



**PUMPE**

Our technology makes an impact.

**DOSING TECHNOLOGY**



## **SOLID MATTER DOSING UNIT**

**Model 200 / 13  
Model 200 / 17  
Model 200 / 20  
Model 300  
Model 500 / 45  
Model 500 / 50**

# Areas of application

Optimal solutions for all requirements.

Our experience has taught us that every plant has its own unique requirements when it comes to capacity, substrate materials and conveyor technology. With our customized and proven solid matter

dosing units, we here at PUMPE have developed just the right solution to each of these challenges. Here are a few examples of areas of application.



## Solid matter dosing unit model 200 and model 300

- Dosing unit mounted at the level of the bottom plate of the fermenter
- 20 or 30 m<sup>3</sup> storage volume
- Out-feed via a dosing blade
- Blade drive 11 or 2x 7.5 kW
- 3-piece conveyor screw section model 360, consists of a base frame screw, conveyor screw and fermenter screw
- Weighing system



## Solid matter dosing unit model 300

- Dosing unit mounted on fermenter roof
- 30 m<sup>3</sup> storage volume
- Release via a dosing blade
- Blade drive 2x 7.5 kW
- 2-piece conveyor screw section model 360, consists of base frame screw and vertical fermenter screw
- Weighing system



## Solid matter dosing unit model 200/17

- Dosing unit mounted at the fermenter's fill level
- 17 m<sup>3</sup> storage volume
- Release via a dosing blade
- Blade drive 11 kW
- 2-piece conveyor screw section model 360, consists of base frame screw and 45 degree fermenter screw
- Weighing system
- Control device attached to unit



Solid matter dosing unit model 300 with 3-piece screw section model 360



Solid matter dosing unit model 500 with two 3-piece screw sections for feeding two fermenters

# Solid matter dosing unit from PUMPE

Robust. Economical. Long-lasting.

The smooth supply of substrate to your biogas plant is of existential importance. Maximum yield can only be achieved when substrate is evenly and continuously dosed. The PUMPE solid matter dosing unit is distinguished by its excellent price/performance ratio. It is particularly suitable for plants that predominantly feed their fermenters with corn silage. Its simple construction and low amount of required power guarantee efficient operation. With our PUMPE solid matter dosing units, you can be assured of a long-lasting system with proven technology, customizable options and of course our comprehensive PUMPE service package.



**1 Container – construction**  
Depending on the model, the corrosion-resistant, stainless steel construction has fill volumes between 13 – 50 m³. The structures are designed as a screwed modular system.



**2 Container – base frame**  
Our low-wear, stainless steel base frame stands for durability and maximum stability.



**3 Electrical drives**  
Robust spur geared motors transmit the output to a planetary bevel gear via a drive shaft. Available performance classes 5.5, 7.5 and 11 kW.



**4 Dosing blade**  
The continuous rotation of the stainless steel dosing blade prevents the substrate from bridging above the screw out-feed. The blade, which is equipped with a plastic slider bearing, processes the material such that it can be further processed by the subsequent screw technology. The revolution speed of the blade socket is set to the exact conveyor capacity of the base frame screw. Due to the flat design of the blade, minimal driving power is required. This also makes it very insensitive to foreign bodies. The dosing blade can easily be replaced during inspection.



**6 Oil reservoirs**  
With its robust, stainless steel design, the oil reservoir ensures easy control of optimum levels in the planetary bevel gear. The gear's output bearing is supplied with lubricant and easy to use.



**5 Access opening**  
In order to simplify maintenance, the solid matter dosing units are standard-equipped with access openings in the sidewalls.

## Equipment options and accessories

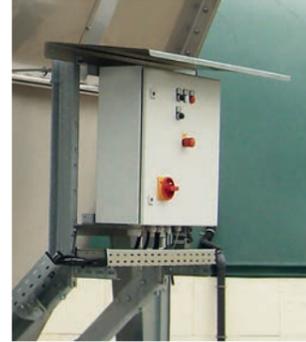
Customized solid matter dosing units for your business.



**Ladder**  
A hot-dip galvanized, non-slip ladder is available for a good and above all safe view of the dosing unit container.



**Cover**  
In order to reduce emissions and weathering, the solid matter dosing unit can be equipped with a hydraulically operated cover. The cover consists of a stainless steel frame covered with a UV-resistant tarp. The cover can be operated via radio remote control upon request.



**Controls**  
We provide custom-made control devices for controlling the dosing unit. In conjunction with the corresponding weighing computer, the dosing unit can also be independently operated.



**Weighing system**  
Shear force and pressure sensors are used alternatively for weighing the solid matter dosing units. A wide variety of display devices are available for programming dosages. An easily legible, alphanumeric large display with two rows of LEDs can also be attached. Both analogue signal outputs and Profibus interfaces can be made available.

