

Title (en)
Injection device

Title (de)
Einspritzeinrichtung

Title (fr)
Dispositif d'injection

Publication
EP 0575887 B1 19970305 (DE)

Application
EP 93109661 A 19930617

Priority
DE 4220619 A 19920624

Abstract (en)
[origin: EP0575887A1] The invention proposes an injection system in which two valves (2, 3) and nozzle needles (4, 5) are provided in a single holder (1), the valves and needles being subjected to hydraulic loading and controlled in accordance with the injection process without the use of screws and springs. The two nozzle needles (4, 5) of the valves (2, 3) can be acted upon by a common hydraulic closing pressure (S) which, on the one hand, acts via a double piston arrangement (D) on the nozzle needle (5) in one injection nozzle (35), that for combustion gas, and, on the other hand, acts directly on the nozzle needle (4) in the other injection nozzle (34), which is intended for fuel or ignitable oil. The two pistons (30, 31) of arrangement (D) are subjected to a defined control pressure (Z), which is superimposed on the closing pressure (S) and the combustion-gas pressure (G) during the injection process. The control pressure (Z) is used to move the one nozzle needle (5) into an open and closed position, and the other nozzle needle (4) can be acted upon, for the purpose of opening it counter to the closing pressure (S), by the fuel or ignitable oil fed in via the passage (23). <IMAGE>

IPC 1-7
F02M 43/04

IPC 8 full level
F02M 43/04 (2006.01)

CPC (source: EP)
F02M 43/04 (2013.01); **F02M 2200/44** (2013.01)

Cited by
WO9945266A1; DE19831081C2; EP0787900A3; DE102016002228A1; DE102016002228B4; DE19808798C2; AT500797B1; US2013139790A1; US9605635B2; US9803564B2; WO2015101406A1; US6328230B1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0575887 A1 19931229; EP 0575887 B1 19970305; DE 4220619 A1 19940105; DE 59305564 D1 19970410; FI 104013 B1 19991029; FI 104013 B 19991029; FI 932941 A0 19930624; FI 932941 A 19931225

DOCDB simple family (application)
EP 93109661 A 19930617; DE 4220619 A 19920624; DE 59305564 T 19930617; FI 932941 A 19930624