What is claimed is:

1. A flow substrate comprising:

a substrate body formed from a solid block of a first material, the substrate body having a first surface and a second surface opposing the first surface;

a plurality of pairs of component conduit ports defined in the first surface of the substrate body;

a plurality of fluid pathways extending between each respective pair of component conduit ports and in fluid communication with each component conduit port of the respective pair of component conduit ports, each respective fluid pathway being formed in the second surface of the substrate body; and

at least one cap formed from a second material, the at least one cap having a first cap surface that is constructed to seal at least one fluid pathway of the plurality of fluid pathways, and a second cap surface opposing the first surface, wherein the at least one cap further comprises a weld cap lip, wherein the weld cap lip protrudes above an adjacent surface of the second surface of the substrate body; and wherein the weld cap lip is deformed to fill any gap or void between the substrate body and the weld cap, thereby forming a swaged joint;

wherein the substrate body includes an opening configured to couple with the at least one cap.

2. The flow substrate of claim 1, wherein the weld cap lip is planar with the first cap surface.

3. The flow substrate of claim 1, wherein the weld cap lip is not planar with the first cap surface.

4. The flow substrate of claim 1, wherein the substrate body comprises a substrate body lip.

5. The flow substrate of claim 2, wherein the weld cap lip is proximate the substrate body lip when the weld cap is coupled with the substrate body.

6. A method of forming a substrate body comprising:

placing a weld cap that includes a weld cap lip proximate an opening in the substrate body;

pressing one or more of the weld cap that includes a weld cap lip and the substrate body with a pressing tool, wherein the pressing tool comprises a pressing element, and wherein the pressing element includes a flat surface with adjacent angled surfaces;

securing the weld cap to the substrate body through a swaged joint formed as a result of said pressing of the weld cap lip and deforming the weld cap lip to fill any gap or void between the substrate body and the weld cap.

7. The method of forming a substrate body of claim 6, wherein the method further comprises welding the swaged joint.

8. The method of forming a substrate body of claim 6, wherein the weld cap comprises a weld cap lip.

9. The method of forming a substrate body of claim 8, wherein the weld cap lip is not planar with a first cap surface.

10. The method of forming a substrate body of claim 8, wherein the weld cap lip is planar with a first cap surface.

11. The method of forming a substrate body of claim 10, wherein the weld cap lip contacts the substrate body adjacent the weld cap lip and the pressing element contacts the weld cap lip during creation of the swaged joint.

12. The method of forming a substrate body of claim 6, wherein the pressing element comprises a first pressing element portion and a second pressing element portion, where the first pressing element portion contacts the weld cap and the second pressing element portion contacts the body substrate during creation of the swaged joint.

13. The method of forming a substrate body of claim 6, wherein the weld cap comprises a weld cap lip, the body substrate comprises a substrate body lip and the flat surface of the

pressing element contacts the weld cap lip and the body substrate lip during creation of the swaged joint.

14. The method of forming a substrate body of claim 6, wherein the pressing tool further comprises a cap holding element and wherein the pressing element comprises a wedge shape that contacts the substrate body and the cap holding element contacts the weld cap during creation of the swaged joint.

15. The method of forming a substrate body of claim 14, wherein the cap holding element comprises a spring material.

16. The method of forming a substrate body of claim 6, where the pressing element contacts the weld cap.

17. The method of forming a substrate body of claim 16, wherein the substrate body comprises a square corner adjacent the weld cap.

18. The method of forming a substrate body of claim 17, wherein the substrate body comprises a rounded corner adjacent the weld cap.

19. The method of forming a substrate body of claim 6, wherein the weld cap is coupled to the substrate body using an adhesive.

20. A method of forming a substrate body comprising:

placing a plug proximate an opening in the substrate body, wherein the substrate body includes a substrate body lip, and wherein the substrate body lip protrudes above an adjacent surface of the substrate body;

pressing one or more of the plug, the substrate body lip, and the substrate body with a pressing tool, wherein the pressing tool comprises a pressing element;

securing the plug to the substrate body through a swaged joint formed as a result of said pressing of the substrate body lip and deforming the substrate body lip to fill any gap or void between the substrate body and the plug.

21. A method of forming a substrate body comprising:

placing a tube stub proximate an opening in the substrate body, wherein the substrate body includes a substrate body lip, and wherein the substrate body lip protrudes above an adjacent surface of the substrate body;

pressing one or more of the tube stub, the substrate body lip, and the substrate body with a pressing tool, wherein the pressing tool comprises a pressing element;

securing the tube stub to the substrate body through a swaged joint formed as a result of said pressing of the substrate body lip and deforming the substrate body lip to fill any gap or void between the substrate body and the tube stub.