

Title (en)

RADIAL PISTON PUMP FOR HIGH-PRESSURE FUEL SUPPLY

Title (de)

RADIALKOLBENPUMPE ZUR KRAFTSTOFFHOCHDRUCKVERSORGUNG

Title (fr)

POMPE A PISTON RADIAL POUR ALIMENTATION HAUTE PRESSION EN CARBURANT

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9902857A2] A radial piston pump for high-pressure fuel supply in fuel injection systems of internal combustion engines, in particular in a common rail injection system, has an input shaft (4) mounted in a pump housing (2), and preferably several pistons (10) which are radially arranged with respect to the input shaft (4), each in its cylinder chamber (12), and which can move back and forth in the radial direction. A metallic insert (22) which forms the cylinder chamber (12) is provided for each piston (10) within the housing (2) and oriented radially with respect to the input shaft (4). The insert (22) communicates with the suction side (40) and with the high-pressure side (42). In order to define the component parts in a statically exact manner, the pump is designed such that each insert (22) is arranged between two flange-shaped metallic housing parts (48, 50) with supporting surfaces (24, 24; 52, 54) perpendicular to the input shaft and is supported on said surfaces. Each insert (22) has a fuel inlet (32) and a fuel outlet (34) which open in the region of the supporting surfaces (24, 26) and are aligned with another inlet and outlet (58, 60) in the housing parts (48, 50). The flange-shaped housing parts (48, 50) are clamped together, with the intercalated inserts (22), so that the supporting surfaces (24, 26; 52, 54) of the inserts (22) and housing parts (48, 50) are sealed in a high-pressure-tight manner without any intercalated packing elements.

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