



Our technology makes an impact.

**DOSING TECHNOLOGY**



## **SB-MIX DOSING UNIT**

**Model 45  
Model 60  
Model 80  
Model 100  
Model 120  
Model 140  
Model 90K  
Model 100K  
Model 120K  
Model 200K**

# 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 SB-Mix

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.



## SB-Mix 60

- 60 m<sup>3</sup> storage volumes
- Out-feed via 2 vertical mixing screws
- Mixing screw drive 2x 7.5 kW
- 3-piece conveyor screw section model 360, consists of a base frame screw, conveyor screw and fermenter screw
- Fill level monitoring
- Weighing system



## SB-Mix 120K

- 120 m<sup>3</sup> storage volumes
- Out-feed via 2 vertical mixing screws
- Mixing screw drive 2x 11 kW
- 2-piece conveyor screw section model 450, consists of base frame screw and inclined conveyor screw on mixing pump / liquid in-feed Fill level monitoring
- Weighing system with large display



## SB-Mix 80

- 80 m<sup>3</sup> storage volumes
- Out-feed via 2 vertical mixing screws
- Mixing screw drive 2x 7.5 kW
- 3-piece conveyor screw model 450, consists of base frame screw, conveyor screw and fermenter screw
- Fill level monitoring
- Weighing system



SB-Mix model 120K



SB-Mix model 80 with stainless steel cover

# SB-Mix dosing unit from PUMPE

Energy optimized. Long-lasting. Economical.

The storage and dosing of substrates for biogas plants in large quantities is becoming increasingly important. The PUMPE SB-Mix dosing unit is characterized by its large storage volumes with reliable downstream out-feed technology. It has a wide variety of applications and requires an impressively low amount of energy. With our PUMPE SB-Mix dosing unit, you can be assured of a long-lasting system with proven technology, customizable options and of course our comprehensive PUMPE service package.



### Storage container

The robust design of the storage container is the product of our many years of experience. The section of the container that comes into contact with products is made from stainless steel.



