

Title (en)
PRESSURE REDUCER FOR ROTARY INTERNAL COMBUSTION ENGINE

Title (de)
DRUCKMINDERER FÜR ROTATIONSBRENNKRAFTMASCHINE

Title (fr)
RÉDUCTEUR DE PRESSION POUR MOTEUR À COMBUSTION INTERNE ROTATIF

Publication
EP 3612720 A1 20200226 (EN)

Application
EP 18718165 A 20180420

Priority
• CH 5272017 A 20170420
• EP 2018060228 W 20180420

Abstract (en)
[origin: WO2018193112A1] A pressure reducer for a rotary internal combustion engine comprises a housing (1) accommodating a first shaft (6) and a second shaft (8) running parallel to each other through the housing (1), and a first rotor (7) on the first shaft (6) and a second rotor (9) on the second shaft (8). The first rotor (7) and the second rotor (9) are configured in a meshing arrangement, when the first shaft (6) and the second shaft (8) rotate in counter direction to each other. The first rotor (6) comprises several radial extensions (10) having convex shaped outer flanks (11), and the second rotor (9) comprises several radial wings (13) defining indentations (14) between two wings (13) having a concave shaped surface (15). A pressure expansion chamber (17) is defined by a volume between a convex shaped flank (11a) of an extension (10a) of the first rotor (7) and a concave shaped surface (15a) of an indentation (14a) of the second rotor (9), such that an outer tip (12a) of the radial extension (10a) abuts on the concave shaped surface (15a) of the indentation (14a) and an outer edge (16a) of the indentation (14a) abuts on the convex shaped flank (11a) of the extension (10a). In rotation the tip (12a) slides over the concave surface (15a) of the indentation (14a) and the edge (16a) of the indentation (14a) slides along the convex flank (11a), thereby expanding the volume of the pressure expansion chamber (17).

IPC 8 full level
F01C 1/16 (2006.01); **F04C 18/16** (2006.01)

CPC (source: EP US)
F01C 1/084 (2013.01 - US); **F01C 1/16** (2013.01 - EP US); **F04C 18/16** (2013.01 - EP US); **F04C 2240/20** (2013.01 - US); **F04C 2240/30** (2013.01 - US); **F04C 2240/60** (2013.01 - US)

Citation (search report)
See references of WO 2018193112A1

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)
WO 2018193112 A1 20181025; CA 3060013 A1 20181025; EP 3612720 A1 20200226; US 2021123345 A1 20210429

DOCDB simple family (application)
EP 2018060228 W 20180420; CA 3060013 A 20180420; EP 18718165 A 20180420; US 201816605861 A 20180420