having the enclosed planar loop profile surrounds the carrying surface.

3. The pod of claim 1, wherein the peripheral trench structure having the enclosed loop planar profile surrounds a pair of the positioning members.

4. The pod of claim 1, wherein the base further comprises:

a support member disposed between a pair of the plurality of positioning members; and

a guide trench structure surrounding the support member.

5. The pod of claim 4, wherein the guide trench structure further extends around the pair of positioning members.

6. The pod of claim 4, wherein the guide trench structure is disposed between the carrying surface and the peripheral trench structure.

7. The pod of claim 4, wherein the guide trench structure is disposed between the first contacting surface and the carrying surface, and is intersecting with the peripheral trench structure.

8. The pod of claim 4, wherein a portion of a wall of the guide trench structure closest to the carrying surface is rounded.

9. A pod for receiving a workpiece, the pod comprising:

a base having an upper surface and a bottom surface opposite the upper surface, wherein the upper surface of the base includes:

an inner region formed in a center portion of the base;

an outer region surrounding the inner region; and

a peripheral trench structure disposed between the inner region and the outer region, wherein a height of a bottom of the peripheral trench structure from the bottom surface of the base is less than a height of the outer region from the bottom surface and a height of the inner region from the bottom surface;

a positioning structure disposed around the inner region, wherein the positioning structure includes:

a pair of positioning members protruding from the upper surface;

a support member disposed between the pair of positioning members; and

a guide trench structure surrounding the support member.

10. The pod of claim 9, wherein a height of the outer region from the bottom surface is no greater than a height of the inner region from the bottom surface.

11. The pod of claim 9, wherein the guide trench structure is disposed between the inner region and the peripheral trench structure.

12. The pod of claim 9, wherein the guide trench structure intersects the peripheral trench structure.

13. The pod of claim 9, wherein the guide trench structure further extends around the pair of positioning members.

14. The pod of claim 9, wherein a planar pattern of the guide trench structure surrounding the support member has a rounded contour.

15. A pod, comprising:

a base having a plurality of corners;

a pair of positioning members arranged around one of the plurality of corners and protruding from the base;

a support member disposed between the pair of positioning members;

a guide trench structure disposed around the support member having a rounded planar profile, wherein the guide trench structure is formed in an outer region of the base; and

a buffer rim arranged between the guide trench structure and an inner region of the base, wherein the inner region of the base has a height greater than the outer region of the base.

16. The pod of claim 15, wherein the pair of positioning members protrude from the outer region of the base.