

Title (en)

BLOOD WITHDRAWAL CANNULA OF A PUMP REPLACING OR ASSISTING ACTIVITY OF THE HEART

Title (de)

BLUTENTNAHMEKANÜLE EINER DIE HERZFUNKTION ERSETZENDEN ODER UNTERSTÜTZENDEN PUMPE

Title (fr)

CANULE DE PRÉLÈVEMENT DE SANG D'UNE POMPE REMPLAÇANT OU ASSISTANT LA FONCTION CARDIAQUE

Publication

**EP 2717762 A1 20140416 (DE)**

Application

**EP 12724909 A 20120525**

Priority

- DE 102011106142 A 20110610
- EP 2012002245 W 20120525

Abstract (en)

[origin: WO2012167876A1] The invention relates to a blood withdrawal cannula (4) for connecting a pump (2) assisting or replacing activity of the heart to the inner volume of a heart ventricle (1), in particular the left ventricle. At the end thereof that is located in the ventricle the cannula has a pressure sensor (7a, 7b) for measuring the ventricle pressure and/or ventricle pressure differences and at the same end of the cannula has a volume sensor (3a, 3b, 5, 6) for measuring the volume and/or volume changes of the ventricle (1) in at least a partial region of the ventricle. The invention further relates to a measuring device for monitoring the ventricle contractions and/or the function of a pump replacing or assisting activity of the heart. The measuring device can be/is connected to the pressure sensor (7a, 7b) and to the volume sensor of a blood withdrawal cannula according to any one of the preceding claims and is designed to detect pressure changes and volume changes of a ventricle (1) as the heart is beating.

IPC 8 full level

**A61B 5/0215** (2006.01); **A61B 5/02** (2006.01); **A61B 5/053** (2006.01); **A61M 1/10** (2006.01); **A61M 1/12** (2006.01)

CPC (source: EP US)

**A61B 5/02028** (2013.01 - EP US); **A61B 5/0215** (2013.01 - EP US); **A61B 5/027** (2013.01 - US); **A61B 5/029** (2013.01 - US); **A61B 5/0538** (2013.01 - EP US); **A61B 5/4836** (2013.01 - EP US); **A61B 5/6848** (2013.01 - EP US); **A61B 5/6869** (2013.01 - EP US); **A61M 60/148** (2021.01 - EP US); **A61M 60/178** (2021.01 - EP US); **A61M 60/216** (2021.01 - EP US); **A61M 60/531** (2021.01 - EP US); **A61M 60/554** (2021.01 - EP US); **A61M 60/857** (2021.01 - EP US); **A61B 5/7235** (2013.01 - EP US); **A61M 2205/3334** (2013.01 - EP US); **A61M 2205/3344** (2013.01 - EP US); **A61M 2205/3379** (2013.01 - EP US)

Citation (search report)

See references of WO 2012167876A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2012167876 A1 20121213**; AU 2012266809 A1 20140109; AU 2012266809 B2 20160714; CA 2842522 A1 20121213; CN 103857326 A 20140611; CN 103857326 B 20151202; DE 102011106142 A1 20121227; EP 2717762 A1 20140416; US 2014114202 A1 20140424

DOCDB simple family (application)

**EP 2012002245 W 20120525**; AU 2012266809 A 20120525; CA 2842522 A 20120525; CN 201280035244 A 20120525; DE 102011106142 A 20110610; EP 12724909 A 20120525; US 201214123849 A 20120525