

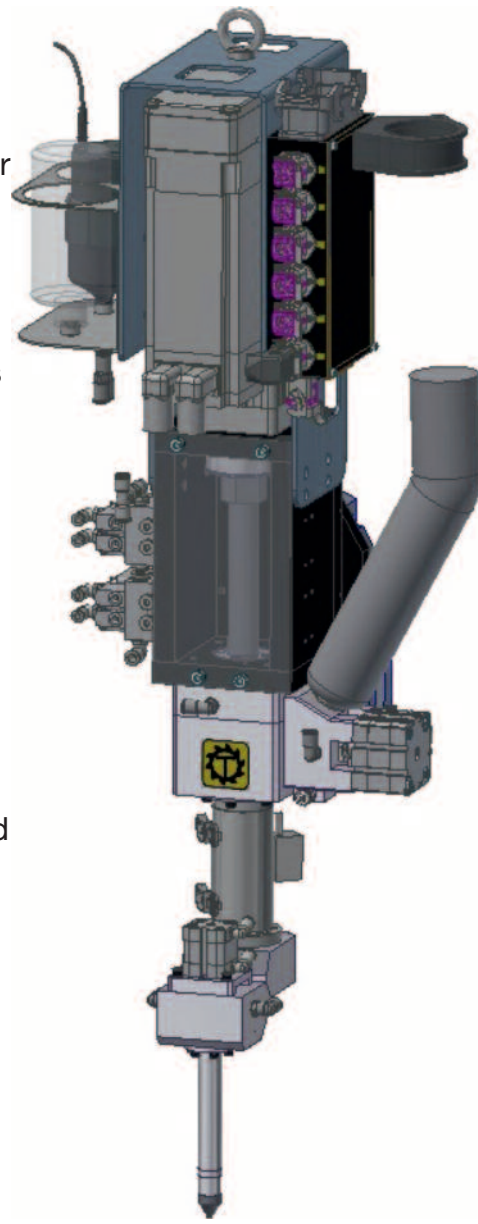




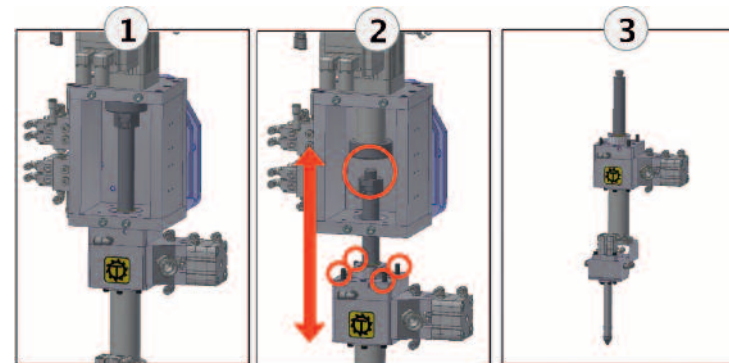
# DOSING

## Doser

- Chamber volume: 10 ccm / 80 ccm / 150 ccm
- Perfect material flow in the doser thanks to FIFO principle as well as minimized dead space
- Application pressures up to 300 bar
- Utilization of quick-action valves for highly precise application (control cycle ca. 8 ms)
- Same TCP even when components are replaced or the size of the dosing chamber is altered
- Optimized ease of maintenance (mechanical and electrical)
- Optimized sealing system (easy replacement)
- No relubrication required at the drive unit (linear unit is immersed in oil bath)



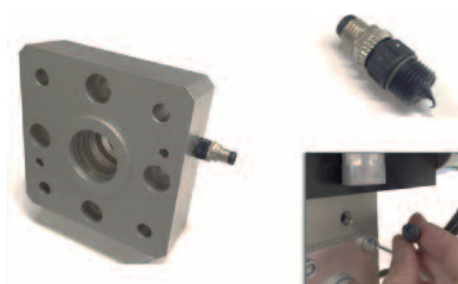
The fluid-conducting part of the doser can be removed with only 5 screws, allowing for a quick exchange even without a lifting crane, as plates, motor and electronic parts remain at the station. This concept saves costs because a lower number of spare parts is required.



## Industry 4.0: TÜNKERS sealing block with integrated sensor

**The smart sealing** – cost-efficient, quick-replacement disposable sensor for early detection of leakage

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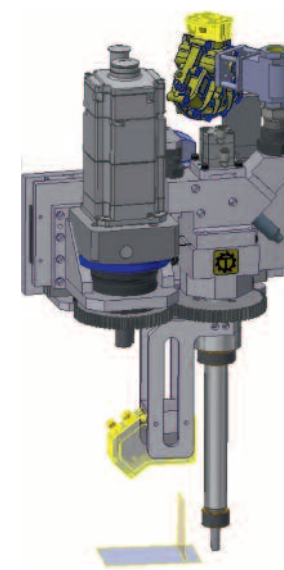
## E-Swirl application head

- Broad material application with even spread
- Nozzle can be removed at the bottom which makes the system particularly easy to maintain



## Application head for window bonding systems

- Stationary application head for application of triangular seams (window bonding)
- Connection to 7th axis of the robot
- Optional with connection to hardener component



