

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 valve (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 ( I 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

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