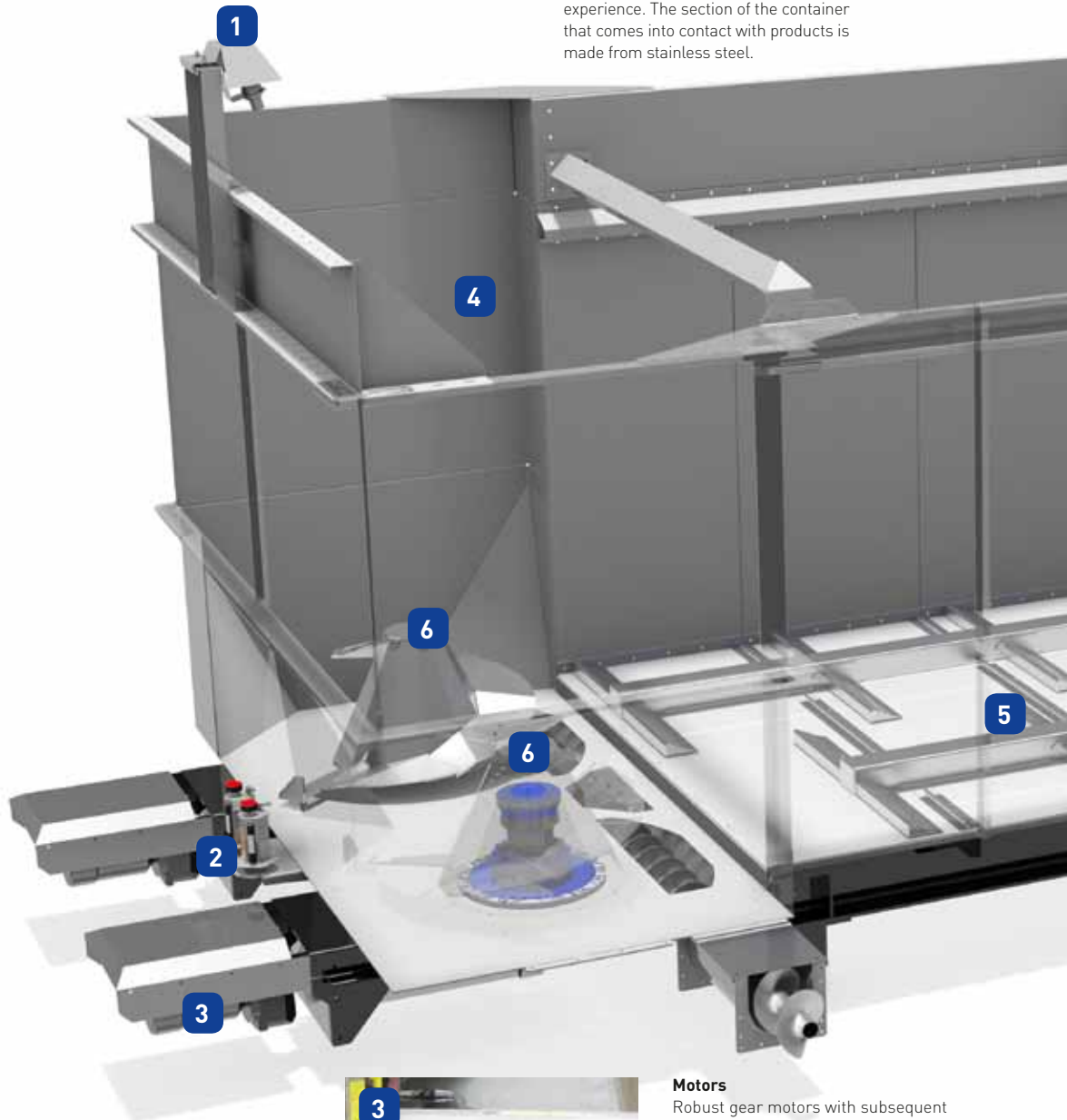
### Level measurement

A standard-equipped, high-quality ultrasonic sensor monitors the fill level in the processing and dosing area. The push rakes only continue to convey material into the dosing area when the level in that area falls below the adjustable level setting. This control significantly reduces the running times of the hydraulic power systems and the energy consumption of the mixer and blade motors.



### 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.



### Motors

Robust gear motors with subsequent drive shaft and planetary bevel gear ensure reliable drive of the dosing and mixing screws.



