

Title (en)  
CARDIAC COMPRESSION SYSTEM

Title (de)  
HERZKOMPRESSIONSSYSTEM

Title (fr)  
SYSTÈME DE COMPRESSION CARDIAQUE

Publication  
**EP 2229213 A4 20121017 (EN)**

Application  
**EP 08870129 A 20081231**

Priority  
• US 2008088620 W 20081231  
• US 1024108 P 20080108

Abstract (en)  
[origin: WO2009088916A1] The present direct cardiac compression (DCC) design, termed Cardiac Resynchronization Compression Sac System (CRCSS), combines together the mechanical and electrical characteristics associated with DCC and cardiac resynchronization therapy (CRT), respectively. The CRCSS comprises a shell at least one opening on the shell, and at least one inflatable balloon, and a pumping system. The shell is custom manufactured to substantially conform to the contour of a portion of a heart, the contour of the heart being obtained by an imaging system. The opening on the shell is designed for passing pericardial fluid so as not to impede the myocardial contraction. The inflatable balloon attaches to at least one predetermined location of the inner surface of the shell. Furthermore, the shell naturally positions in the pericardium space without resorting to any artificial force to prevent it from dislodging from the heart, and when the inflatable balloon inflates at least one ventricular free wall of the heart is compressed.

IPC 8 full level  
**A61N 1/362** (2006.01); **A61F 2/24** (2006.01); **A61M 60/191** (2021.01); **A61M 60/289** (2021.01); **A61M 60/468** (2021.01); **A61M 60/515** (2021.01); **A61M 60/839** (2021.01); **A61M 60/861** (2021.01)

CPC (source: EP US)  
**A61F 2/2481** (2013.01 - EP US); **A61M 60/191** (2021.01 - EP US); **A61M 60/289** (2021.01 - EP US); **A61M 60/468** (2021.01 - EP US); **A61M 60/515** (2021.01 - EP US); **A61M 60/839** (2021.01 - EP US); **A61M 60/861** (2021.01 - EP US); **A61M 2230/04** (2013.01 - EP); **A61N 1/3627** (2013.01 - EP)

Citation (search report)  
• [Y] US 5131905 A 19920721 - GROOTERS RONALD K [US]  
• [Y] WO 2004112867 A1 20041229 - TEXAS A & M UNIV SYS [US], et al  
• [A] US 4690134 A 19870901 - SNYDERS ROBERT V [US]  
• See references of WO 2009088916A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2009088916 A1 20090716**; CN 101939050 A 20110105; CN 101939050 B 20130703; EP 2229213 A1 20100922; EP 2229213 A4 20121017; JP 2011500295 A 20110106; JP 5298132 B2 20130925

DOCDB simple family (application)  
**US 2008088620 W 20081231**; CN 200880117434 A 20081231; EP 08870129 A 20081231; JP 2010531344 A 20081231