

## Press Release H2FC, HMI 2011

title            **New component for fuel cells - magnetic driven, hermetic micro annular gear pump**

text            **HNP Mikrosysteme designs magnetic hermetic micro annular gear pump for applications in the field of fuel cells.**

The magnetic drive of rotary displacement pumps in combination with a liquid separating cup will be used for pump technologies if safety requirements as well as requirements regarding the handling of liquids demand a leak-free pump construction without a shaft seal.

The German-based HNP Mikrosysteme implements this functionality in the new magnetic driven, hermetic series (MH) of micro annular gear pumps. The mzm-4661 is equipped with a powerful inner magnet system and an integrated speed control. This first pump of the MH series reaches a precise and pulseless volume flow from 3.6 ml/min to 72 ml/min as well as a system pressure of 6 bar. Especially the compact dimensions have to be outlined. The pump has a diameter of 22 mm, a length of 68 mm and a weigh of 100 g.

The compact dimension of the pump is achieved by a completely new product structure and an optimal design matching with the integrated drive system. The materials in contact with liquid of the current style available are stainless steel, ceramics and NdFeB-magnets.

Magnetic hermetic pumps are used for demanding metering tasks for water, ethanol, methanol and other fuels in fuel cells operations. Further future applications will be in the range of AdBlue delivery or dialysis. This new pump can be used and prove its superiority regarding to long service life, where avoidance of leakage is an important criterion.

photo



mzr\_4661.jpg (134 kB)

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mzr-4661 - first pump of new magnetic hermetic series of micro annular gear pumps

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