

Title (en)

DEVICE FOR FUEL INJECTION FOR INTERNAL COMBUSTION ENGINES

Title (de)

VORRICHTUNG ZUR KRAFTSTOFFEINSPRITZUNG FÜR VERBRENNUNGSMOTOREN

Title (fr)

DISPOSITIF D'INJECTION DE COMBUSTIBLE POUR MOTEURS À COMBUSTION INTERNE

Publication

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Application

EP 20780562 A 20200803

Priority

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Abstract (en)

[origin: WO2021047790A1] The invention relates to a four-stroke reciprocating internal combustion engine, comprising a supercharger (2) which provides the charge air (3) at a pressure of more than one atmosphere in a charge air line (5), and a throttle valve (6) which reduces excess pressure of the charge air (3) in order to lower the pressure and thus achieve the Venturi effect for supercooling the charge air (3) in an inlet channel (10). For injecting fuel (8), a cylinder head is equipped with a swirl chamber (13) or a pre-combustion chamber for each main combustion chamber (11), the size of which corresponds to at least 5% of the size of the main combustion chamber (11). The injection of fuel (8) only into the small swirl chamber (13) allows reliable ignition of a small amount of fuel (8) for each main combustion chamber (11) and, in combination with the supercooling of the charge air (3) in the inlet channel (10), simultaneously reduces exhaust-gas emissions and saves fuel.

IPC 8 full level

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CPC (source: CN EP US)

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Citation (search report)

See references of WO 2021047790A1

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