CLAIMS

What is claimed is:

1. A flow path comprising:

at least one flexible tube;

an inlet or an outlet;

a barb adaptor inserted into the interior cavity of the at least one flexible tube so as to form a connection between the at least one flexible tube to the inlet or the outlet;

two semi-circular half clamps encircling the exterior of the connection;

a plurality of teeth on the interior surface of the half clamps;

a locating groove on the interior surface of the half clamps;

at least one ear clamp securing the half clamps around the connection; and

a sealing edge on the interior of the half clamps to radially compress the exterior surface of the at least one flexible tube.

2. The flow path of claim 1, wherein the two half clamps are identical.

3. The flow path of any one of claims 1 and 2, wherein the at least one ear clamp is within a recess on an exterior surface of the half clamps.

4. The flow path of any one of claims 1-3, wherein the at least one ear clamp is made of stainless steel.

5. The flow path of any one of claims 1-4, further comprising a clamshell interfacing with at least a portion of the exterior surface of the half clamps.

6. The flow path of claim 1, wherein the half clamps have a locating rib capable of fitting within a groove in the interior surface of the clamshell.

7. The flow path of claim 6, wherein the interior surface of the clamshell comprises more than one groove.

8. The flow path of claim 6, wherein the at least one ear clamp is within the more than one groove.

9. The flow path of any one of claims 1-8, wherein at least one of the flexible tube, the barb adapter, and the half clamps are made of a polymeric material.

10. The flow path of any one of claims 1-9, wherein the inlet or the outlet is selected from a flexible tube or a port of a biocontainer.

11. The flow path of any one of claims 1-10, wherein the flexible tube is low hardness silicone tubing.

12. The flow path of any one of claims 1-11, wherein two ear clamps secure the half clamps around the connection.

13. The flow path of any one of claims 1-11, wherein three, four, five, six, seven, eight, nine, or ten ear clamps secure the half clamps around the connection.

14. A method of increasing the pressure tolerance of a piping system, the method comprising:

inserting a barb adapter into a flexible tube;

sliding at least one ear clamp over the flexible tube;

positioning the half clamps on the barb adapter and the flexible tube by matching locating grooves on the interior of the half clamps to protrusions of the barb adapter to encircle the barb adapter and the flexible tube with the half clamps; and

compressing the flexible tube with a sealing edge on the interior of the half clamps by tightening the ear clamp at recesses on the exterior surface of the half clamps.

15. The method of claim 14, further comprising securing the half clamps into a clamshell by inserting a locating rib of the half clamps into a groove on an interior surface of the clamshell, thereby increasing the tolerance of the piping system.

16. The method of claim 14, wherein the method increases the pressure tolerance to over four bars.

17. The method of claim 14, wherein the method causes the pressure tolerance of the piping system to increase more than two bars from an initial pre-method pressure tolerance of the piping system.

18. The method of any one of claims 14-17, further comprising inserting the at least one ear clamp into an additional groove on the interior surface of the clamshell.