

Title (en)  
FUEL INJECTION DEVICE FOR INTERNAL COMBUSTION ENGINES

Title (de)  
KRAFTSTOFF-EINSPRITZVORRICHTUNG FÜR BRENNKRAFTMASCHINEN

Title (fr)  
SYSTEME D'INJECTION DE CARBURANT POUR MOTEURS A COMBUSTION INTERNE

Publication  
**EP 0823019 A1 19980211 (DE)**

Application  
**EP 96912036 A 19960424**

Priority  
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• EP 9601715 W 19960424

Abstract (en)  
[origin: WO9634196A1] A fuel injection device works based on the principle of storage of energy in a solid body and is designed as a reciprocating piston pump with a feeding piston (35, 24) that stores kinetic energy during an almost resistance-free acceleration phase. The stored kinetic energy is abruptly transmitted to the fuel contained in a compression chamber (66), generating a pressure wave for injecting fuel through an injection nozzle. The means that interrupt the resistance-free acceleration phase are designed as a valve with a valve body (50a) and a valve seat (57) shaped on the feeding piston (35, 24). To generate the pressure wave, the valve closes the compression chamber (66) so that the kinetic energy of the feeding piston (35, 24) is transmitted to the fuel enclosed in the compression chamber (66). The valve seat (57) and the valve body (50a) lie at the front end of the feeding piston (35, 24), seen in the direction of injection, and separate the compression chamber (66) from the feeding piston (35, 24).

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