

CLAIMS

1. An intravascular blood pump (1), comprising:
 - a catheter (5);
 - a housing (11) in which a rotor (10) is housed, the housing (11) being attached to a
 - 5 distal end of the catheter (5);
 - a flexible drive shaft (12) extending through the catheter (5) and connected to the rotor (10), said drive shaft (12) being rotatably supported in a proximal bearing (13) located proximally of the rotor (10);
 - wherein the proximal bearing (13) comprises a bearing sleeve (30) and an outer
 - 10 bearing ring (32),
 - wherein the bearing sleeve (30) comprises a proximal portion (30a) located proximally of the outer bearing ring (32), the proximal portion (30a) of the bearing sleeve (30) forming an axial bearing of the proximal bearing together with a proximal surface of the outer bearing ring (32) and
 - 15 wherein the bearing sleeve (30) comprises a distal portion (30b) extending from the proximal portion (30a) of the bearing sleeve (30) distally into the outer bearing ring (32), wherein the distal portion (30b) of the bearing sleeve (30) forms a radial bearing of the proximal bearing together with the outer bearing ring (32).
2. The intravascular blood pump (1) according to claim 1, wherein the bearing sleeve
- 20 (30) is fixedly connected to the flexible drive shaft (12).
3. The intravascular blood pump according to claim 1 or 2, wherein the outer bearing ring (32) is located inside a distal end region of the catheter (5) or inside a proximal end region of the housing (11).

4. The intravascular blood pump (1) according to any one of claims 1 to 3, wherein a restriction member (33) limiting axial movement of the bearing sleeve (30) relative to the outer bearing ring (32) is located proximally of the bearing sleeve (30) inside at least one of the catheter (5) and the housing (11).
5. The intravascular blood pump (1) according to any one of claims 1 to 4, wherein the flexible drive shaft (12) is at least partly filled with sealant.
6. The intravascular blood pump (1) according to any one of claims 1 to 5, wherein at least one of the bearing sleeve (30) and the outer bearing ring (32) comprises at least one of the following materials: ceramics and metals.
7. The intravascular blood pump (1) according to any one of claims 1 to 6, wherein at least one of the bearing sleeve (30) and the outer bearing ring (32) comprises a coating.
8. The intravascular blood pump (1) according to any one of claims 1 to 7, wherein one or both of the proximal end region of the housing (11) or the distal end region of the catheter (5) contains one or more radial through-holes.
9. The intravascular blood pump (1) according to any one of claims 1 to 8, wherein the flexible drive shaft (12) contains a reinforcement element (35) extending longitudinally within a central lumen of the drive shaft (12).
10. The intravascular blood pump (1) according to any one of claims 1 to 9, wherein a radial bearing gap between the outer bearing ring (32) and the bearing sleeve (30) is between 2 μm and 10 μm , preferably between 3 μm and 4 μm .
11. The intravascular blood pump (1) according to any one of claims 1 to 10, wherein the bearing sleeve (30) comprises a portion extending distally of the outer bearing ring

(32), wherein the rotor (10) is mounted on the portion extending distally of the bearing sleeve (30).

12. The intravascular blood pump (1) according to any one of claims 1 to 11, wherein the rotor (10) is located at a distance between 0.001 mm and 8 mm from the outer bearing ring (32).
13. The intravascular blood pump (1) according to any one of claims 1 to 12, comprising a purge fluid supply line arranged to supply purge fluid such that the purge fluid flows through a gap defined by the radial bearing.
14. The intravascular blood pump (1) according to any one of claims 1 to 13, wherein the drive shaft (12) has a section of reduced diameter and wherein at least the distal portion (30b) of the bearing sleeve (30) is arranged at the section of reduced diameter.
15. The intravascular blood pump (1) according to any one of claims 1 to 14, wherein the rotor (10) and the housing (11) are radially expandable.