

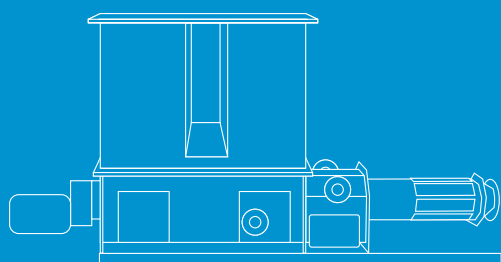


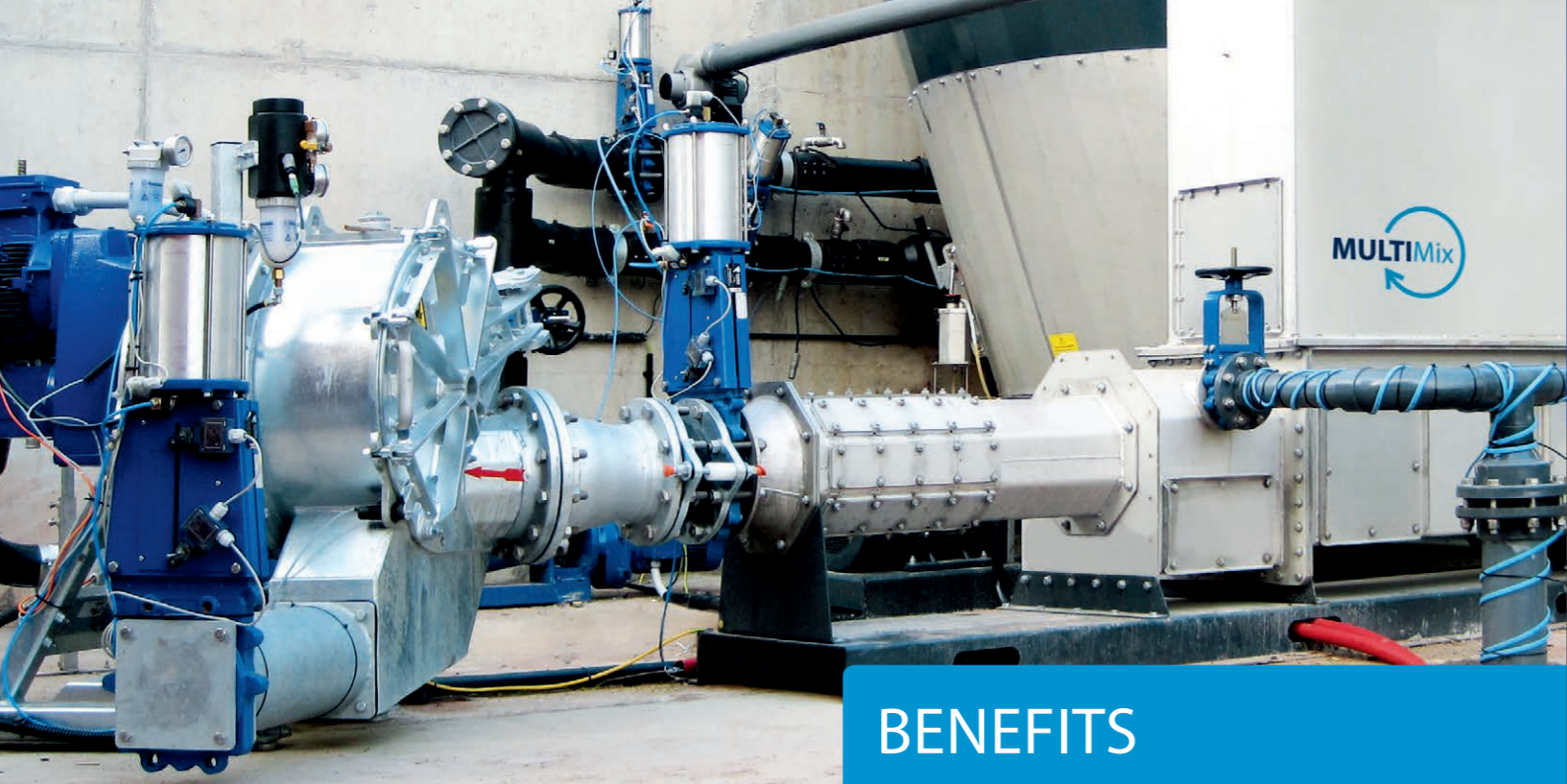
Innovative liquid input system for biogas plants

