

Title (en)  
INTERNAL GEAR PUMP THAT DOES NOT CONTAIN ANY FILLER ELEMENTS

Title (de)  
FÜLLSTÜCKLOSE INNENZAHNRADPUMPE

Title (fr)  
POMPE A ENGRENAGES INTERIEURS SANS PIECES INTERCALAIRES

Publication  
**EP 1364127 A1 20031126 (DE)**

Application  
**EP 02714073 A 20020228**

Priority  
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• DE 10109770 A 20010301

Abstract (en)  
[origin: WO02070899A1] An internal gear pump that does not contain any filler elements comprises a housing (11) and a bearing ring (5), which is accommodated inside a boring of the housing in a manner that permits it to transversally move in relation to its axis but not to rotate. The internal gear pump also comprises an internal-gear ring gear (3), which is mounted inside the bearing ring in a manner that permits it to revolve, and a pinion (2), which is mounted inside the housing in a manner that permits it to rotate and which meshes with said ring gear. The teeth of the pinion define an inlet chamber and a pressure chamber in the denticulations, on the one hand, by a complete engagement in tooth gaps of the ring gear and, on the other hand, by a tight contact with the tooth tips of the ring gear in an engagement-free ring gear area that is almost diametrically opposed to the tooth gap engagement. A spring (25) that exerts force onto the bearing ring (5) enables the bearing ring (5) to pivot in relation to the boring about a parallel pivotal axis (20, 22) that is parallel to the axis thereof. The bearing ring can pivot without the tight contact between the tooth tips of the pinion (2) and the ring gear (3) being lost. The spring (25) that exerts force onto the bearing ring (5) is a torsion bar spring, which passes through a boring (24, 26) extending inside the bearing ring approximately in the axial direction thereof and which, at at least one end, is supported inside a housing boring (32).

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