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Plastics technology / adhesive technology / dosing and mixing technology / electrical engineering / fluid technology / laboratory technology

EFFICIENT AND HOMOGENEOUS PROCESSING OF SMALL VOLUMES

TARTLER offers five systems for the minimum quantity application of liquid synthetic resins

In product development and adhesive technology, as well as in electro casting and resin injection moulding (RIM), the precise processing of minimum quantities of liquid two-component synthetic resins is one of the daily challenges. TARTLER offers five system solutions aimed precisely at the dosing, mixing and application of silicones and polyurethane and epoxy resins. Depending on the version, they are suitable for use under laboratory conditions or already for small series production.

Michelstadt, Juli 2020. – Many users who only process small quantities of synthetic resins traditionally work with the material manufacturers' multi-component or

double cartridge pistols. These pneumatic dispensers themselves can be converted very easily and cost-effectively into a manual system solution with the LC-DCM attachment from TARTLER, which opens up the advantages of dynamic 2K dosing and mixing technology to the user. Thanks to a practical universal adapter, the attachment can be docked onto many commercially available cartridge systems and enables the dosing and mixing of resin and hardener at a level of quality that up to now has only been found in industrial resin processing.

Wherever adhesives, sealants and casting resins are used for reworking, repairs or surface optimisation, for example, the LC-DCM can achieve both very homogeneous mixing and increased output. With a comparable configuration, the same pressure and depending on the material, minimum-quantity users can achieve a volume output that is up to 80 percent higher with TARTLER's cartridge attachment than they would by using the conventional static mixer. They also benefit from the fact that the LC-DCM can handle even extreme mixing ratios and large differences in viscosity between the components. Especially where small quantities of synthetic resin, sealant and adhesive are to be applied in uniform volume flows and where material components that are as close as possible to those used in series are to be used for reworking with optimum mixing quality, the LC-DCM from TARTLER is a real benefit. The manufacturer provides a visualisation of the handling and use of the attachment in a [YouTube video](#).



The LC-DCM cartridge mixer attachment from TARTLER has a universal adapter for numerous commercially available dispensers and enables the dynamic mixing of resin and hardener.



Minimal quantity users can take the first steps on the path to mechanical resin processing with TARTLER's ultra-compact dosing and mixing system MDM 3. The picture shows an extended version with additional A/B containers and chassis.

Entry into laboratory scale

TARTLER puts users of minimum quantities on the path to the machine processing of synthetic resins with its MDM 3, an ultra-compact dosing and mixing system with an electrically driven dosing pump and container connections for the material manufacturers' original containers. It is designed for the rational processing of liquid synthetic resins made of polyurethane or epoxy resin and has an output of up to 0.7 l/min at a mixing ratio of 100:100. In practice, output varies depending on viscosity, mixing ratio and hose length (1.5 - 5.0 m). A 220 V connection is sufficient to start up the MDM 3. The supply of external compressed air is not intended.

The next larger entry-level solution for users who dare to make the leap from manual to machine dosing and mixing of liquid polyurethane and epoxy resins is TARTLER's equally very compactly built table top device MDM 4. It underwent a thorough re-engineering in 2019 and since then has been designed in such a way that it can be configured for output rates ranging from 50 to 800 ml/min using various pump combinations and depending on the mixing ratio and viscosity of the components. With this system, the small-volume processor can implement dosing ratios from 100:10 to 10:100, with output being adjusted by a potentiometer. The mixing head used for the MDM 4 is a slim LC 0/2 from the TARTLER range, whose rotating disposable mixer is driven by a frequency-controlled electric motor via a flexible shaft. The containers for the A and B components can be selected from containers with volumes of 0.5 to 100 l. The MDM 4 also requires no more than a 220 V connection to put into operation.

Compact intelligence for casting, spraying, foaming

The MDM 5 model, which is somewhat larger in size, exhibits a variable output rate of 0.05 to 1.5 l/min and has considerably more extensive features. With this machine, small-quantity users get a both stationary and mobile system solution for casting, spraying and foaming. It features a Siemens Logo control system, which offers several extremely useful functions (shot time pre-selection, pot time alarm, etc.), and can be equipped with containers of different sizes as well as electric stirrers and various heaters for the containers, the hoses and the mixing head. It can also be equipped with different mixing heads from TARTLER. In addition to a 220 V power connection, the MDM 5 also requires a compressed air connection (6-8 bar).

Finally, the premium model in TARTLER's compact machine series is the MDM 6, which can also be used as both a stationary or mobile system, and is designed for outputs of up to 3.5 l/min and has numerous features and functions. Its control system offers, among other things, the possibility to carry out small and large recirculations of the components. The MDM 6 can be operated with containers with volumes from 3.0 l to 100 l and is also suitable for casting, spraying and foaming.

To automation via modularity

With the LC-DCM cartridge attachment and the systems in its MDM series, TARTLER offers five innovative solutions for dosing and mixing small quantities of liquid polyurethane and epoxy resins. And not just that. Since all devices are integrated into the comprehensive modularity programme of the plant manufacturer, they can be optimally adapted to different or changing



With the thoroughly revised MDM 4, TARTLER offers a versatile table device with which low-viscosity media can be dosed and mixed efficiently.



The MDM 5 from TARTLER convinces with extensive standard features and a Siemens control system with shot time pre-selection and a pot time alarm. The picture shows a variant with a chassis and large 60-litre containers.



The MDM 6 is the standout model of TARTLER's small-quantity series and joins the company's large, fully automated NODO-PUR multi-component systems.

requirements with numerous expansion components. For example, by means of individually designed chassis, refill kits and heating and degassing systems. This also means that TARTLER can accompany its customers on every subsequent step to the next stage of mechanical,

and finally automated, synthetic resin processing. The MDM 5 and MDM 6 models particularly provide an insight into what is possible with the large, volume flow controlled multi-component systems of TARTLER's NO-DOPUR series.

Where minimum quantity processing plays a role



The precise application of small and tiny quantities of liquid two-component synthetic resins plays an important role especially in product development, prototyping, maintenance, electro casting and resin injection moulding. The repeatable processing of minimum quantities is also key in the application of adhesives and sealants. TARTLER's system solutions for the manual and machine dosing, mixing and application of silicones and polyurethane and epoxy resins are perfectly adapted to this area of application of plastics technology. Depending on the version, they are suitable for test series at laboratory scale, as well as for small series production from batch size 1.

Note for editorial staff: Text and images available at www.pr-box.de/



More Information about TARTLER'S Cartridge Mixer LC-DCM and MDM series can be found on our websites.

- ▶ www.tartler.com/en
- ▶ www.mdm-serie.tartler.com/en
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