

Title (en)  
CONTROL VALVE FOR VARIABLE DISPLACEMENT COMPRESSOR

Title (de)  
REGELVENTIL FÜR EINEN VERDICHTER MIT VARIABLER VERDRÄNGUNG

Title (fr)  
SOUPAPE DE CONTRÔLE POUR COMPRESSEUR DE DÉPLACEMENT VARIABLE

Publication  
**EP 2963294 A1 20160106 (EN)**

Application  
**EP 15172342 A 20150616**

Priority  
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Abstract (en)  
A control valve (1) according to one embodiment includes a discharge chamber communication port (10), a crankcase communication port (12) and a suction chamber communication port (14) formed in this order from one end side of a body (5), and a solenoid (3) provided on the other side thereof. A valve element (24) autonomously operates so that a differential pressure (Pd - Ps) between a discharge pressure (Pd) of a discharge chamber (114) and a suction pressure (Ps) of a suction chamber (110) is kept at a preset differential pressure according to a value of current supplied to the solenoid (3). A valve seat (22) has a surface perpendicular to an axis line of the valve hole (18). The valve element (24) is a flat valve having a flat surface that touches and leaves the valve seat (22) and that is perpendicular to an axis line thereof. When a valve section is opened from a valve closed state while the solenoid (3) is energized, a force caused by a crank pressure (Pc) acting on the valve element (24) is larger than that when the valve section is closed.

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Citation (applicant)

- JP 2001132650 A 20010518 - TGK CO LTD
- JP 2006057506 A 20060302 - TGK CO LTD

Citation (search report)

- [XY] EP 1681466 A2 20060719 - TGK CO LTD [JP]
- [XY] EP 1630419 A2 20060301 - TGK CO LTD [JP]
- [XY] EP 1867873 A1 20071219 - EAGLE IND CO LTD [JP]
- [Y] EP 1279831 A2 20030129 - TGK CO LTD [JP]
- [Y] US 2011194951 A1 20110811 - TAGUCHI YUKIHIKO [JP]
- [Y] WO 2008108093 A1 20080912 - TGK CO LTD [JP], et al
- [Y] US 2012251343 A1 20121004 - TAGUCHI YUKIHIKO [JP]

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