CLAIMS

1. A fluid management device for handling pressurized fluid comprising:

a two-part jacket comprising a first half and a second half joined together via a hinge or friction fit arrangement, the first half defining a semi-circular inner surface, the second half defining a semi-circular inner surface, the first half and the second half configured to mate with each other to define a circular passageway through the two-part jacket, wherein the first half and the second half each have respective socket portions located at an end of the two-part jacket that are configured to mate with each other to define a socket;

a two-part ball housing comprising a first half and a second half configured to mate and define a ball about an exterior portion of the two-part ball housing, wherein respective inner surfaces of the first half and the second half of the two-part ball housing each define respective semi-circular inner surfaces that define a circular passageway through the two-part ball housing when mated, and wherein the ball is disposed in the socket of the two-part jacket; and

a flexible conduit having a lumen therein dimensioned to carry the pressurized fluid, the flexible conduit disposed within the circular passageways of the two-part jacket and the two-part ball housing.

2. The fluid management device of claim 1, wherein the two-part jacket and the two-part ball housing have a degree of angular rotation and/or axial movement relative to each other.

3. The fluid management device of claim 1, further comprising at least one fastener disposed on at least one of the first half or the second half of the two-part jacket.

4. The fluid management device of claim 1, further comprising at least one fastener disposed on the two-part ball housing.

5. The fluid management device of claim 1, wherein the two-part jacket and the two-part ball housing comprise a polymer material.

6. The fluid management device of claim 1, wherein the two-part ball housing defines a connecting end at an end thereof, the connecting end comprising one of a flanged end, a barbed end, and a disposable aseptic connector end.

7. The fluid management device of claim 1, further comprising a locking member disposed on the two-part jacket and configured to lock the ball relative to the two-part jacket.

8. A fluid management device for handling pressurized fluid comprising:

a two-part jacket comprising a first half and a second half joined together via one or more hinges or a friction fit arrangement, the first half defining a semi-circular inner surface, the second half defining a semi-circular inner surface, the first half and the second half configured to mate with each other to define a circular passageway through the two-part jacket, wherein the first half and the second half each have respective socket portions located at both ends of the two-part jacket, wherein the respective socket portions are configured to mate with each other to define sockets at both ends of the two-part jacket;

a first ball housing comprising a first half and a second half and configured to mate and define a ball about an exterior portion of the first ball housing, wherein respective inner surfaces of the first half and the second half of the first ball housing each define respective semi-circular inner surfaces that define a circular passageway through the first ball housing when mated, and wherein the ball of the first ball housing is disposed in one of the sockets of the two-part jacket;

a second ball housing comprising a first half and a second half and configured to mate and define a ball about an exterior portion of the second ball housing, wherein respective inner surfaces of the first half and the second half of the second ball housing each define respective semi-circular inner surfaces that define a circular passageway through the second ball housing when mated, and wherein the ball of the second ball housing is disposed in the other socket of the two-part jacket; and

a flexible conduit having a lumen therein dimensioned to carry the pressurized fluid, the flexible conduit disposed within the circular passageways of the two-part jacket, the first ball housing, and the second ball housing.

9. The fluid management device of claim 8, wherein the first and second ball housings have a degree of angular rotation and/or axial movement relative to the two-part jacket.

10. The fluid management device of claim 8, wherein the two-part jacket is straight, curved, or angled.

11. The fluid management device of claim 8, wherein the two-part jacket, the first ball housing, and the second ball housing are formed of a polymer material.

12. The fluid management device of claim 8, wherein the first ball housing comprises an end having a connecting end.

13. The fluid management device of claim 8, wherein the second ball housing comprises an end having a connecting end.

14. The fluid management device of claim 8, further comprising one or more fasteners on the two-part jacket.

15. The fluid management device of claim 8, further comprising respective locking members disposed on the two-part jacket and configured to lock the ball of the first ball housing and the ball of the second ball housing relative to the two-part jacket.

16. A valve device for handling pressurized fluid comprising:

a two-part manifold comprising a first half and a second half joined together via a hinge or other connection, the first half defining one or more fluid passages along an inner surface thereof, the second half defining corresponding fluid passages along an inner surface thereof, wherein the first half and the second half are configured to mate with each other to define circular-shaped passages through the two-part manifold, wherein the first half and the second half each have respective socket portions located in ends of one or more of the passages that are configured to mate with each other to define a socket;

a two-part ball housing comprising a first half and a second half configured to mate and define a ball about an exterior portion of the two-part ball housing, wherein respective inner surfaces of the first half and the second half of the two-part ball housing each define respective inner surfaces that together define a circular passageway through the two-part ball housing when mated, and wherein the ball is disposed in the socket of the two-part manifold;

a flexible conduit having a lumen therein dimensioned to carry the pressurized fluid, the flexible conduit disposed within the circular passageways of the two-part manifold and the two-part ball housing; and

at least one pinch valve disposed on the two-part manifold and configured to pinch the flexible conduit.

17. The valve device of claim 16, wherein the two-part ball housing has a degree of angular rotation and/or axial movement relative to the two-part manifold.

18. The valve device of claim 16, wherein the two-part ball housing comprises an end having a connecting end comprising one of a flanged end, a barbed end, and a disposable aseptic connector end.

19. The valve device of claim 16, wherein the first half and the second half each have respective socket portions located in ends of one or more of the passages that are configured to mate with each other to define multiple sockets and wherein each socket contains a two-part ball housing.

20. The valve device of claim 16, further comprising a locking member disposed on the two-part manifold and configured to lock the ball relative to the two-part manifold.