

# MarMax



picture includes options

## METER MIX DISPENSE MACHINES

**FOR FLEXIBLE PACKAGING /  
CONVERTING INDUSTRY**

- Modular and flexible by the use of application specific machine concepts
- User friendly operation by the use of visualized user interface
- High metering accuracy by the use of precision gear pumps

**PRECISION** has our Word.

**Mahr**

**Mahr Metering Systems**

# Meter Mix Dispense Machines

## for flexible packaging / converting industry

Metering experiences of more than 60 years have taught us a lot. Mahr Metering Systems headquartered in Göttingen has been developing and manufacturing precision gear metering pumps since 1948. For the most different applications.

The precise gear pumps of Mahr Metering Systems were first used to meter nylon fibers for stockings.

A „must-have“ in the 50s. Today, after many developments gear pumps and meter mix dispense machines meter various liquids, such as adhesives for packaging foils to preserve cheeses, sausages and many other daily needs in the 21st century.

Who could have ever expected that. The world continues to develop. New demands are always being placed. Technologically, too. We feel at home in this world.

### Just a word

Higher flexibility, less retooling time and longer machine runtime are converter requirements.

A task for dosing technology is to allow quick changes between various adhesive systems in order to minimize downtime.

In addition to our proven MarMax 2K Meter Mix Dispense Systems, we developed also **MarMax 1+2K** (for systems with 1 NCO and 2 different OHs) and **MarMax 2+2K** (for 2 different adhesive systems).

Change of adhesive systems cannot be more quickly from the dosing side!

