



Our technology makes an impact.

DOSING TECHNOLOGY



SCREW TECHNOLOGY

for biomass and loose material

Model 360

Model 450

Model 600

Conveyor screws for biomass

Individual solutions for every plant.



Screw section model 450 with horizontal and inclined screw conveyance to a crusher unit

We offer conveyor screws in various designs and at various conveyance capacities, with which we can meet the most diverse requirements with regard to feed rate and substrate composition. The screws can be manufactured in various grades of steel and stainless steel. Our horizontal and inclined conveyor screws are designed as feeder screws, which are lined with wear-resistant plastic. The particular shape of the vertical screw's outer tube inhibits the movement of the substrate in the screw and thus ensures the continuous conveyance of even the most difficult materials. The advantage of vertical conveyance is that the screw shaft is centered in the feed substrate and doesn't come into contact with the outer casing. The screw drives are durable and robust offset geared motors, designed for the hazardous area according to the applicable ATEX guidelines. With the easy installation system technology, the pre-assembled screw system can be installed and ready for operation within a few hours.

3-piece conveyor screw section model 450 consisting of base frame screw, steep conveyor screw and fermenter screw



Conveyor section model 360 with base frame screw, steep conveyor screw and fermenter screw with silo mounting plate

In the 3-piece conveyor section, the steep conveyor screw serves as a support for the fermenter screw. This is done freely by the silo mounting plate and thus decouples the conveyor technology and the fermenter wall. In order to optimize the weighing accuracy, the horizontal screw leading out of the dosing container is flexibly connected with the steep screw.

Wall feed-through



Silo mounting plate for fermenter screw

The silo mounting plate is permanently elastically sealed against the fermenter wall and can also easily be retrofitted to existing installations. The feed-through dips into the substrate in the fermenter underneath the fill level, thus ensuring that no gas can escape, even when the fermenter screw is disassembled. What sets our system apart is that the fermenter screw can be disassembled even when the fermenter is full. Reducing the fill level is not required.



Fermenter screw

Thanks to special mounting integrated the fermenter screw's outer tube, no cumbersome repository is required. The material is thus easily conveyed to the fermenter.



Conveyor screws for biomass

A wide range of applications.



Double base frame screw model 360 for taking in material from the push floor systems etc.

PUMPE's construction department specializes in custom solutions – just ask us!



Conveyor section model 360 with double base frame screw

Our screw systems can be connected to a wide variety of dosing containers.



Steep conveyor screw model 360 with 2 fermentation screws for double entry for 2 containers

Interesting solution for extensions and repowering.



Base frame screw and fermenter screw model 360 for floor grade input

We tailor our conveyor systems to a site's architectural and topographical conditions.



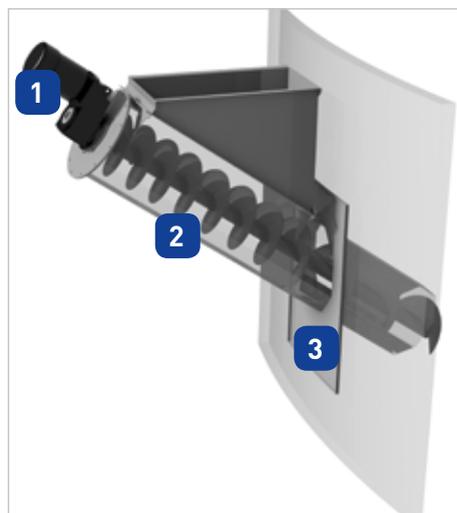
Base frame screw and inclined conveyor screw model 360 for feeding a mixing container

Our conveyor screws can be applied in diverse areas, including fully automatic feeding systems for cows and pigs and in the recycling industry.

Conveyor screw technology model 450

Designed as a double steep screw for filling fermenters up to 20 m high.

Specifications



Fermenter screw model 600 side input

- 1 Screw and drive according to ATEX
- 2 All stainless steel construction
- 3 Mounting plate in the fermenter wall



Screw section model 360/450

- 1 Steep conveyor screw and fermenter screw drives according to ATEX
- 2 The fermenter screw is attached to the steep screw
- 3 Stainless steel steep conveyor screw design according to ATEX conveyor height up to 20 m
- 4 Solid matter dosing unit in different designs
- 5 Stainless steel base frame screw. In-feed and dosing screw for blade lengths, according to model, up to 130 mm
- 6 Wall duct standard 35°
The component is responsible for the liquid and gas seal
- 7 Fermenter screw V2A and V4A
Design according to ATEX. Various feed through systems
- 8 Swivel flange
Mounting can be adjusted
- 9 Screw base for supporting the weight of steep and fermenter screws on the foundation



Fermenter screw model 600 vertical

- 1 Screw and drive according to ATEX
- 2 All stainless steel construction
- 3 Non-contract transfer from the biomass mixer to the fermenter screw
- 4 Mounting plate for fermenter cover
- 5 Stainless steel conveyor shaft

An overview of models

| Model | Frame screw model 360 | Steep screw model 360 | Fermenter screw model 360 | Frame screw model 450 | Steep screw model 450 | Fermenter screw model 450 | Fermenter screw model 600/90° | Fermenter screw model 600/55° |
|--------------------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|---------------------------|-------------------------------|-------------------------------|
| output up to m ³ /h | 12 | 12 | 12 | 22 | 22 | 22 | 20 | 20 |
| Ø screw flight | 250 | 280 | 250 | 360 | 360 | 360 | 450 | 450 |
| material strength | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| overall length (m) | <5,50 | <7,20 | <3,50 | <4,50 | <4,50 | <3,50 | <3,50 | <3,50 |
| drive output (kW) | 3 | 5 | 2,5 | 4 | 5 | 3,6 | 3,6 | 3,6 |
| total length (m) | <8,50 | <9,00 | | <6,00 | <8,00 | | | |
| drive output (kW) | 4 | 6,8 | | 5,5 | 6,8 | | | |
| material V2A | x | x | x | x | x | x | x | x |
| gas area V4A | | | x | | | x | x | x |
| drill hole fermenter wall | | | 450 | | | 550 | 700 | 700 |

x = standard equipment

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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