

Title (en)  
STIRLING REFRIGERATOR

Title (de)  
STIRLING-KÄLTEMASCHINE

Title (fr)  
RÉFRIGÉRATEUR STIRLING

Publication  
**EP 3062039 A1 20160831 (EN)**

Application  
**EP 16157607 A 20160226**

Priority  
JP 2015036985 A 20150226

Abstract (en)  
Provided is a Stirling refrigerator having enhanced cooling capacity through improving exhaust-heat efficiency of the electromagnetic reciprocating drive mechanism. The Stirling refrigerator includes: a casing (1) having a cylindrical portion (2) and a body portion (3); a cylinder (7) provided with a mount (27) housed within the casing (1), the mount (27) formed of a metal exhibiting high thermal conductivity; a piston (15) and a displacer (8) housed in the cylinder in a reciprocable manner; a stator (24) of an electromagnetic reciprocating drive mechanism (16), the stator (24) held on the mount (27) and arranged within the body portion (3); and a mover (17) of the electromagnetic reciprocating drive mechanism (16), the mover (17) connected to the piston (15). The casing (1) is partially formed with a heat-conduction block (4) formed of a metal exhibiting favorable thermal conductivity thermally in contact with the mount (27). A heat generated at a compression chamber (C) and an electromagnetic reciprocating drive mechanism (16) can be efficiently released to the outside of the casing (1).

IPC 8 full level  
**F25B 9/14** (2006.01); **F02G 1/043** (2006.01)

CPC (source: EP US)  
**F25B 9/14** (2013.01 - EP US); **F25B 31/023** (2013.01 - US); **F28D 1/0226** (2013.01 - US); **F28D 15/0275** (2013.01 - US);  
**F25B 2309/001** (2013.01 - EP US)

Citation (applicant)  
JP 3769751 B2 20060426

Citation (search report)  
• [XII] US 2004163388 A1 20040826 - YAMAGIRI TSUNEO [JP], et al  
• [XII] EP 1164278 A2 20011219 - TSUIN BADO KOGYO KK [JP]  
• [A] US 2004089012 A1 20040513 - CHEN WEI [JP], et al

Cited by  
CN112885494A

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3062039 A1 20160831**; JP 2016161140 A 20160905; US 2016252280 A1 20160901

DOCDB simple family (application)  
**EP 16157607 A 20160226**; JP 2015036985 A 20150226; US 201615051815 A 20160224