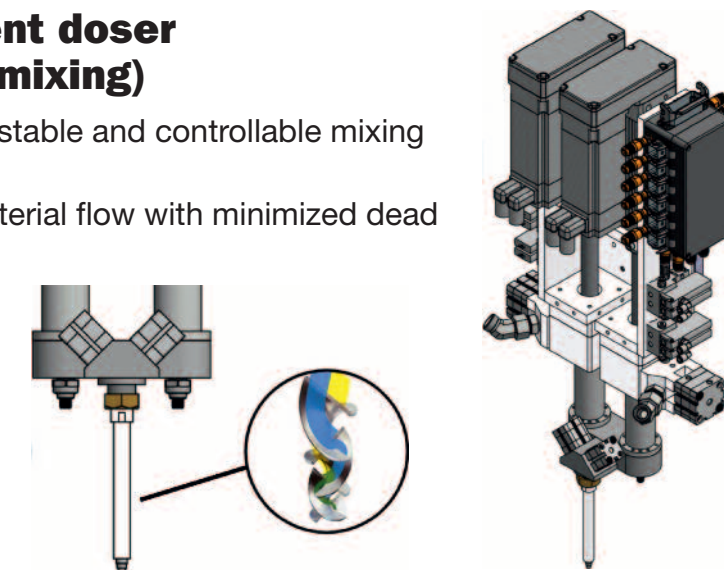
## ApplicationMaster Modular concept

The four modules (pump station, systems/dosing controller, doser and handling unit) of the TÜNKERS ApplicationMaster allow for a very flexible and simple assembly of a dosing workstation. The modules can be configured freely and may be rearranged by the customer to accommodate for new dosing tasks.



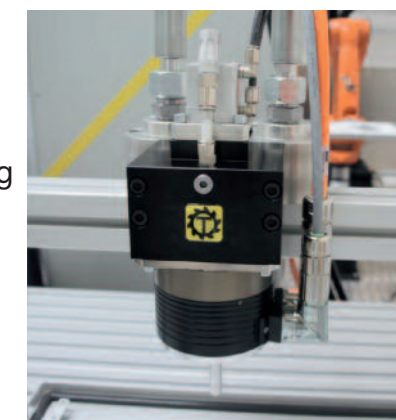
## 2 component doser (statically mixing)

- Precisely adjustable and controllable mixing ratios
- Optimized material flow with minimized dead space



## 2 component doser (dynamically mixing)

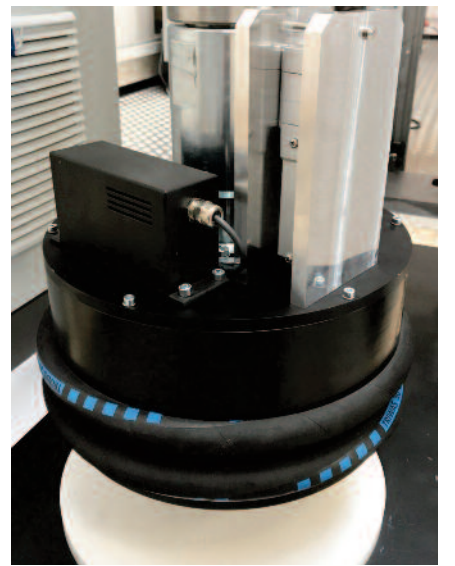
- Perfect homogeneity of the mixed components through complete mixing in the sleeve shaft motor
- Maximum process stability
- Easy and fast cleaning thanks to a disposable injection moulding mixer in the sleeve shaft motor



## Partly automated barrel change

- Easy maintenance
- Short barrel replacement times
- Minimizes accident hazard

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## Fully electric dosing system

- Doser (inlet/outlet valve) and pump station without pneumatic components
- Lower energy costs



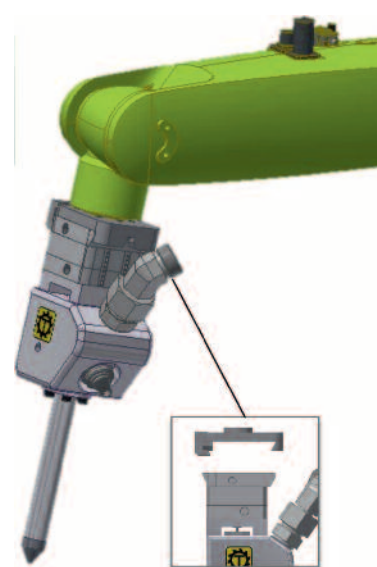
## Electrically controlled application head

- High-precision application
- Controlled dynamic seams or stitch seams



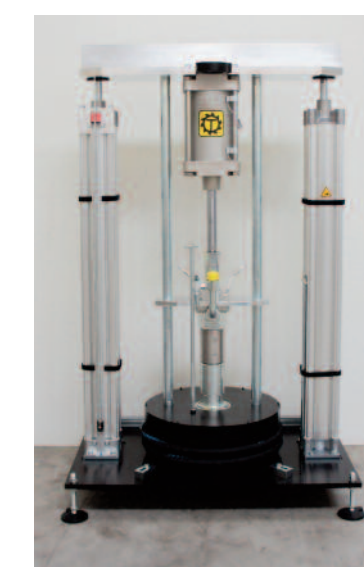
## Robot-controlled dosing head

- Maintenance-friendly with integrated quick-replacement flange (directly at the cylinder)
- Integrated sensor for pressure adjustment enabling optimum seam quality
- Compact robot-controlled dosing head for assembly at small robots (for robot loads of about 10 kg)



## Barrel pump station (single/double)

- Barrel sizes of 30 l, 50 l or 200 l heated or unheated
- With optional outlet for manual gun
- Follower plate with dual scraper for extended service life
- Pump volume up to 200 ccm
- Utilisation of an adjustable, easy replacement sealing package at the pump



## Seam monitoring system

TÜNKERS integrates online seam monitoring into doser control

