

Title (en)  
CENTER CAMSHAFT SCROLL PUMP

Title (de)  
SPIRALPUMPE MIT MITTLERER NOCKENWELLE

Title (fr)  
POMPE À SPIRALE À ARBRE À CAMES CENTRALE

Publication  
**EP 4177439 A1 20230510 (EN)**

Application  
**EP 22216324 A 20220425**

Priority  
• US 202163179967 P 20210426  
• EP 22169728 A 20220425

Abstract (en)  
A scroll pump includes a first scroll member having a first involute, a second scroll member scroll member having a second involute, and a camshaft rotatably connected to the first scroll member and to the second scroll member. A link is pivotably connected to the first scroll member and the second scroll member. The first and second scroll members cooperate to define a working volume wherein a working fluid is pressurized during operation of the scroll pump. The second scroll member is configured to equalize pressure across first and second opposed surfaces of an end plate thereof. The second scroll member includes a piston and cavity configured to bias the second scroll member toward the first scroll member in response to pressure across the first and second opposed surfaces of the end plate of the second scroll member.

IPC 8 full level  
**F01C 17/06** (2006.01); **F01C 19/08** (2006.01); **F01C 21/00** (2006.01); **F01C 21/10** (2006.01); **F04C 18/02** (2006.01); **F04C 18/067** (2006.01)

CPC (source: EP US)  
**F01C 17/06** (2013.01 - EP); **F01C 19/08** (2013.01 - EP); **F01C 21/003** (2013.01 - EP); **F01C 21/102** (2013.01 - EP);  
**F04C 18/0215** (2013.01 - EP US); **F04C 18/0284** (2013.01 - EP); **F04C 18/067** (2013.01 - EP); **F04C 27/005** (2013.01 - US);  
**F04C 29/0021** (2013.01 - US); **F04C 29/0057** (2013.01 - US); **F04C 2240/60** (2013.01 - US)

Citation (search report)  
• [XY] US 3884599 A 19750520 - YOUNG NIELS O, et al  
• [X] US 2009098001 A1 20090416 - NI SHIMAO [US]  
• [Y] US 5258046 A 19931102 - HAGA SHUJI [JP], et al

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4083375 A2 20221102; EP 4083375 A3 20230215**; EP 4177439 A1 20230510; JP 2022168847 A 20221108; US 2022341422 A1 20221027

DOCDB simple family (application)  
**EP 22169728 A 20220425**; EP 22216324 A 20220425; JP 2022071237 A 20220425; US 202217728546 A 20220425