

# PLOUGHSHARE® MIXER FOR CONTINUOUS OPERATION TYPE KM-D



- Excellent product homogeneity
- High throughput rates with short mixing times
- Granulation possible even with short residence times
- Gentle treatment of products
- Consistent reproducibility
- Maximum availability
- Low maintenance mixer concept



Ploughshare® Mixer for continuous operation type KM 3000 with view of door side

## Ploughshare® Mixer for continuous operation type KM-D

### Mode of Operation

Ploughshare® shovels arranged on a shaft rotate in a horizontal drum close to the wall. Their position, peripheral speed and geometrical shape are adapted to each other so that they cause a three-dimensional movement of the product to be mixed. This generates a mechanical fluidised bed in which the entire product is constantly gripped, resulting in gentle yet extremely thorough mixing of the components. The separation of the particles in the fluidised bed makes adding liquids and coating the particles very easy.

The continuous process can be performed at filling levels between 25 % and 50 % without any impact on the mixing quality. The mixing tools are set so that there is constant remixing for the duration of the residence time, before the mixed product is guided toward further processing steps through the discharge opening. The size of the discharge opening set by a slide or segmented structure has a significant effect on the residence time.



View of shovel and chopper



Opening in the end plate with segmented weir and additional bottom discharge



View inside mixing drum

### Range of Application

- Dry bulk materials (powdery, granular, fibrous)
- Dry bulk materials and liquids (moistening + granulating)
- Liquids and pastes with low viscosities

### Optional Equipment

- Highly wear resistant surfaces
- Heavy duty mild steels, stainless steels and special materials
- Chopper units
- Heated/cooled drum, endplates and shaft
- Equipment for liquid supply

### Sizes

Mixer type	Total volume in litres	Flow rate in m <sup>3</sup> /h (Filling degree 50 % residence time 1 min.)	Dimensions l x w in mm
KM 150 D	150	4,5	2000 x 1000
KM 300 D	300	9	3000 x 1000
KM 600 D	600	18	4000 x 1500
KM 1200 D	1200	36	4000 x 1500
KM 2000 D	2000	60	5000 x 1500
KM 3000 D	3000	90	6000 x 1500
KM 4200 D	4200	126	7000 x 2000
KM 6000 D	6000	180	8000 x 2500
KM 8000 D	8000	240	8000 x 2500
KM 10000 D	10000	300	9000 x 3000
KM 13500 D	13500	405	10000 x 3000
KM 15000 D	15000	450	11000 x 3000
KM 20000 D	20000	600	12000 x 3000
KM 30000 D	30000	900	14000 x 3500

Basically, the Lödige Ploughshare® Mixer of type KM for continuous operation has a filling degree of approx. 25 to approx. 50 % of the total volume. The optimal filling degree depends on the application and can therefore vary according to the product mixed.