CLAIMS

1. An extension set, comprising:

a clamp, comprising:

a housing; and

an actuator movable between a raised position and a depressed position with respect to the housing, wherein the actuator comprises a bump profile and a circumference; and

an extension tube disposed within the housing, wherein the extension tube comprises a loop around the circumference of the actuator, wherein said loop is entirely disposed inside the housing, wherein in response to movement of the actuator between the raised position and the depressed position with respect to the housing, the bump profile progressively clamps the extension tube along the loop.

2. The extension set of claim 1, wherein the bump profile is configured to force fluid disposed within the loop distally in response to movement of the actuator from the raised position to the depressed position.

3. The extension set of claim 1, wherein in response to movement of the actuator between the raised position and the depressed position with respect to the housing, the bump profile contacts a distal portion of the loop prior to contacting a proximal portion of the loop.

4. The extension set of claim 1, wherein the housing comprises a protrusion, wherein the actuator comprises a groove, wherein the protrusion is disposed within the groove to orient the actuator within the housing.

5. The extension set of claim 1, wherein the actuator comprises a head disposed outside the housing, wherein the head contacts an outer surface of the housing in response to movement of the actuator to the depressed position.

6. The extension set of claim 5, wherein the head of the actuator is disposed proximate a body of the actuator, wherein a diameter of the head is greater than a diameter of the body, wherein the bump profile is disposed on the body.

7. The extension set of claim 1, wherein the housing comprises a distal opening and a proximal opening, wherein the extension tube extends through the distal opening and the proximal opening, wherein the loop is disposed within the housing between the distal opening and the proximal opening.

8. The extension set of claim 1, wherein an interior of the housing comprises a support element configured to contact the extension tube to support the extension tube and maintain the loop in a loop configuration.

9. The extension set of claim 1, further comprising a needleless connector coupled to the extension tube.

10. A catheter system, comprising:

a catheter assembly, comprising:

a catheter adapter; and

a catheter extending distally from the catheter adapter;

a clamp, comprising:

a housing;

an actuator movable between a raised position and a depressed position with respect to the housing, wherein the actuator comprises a bump profile and a circumference; and

an extension tube coupled to the catheter adapter, wherein the extension tube comprises a loop around the circumference of the actuator, wherein said loop is entirely disposed inside the housing, wherein in response to movement of the actuator between the raised position and the

depressed position with respect to the housing, the bump profile progressively clamps the extension tube along the loop.

11. The catheter system of claim 10, wherein the bump profile is configured to force fluid disposed within the loop distally in response to movement of the actuator from the raised position to the depressed position.

12. The catheter system of claim 10, wherein in response to movement of the actuator between the raised position and the depressed position with respect to the housing, the bump profile contacts a distal portion of the loop prior to contacting a proximal portion of the loop.

13. The catheter system of claim 10, wherein the housing comprises a protrusion, wherein the actuator comprises a groove, wherein the protrusion is disposed within the groove to orient the actuator within the housing.

14. The catheter system of claim 10, wherein the actuator comprises a head disposed outside the housing, wherein the head contacts an outer surface of the housing in response to movement of the actuator to the depressed position.

15. The catheter system of claim 14, wherein the head of the actuator is disposed proximate a body of the actuator, wherein a diameter of the head is greater than a diameter of the body, wherein the bump profile is disposed on the body.

16. The catheter system of claim 10, wherein the housing comprises a distal opening and a proximal opening, wherein the extension tube extends through the distal opening and the proximal opening, wherein the loop is disposed within the housing between the distal opening and the proximal opening.

17. The catheter system of claim 10, wherein an interior of the housing comprises a support element configured to contact the extension tube to support the extension tube and maintain the loop in a loop configuration.

18. A method of clamping an extension tube, comprising:

placing a first digit of a hand of a user on an actuator of a clamp of an extension set, wherein the first digit includes a thumb, wherein the extension set comprises:

a clamp, comprising:

a housing; and

the actuator movable between a raised position and a depressed position with respect to the housing, wherein the actuator comprises a bump profile and a circumference;

an extension tube comprising a loop around the circumference of the actuator, wherein said loop is entirely disposed inside the housing;

placing a third digit and a fourth digit of the hand of the user on a side of the housing opposite the actuator; and

depressing the actuator with the first digit to move the actuator to a depressed position with respect to the housing, wherein in response to depressing the actuator with the first digit, the bump profile progressively clamps the extension tube along the loop.

19. The method of claim 18, wherein the bump profile is configured to force fluid disposed within the loop distally in response to depression of the actuator.

20. The method of claim 18, wherein in response to movement of the actuator between the raised position and the depressed position with respect to the housing, the bump profile contacts a distal portion of the loop prior to contacting a proximal portion of the loop.

21. The extension set of claim 1, wherein the bump profile comprises at least one ridge forming a corkscrew shape on the body.