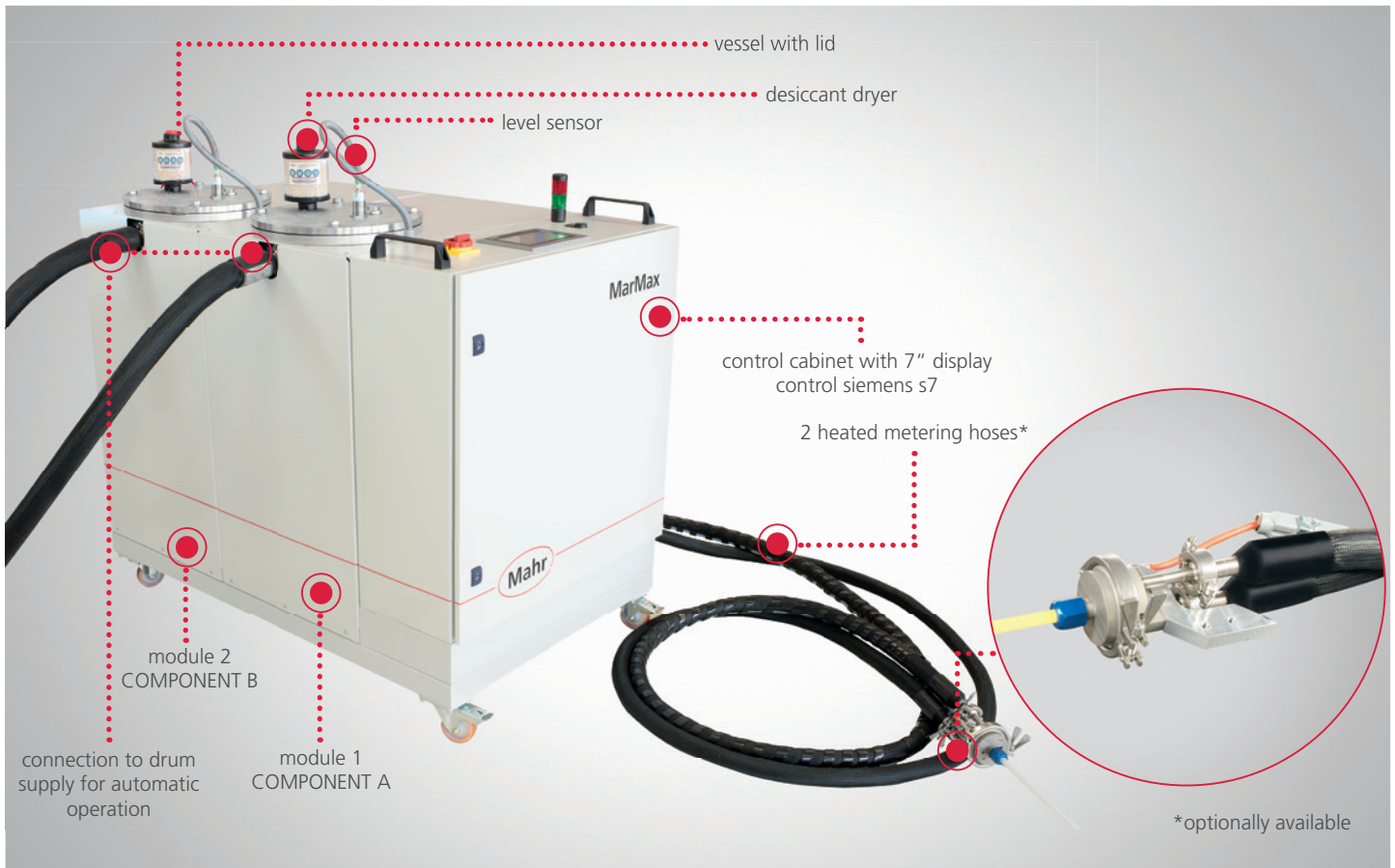


### In general

Coordinated monitoring of day tanks and adhesive puddle allows continuous operation of Meter Mix Dispense Machines. The machine automatically regulates thus the material feed at various line speed and adhesive removal. Even more fine adjustment to the complete coating process is feasible through the connection of Meter Mix Dispense Machines to the laminating line. A continuous dosing process is realized, namely from the material feed in Meter Mix Dispense Machines up to the optimal fill level in the adhesive puddle. The prompt reaction makes possible that gear metering pumps, too, run gentle to materials and with low energy consumption.

For process automation as well as at lots of linear meters, wide line width and high coating weight an automatic refill of Meter Mix Dispense Machines is recommended. Whether out of barrels or out of IBCs, the machine takes over control of the refilling.

# Meter Mix Dispense Machines



## Features

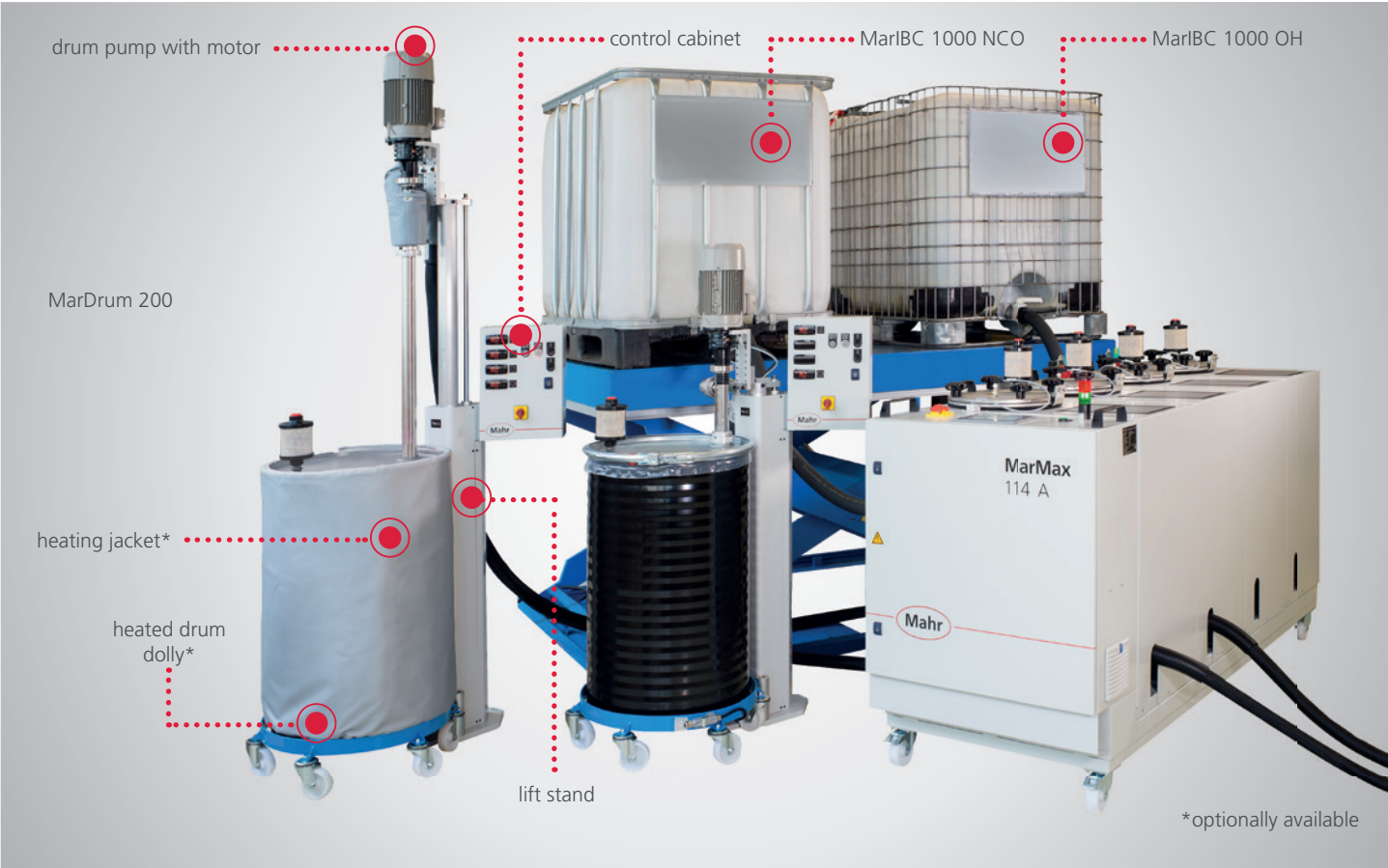
- for 1 up to 4 components, further components on request
- for solventless (LF) adhesive systems
- for cold and warm adhesive systems
- mobile and steady state machines
- mixing ratios 100:100 to 100:1, others on request
- flow rate approx. 50 to 4000 cc/min, depending on mixing ratio and viscosity
- metering gear pumps with stuffing box seal
- flow control optionally based on the coriolis or on the gear based working principle
- temperature control from supply tank to dosing/ mixing head
- level control of vessels
- production process automatic or manually
- level control of adhesive puddle
- purge and sleep mode
- data exchange with host computer
- remote diagnosis and maintenance
- precomputation of coating weight