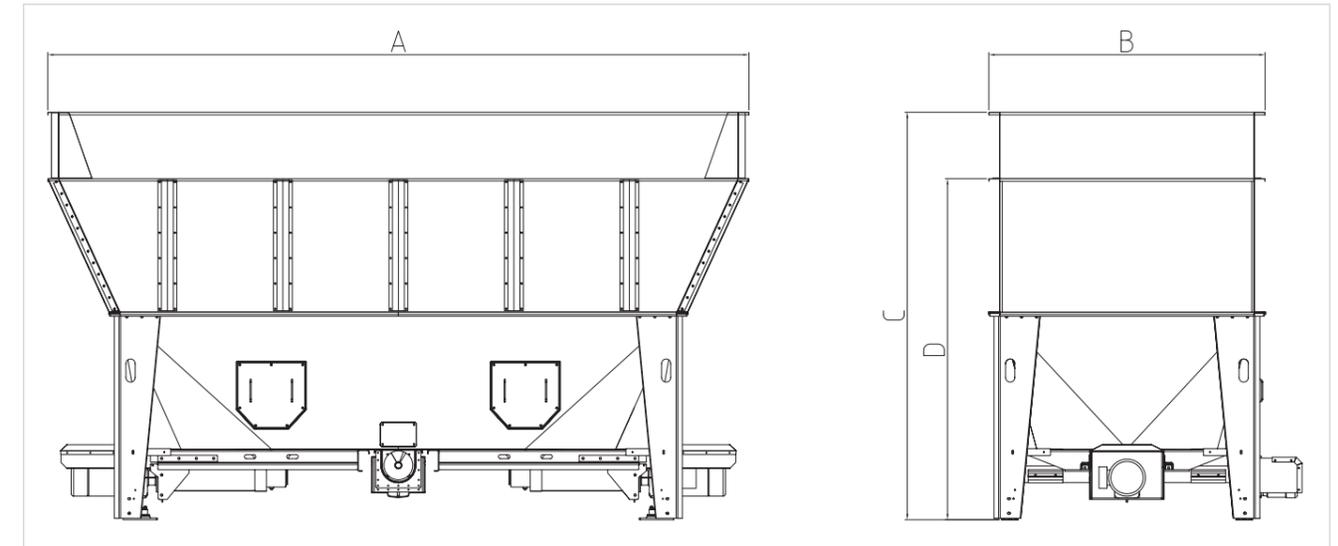


## An overview of models

Technology that makes an impact.

Choosing the optimal solid matter dosing unit is based on individual requirements such as the size of the plant, the spatial conditions, the type of substrates, their mixing ratios and the feeding intervals. In order to meet the individual needs of our clients, we offer six

different model sizes with various motorization and equipment options. Upon request, each plant can be supplied with a weighing device and complete electrical controls. We offer a customized solution for agriculturalists and energy producers.



Model	200 / 13	200 / 17	200 / 20	300	500 / 45	500 / 50
contents (m³)	13	17	20	30	45	50
A - container length (m)	3.70	3.70	3.70	5.90	8.10	8.10
B - container width (m)	2.50	2.50	2.50	2.20	2.20	2.20
C - total height (m)	2.95	3.55	2.95	3.55	3.55	3.80
D - sill height (m)	2.95	2.95	3.20	2.95	2.95	3.20
max. load (t)	6.5	8.5	10	15	22.5	25
drive	1	1	1	2	3	3
recommended drive (kW)	5.5	11	11	7.5	5.5	5.5
optional drive (kW)	7.5	7.5	7.5	11	7.5	7.5
dosing blade in stainless steel	x	x	x	x	x	x
hinged cover	o	o	o	o	o	o
base container in stainless steel	x	x	x	x	x	x
container top in stainless steel	x	x	x	x	x	x
weighing system	o	o	o	o	o	o
electric controls	o	o	o	o	o	o
transfer to screw model 360	x	x	x	x	x	x
transfer to screw model 450	o	o	o	o	o	o

x = standard equipment, o = optional scope of supply

# Konrad Pumpe GmbH

Innovative technology plus experience.



## AGRICULTURAL TECHNOLOGY

For more than 180 years, we have been closely following the developments and increasing demands of the agricultural industry. Our barn equipment and feeding systems are characterized by sophisticated functionality, individual concepts and the highest standards of quality and durability. Partnership is our foundation; reliability and professionalism are our recipe for success.



## DOSING TECHNOLOGY

The transition to renewable sources of energy is opening up new perspectives for agricultural practices. We here at PUMPE are reliable partners to the energy farmers of tomorrow and offer innovative products and proven technology for biogas operators. From the design process, to manufacturing in our own production facilities, to installation and maintenance, we guarantee perfect service from a single source.



## METAL TECHNOLOGY

Our origin is our expertise. Since 1830, we have been forging solid realities out of metal. With the latest technology and our years of experience, we are coming up with customized metal solutions for various applications in agriculture and industry. Custom-made solutions and in-house developments using steel and stainless steel is our passion.

## Our service for your success

- Full service – from design and manufacturing to installation and service
- 365 days a year customer service for our clients
- Our own high bay warehouse and in-house production guarantee availability of all spare parts
- Quick reaction times and personal contacts
- Customized production and adaptations for individual specifications
- Close cooperation with our clients and consulting by our specialists
- Short distances and clear structures for perfect customer service
- Worldwide installation and maintenance of your equipment
- Quality and material "Made in Germany"
- A qualified staff that receives ongoing training guarantees the highest level of service
- More than 180 years of experience in the metal processing
- Owner-managed family company



### Konrad Pumpe GmbH

- project engineering
- special machinery
- CNC sheet metal
- accessory and containers
- machinery and equipment
- steel construction
- barn equipment
- feeding systems for pigs
- dosing technology for biogas plants



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