Title (en)

POWER ELEMENT AND EXPANSION VALVE USING SAME

Title (de)

KRAFTELEMENT UND EXPANSIONSVENTIL UNTER VERWENDUNG DESSELBEN

Title (fr)

ÉLÉMENT DE COMMANDE ET DÉTENDEUR UTILISANT LEDIT ÉLÉMENT DE COMMANDE

Publication

EP 4067715 A1 20221005 (EN)

Application

EP 20894465 A 20201125

Priority

- JP 2019212463 A 20191125
- JP 2020043823 W 20201125

Abstract (en)

Provided are a power element and an expansion valve using same that are capable of suppressing local deformation of a diaphragm while ensuring the transfer efficiency of a refrigerant. A power element 8 includes a diaphragm 83; an upper lid member 82 that is overlapped on one surface in the vicinity of the outer circumference of the diaphragm 83 and forms a pressure working chamber PO with the diaphragm 83; a receiving member 86 that is overlapped on another surface in the vicinity of the outer circumference of the diaphragm 83 and forms a refrigerant inflow chamber LS with the diaphragm 83; and a stopper member 84 housed in the refrigerant inflow chamber LS and in contact with the diaphragm 83, wherein the diaphragm 83 is displaced within a range from a neutral position to a position displaced from the neutral position toward the upper lid member 82 side.

IPC 8 full level

F16K 31/68 (2006.01); **F25B 41/335** (2021.01)

CPC (source: EP US)

F25B 41/335 (2021.01 - EP US); F25B 2341/06 (2013.01 - EP US)

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)

EP 4067715 A1 20221005; **EP 4067715 A4 20240207**; CN 114667424 A 20220624; CN 114667424 B 20230915; JP 2021085547 A 20210603; JP 7182283 B2 20221202; US 2023012455 A1 20230112; WO 2021106933 A1 20210603

DOCDB simple family (application)

EP 20894465 A 20201125; CN 202080076732 A 20201125; JP 2019212463 A 20191125; JP 2020043823 W 20201125; US 202017778964 A 20201125