

Title (en)
ELECTRIC MOTOR

Title (de)
ELEKTROMOTOR

Title (fr)
MOTEUR ÉLECTRIQUE

Publication
EP 4233157 A1 20230830 (EN)

Application
EP 21801002 A 20211020

Priority
• CZ 2020574 A 20201022
• CZ 2021050115 W 20211020

Abstract (en)
[origin: WO2022083808A1] The invention relates to an electric motor designed for applications requiring the best performance/small size ratio, in particular for aviation. The electric motor uses an enhanced magnetic field by arranging the permanent magnets (2) of the rotor (1) in a Halbach array. As the power of the electric motor is increased, it is necessary to dissipate waste heat from the stator (3) without the stator winding (4) having to be structurally constrained. The waste heat is dissipated by means of a cooling medium which flows through distribution channels (8) formed by means of the jacket (6) of the electric motor and a partition (7) lying in the air gap between the stator (3) and the rotor (1). The distribution channels (8) carry the cooling medium to the sides of the windings (4) and along the back of the armature (5) of the stator (3) outside the electric motor.

IPC 8 full level
H02K 5/20 (2006.01); **H02K 1/27** (2022.01); **H02K 9/197** (2006.01); **H02K 21/16** (2006.01)

CPC (source: CZ EP)
H02K 1/20 (2013.01 - CZ); **H02K 1/278** (2013.01 - CZ EP); **H02K 5/203** (2021.01 - EP); **H02K 9/197** (2013.01 - EP); **H02K 21/16** (2013.01 - EP)

Citation (search report)
See references of WO 2022083808A1

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 2022083808 A1 20220428; CZ 2020574 A3 20211208; CZ 309032 B6 20211208; EP 4233157 A1 20230830

DOCDB simple family (application)
CZ 2021050115 W 20211020; CZ 2020574 A 20201022; EP 21801002 A 20211020