

Title (en)

Internal combustion piston engine with gas exchange valves per cylinder

Title (de)

Hubkolben-Brennkraftmaschine mit zwei Gaswechselventilen je Zylinder

Title (fr)

Moteur à combustion interne à pistons avec deux soupapes de distribution des gaz par cylindre

Publication

EP 0582846 B1 19960424 (DE)

Application

EP 93111185 A 19930713

Priority

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- DE 4230074 A 19920909
- DE 4240631 A 19921203

Abstract (en)

[origin: EP0582846A1] The two inlet valves of an internal combustion engine cylinder, for example, are operated by two cams (11, 12), which in respect of their phase angle can be adjusted in opposition to one another. In addition, the phase position of both cams can be varied in relation to the crankshaft of the internal combustion engine. By means of the so-called variable cam phasing and the variable spread, the charge cycle dynamics of the internal combustion engine can be optimally adjusted. To vary the spread and/or the phasing, either a longitudinally displaceable adjusting screw (30) is provided, which is connected by way of various helical tooth systems (18, 17, 23) to the two camshafts (10, 20) or to the drive gear (15), or two concentrically arranged adjusting screws are provided, which are connected by way of helical tooth systems to the assigned camshafts. The two adjusting screws may carry pistons, which are arranged in a common hydraulic chamber and can be displaced as required by appropriate variation of the pressure ratios. Means can also be provided, however, in order to couple the adjusting screws to one another under certain conditions. <IMAGE>

IPC 1-7

F01L 1/34; **F01L 13/00**

IPC 8 full level

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CPC (source: EP)

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Cited by

EP2320035A1; WO2013171321A1; DE102010034956B4; EP1860286A3; CN104246153A; GB2327482A; CN103899374A; DE19722187A1; DE102010008759B4; DE102007040697A1; FR2739410A1; DE102005061187A1; EP1803904A3; EP2479388A4; EP1234954A3; DE102009016872B4; US8550051B2; US8960143B2; DE102005039751A1; DE19535499A1; DE19535499B4; US5746166A; CN102439265A; GB2472054B; EP1726789A1; EP0686754A3; CN102052117A; DE102010023571A1; US2011303173A1; US8631776B2; DE102010023571B4; WO2014071927A1; WO2010040439A1; WO2013171322A1; US9638306B2; US7421992B2; US8807102B2; US8991342B2; US9297283B2; WO2007022737A1; WO9516852A1; WO2011010241A1

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