



2 Komponenten Maschinenbau

Metering and Mixing Systems



Process**gearMix**
Laminate LF



Kindly approved by Messrs WINDMÖLLER & HÖSCHER

Messrs **2KM** have taken a completely new approach to metering systems with their product line **ProcessGearMix (PGM)** which differs from conventional metering machines not only with regard to capacity and cost-efficiency, but also where quality is concerned. Besides an operation without flushing agent, operation of the system has been made a lot easier.

Operators can be assured of maximum process reliability as a result of the development and production of state-of-the-art computer systems for metering control as well as decades of experience in all sectors of industry. By means of the **2KM** systems, the software can also be specifically adapted to the requirements of individual companies (e.g. data transfer to a host computer) without problems.

Operating Elements, Process Computer and Printer

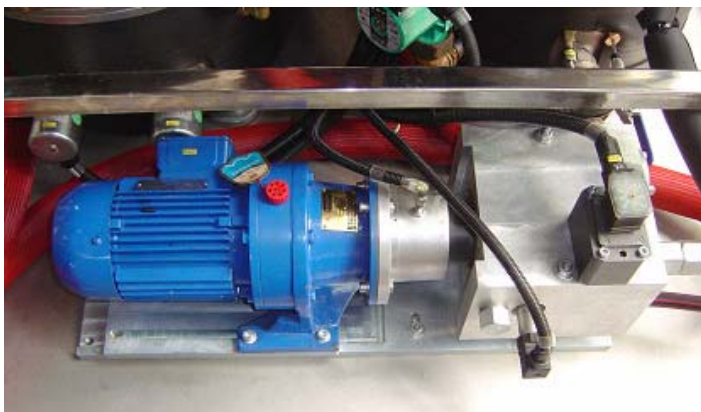
Thanks to the ergonomic order of the operating elements, an integrated process computer as well as a printer allowing documentation of the process data, an easy machine operation is guaranteed.



Operating Elements, Process Computer and Printer

Metering and Product Safety

Metering of the components is effected by means of high-capacity gear pumps with gear motors. The motors' frequency converters are connected to the process computer. Due to the measurement of the volume stream and monitoring of the pressure, data on the mixing ratio, output quantity and pressure are continuously transmitted to the computer which then adjusts the numbers of revolutions accordingly. Any faults are detected immediately and the process computer may then eliminate these faults within the adjusted time tolerances.



All data can be logged on a printer with the date, time and consecutive numbering. This ensures that all machine processes are fully reproducible at all times.

Heated Function Block with Metering Pump, Volume Stream Counter, Pressure Transducer and Filter

Material Heating and Transfer

The **PGM Laminate** puts special emphasis on the heating of the components, the product temperature is controlled from the material filling, up to the metering head. A key component is a downdraft vessel especially developed for this type of materials which heats up the components to the constant processing temperature within the shortest possible time. Each of the vessels has got a separate water heating circuit. Heating is effected by means of a water-heated double jacket in the upper area as well as a downdraft case placed at short distance from the vessel exit.

By means of water-heated hoses, the material vessels are connected onto the metering pumps. The metering pumps, together with the volume counters, pressure transducers and filter elements are assembled onto a heated function block. Transport of the components from the function block to the metering head is effected via separate heated hoses.



Downdraft Container



Downdraft case

Filling

Filling of the downdraft heaters is effected manually via a large opening in the vessel cover. The vessels themselves are equipped with constant feedback level probes. Optionally, the **PGM Laminate** may also be equipped with automatic filling (heated/unheated) directly from the supplied material vessels. The downdraft vessels are equipped with automatic inlet valves. If the filling level drops below the value adjusted at the process computer, the vessel is filled until reaching the maximum filling level.

