

Title (en)  
ENERGY CONVERSION DEVICE

Title (de)  
ENERGIEUMWANDLUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE CONVERSION D'ÉNERGIE

Publication  
**EP 2422434 A4 20160601 (EN)**

Application  
**EP 10767758 A 20100422**

Priority  
• US 2010032037 W 20100422  
• US 17164109 P 20090422

Abstract (en)  
[origin: WO2010124075A2] An energy conversion device for converting one form of input energy selected from a mechanical energy and electrical energy, into an output energy selected from a mechanical energy and electrical energy using stationary and moveable magnetic components. One of the stationary or movable parts may be a winding and the other may be a piston comprised of a complex magnet having an axial magnetic component responsive to the oppositely disposed axial magnets, and a radial magnetic component responsive to the radial magnetic source to generally maintain the piston in a floating position within the elongated channel between two magnets disposed at opposite ends of the winding.

IPC 8 full level  
**H02K 35/02** (2006.01); **H02K 7/09** (2006.01); **H02K 35/00** (2006.01)

CPC (source: EP KR)  
**H02K 35/02** (2013.01 - EP KR); **H02K 7/09** (2013.01 - EP)

Citation (search report)  
• [X] US 2007108850 A1 20070517 - CHERTOK ALLAN [US]  
• [A] US 2004251750 A1 20041216 - CHEUNG JEFFREY T [US], et al  
• [A] DE 3033763 A1 19820325 - PRVNI BRNENSKA STROJIRNA [CS]  
• [A] JP 2006149087 A 20060608 - YASKAWA ELECTRIC CORP  
• [A] US 4644205 A 19870217 - SUDO HAJIME [JP], et al  
• [A] JP 2006149163 A 20060608 - CHUGOKU ELECTRIC POWER  
• [A] WO 0178219 A1 20011018 - ABB AB [SE], et al  
• See references of WO 2010124075A2

Designated contracting state (EPC)  
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 SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2010124075 A2 20101028; WO 2010124075 A3 20110120**; BR PI1013866 A2 20161129; CA 2759260 A1 20101028;  
CN 102460919 A 20120516; EP 2422434 A2 20120229; EP 2422434 A4 20160601; KR 20120030999 A 20120329; MX 2011011131 A 20120131

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**US 2010032037 W 20100422**; BR PI1013866 A 20100422; CA 2759260 A 20100422; CN 201080024262 A 20100422; EP 10767758 A 20100422;  
KR 20117027859 A 20100422; MX 2011011131 A 20100422