CLAIMS

1. An interface joint for interconnecting an electrosurgical generator and an electrosurgical instrument, the interface joint comprising:

a housing made of electrically insulating material, the housing having:

a first inlet for receiving radiofrequency (RF) electromagnetic (EM) energy and/or microwave frequency EM energy from the electrosurgical generator,

a second inlet for receiving fluid, and

an outlet;

a flexible shaft for connecting the housing to the electrosurgical instrument, the flexible shaft extending through the outlet and having a longitudinal passage therein, which provides a fluid flow path that is in fluid communication with the second inlet, and which conveys a coaxial transmission line that is connected to the first inlet;

an actuation mechanism operably connected to the electrosurgical instrument to control deployment of a fluid delivery structure, the actuation mechanism comprising:

an actuation rod extending out of the housing through the outlet,

an actuator movably mounted on the housing and connected to the actuation rod; and

a shaft rotation mechanism for rotating the flexible shaft relative to the housing, the shaft rotation mechanism comprising a rotation actuator rotatably mounted on the housing and operably coupled to the flexible shaft, and

wherein the housing includes an internal watertight branched conduit that provides a fluid flow path between the second inlet and the outlet, the branched conduit comprising:

a main conduit fixed to the housing, and

a rotating luer lock fitting rotatably mounted to a distal end of the main conduit,

wherein the flexible shaft is non-rotatably coupled to the rotating luer lock fitting, and

wherein the rotation actuator is operable to rotate the rotating luer lock fitting relative to the main conduit.

2. An interface joint according to claim 1, wherein the actuation rod extends through the longitudinal passage of the flexible shaft.

3. An interface joint according to claim 1 or 2, wherein the rotation actuator comprises a collar mounted around a distal portion of the housing.

4. An interface joint according to any preceding claim, wherein the rotation actuator is rotatable relative to the housing around an axis that is aligned with a direction in which the flexible shaft passes through the outlet.

5. An interface joint according to any preceding claim, wherein the branched conduit has a first port adjacent to the first inlet for admitting the coaxial cable.

6. An interface joint according to claim 5, wherein the first port comprising a plug which defines a watertight passage for the coaxial cable.

7. An interface joint according to claim 5 or 6, wherein the branched conduit defines a second port adjacent the actuation mechanism for admitting the actuation rod.

8. An interface joint according to claim 7, wherein the second port comprising a plug which defines a watertight passage for the actuation rod.

9. An interface joint according to any preceding claim having a connector rotatably mounted at the first inlet, wherein the connector is arranged to connect to a coaxial cable.

10. An interface joint according to claim 9, wherein the connector is mounted within a bearing unit that is fixed to the housing.

11. An interface joint according to any preceding claim, wherein a distal end of the actuation rod is connected to a proximal end of a needle ferrule, which has an internal volume

in fluid communication with the fluid flow path through the flexible shaft, and wherein a needle is mounted in the distal end of the needle ferrule, the needle being in fluid communication with the internal volume.