

References

(Selection)

Wastewater and biogas projects



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / gas boiler
Treatment capacity	40000 m ³ /a
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 800 mg/l
Biogas production	4,5 m ³ /h, methane concentration 75 % Energy production: ca. 35 kW
Location	Germany / Hachenburg
Completion	05/2023



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing
Treatment capacity	100000 m ³ /a
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 800 mg/l
Biogas production	12 m ³ /h, methane concentration 75 % Energy production: ca. 50 kW electric
Location	Germany / Alpirsbach
Completion	11/2022



Gas treatment

Sector: Sugar production

Design / Planning / Construction / Supervision

Compact container plant Gas dryer, gas desulfurization, gas compressor

Treatment capacity Bio gas 500 m³/h

Location Germany / Rain

Completion 10/2022



Anaerobic wastewater treatment

Sector: Beverage / Juice producers

Design / Planning / Construction / Supervision

Compact container plant FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / CHP

Treatment capacity 30000 m³/a

Pollution of wastewater COD: 3000 – 6000 mg/l

Quality of treated water Indirect discharge (sewerage) COD: < 800 mg/l

Biogas production 6 m³/h, methane concentration 70 %
Energy production: ca. 15 kW electric

Location Germany / Laichingen

Completion 09/2022



Anaerobic wastewater treatment

Sector: Food / Delikatessen

Design / Planning / Construction / Supervision

Compact container plant	Extension module / expansion stage FLEXBIO-AF-100.HC / initial order 2018
Treatment capacity	140000 m ³ /a
Pollution of wastewater	COD: 5000 – 10000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 1400 mg/l
Biogas production	45 m ³ /h, methane concentration 60 % Energy production: ca. 150 kW electric
Location	Germany / Kaltenkirchen
Completion	11/2022



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / CHP
Treatment capacity	182500 m ³ /a
Pollution of wastewater	COD: 3000 – 5500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 800 mg/l
Biogas production	30 m ³ /h, methane concentration 75 % Energy production: ca. 80 kW electric
Location	Germany / Einbeck
Completion	08/2022



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / CHP
Treatment capacity	40000 m ³ /a
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 1000 mg/l
Biogas production	8 m ³ /h, methane concentration 70 % Energy production: ca. 15 kW electric
Location	Germany / Markt Schwaben
Completion	07/2022



Anaerobic wastewater treatment

Sector: milk processing / cheese dairy

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / gas boiler
Treatment capacity	25500 m ³ /a
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 500 mg/l
Biogas production	1,4 m ³ /h, methane concentration 80 % Energy production: ca. 12 kW
Location	Germany / Appenzeller
Completion	05/2022



Anaerobic-aerobic wastewater treatment

Sektor: Agriculture / Cattle transport

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / BBM-100.HC / Gas processing / gas boiler
Treatment capacity	13000 m ³ /a
Pollution of wastewater	COD: 3500 – 7000 mg/l
Quality of treated water	Reuse as wash water COD: < 150 mg/l
Biogas production	2 m ³ /h, methane concentration 75 % Energy production: ca. 15 kW
Location	Germany / Nordkirchen
Completion	02/2022



Anaerobic wastewater treatment

Sector: Slaughterhouse

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AFBBM-100.HC
Treatment capacity	20000 m ³ /a
Pollution of wastewater	COD: 5000 – 9000 mg/l
Quality of treated water	Irrigation / Agricultural use COD: < 100 mg/l
Biogas production	6 m ³ /h, methane concentration 70 % Energy production: ca. 40 kW
Location	Germany / Halsbach
Completion	01/2022



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC
Treatment capacity	60000 m ³ /a
Pollution of wastewater	COD: 3000 – 5500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 1000 mg/l
Biogas production	10 m ³ /h, methane concentration 80 % Energy production: ca. 80 kW
Location	Germany / Moos
Completion	05/2021



Anaerobic wastewater treatment

Sector: Food / Delicatessen / Poultry processing

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / gas boiler
Treatment capacity	48000 m ³ /a
Pollution of wastewater	COD: 3500 – 4500 mg/l
Quality of treated water	Irrigation / Agricultural use COD: < 2000 mg/l
Biogas production	7 m ³ /h, methane concentration 72 % Energy production: ca. 60 kW
Location	Germany / Dehlbrück
Completion	08/2021



