



(51) International Patent Classification:

A61M 60/135 (2021.01) A61M 60/859 (2021.01)
A61M 60/17 (2021.01) A61M 60/861 (2021.01)
A61M 60/174 (2021.01) A61M 60/416 (2021.01)
A61M 60/221 (2021.01)

(21) International Application Number:

PCT/EP2025/050601

(22) International Filing Date:

10 January 2025 (10.01.2025)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

24305079.6 12 January 2024 (12.01.2024) EP

(71) Applicant: **BRIGHTFLOW** [FR/FR]; 1 avenue du Champ de Mars, 45100 Orléans (FR).

(72) Inventors: **BREDENBREUKER, Lars**; c/o BRIGHTFLOW, 1 avenue du Champ de Mars, 45100 Orléans (FR). **NICOL, Aurélien**; c/o BRIGHTFLOW, 1 avenue du Champ de Mars, 45100 Orléans (FR).

(74) Agent: **ICOSA**; 83 avenue Denfert-Rochereau, 75014 Paris (FR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UY, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

(54) Title: AXIAL CARDIAC ASSISTING DEVICE

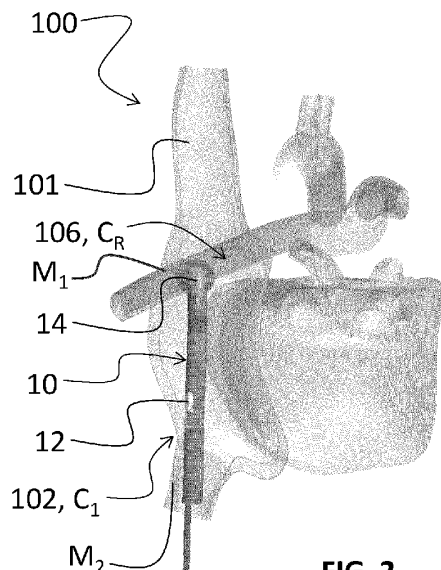


FIG. 2

(57) Abstract: Cardiac assisting device (10) configured to be percutaneously implanted inside a patient's heart (100), comprising: a device inlet (12), a device outlet (14), a rotary pump (16) connecting the device inlet to the device outlet, the rotary pump comprising a pump inflow (161) in fluidic communication with the device inlet and a pump outflow (162) in fluidic communication with the device outlet, the rotary pump further comprising an impeller (18) located inside the pump body (160) between the pump inflow and the pump outflow. The rotary pump extends axially along an elongation axis X, the pump inflow, the impeller and the pump outflow are all aligned along the elongation axis. The device inlet being aligned along the elongation axis. The device outlet being aligned with an outflow axis Y, different from the elongation axis X.

Published:

- with international search report (Art. 21(3))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE