

## PRESS RELEASE

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### **Maag presents chemical gear pump for highly viscous fluids**

Gear pumps are used in all those situations where fluids with high viscosities, high pressures and high temperatures have to be handled. Maag Pump Systems has now developed a special pump as a solution to an important problem with the conveyance of highly viscous food additives. It can convey various chemical fluids and can also handle low suction pressure. It features a particularly slim construction and a large inlet. Maag will present this new type of pump for the first time as prototype at Achema. The complete series will be available from mid 2009.

"We have been using this pump design for conveying highly viscous liquid plastics for years" says Andreas Bachmann, Product Manager Industrial at Maag Pump Systems. "Now the design is also available for all other chemical fluids with similar properties. That includes resins or silicones as well as polyurethane and polymer solutions."

The prototype show-cased at Achema is used for conveying highly viscous sugar esters. In that process the pressure in the thin film evaporator is only a few mbar. For this reason, a pump with special intake geometry is required. Maag has developed a design for this exact application. The body has been designed so that the gears are located just a few millimetres beneath the flange connection face of the thin film evaporator. This means that the liquid 'lies' directly on the teeth and can be conveyed, in spite of the very low vacuum, from the high vacuum in the container thanks to a special intake geometry with a static liquid head of only approx. 200 mm.

The ultra-slim construction and a large inlet make it possible that the value for NPSHreq (Net Positive Suction Head required) can be reduced down to 100 mm. This design is therefore capable of reliably conveying highly viscous fluids with several million mPas from vacuum containers.

The complete pump series of this design will be available from mid 2009.

The special body of the pump as well as all other components, such as

shafts, bearings, seals and peripherals are developments based on existing pumps made by Maag. This ensures that these new pumps are also fully compatible with the tried and tested building block system by Maag Pump Systems.

Photo: gear pump for sugar ester application

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