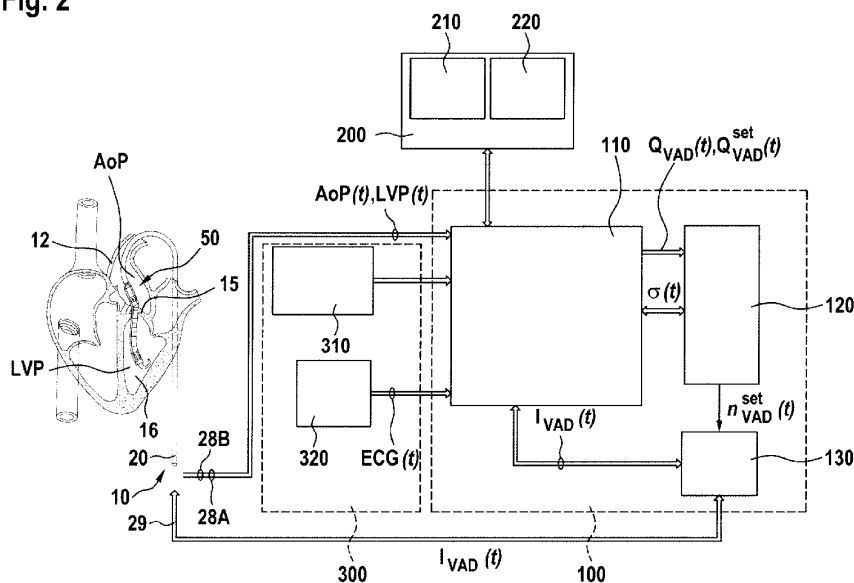




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**Fig. 2**



**(57) Abstract:** The invention concerns a control device (100) for controlling a blood flow  $Q_{\text{pump}}(t)$  of an intravascular blood pump (50) for percutaneous insertion into a patient's blood vessel, the blood pump (50) comprising a pump unit (52) with a drive unit (51) for driving the pump unit and configured to convey blood from a blood flow inlet (54) towards a blood flow outlet (56), wherein the control device (100) is configured to operate the blood pump (50) in a selectable zero-flow control mode, wherein a blood flow command signal  $Q_{\text{pump}}^{\text{set}}(t)$  is selected, and the control device comprises a first controller (401) and a second controller (402), wherein the first controller (401) is configured to control the blood flow  $Q_{\text{pump}}(t)$  by adjusting a speed command signal  $n_{\text{pump}}^{\text{set}}(t)$  for the drive unit (51), and the second controller (402) is configured to control a drive speed  $n_{\text{pump}}(t)$  of

SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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the drive unit (51). Further, the invention concerns a corresponding method for controlling a blood flow  $Q_{\text{pump}}(t)$  of an intravascular blood pump (50), as well as a control device (100) configured to carry out the method. Finally, the invention concerns a system comprising an intravascular blood pump (50) for assistance of a heart and the control device (100) controlling the blood pump (50).