

Title (en)
Four-cycle internal combustion engine.

Title (de)
Viertakt-Brennkraftmaschine.

Title (fr)
Moteur à combustion interne à quatre temps.

Publication
EP 0063385 A2 19821027 (EN)

Application
EP 82103323 A 19820420

Priority
JP 6184381 A 19810422

Abstract (en)
In a four-cycle combustion engine of the type having plurality of intake valves and of exhaust valves provided each cylinder, at least an additional intermediate intake vale (5 min) is arranged in order to enlarge the number of intake valves. Said intermediate intake valve is arranged to face the combustion chamber of the cylinder at a smaller angle (alpha 1) of inclination with respect to the axis (l 1) of the cylinder than that of the remaining intake valves (5) which are arranged at both sides of said intermediate intake valve. As a result, any interference between said valves can be avoided.

IPC 1-7
F01L 1/04; F01L 1/26; F02F 1/38

IPC 8 full level
F01L 1/00 (2006.01); F01L 1/053 (2006.01); F01L 1/26 (2006.01); F02F 1/42 (2006.01); F02B 1/04 (2006.01); F02B 75/02 (2006.01); F02F 1/24 (2006.01)

CPC (source: EP)
F01L 1/0532 (2013.01); F01L 1/265 (2013.01); F02F 1/4221 (2013.01); F01L 2003/251 (2013.01); F02B 1/04 (2013.01); F02B 2075/027 (2013.01); F02B 2275/18 (2013.01); F02F 2001/245 (2013.01)

Cited by
US4858573A; EP0245550A1; EP0262250A1; EP0408079A1; DE3708675A1; GB2166799A; GB2166799B; FR2652384A1; US5515827A; EP0324092A1; US4915065A; EP0265282A1; WO9003498A1; EP0483109B1; EP0144179B1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0063385 A2 19821027; EP 0063385 A3 19830413; EP 0063385 B1 19850731; DE 3265030 D1 19850905; DE 63385 T1 19830414; JP H024765 B2 19900130; JP S57176311 A 19821029

DOCDB simple family (application)
EP 82103323 A 19820420; DE 3265030 T 19820420; DE 82103323 T 19820420; JP 6184381 A 19810422