

Title (en)  
WATER PUMP

Title (de)  
WASSERPUMPE

Title (fr)  
POMPE À EAU

Publication  
**EP 3597880 A4 20201118 (EN)**

Application  
**EP 18767300 A 20180319**

Priority  
• KR 20170033835 A 20170317  
• KR 2018003178 W 20180319

Abstract (en)  
[origin: EP3597880A1] Provided is a water pump including: a body portion including a housing where an inlet port and a discharge port through which cooling water is introduced and discharged are provided, an impeller accommodated inside the housing and introducing or discharging the cooling water via rotation, a rotation shaft coupled to the impeller and rotating the impeller by receiving external driving power, and a cooling water flow rate control unit arranged above the impeller and operating to selectively open or close the discharge port; a cylinder portion provided above the cooling water flow rate control unit and formed therein a hydraulic space accommodating cooling water that applies pressure to the cooling water flow rate control unit; a piston located inside the hydraulic space and pressurizing the cooling water present inside the hydraulic space; a driving unit coupled to a side surface of the cylinder portion and moving the piston forward or backward; and a lock preventing member located at an inner surface of the cylinder portion that faces a front surface or a rear surface of the piston, and formed of an elastic material. According to the water pump of the present disclosure, the lock preventing member is provided to fundamentally prevent a situation in which the piston is unable to move by contacting the inner wall of the cylinder portion.

IPC 8 full level  
**F01P 5/12** (2006.01); **F01P 5/10** (2006.01); **F01P 7/14** (2006.01); **F01P 7/16** (2006.01); **F04D 13/06** (2006.01); **F04D 15/00** (2006.01); **H02K 1/16** (2006.01); **H02K 1/26** (2006.01); **H02K 41/035** (2006.01)

CPC (source: EP KR US)  
**F01P 5/10** (2013.01 - EP); **F01P 5/12** (2013.01 - KR US); **F04D 13/06** (2013.01 - KR); **F04D 15/0022** (2013.01 - KR US); **F04D 15/0038** (2013.01 - EP US); **F04D 25/026** (2013.01 - US); **F04D 29/086** (2013.01 - US); **F04D 29/468** (2013.01 - US); **F01P 5/12** (2013.01 - EP); **F01P 2005/125** (2013.01 - US); **F04D 15/0263** (2013.01 - US); **F05D 2270/64** (2013.01 - EP US)

Citation (search report)  
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• [A] WO 2013075855 A2 20130530 - SCHAEFFLER TECHNOLOGIES AG [DE], et al  
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• [A] DE 102006034960 A1 20080131 - AUDI AG [DE]  
• [A] JP 2016217156 A 20161222 - AISIN SEIKI  
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Designated contracting state (EPC)  
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