

WHAT IS CLAIMED IS:

1. A wound dressing apparatus comprising:
 - a wound contact layer comprising a proximal wound-facing face and a distal face, wherein the proximal wound-facing face is configured to be positioned in contact with a wound;
 - at least one absorbent layer over the wound contact layer;
 - an electronics unit comprising:
 - a negative pressure source unit comprising a negative pressure source, inlet protection mechanism, and an outlet or exhaust mechanism;
 - a plurality of sensors positioned on a printed circuit board;
 - wherein the inlet protection mechanism comprises a first recess configured to be in fluid communication with and positioned over a first sensor on the printed circuit board and the outlet or exhaust mechanism comprises a second recess configured to be in fluid communication with and positioned over a second sensor on the printed circuit board; and
 - wherein the at least one absorbent layer is configured to be in fluid communication with the electronics unit; and
 - a cover layer configured to cover and form a seal over the wound contact layer, the at least one absorbent layer, and the electronics unit.
2. The wound dressing apparatus of claim 1, wherein the perimeter of the first recess comprises a first gasket configured to seal the perimeter of the first recess in the inlet protection mechanism to the printed circuit board surrounding the first sensor.
3. The wound dressing apparatus of claim 1, wherein the perimeter of the second recess comprises a second gasket configured to seal the perimeter of the second recess of the outlet or exhaust mechanism to the printed circuit board surrounding the second sensor.
4. The wound dressing apparatus of any of the preceding claims, wherein the outlet or exhaust mechanism comprises at least one vent aperture and the printed circuit board comprises at least one vent hole in the printed circuit board, wherein the at least one vent aperture of the outlet or exhaust mechanism is configured to be in fluid communication with the at least one vent hole of the printed circuit board.
5. The wound dressing apparatus of claim 4, wherein the second gasket comprises an aperture configured to provide fluid communication between a vent hole of the at least one

vent hole of the printed circuit board and a vent aperture of the at least one vent aperture of the outlet or exhaust mechanism through the second gasket.

6. The wound dressing apparatus of any of claims 4-5, wherein the at least one vent aperture of the outlet or exhaust mechanism comprises an antibacterial membrane and/or a non-return valve.

7. The wound dressing apparatus of any of claims 4-6, wherein the cover layer comprises an aperture over the at least one vent aperture.

8. The wound dressing apparatus of any of the preceding claims, wherein the electronics unit comprises one or more power sources.

9. The wound dressing apparatus of any of the preceding claims, wherein the at least one absorbent layer comprises one or more recesses configured to receive the electronics unit.

10. The wound dressing apparatus of any of the preceding claims, further comprising a transmission layer comprising a proximal wound-facing face and a distal face, the transmission layer positioned over the distal face of the wound contact layer.

11. The wound dressing apparatus of claim 10, wherein the at least one absorbent layer comprises:

a first absorbent layer comprising a proximal wound-facing face and a distal face, the first absorbent layer positioned on the distal face of the transmission layer; and

a second absorbent comprising a proximal wound-facing face and a distal face, the second absorbent layer positioned on the distal face of the first absorbent layer.

12. The wound dressing apparatus of claim 11, further comprising an overlay layer comprising a proximal wound-facing face and a distal face, the overlay layer positioned over the distal face of the second absorbent layer, wherein the overlay layer comprises a larger perimeter than a perimeter of the transmission layer and the first and second absorbent layer.

13. The wound dressing apparatus of any of the preceding claims, wherein the electronic unit comprises a switch.

14. The wound dressing apparatus of any of the preceding claims, wherein the electronic unit comprises a light or LED indicator.