Mixer Head

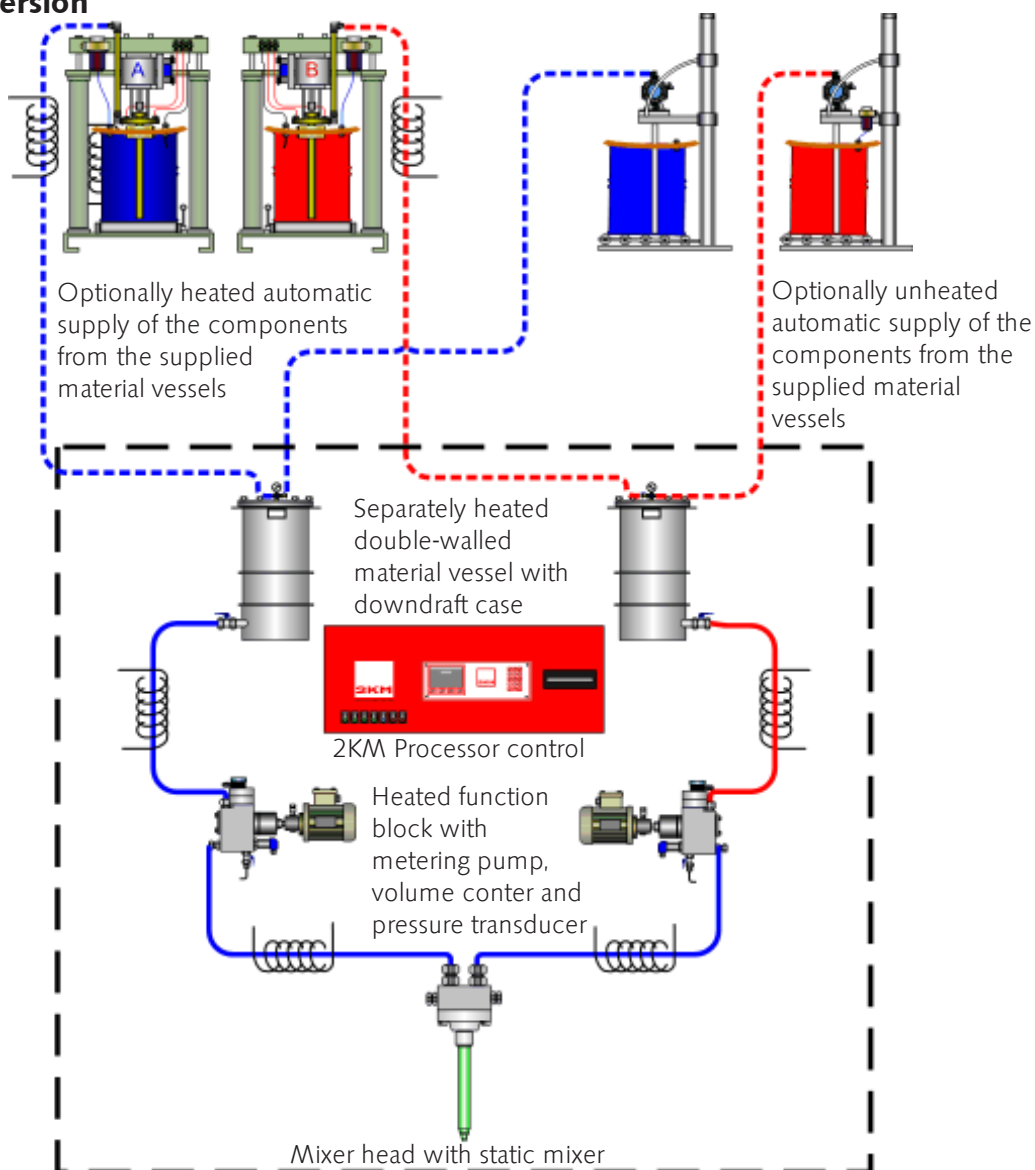
The mixer head includes a static disposable mixer. This mixing system reduces time lost through cleaning.



Mixer Head

General Machine Construction

With twin-post elevator heated version



Technical Data

Max.-Viscosity	flowable
Output Rate	1 - 2 Litres/min, depending on the viscosity
Mixing Ratio	from 1:6 to 6:1
Air Connection	1/4", 6-8 bar
Electric Connection	400 V/50 Hz, fuse 16 A (other voltages possible)
Dimensions (L x W x H in mm)	1412 x 1412 x 1355
Weight	approx. 750 kg

We reserve the right to carry out technical modifications.