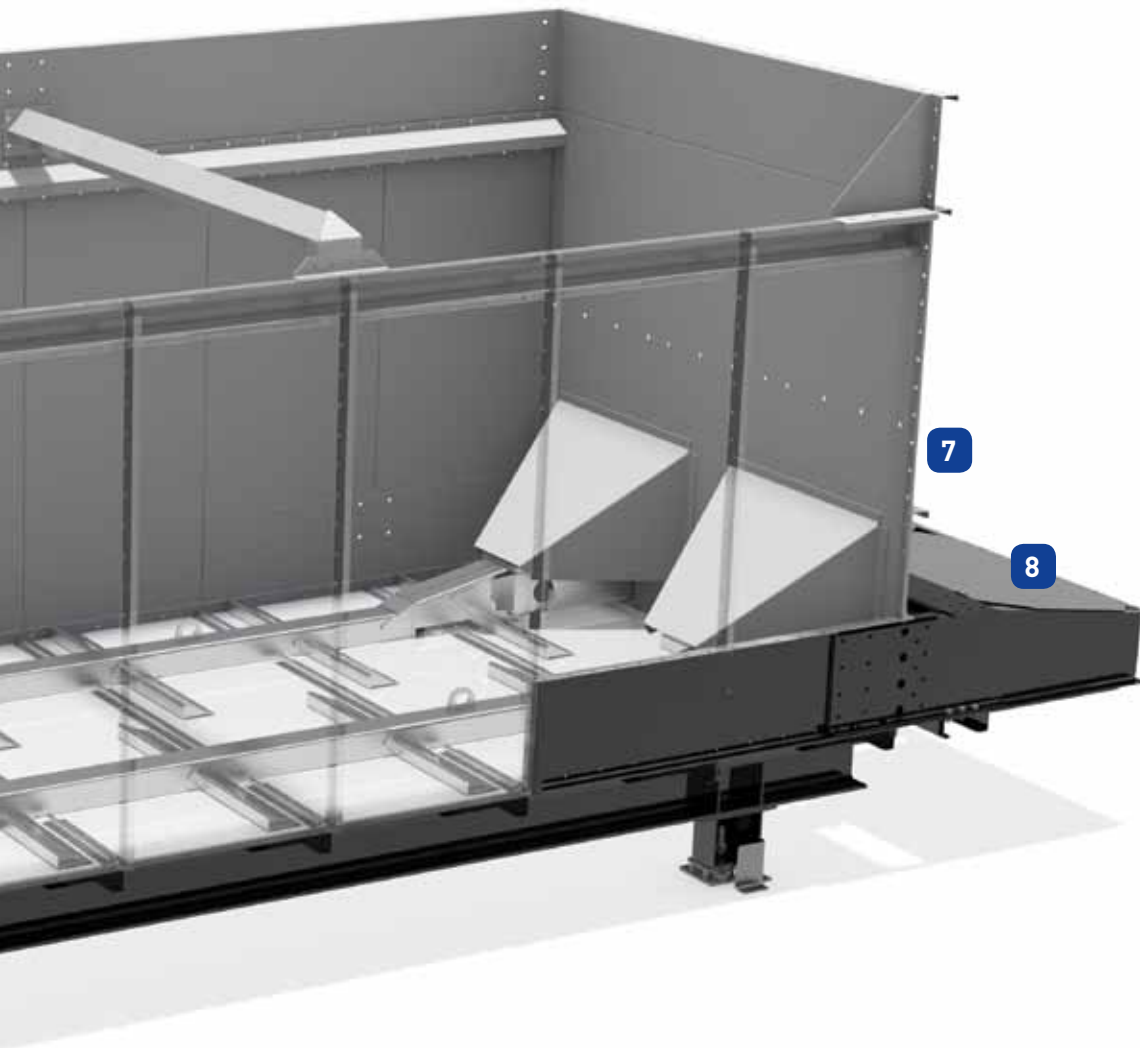
**Push strip system**

On the floor of the dosing container, hydraulically driven stainless steel push strips convey the material to the processing area. The floor itself is coated with wear-resistant plastic, which results in low friction between the push rakes and the floor.



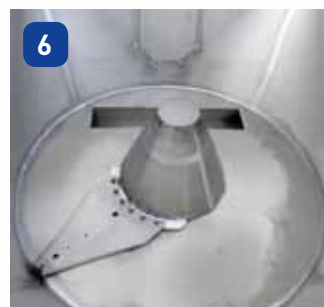
**Hydraulic power unit**

The push rakes are driven by an electric hydraulic power unit, which is standard-equipped with thermal monitoring and a low oil switch. A pressure-dependent, hydraulic switching valve controls the movement of the push rakes.



**Cylindrical feed through**

The hydraulic cylinders move in a corrosion-resistant, stainless steel housing and are thus protected from direct substrate contact.



**Processing and dosing area**

Various dosing and grinding systems can be used to process stored substrates. Depending on requirements, simple dosing blades or vertical mixing screws can be employed in various configurations.

# Equipment options and accessories

## Customized SB-Mix dosing unit for your business.



### Cover

In order to reduce emissions and weathering, the SB-Mix dosing unit can be equipped with a hydraulically operated cover. The cover is designed in segments and made from sturdy stainless steel. The cover can be operated via radio remote control upon request.



### Overload protection

In order to prevent substrate from getting behind the container during loading, additional stainless steel assembly elements can be mounted (only possible for devices without covers).



### Weighing system

For precise control of fill quantities, we rely on shear force or pressure sensors. Various display devices – optionally coupled with an easily legible, alphanumeric large display with two rows of LEDs – ensure ease of use and simple programming of optimum dosage. For further processing of data, analogue signal outputs as well as Profibus interfaces can be made available.



### Access opening

In order to simplify maintenance, containers can be optionally equipped with access openings in the sidewalls.



