

Title (en)
MECHANICAL CIRCULATORY SUPPORT DEVICE WITH CENTRIFUGAL IMPELLER DESIGNED FOR IMPLANTATION IN THE DESCENDING AORTA

Title (de)
MECHANISCHE KREISLAUFSTÜTZVORRICHTUNG MIT ZENTRIFUGALLAUFRAD ZUR IMPLANTATION IN DER ABSTEIGENDEN AORTA

Title (fr)
DISPOSITIF D'ASSISTANCE CIRCULATOIRE MÉCANIQUE À IMPULSEUR CENTRIFUGE, DESTINÉ À ÊTRE IMPLANTÉ DANS L'AORTE DESCENDANTE

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Application
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Abstract (en)
[origin: WO2018223060A1] Mechanical circulatory supports configured to operate in series with the native heart are disclosed. In an embodiment, a centrifugal pump is used. In an embodiment, inlet and outlet ports are connected into the aorta and blood flow is diverted through a lumen and a centrifugal pump between the inlet and outlet ports. The supports may create a pressure rise between about 40-80 mmHg, and maintain a flow rate of about 5 L/min. The support may be configured to be inserted in a collinear manner with the descending aorta. The support may be optimized to replicate naturally occurring vortex formation within the aorta. Diffusers of different dimensions and configurations, such as helical configuration, and/or the orientation of installation may be used to optimize vortex formation. The support may use an impeller which is electromagnetically suspended, stabilized, and rotated to pump blood.

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US11679250B2; US11524153B2; US11116959B2; US10857274B2; US11813445B2

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