- quality control by data recording of oprocess parameters
- service hotline
- online connection to converting lines of various manufacturers

## Scope of supply

- MarMax as 1K, 2K, 1+2K, 2+2K, 3K or 4K
- base frame including housing
- control cabinet with 7" display
- material vessel with 32 liters capacity
- metering hoses
- gear metering pumps including drive
- 1K dosing head, 2K, 3K or 4K mixing head
- adhesive puddle level sensor
- optical signal

# MarDrum & MarIBC



## MarDrum 200 Drum pump supply system

For automatic refilling of the Meter Mix Dispense Machine out of 200 l drums.

- controlled by Meter Mix Dispense Machine
- unheated, partially heated, fully heated
- admissible operating temperature max. 90 °C
- required compressed air supply 6 bar
- pump selection based on metering media
- convenient handling of drum change due to drum dolly
- also available as a stand-alone system

## MarIBC 1000 Containerversorgungssysteme

Various systems for 1000 liter container are available.

- gravimetric feeding of raw material
- material feed by pumping system
- control of material availability
- monitoring and safety concept

● standard / ○ optional		MarDrum	MarIBC
features			
heating features	unheated (LF)	●	●
	partially heated	○	-
	fully heated I (with additional heating jacket for barrel)	○	-
	fully heated II (with additional heating for pump outlet)	○	-
feeding technology	excentric screw pump	●	-
	diaphragm pump	○	○
	other	○	○
base plate		○	-



# Meter Mix Dispense Machines

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### Advantages

- MarMax is equipped for each given application.
- High-precision gear metering pumps are manufactured at the headquarters in Göttingen and guarantee a high metering accuracy.
- If highest accuracies are required, MarMax will be additionally equipped with flow rate instruments.
- Integrated sensor systems monitor the level of the adhesive puddle. Therefore just a minimum of mixed material is hold ready in the adhesive puddle of the laminator. This enables a more cost-effective handling of raw materials.
- A user friendly operation is guaranteed by a visualized user interface.
- Password protected operations assure secure handling.
- Each system is equipped with only those high-quality components needed for the application-specific configuration – a budget-friendly solution.
- 1+2K – switching between low-performing and high-performing adhesive system via software (1 NCO and 2 OHs on board).
- 2+2K – switching between two different adhesive systems on a button press.



MarMax maintenance agreements on request.



MarMax 1+2K (1 NCO and 2 OHs on board)

# Meter Mix Dispense Machines

## for flexible packaging / converting industry

### Features MarMax 1K bis 4K

● standard / ○ optional		MarMax 1K to 4K
features		
flow rate from ÷ to (further on request)		50 - 4000 cc/min
mixing ratio selectable from ÷ to [according to mixing ratio + viscosity] (further on request)		100:100 to 100:1
heating features	unheated	●
	partially heated	○
	fully heated	○
metering accuracy [accuracy of final mixing proportion] (higher accuracy on request)		± 3%
flow control instruments		± 1% with flow control instruments
pump technology	gear metering pump with stuffing box seal	○
	gear metering pump with magnetic coupling	●
level sensor adhesive puddle		on request
dosing/mixing head		●
vessel 32 l	screw/flap lid	●
	inner-coated vessel (PTFE-compound)	○
remote maintenance	ethernet	○
	modem	○
vessel connection with	desiccant dryer	○
	level sensor	●
	reserve	●
production process	manual	●
	automatic	○
optical signal		●
acoustic signal		○
touch panel operation, 7" coloured	basic	●
	comfort	○

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