INPUT TECHNOLOGY



Organic energy worldwide





BENEFITS

MULTIMix The innovative liquid input system for biogas plants

The energy potential of grass silage and whole plant silage is very high. Frequently, bacteria are not capable, though, of completely processing carbohydrates and proteins to biogas as a result of their long, smooth surfaces.

Now, a solution is available for this problem.

Simple structure and function

The retrofitable **MULTIMix** is positioned between the solids input system and the fermenter. From the dosing feeder, the substrates enter the **MULTIMix**, where they are mixed with recirculate. This mashing is supported by a screw system that also roughens the fibres. Before the long-fibre substrates and lumpy materials enter the macerator and are effectively comminuted, an upstream process stage reliably removes foreign materials prior to being conveyed to the pump. Thus, only substances that are shredded to a size suitable for bacteria enter the fermenter.

Fermentation substrates (examples)

Renewable raw materials:	Grass & maize silage, whole plant silage, beet silage
Manure and dung:	All animal species supported
Co-substrates:	Food leftovers, vegetable waste, abattoir waste

The use of **MULTIMix** greatly increases the possibility of a flexible input mix as an alternative to expensive maize silage.

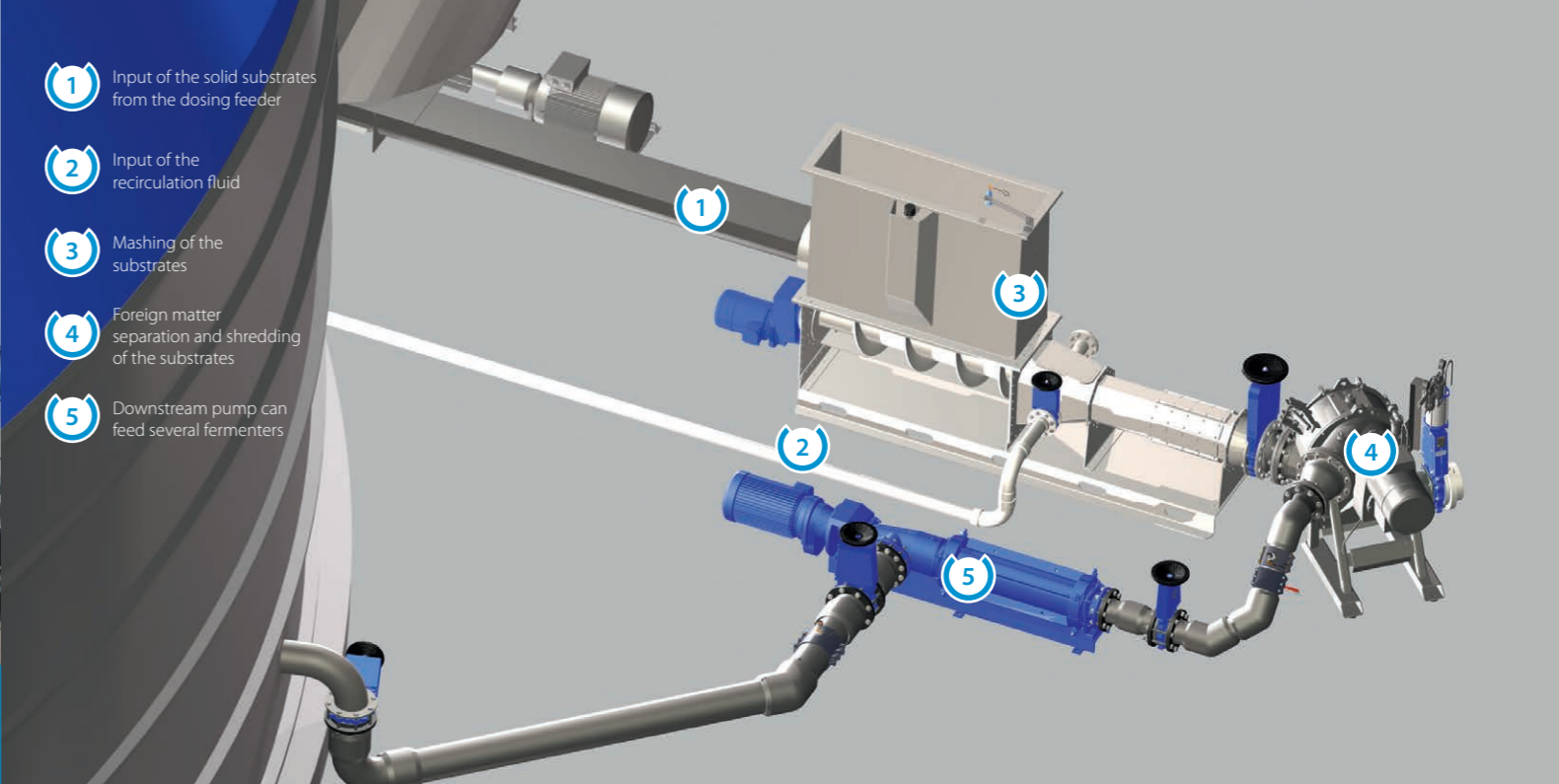
- Processes fibrous, sticky and soft substrates (up to a high percentage)
- Bacteria-oriented substrate shredding for immediate biogas production
- Loading of the fermenter with homogeneous, mashed bio-suspension
