CLAIMS

1. A non-implantable portable device for transferring fluids from an external vessel via an administration set and controllably infusing the fluids into a patient, the portable device comprising;

a protective housing including a first protective housing piece that includes a first wall defining an infusion line aperture that extends through the first wall, the protective housing defining an internal cavity that is contiguous with the infusion line aperture;

infusion tubing configured to allow the fluids to pass therethrough, the infusion tubing including a first portion and a second portion, the first portion and the second portion extending through the first wall, the first portion being disposed within the infusion line aperture, the first portion including an infusion line in configured to engage the external vessel for transporting fluids from the external vessel, the second portion including an infusion line out configured to engage with a patient's vascular access device for transporting fluids to the patient;

a seal disposed at the protective housing and configured to substantially isolate the internal cavity from an exterior of the protective housing;

a pump disposed within the internal cavity;

a power source disposed within the internal cavity that provides power to the pump;

an on-board computer for controlling the pump to draw the fluids through the infusion line in and/or the infusion line out at a preset flow rate, the on-board computer being disposed within the internal cavity of the protective housing; and

a computer programming interface configured for receiving instructions for the preset flow rate at which the on-board computer controls the pump, the computer programming interface being entirely disposed within the internal cavity as to be inaccessible from the exterior of the protective housing to thereby impede manually re-programming the preset flow rate.

2. A non-implantable portable device of claim 1, further including an occlusion sensor and a pump actuator that are substantially disposed within the internal cavity.

3. A non-implantable portable device of claim 2, wherein the on-board computer includes a processor, and the computer programming interface is configured to receive instructions from a user for modulating the activity of the pump actuator.

4. A non-implantable portable device of claim 1, wherein the computer programming interface comprises a memory device reader.

5. A non-implantable portable of claim 1, wherein the computer programming interface comprises a removable memory device reader, is configured to impede

editing subsequent to installation within the internal cavity, and is configured to receive a pre-programmed memory device.

6. The non-implantable portable device of claim 1, wherein the computer programming interface comprises a wireless signal receiver, and is configured to impede editing subsequent to installation within the internal cavity.

7. The non-implantable portable device of claim 1, wherein the protective housing includes a second protective housing piece that includes a second wall and the seal formed between the first wall and the second wall, and configured to substantially isolate the internal cavity from an exterior of the protective housing so as to impede access to the pump from the exterior of the protective housing, the computer programming interface being disposed within the sealed internal cavity so as to be inaccessible from the exterior of the protective housing to thereby impede manually re-programming the preset flow rate.

8. A non-implantable portable device of claim 7, wherein the non-implantable portable device is configured to be wearable by a user and the first protective housing piece and second protective housing piece are formed from a substantially impervious, firm material capable of providing shock absorption.

9. The non-implantable portable device of claim 1, wherein the computer programming interface and the on-board computer comprises a memory device reader, is configured to impede editing subsequent to installation within the internal cavity, and is configured to receive a pre-programmed memory device.

10. The non-implantable portable device of claim 9, wherein the first wall or a second wall of the protective housing is configured to receive the memory device reader therethrough.

11. The non-implantable portable device of claim 1, wherein the pump further includes an occlusion sensor and a pump actuator, and the computer programming interface is configured to receive instructions from a user for modulating the activity of the pump actuator.

12. The non-implantable portable device of claim 11, wherein the on-board computer is a memory device reader, the on-board computer being operated by software configured to impede editing subsequent to installation of the on-board computer within the protective housing, the on-board computer being configured to receive a pre-programmed memory device, and the protective housing being configured to receive the pre-programmed memory device there through.

13. A method of manufacturing the non-implantable portable device according to claim 7, comprising:

placing the pump within the internal cavity defined by the protective housing; and

deploying the seal to engage the second protective housing piece with the first protective housing piece to secure the pump within the internal cavity of the protective housing.

14. A method of manufacturing the non-implantable portable device according to claim 1, comprising:

placing the pump and the on-board computer within the internal cavity of the protective housing;

placing a part of the infusion tubing within the infusion line aperture; and

deploying the seal to secure the pump and the on-board computer within the internal cavity of the protective housing.

15. A method of controllably infusing fluids into a patient, comprising:

obtaining the non-implantable portable device according to claim 1,

obtaining the fluids contained within the external vessel;

connecting a vascular access device to the patient;

connecting a vascular access device fitting to a terminal end of the infusion line out;

connecting the infusion line in to the external vessel;

connecting the infusion line out to the patient;

priming the infusion tubing; and

activating the non-implantable portable device.

16. A non-implantable portable device for transferring fluids from an external vessel via an administration set and controllably infusing the fluids into a patient, the portable device comprising:

a protective housing including a first protective housing piece that includes a first wall defining infusion line apertures that extend through the first wall, the protective housing defining an internal cavity that is contiguous with the infusion line apertures;

infusion tubing configured to allow the fluids to pass therethrough, the infusion tubing including a first portion and a second portion, the infusion line apertures being configured to allow the first portion and the second portion to extend through the first wall, the first portion including an infusion line in configured to engage the external vessel for transporting fluids from the external vessel, the second portion including an infusion line out configured to engage with a patient's vascular access device for transporting fluids to the patient;

a seal disposed at the protective housing and configured to substantially isolate the internal cavity from an exterior of the protective housing;

a pump disposed within the internal cavity;

a power source disposed within the internal cavity that provides power to the pump;

an on-board computer for controlling the pump to draw the fluids through the infusion line in and/or the infusion line out at a preset flow rate, the on-board computer being disposed within the internal cavity of the protective housing; and

a computer programming interface configured for receiving instructions for the preset flow rate at which the on-board computer controls the pump, the computer programming interface being entirely disposed within the internal cavity as to be inaccessible from the exterior of the protective housing to thereby impede manually re-programming the preset flow rate.