

Title (en)  
VARIABLE DISPLACEMENT LUBRICANT PUMP

Title (de)  
SCHMIERMITTELPUMPE MIT VARIABLER VERDRÄNGUNG

Title (fr)  
POMPE DE GRAISSAGE À CYLINDRÉE VARIABLE

Publication  
**EP 4240973 A1 20230913 (EN)**

Application  
**EP 20803829 A 20201109**

Priority  
EP 2020081508 W 20201109

Abstract (en)  
[origin: WO2022096134A1] A variable displacement lubricant pump (10), comprising a housing (12), a housing cover (16), a rotor hub (35), a shiftable control ring (15), provided with a variable eccentricity and a pumping chamber (25), wherein the pumping chamber (25) comprises a suction zone (S), a discharge zone (D) and a neutral zone (N), the neutral zone (N) is provided with a switchable pressure relief valve (50) to temporarily fluidically connect the suction opening (18) with the discharge opening (19) via the passing pumping compartment (40'), the pressure relief valve (50) comprises a valve opening (52) at the sidewall (13) of the housing (12) and a valve body (56) defined by the control ring (15), so that the valve opening (52) is not or partially covered by the control ring (15) at non-maximum-eccentricity values (eVn) and is completely covered by the control ring (15) at a maximum eccentricity value (eVmax).

IPC 8 full level  
**F04C 2/344** (2006.01); **F01C 21/10** (2006.01); **F04C 14/22** (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP)  
**F01C 21/108** (2013.01); **F04C 2/3442** (2013.01); **F04C 14/223** (2013.01); **F04C 15/0042** (2013.01)

Citation (search report)  
See references of WO 2022096134A1

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)  
**WO 2022096134 A1 20220512**; EP 4240973 A1 20230913

DOCDB simple family (application)  
**EP 2020081508 W 20201109**; EP 20803829 A 20201109