- Minimises the risk of floating and sediment layers
- Energy efficiency through reduction of agitation work and significant increase in the pump's typical service life
- Unique feature of **MULTIMix**: Reliable foreign matter separation upstream of the pumps reduces wear and tear
- Several fermenters can be fed with only one **MULTIMix**
- The risk of obstruction of the input system is prevented by means of uncomplicated pump and control technology
- Can be retrofitted even in third-party plants

These benefits enable more efficient plant operation and a short payback period.*

*Depending on the market conditions and the personal situation.



- 1 Input of the solid substrates from the dosing feeder
- 2 Input of the recirculation fluid
- 3 Mashing of the substrates
- 4 Foreign matter separation and shredding of the substrates
- 5 Downstream pump can feed several fermenters



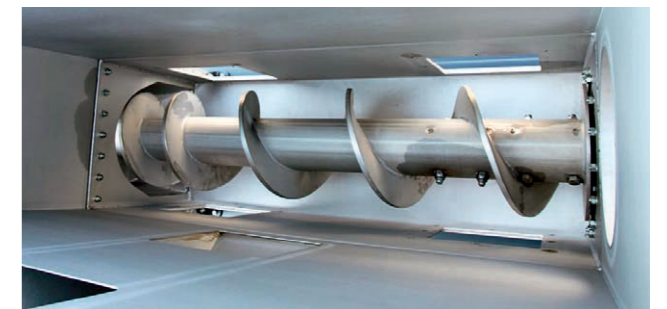
Fibrous substrates like solid manure can be processed up to high percentage.



Positioning of **MULTIMix** between the solids input system and the fermenter.



Macerator ensures reliable substrate shredding and separates extraneous materials.



Mashing of the solid substrates with recirculation fluid in the first step.

MULTIMix – specifications

Parameters	Maize silage	Grass silage/solid manure
Throughput	8–9 t/h	4.5 t/h
Max. solids content*	13%	11%
Substrate dimensions	up to 40 mm ø	up to 50 mm length Clumps of up to 100 mm ø

*After mashing.





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