

## Press release

### **BIBKO® INFRA<sup>TEC</sup> - Compact recycling system for waste from sewer cleaning (AVV 20 03 06)**

Reduction of disposal volume and reduction of Z-value with low space requirement

Free space in a depot is a valuable asset. It is therefore all the more important to minimize the space requirement and thus the consumption of free areas when investing in new machines. With the recycling system IT-2500/2+, BIBKO®, business unit **INFRA<sup>TEC</sup>**, offers a solution for waste from sewer cleaning (AVV 20 03 06) and other waste.

#### **Reduce disposal costs**

The aim of the IT-2500/2+ recycling system is to reduce the disposal costs of the collected waste. This is achieved by the following measures:

- Reduction of the disposal volume
- Reduction of the organic content
- Reduction of the allocation value Z



Discharge procedure of suction/ rinsing vehicle

#### **Factors influencing the recycling quality**

A wet-mechanical process is used for the recycling of waste from sewer cleaning. In order to ensure the quality of the process and to achieve the above objectives, various factors play a role:

1. **Material feeding**  
The material feed into the recycling machine must be designed in such a way that the quality of the recycled mineral components and the separation cut of the process water are independent of the discharge speed of the vehicle. This is the only way to ensure that the quality targets are met even in the case of intermittent feeding of the plant (e.g. material lumps from vehicle tanks).
2. **Water bath size**  
The size of the water bath in the recycling machine also determines the density of the water bath. If the density is very high because the water bath is too small, the quality of the recycling process is no longer guaranteed. The organic content is no longer reduced to the required extent.
3. **Fresh water supply**  
The proper functioning of a wet-mechanical recycling process is only ensured if a certain amount of fresh water is regularly added to the process. This prevents, in particular, an excessive increase in density in the recycling machine.



BIBKO®-Recycling machine

4. Machine design  
An optimum recycling result is achieved when the recycling process is carried out in two process stages:

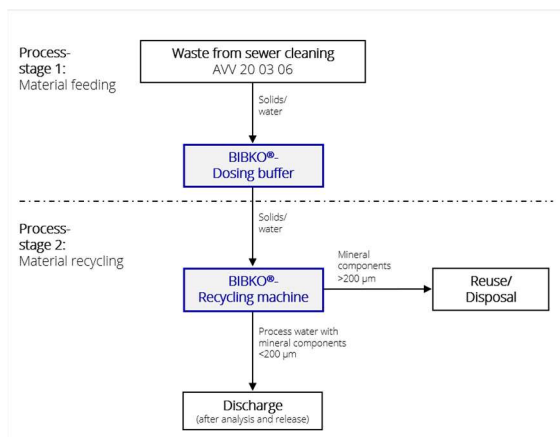
Stage 1    Pre-washing  
Stage 2    Main washing

The recycling quality is ensured by the addition of fresh water as described above, which is carried out in countercurrent.

5. Separation cut  
The separation cut  $d_{50}$  is defined as the smallest particle diameter of which at least 50% can still be separated from the water bath in the recycling plant. The lower this value, the less material (e.g. fine sand) is discharged with the process water. This facilitates discharge into the sewage system.

#### BIBKO® INFRA<sup>TEC</sup> – Recycling solution

The following diagram shows the schematic structure of the IT-2500/2+ recycling solution.



BIBKO®-Recycling solution

#### Process stage 1: Material feeding

The material from the vehicle is first fed into the dosing buffer via a sufficiently large feed hopper.

There, the material is buffered and then evenly transported to the recycling plant. This transforms a discontinuous, intermittent flow of material into a continuous, uniform flow. Excess water runs in free fall directly from the dosing buffer into the recycling plant.

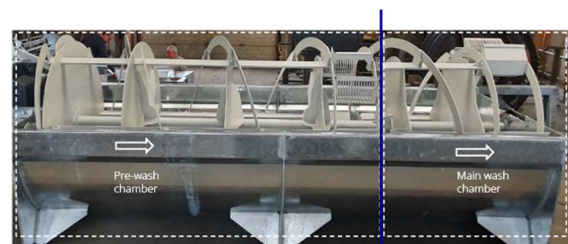


Loading of Recycling machine/ Dosing buffer

#### Process stage 2: Material recycling

In the recycling plant, the material first enters the pre-washing chamber. The material is conveyed and segregated by a rotating spiral. In addition, adhesions are removed by friction. At the same time, water from the main washing chamber flows through the pre-washing chamber.

