

Title (en)
SLIDING VANE PUMP

Title (de)
FLÜGELZELLENPUMPE

Title (fr)
POMPE À PALETTES

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Application
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Abstract (en)
[origin: WO2010060416A2] The invention relates to sliding vane pumps having a rotor which is mounted in a pump housing and driven by a shaft, a plurality of vane plates mounted on the outer periphery of said rotor and an outer ring surrounding the rotor and the vane plates, said outer ring being arranged either directly in the pump housing or in an adjusting ring that can be displaced along predetermined pathways inside the pump housing. The aim of the invention is to devise a novel sliding vane pump having a novel pump chamber geometry which allows a fluidically optimum complete filling of the pump chambers especially at speeds in the range of 4500 rpm up to more than 6000 rpm for all designs of sliding vane pumps and which can be easily manufactured. The sliding vane pump according to the invention comprises transverse grooves (12) which extend in the cylindrical surface area of the rotor (3) between the bearing grooves (4) of the vane plates (5) across the entire rotor width and which are arranged in parallel to the bearing grooves (4) of the vane plates (5) and interspaced from the bearing grooves (4) by a bearing web (11), and is characterized in that the transverse grooves (12) have an asymmetrical cross-section (13) which has a lowest point (14) in every vane chamber (10), said lowest point being always arranged after the vane chamber center axis (15) when seen in the direction of rotation.

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