

CLAIMS

1. An intravascular blood pump for percutaneous insertion into a patient's blood vessel, comprising a catheter (10) and a pumping device (1) attached to the catheter (10), the catheter (10) extending along a longitudinal axis and having a distal end (11),
5 and a proximal end (12) opposite the distal end (11) along the longitudinal axis, the catheter (10) comprising an elongate stiffening structure (15) extending continuously longitudinally along the length of the catheter (10) between the proximal end (11) and the distal end (12) of the catheter (10), wherein the stiffening structure (15) has a bending stiffness of about 0.00005 Nm^2 to about 0.01 Nm^2 and is not subject to plastic
10 deformation if bent with a minimum bending radius 10 mm,

characterized in that the stiffening structure comprises at least one solid rod or wire (15).
2. The blood pump of claim 1, wherein the catheter (10) has at least one lumen (13) that extends through the catheter (10) from the proximal end (12) to the distal end (11),
15 with the stiffening structure (15) being disposed in the lumen (13) of the catheter (10).
3. The blood pump of claim 2, wherein the stiffening structure (15) is loose inside the lumen (13) of the catheter (10).
4. The blood pump of any one of claims 1 to 3, wherein the stiffening structure comprises a plurality of rods or wires (15B).
- 20 5. The blood pump of any one of claims 1 to 4, wherein the at least one rod or wire (15) has a diameter of about 0.3 to 0.6 mm, preferably about 0.5 mm.
6. The blood pump of any one of claims 1 to 5, wherein a cross-section of the at least one rod or wire (15) is not rotationally symmetric, wherein the cross-section of the at least one rod or wire (15) has preferably at least two intersecting axes of symmetry.
- 25 7. The blood pump of any one of claims 1 to 6, wherein the at least one rod or wire (15) is straight.

8. The blood pump of any one of claims 4 to 7, wherein the plurality of rods or wires are braided.
9. The blood pump of any one of claims 1 to 8, wherein the bending stiffness of the stiffening structure (15) varies with respect to bending of the stiffening structure (15) in different planes.
10. The blood pump of claim 9, wherein the catheter (10) is curved in a plane and wherein the stiffening structure (15) has a minimum bending stiffness with respect to bending in said plane in which the catheter (10) is curved.
11. The blood pump of any one of claims 1 to 10, wherein the stiffening structure (15) comprises a shape-memory material, preferably Nitinol.
12. The blood pump of any one of claims 1 to 11, wherein the stiffening structure (15) is configured to stay in the catheter (10) during operation of the blood pump.
13. The blood pump of any one of claims 1 to 11, wherein the stiffening structure (15) is configured to be removed from the catheter (10) after placement of the blood pump in a patient's body.