

CLAIMS

We claim:

1. A therapeutic compression apparatus comprising:
 - a primary wrap having a proximal end and a distal end;
 - a secondary wrap having a proximal end and a distal end wherein the proximal end of the secondary wrap is connected to the distal end of the primary wrap;
 - at least one bladder within the primary wrap and/or secondary wrap;
 - an inflation means connected to the bladder via an inflation port on the primary wrap wherein the inflation means includes a first check valve and a switch, the switch capable of rotating among a first valve, a second valve and a third valve; and
 - wherein the inflation port is configured to be universally capable of connection to a variety of inflation means.
2. The therapeutic compression apparatus of claim 1 wherein the primary wrap includes (a) an inner sheet configured and adapted to be disposed facing a limb when in use and (b) an outer sheet joined to the inner sheet with the bladder defined between the inner and outer sheets.
3. The therapeutic compression apparatus of claim 1 wherein the inflation means is selected from the group consisting of manual pumps, static pumps, intermittent pumps, electrical inflation pumps, battery inflation pumps, gas powered inflation pumps, static pneumatic compression pumps, intermittent pneumatic pressure pumps, and the combination thereof.
4. The therapeutic compression apparatus of claim 1 wherein the at least one bladder is configured to have one chamber capable of sequential gradient pressure when connected to the inflation means.
5. The therapeutic compression apparatus of claim 1 wherein the first valve is configured to be capable of holding a pressure created by the inflation means within the at least one bladder creating an inflated state of the bladder, the second valve is configured to be capable of releasing a set amount of pressure within the at least one bladder creating a partially deflated state of the bladder, and the third valve is configured to be capable of

releasing all the pressure within the at least one bladder so as to create a fully deflated state of the bladder.

6. The therapeutic compression apparatus of claim 1 wherein the inflation means includes a real-time pressure measurement mechanism.

7. The therapeutic compression apparatus of claim 1 further comprising an elbow connector, a second check valve and a valve cap wherein the valve cap is capable of releasing a pressure created by the inflation means within the at least one bladder.

8. The therapeutic compression apparatus of claim 1 further comprising a third check valve operatively connected to the at least one bladder to protect from overinflation.

9. The therapeutic compression apparatus of claim 8, wherein the third check valve is set to open at a predetermined pressure.

10. The therapeutic compression apparatus of claim 8 wherein the third check valve is configured to open at a user selectable pressure.

11. The therapeutic compression apparatus of claim 8, further comprising a vent valve operatively connected to the at least one bladder for deflation.

12. The therapeutic compression apparatus of claim 1 further comprising at least two tabs connected either to the proximal end of the primary wrap or the distal end of the secondary wrap wherein the tabs include a connecting means configured to be capable of connecting at least two therapeutic compression apparatus together along a plane.

13. A therapeutic compression apparatus for applying pressure to a leg of a human body, comprising:

- a foot bladder having a first inflatable chamber that accommodates a fluid entering therein by inflating;

- a leg bladder having a second inflatable chamber that accommodates the fluid entering therein by inflating;

- a first means for locating the leg bladder on the leg of the human body;

- a second means for locating the foot bladder on a foot of the human body;

a fluid conduit fluidly coupling the foot bladder and the leg bladder such that a fluid may travel from the foot bladder to the leg bladder through the fluid conduit, and from the leg bladder to the foot bladder through the fluid conduit;

an inflation means connected to the leg bladder via an inflation port on the leg bladder wherein the inflation means includes a first check valve and a switch, the switch capable of rotating among a first valve, a second valve and a third valve; and

wherein the inflation port is configured to be universally capable of connection to a variety of inflation means.

14. The therapeutic compression apparatus of claim 13, wherein the first means for locating is a first attachment member wrapping around the leg to secure the leg bladder to the leg.

15. The therapeutic compression apparatus of claim 14, wherein the first attachment member is a plurality of straps attached to the leg bladder.

16. The therapeutic compression apparatus of claim 13, wherein the second means for locating is a second attachment member wrapping around the foot to secure the fluid foot bladder to the foot.

17. The therapeutic compression apparatus of claim 16, wherein the second attachment member is a plurality of straps attached to the foot bladder.

18. The therapeutic compression apparatus of claim 17, wherein the plurality of straps have an adhesive or hook and loop closure for attaching the straps to the foot.

19. The therapeutic compression apparatus of claim 13, wherein the foot bladder attaches to a bottom portion of a heel of the foot.

20. The therapeutic compression apparatus of claim 13, wherein the fluid is either air, gas or liquid.

21. The therapeutic compression apparatus of claim 13, wherein the foot bladder and the leg bladder are arranged such that when the fluid is forced out of the foot bladder, the leg bladder applies an extra pressure to the leg.

22. The therapeutic compression apparatus of claim 21, wherein the extra pressure is between 10 and 20 mm Hg extra pressure.

23. The therapeutic compression apparatus of claim 22, wherein the leg bladder applies between 30 and 40 mm Hg pressure to the leg in a first state, and applies between 50 and 60 mm Hg pressure to the leg when fluid is forced out of the foot bladder.

24. The therapeutic compression apparatus of claim 13, wherein the fluid conduit has a first end and a second end, and the leg bladder and the foot bladder each have a nozzle for receiving one of the first end and the second end of the fluid conduit.

25. The therapeutic compression apparatus of claim 13, wherein the inflation means is selected from the group consisting of manual pumps, static pumps, intermittent pumps, electrical inflation pumps, battery inflation pumps, gas powered inflation pumps, static pneumatic compression pumps, intermittent pneumatic pressure pumps, and the combination thereof.

26. The therapeutic compression apparatus of claim 13, wherein the leg and foot bladders are configured to have one chamber capable of sequential gradient pressure when connected to the inflation means.

27. The therapeutic compression apparatus of claim 13, further comprising an elbow connector, a second check valve and a valve cap wherein the valve cap is capable of releasing a pressure created by the inflation means within the leg and foot bladders.

28. The therapeutic compression apparatus of claim 13, further comprising a third check valve operatively connected to the leg bladder to protect from overinflation.

29. The therapeutic compression apparatus of claim 28, wherein the third check valve is set to open at a predetermined pressure.

30. The therapeutic compression apparatus of claim 28, wherein the third check valve is configured to open at a user selectable pressure.

31. The therapeutic compression apparatus of claim 13, further comprising a vent valve operatively connected to the leg bladder for deflation.