Process water containing fine mineral particles is discharged via the machine outlet. Due to the built-in separation cut optimization, the separation cut is approx. 200 µm.



Pre-wash-/ Main wash chamber

The material is removed from the pre-wash chamber via a bucket elevator and transported into the main wash chamber. As in the prewash chamber, the material is also conveyed and segregated here via a rotating spiral.

At the same time, fresh water flows through the main washing chamber. This completes the recycling process.

The recycled material is removed from the main washing chamber via a bucket elevator, fed to the discharge screw conveyor and transported to the material box.



Recycled material

#### Technical data IT-2500/2<sup>+</sup>

##### Dosing buffer

Length	2.500 mm
Width	2.150 mm
Height	2.150 mm
Feed hopper	2.500 x 2.500 mm
Buffer volume <sub>ges.</sub>	4 m <sup>3</sup> - of which: 2,5 m <sup>3</sup> in dosing buffer 1,5 m <sup>3</sup> in hopper

##### Recycling machine

Length	2.500 mm
Width	2.150 mm
Height	2.150 mm
No. of chambers	2
	Pre-/ Main washing
Recycling capacity	15 m <sup>3</sup> /h - mechanical

##### Discharge screw

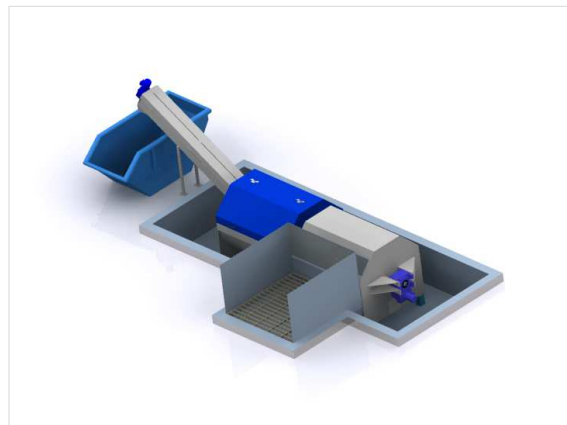
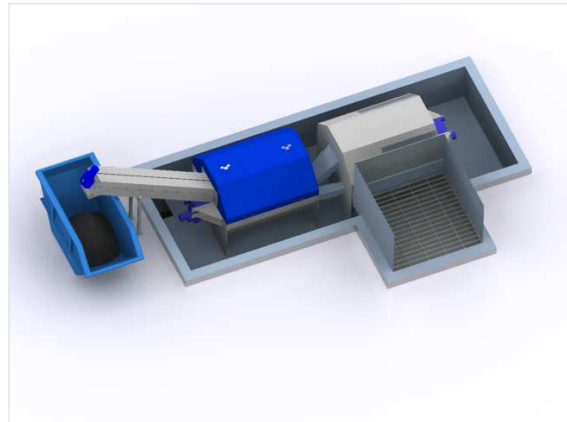
Length	4.000 mm
Ø-Screw	325 mm
Conveying angle	30°
Discharge height	2.000 mm

##### Control system

Type	SPS – S7-1200
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#### Machine layout

The machine layout of the IT-2500/2<sup>+</sup> recycling system is shown below.



Machine layout Recycling system IT-2500/2<sup>+</sup>

#### Use for other types of waste

In addition to the recycling of waste from sewer cleaning (AVV 20 03 06), the recycling system can also be used for other types of waste. These include waste from:

- Sand traps AVV 19 08 02
- Freshwater drilling AVV 01 05 04
- Road cleaning AVV 20 03 03
- Rainwater pits AVV 17 05 06

If necessary, other facilities and systems are available for the treatment of process water prior to discharge into the sewer system.

## Conclusion

With the compact recycling system IT-2500/2+ waste disposal costs are reduced by:

- Reduction of the disposal volume
- Reduction of the organic content
- Reduction of the allocation value Z

Due to the constructional design, a recycling system is available despite the compact design, which ensures a constant high quality of the recycled material. This makes the purchase of an IT-2500/2+ recycling system a profitable investment.