

Title (en)  
INTEGRATED FILTER-INJECTOR

Title (de)  
INTEGRIERTER FILTER-INJEKTOR

Title (fr)  
FILTRE-INJECTEUR INTEGRE

Publication  
**EP 1787021 A1 20070523 (EN)**

Application  
**EP 05774132 A 20050817**

Priority  
• EP 2005054060 W 20050817  
• TR 200402049 A 20040818

Abstract (en)  
[origin: WO2006018440A1] In high-pressure injection systems used in internal combustion engines, the narrowing of diameters of holes in the injector nozzle brings about the risk of clogging of such holes completely or partially even by very small solid particles in the fuel. By this invention, an integrated filter applicable to any type of fuel injectors, which prevents the injector nozzle (7) holes (8) to be clogged by solid particles resulting from the fuel itself or from the injection system is explained. The said filter is directly incorporated within the injector body (1). Furthermore, thanks to a collection volume (12) provided in the integrated filter, which has a structure to allow accumulation of solid particles, an integrated filter element will have a longer operation life. An additional acquisition with an integrated filter is that by determining the chamfer size (13) of an injector needle (5), it can be ensured that the external surface (15) of the needle (5) covers a portion of the holes (6) provided on the filter when the needle (5) is in closed position, thus changing the cross-section of flow in the course of injection process proceeding from the start of injection and that hence a step-by-step injection becomes possible.

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