

Title (en)  
RECIPROCATING COMPRESSION APPARATUS

Title (de)  
HUB-KOMPRESSIO NSVORRICHTUNG

Title (fr)  
APPAREIL DE COMPRESSION À MOUVEMENT ALTERNATIF

Publication  
**EP 3009676 A3 20160504 (EN)**

Application  
**EP 15177060 A 20150716**

Priority  
JP 2014197138 A 20140926

Abstract (en)  
[origin: EP3009676A2] To simplify a configuration for returning to uncompressed gas a lubricant separated from gas discharged from a compression chamber, while effectively using the lubricant , a reciprocating compression apparatus includes: a cylinder; a piston disposed in the cylinder to form a compression chamber therein; a drive section for generating drive force for reciprocating the piston in the cylinder; a separator for separating a lubricant from gas discharged from the compression chamber; and a return line for returning the lubricant separated in the separator to a return destination where gas containing the lubrication is present and a pressure is lower than that in the separator. The return line includes a lubrication cooling unit for cooling the lubricant flowing through the return line and a drive section cooling section for cooling the drive section with the lubricant which has been cooled in the lubricant cooling unit 35.

IPC 8 full level  
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CPC (source: EP)  
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Citation (search report)  
• [X] US 2011203304 A1 20110825 - SATO HIDEAKI [JP], et al  
• [Y] US 2011052430 A1 20110303 - DEHNEN MANFRED [DE], et al  
• [Y] US 7032410 B2 20060425 - BARRATT THOMAS [US], et al  
• [Y] US 3955945 A 19760511 - BAUER HEINZ  
• [A] WO 2013126971 A2 20130906 - ATLAS COPCO AIRPOWER NV [BE], et al  
• [A] WO 2011090482 A2 20110728 - INGERSOLL RAND CO [US], et al

Cited by  
CN112703316A; US2023272789A1

Designated contracting state (EPC)  
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**EP 3009676 A2 20160420; EP 3009676 A3 20160504; EP 3009676 B1 20201202**; JP 2016070090 A 20160509; JP 6276154 B2 20180207

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