### 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.



### Ladder

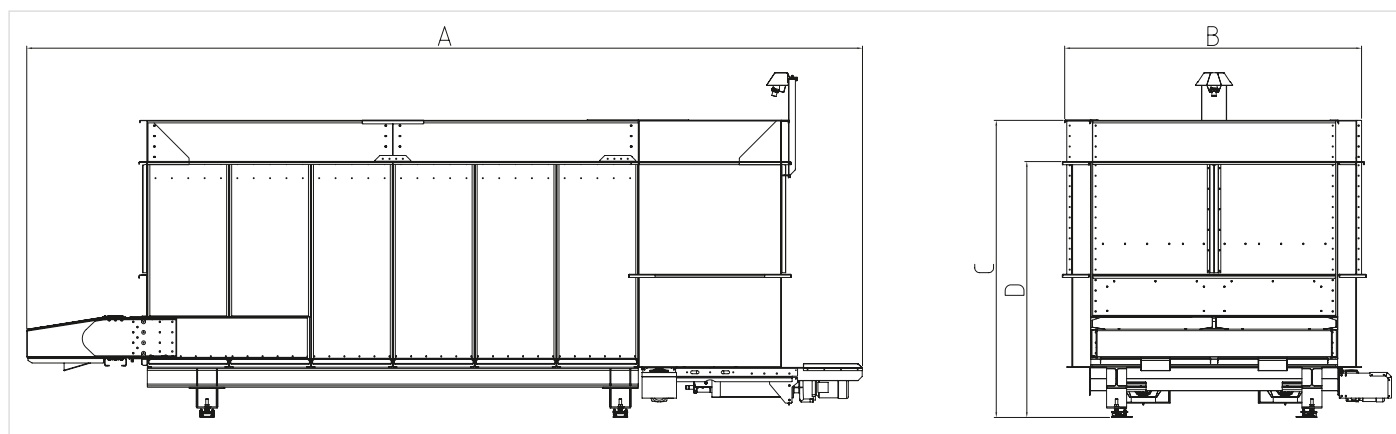
A hot-dip galvanized, non-slip ladder is available for a good and above all safe view of the SB-Mix dosing unit.

# 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 ten 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.



| Typ                                   | SB-Mix standard series |        |        |        |        |        | SB-Mix compact series |       |       |       |
|---------------------------------------|------------------------|--------|--------|--------|--------|--------|-----------------------|-------|-------|-------|
|                                       | 45                     | 60     | 80     | 100    | 120    | 140    | 90                    | 100   | 120   | 200   |
| contents (m <sup>3</sup> )            | 45                     | 60     | 80     | 100    | 120    | 140    | 90                    | 100   | 120   | 200   |
| A – total length (m)                  | 9.55                   | 10.05  | 13.00  | 16.45  | 19.40  | 22.35  | 10.10                 | 11.10 | 13.10 | 22.60 |
| B – container width (m)               | 2.50                   | 2.98   | 2.98   | 2.98   | 2.98   | 2.98   | 3.98                  | 3.98  | 3.98  | 3.98  |
| C – total height (m)                  | 3.56                   | 3.56   | 3.56   | 3.56   | 3.56   | 3.56   | 4.10                  | 4.10  | 3.85  | 3.85  |
| D – sill height (m)                   | 3.06                   | 3.06   | 3.06   | 3.06   | 3.06   | 3.06   | 3.37                  | 3.37  | 3.37  | 3.37  |
| max. load (t)                         | 23                     | 30     | 40     | 50     | 60     | 75     | 60                    | 70    | 85    | 140   |
| drive push rakes (kW)                 | 5.5                    | 5.5    | 5.5    | 2x 5.5 | 2x 5.5 | 2x 5.5 | 11                    | 11    | 11    | 11    |
| dosing blades                         | 1                      | 2      | 2      | 2      | 2      | 2      | 2                     | 2     | 2     | 2     |
| blade dosing drive (kW)               | 11                     | 2x 4   | 2x 4   | 7.5    | 7.5    | 7.5    | 2x 4                  | 2x 4  | 2x 4  | 7.5   |
| dosing unit-mixing screw              | o                      | o      | o      | o      | o      | o      | o                     | o     | o     | o     |
| recommended drive (kW)                | 22                     | 2x 7.5 | 2x 7.5 | 15     | 15     | 15     | 2x 11                 | 2x 11 | 2x 11 | 22    |
| hinged cover                          | o                      | o      | o      | o      | o      | o      | -                     | -     | -     | -     |
| stainless steel dosing area           | x                      | x      | x      | x      | x      | x      | x                     | x     | x     | x     |
| push floor plastic coating            | x                      | x      | x      | x      | x      | x      | x                     | x     | x     | x     |
| stainless steel side wals             | x                      | x      | x      | x      | x      | x      | x                     | x     | x     | x     |
| overload protection (stainless steel) | o                      | o      | o      | o      | o      | o      | o                     | o     | o     | o     |
| weighing system                       | o                      | o      | o      | o      | o      | o      | o                     | o     | o     | o     |
| electric controls                     | o                      | o      | o      | o      | o      | o      | o                     | o     | o     | o     |
| transfer to screw model 360           | x                      | x      | x      | x      | x      | x      | o                     | o     | o     | o     |
| transfer to screw model 450           | o                      | o      | o      | o      | o      | o      | o                     | x     | x     | x     |

x = standard equipment, o = optional, - = not available

# 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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