

PLOUGHSHARE® MIXER FOR CONTINUOUS OPERATION TYPE KM



- High throughputs possible with small sizes
- Highest quality mixes in short mixing times
- Flexible use for almost all applications
- Gentle treatment of the product
- Reliable reproducibility of the mix quality
- Combined processes in one single machine
- Maintenance-friendly and easy to clean design
- Easy accessibility to all inside parts of the mixer
- Automated wet cleaning (WIP)



ALWAYS THE RIGHT MIX



Ploughshare® Mixer for continuous operation type KM 150



Ploughshare® Mixer for continuous operation type KM 1200

Lödige Ploughshare® Mixer for Continuous Operation type KM for Food Production

The Ploughshare® Mixer for continuous operation type KM works on the principle of a mechanically generated fluid bed introduced by Lödige to the mixing technology.

The mixing elements can be adapted to individual applications. These mixers achieve high throughputs which can be adjusted depending on the residence time, filling level and component properties.

Range of Application

- Processes requiring high throughputs
- Processing of bulk materials (powdery, granular, fibrous)
- Liquid addition for humidification and granulation
- Compensation of dosing fluctuations

Sizes

Mixer type	Total volume in litres	Through-put (l/h)	Length* (mm)	Width* (mm)
KM 150	150	4500	1550	490
KM 300	300	9000	1800	590
KM 600	600	18000	2400	700
KM 1200	1200	36000	2950	880
KM 2000	2000	60000	3490	1040
KM 3000	3000	90000	3550	1220

Specification of the flow rate is based on a one minute retention time. The required retention time is determined by mixing tests or defined using empirical values from comparable applications.

* approx. dimensions without drives

Mode of Operation

Ploughshare® Shovels rotate as mixing elements arranged systematically on the mixer shaft in a horizontal, cylindrical drum. The positioning, peripheral speed and geometric shape of the mixing elements are coordinated in such a way that they produce a three-dimensional movement of the product. The mechanically generated fluid bed, with total involvement of all product particles, ensures gentle and intensive mixing.

The resultant individualisation of the particles in the mix (fluid bed) allows the addition of liquids and coating of the particles with ease. The continuous process is operable at filling levels between 20 and 50 % with consistent mixing quality without influencing the mix quality. The mixing elements are adjusted in order to achieve a constant back-mixing during the whole retention time prior to discharge of the mixed product via the outlet for further processing.

The adjustment of the outlet size by means of a slide or an adjustable weir has a direct influence on the retention time.

The design of all Lödige Ploughshare® Mixers for the food sector is based on the guidelines of the EHEDG.

Optional Equipment

- Heating/cooling jacket for drum and endplates
- Heated/cooled main shaft
- Dust-free feeding systems
- Specific sealing systems for shaft bearings
- Devices for liquid addition