

Title (en)
Expansion valve

Title (de)
Expansionsventil

Title (fr)
Vanne d'expansion

Publication
EP 2503267 A3 20140312 (EN)

Application
EP 12150529 A 20120110

Priority
JP 2011063003 A 20110322

Abstract (en)
[origin: EP2503267A2] An expansion valve has a valve main body 10, a valve member 40, and a power element 100. The power element 100 includes a diaphragm 130 sandwiched between an upper cover member 110, and a receiving member 120. Outer peripheries of the upper cover member 110, the diaphragm 130, and the receiving member 120 are joined by laser welding. The distance from a fulcrum position of the diaphragm 130 to an outer periphery of the power element 100 is set to be a distance obtained by adding 0.2 mm to 1.0 mm to the length dimension of the welding part formed by laser welding. The assembled power element 100 is inserted into a cylindrical part 12 provided at an upper part of a valve main body 10, and is fixed by a caulking part 12a formed by caulking-processing, thereby to reduce the size of the power element 100.

IPC 8 full level
F25B 41/06 (2006.01)

CPC (source: EP US)
F25B 41/335 (2021.01 - EP US); **F25B 2341/0683** (2013.01 - EP); **F25B 2500/01** (2013.01 - EP)

Citation (search report)
• [I] JP 2006105474 A 20060420 - TGK CO LTD
• [I] JP 2007032862 A 20070208 - TGK CO LTD

Cited by
EP3076104A1; CN106051282A; US11326816B2; US10436484B2

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 2503267 A2 20120926; EP 2503267 A3 20140312; EP 2503267 B1 20200219; CN 102692105 A 20120926; CN 102692105 B 20160622; JP 2012197990 A 20121018; JP 5730630 B2 20150610

DOCDB simple family (application)
EP 12150529 A 20120110; CN 201110406877 A 20111208; JP 2011063003 A 20110322