

Title (en)  
INTERNAL-COMBUSTION PISTON ENGINE "NAIDA"

Title (de)  
HUBKOLBEN-BRENNKRAFTMASCHINE "NAIDA"

Title (fr)  
MOTEUR A COMBUSTION INTERNE ET A PISTONS "NAIDA"

Publication  
**EP 0985809 A4 20040623 (EN)**

Application  
**EP 99913782 A 19990301**

Priority  
• RU 9900070 W 19990301  
• RU 98104311 A 19980310

Abstract (en)  
[origin: EP0985809A2] There is claimed an engine of the adiabatic type. It is an object of the invention to enhance economical operation of the engine. The novelty of the invention consists in provision of two additional strokes for intra-cycle forced cooling of the engine (E) and injection of the air into cylinders. The engine comprises additional passages (AP) communicating the spaces of cylinders (C) and cooling jacket (CJ), AP overlap valves, a distribution device and its drive from a crankshaft with a gear ratio: 2: (S+2), where S is the original number of E strokes. CJ comprises volute chambers and is filled with air (A) or fuel-air mixture used in the capacity of a cooling medium (CM) for cooling and supercharging E due to a pumping action in two additional strokes. The engine can comprise injectors connected in series with admission P, the active gas paths thereof communicate these injectors via AP with CJ for injection of A into C at the expense of CM energy. There is provided a boost receiver connected with C and CJ spaces via pressure and discharge paths, with the controlled valves installed therein, for non-inertia increase of the supercharging pressure when E load abruptly changes and for facilitation of E starting by means of the supply of compressed A from the receiver into CJ. The rate of fuel consumption decreases by about 30 % in comparison with conventional engines. <IMAGE>

IPC 1-7  
**F02B 75/02**; F02B 33/44; F02F 1/04; F01P 1/02

IPC 8 full level  
**F02B 33/44** (2006.01); **F02B 75/02** (2006.01); **F02F 1/04** (2006.01)

CPC (source: EP)  
**F02B 33/44** (2013.01); **F02B 75/02** (2013.01); **F02B 75/021** (2013.01); **F02F 1/04** (2013.01)

Citation (search report)  
• [X] DE 605412 C 19341115 - HENSCHEL & SOHN AG  
• [X] GB 145533 A 19210512 - FRIEDRICH KUERS  
• See references of WO 9946490A2

Cited by  
FR2850705A1; US10770816B2

Designated contracting state (EPC)  
DE FR GB IT SE

DOCDB simple family (publication)  
**EP 0985809 A2 20000315**; **EP 0985809 A4 20040623**; JP 2000516686 A 20001212; RU 2132954 C1 19990710; WO 9946490 A2 19990916; WO 9946490 A3 19991125; WO 9946490 A9 20000302; WO 9946490 B1 19991229

DOCDB simple family (application)  
**EP 99913782 A 19990301**; JP 54569499 A 19990301; RU 98104311 A 19980310; RU 9900070 W 19990301