CLAIMS

1. An intravascular blood pump comprising:

an inlet area having one or more openings;

an outlet area having one or more openings;

a passage fluidically coupling the inlet and outlet areas;

a motor having a rotor and a stator, wherein the stator comprises one or more coils, wherein the stator is configured to generate a rotating magnetic field in response to receiving one or more electrical signals at the one or more coils, wherein the rotating magnetic field causes the rotor to rotate, and wherein rotation of the rotor draws blood into the one or more openings of the inlet area, channels the blood through the passage, and expels the blood through the one or more openings of the outlet area; and

a cable having a tail portion and a head portion, wherein one or more electrical conduits extend through the tail and head portions, wherein the head portion comprises one or more pads, and wherein at least one of the coils is coupled to at least one of the electrical conduits through at least one of the pads.

2. The intravascular blood pump of claim 1, wherein the stator has an even number of coils.

3. The intravascular blood pump of claim 1, wherein the one or more coils and the one or more electrical conduits are coupled to the one or more pads to form a star circuit configuration.

4. The intravascular blood pump of claim 1, wherein the one or more coils and the one or more electrical conduits are coupled to the one or more pads to form a delta circuit configuration.

5. The intravascular blood pump of claim 1, wherein the one or more coils and the one or more electrical conduits are coupled to the one or more pads to form an open end windings circuit configuration.

6. The intravascular blood pump of claim 1, wherein the head portion of the cable is coupled to a yoke of the motor.

7. The intravascular blood pump of claim 1, wherein the head portion of the cable is coupled to a bearing or a bushing.

8. The intravascular blood pump of claim 7, wherein a shaft extends through (a) an opening of the bearing or the bushing and (b) an opening of the head portion of the cable.

9. The intravascular blood pump of claim 1, wherein at least one of the electrical conduits comprises a plurality of electrically conductive layers and a plurality of through holes, and wherein each of the conductive layers is separated by at least one electrically insulating layer.

10. The intravascular blood pump of claim 9, wherein the head portion of the cable comprises an adhesive layer beneath the plurality of conductive layers.

11. The intravascular blood pump of claim 9, wherein the head portion is O-shaped.

12. The intravascular blood pump of claim 9, wherein the head portion is C-shaped.

13. The intravascular blood pump of claim 9, wherein the tail portion comprises a coating covering sections of the plurality of electrically conductive layers.

14. The intravascular blood pump of claim 13, wherein the tail portion comprises one or more pads, and wherein the one or more pads of the tail portion and the one or more pads of the head portion are exposed.

15. The intravascular blood pump of claim 1, wherein the cable is bent near an interface between the tail portion and the head portion at an angle between 45 and 135 degrees.

16. A method for assembling an intravascular blood pump comprising a motor and a cable, the method comprising:

coupling a head portion of the cable to an internal structure of the intravascular blood pump, wherein the cable further comprises a tail portion, wherein one or more electrical conduits extend through the tail and head portions, and wherein the head portion comprises one or more pads; and

coupling at least one coil of the motor to at least one of the electrical conduits through at least one of the pads, wherein the motor further comprises a rotor and a stator, wherein the stator comprises one or more coils, wherein the stator is configured to generate a rotating magnetic field in response to receiving one or more electrical signals at the one or more coils, and wherein the rotating magnetic field causes the rotor to rotate.

17. The method of claim 16, wherein the head portion is O-shaped or C-shaped.

18. The method of claim 17, wherein at least one of the electrical conduits comprises a plurality of electrically conductive layers and a plurality of through holes, and wherein each of the conductive layers is separated by at least one electrically insulating layer.

19. The method of claim 18, wherein the head portion comprises an adhesive layer beneath the plurality of conductive layers, and wherein coupling the head portion to the internal structure of the intravascular blood pump comprises placing the adhesive layer on the internal structure.

20. The method of claim 19, wherein coupling the at least one coil to the at least one of the electrical conduits through the at least one of the pads comprises soldering the at least one coil to the at least one of the pads.