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / CHP
Treatment capacity	40000 m ³ /a
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 1000 mg/l
Biogas production	8,8 m ³ /h, methane concentration 80 % Energy production: ca. 18 kW electric
Location	Germany / Hallendorf
Completion	10/2021



Anaerobic-aerobic wastewater treatment

Sector: Food / Potato processing

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / BBM-100.HC
Treatment capacity	55000 m ³ /a
Pollution of wastewater	COD: 3000 – 5000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 150 mg/l
Biogas production	8 m ³ /h, methane concentration 70 % Energy production: ca. 60 kW thermic
Location	Germany
Completion	10/2020



Anaerobic-aerobic wastewater treatment

Sector: Agriculture / Dairy

Design / Planning / Construction / Supervision

Compact container plant	Typ FLEXBIO-AFBB-075-P
Treatment capacity	8700 m ³ /a COD: 1000 – 5000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 150 mg/l TP (total phosphorus): 10 -80 mg/l
Quality of treated water	Irrigation / Agricultural use COD: < 15 mg/l TN (total nitrogen): < 10 mg/l TP (total phosphorus): < 2 mg/l
Biogas production	10 m ³ /h, methane concentration 80 % Energy production: ca. 35 kW thermic
Location	Germany / Sömmerda
Completion	08/2020



Anaerobic wastewater treatment

Sector: Food / Delicatessen

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / gas boiler
Treatment capacity	65000 m ³ /a
Pollution of wastewater	COD: 8000 – 12000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 2.000mg/ mg/l
Biogas production	40 m ³ /h methane concentration 60 % Energy production: ca. 240 kW thermic
Location	Germany / Dehlbrück
Completion	07/2020



Anaerobic wastewater treatment

Sector: Food industry / potato processing

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100 HC
Treatment capacity	140 m ³ /d / 51.100 m ³ /a
Pollution of wastewater	COD: 3000 – 5000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 500 mg/l
Biogas production	10 m ³ /h methane concentration 70 % Energy production: ca. 70 kW thermic
Location	Germany / Bielefeld
Completion	05/2020



Compact biogas plant for liquid manure

Sector: Agriculture

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / CHP
Biogas production	9 m ³ /h, methane concentration 55 %
Energy production	20 kW electric, 25 kWth thermic
Location	Switzerland / Chur
Completion	04/2020



Anaerobic wastewater treatment

Sector: Brewery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100 HC
Treatment capacity	62050 m ³ /a (max. 87500 m ³ /a)
Pollution of wastewater	COD: 2000 – 3500 mg/l
Quality of treated water	Indirect discharge COD: < 600 mg/l
Biogas production	8 m ³ /h, methane concentration 90 % Energy production: ca. 70 kW thermic
Location	Germany / Schönram
Completion	10/2019



Anaerobic wastewater treatment

Sector: Food / Delicatessen / Prepared salads

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-100.HC / GS-100.HC / Gas processing / gas boiler
Treatment capacity	140000 m ³ /a
Pollution of wastewater	COD: 5000 – 10000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 1400 mg/l
Biogas production	45 m ³ /h, methane concentration 60 % Energy production: ca. 300 kW thermic
Location	Germany / Kaltenkirchen
Completion	12/2018



Biogas plant for liquid and solid manure

Sector: Agriculture

Design / Planning / Construction / Supervision

Treatment capacity	7300 m ³ /a
Biogas production	45 m ³ /h, methane concentration 55 %
Energy production	75 kW electric ,130 kW thermic
Location	Germany / Hardegsen
Completion	11/2018



Anaerobic-aerobic wastewater treatment

Sector: Waste treatment / disposal

Design / Planning / Construction / Supervision

Compact container plant	Type FLEXBIO AFBBM-075
Treatment capacity	1800 m ³ /a
Pollution of wastewater	COD: 55000 – 70000 mg/l TN (total nitrogen): 1500 – 3000 mg/l
Quality of treated water	Indirekteinleitung COD: < 100 mg/l TN (total nitrogen): < 50 mg/l
Biogas production	5 m ³ /h methane concentration 80 - 90 %
Location	China / Tianjin
Completion	09/2018



Anaerobic-aerobic wastewater treatment

Sector: Biowaste / roadside greenery

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-050 and FLEXBIO-TK-BB-050
Treatment capacity	7300 m ³ /a
Pollution of wastewater	COD: 5000 – 20000 mg/l
Quality of treated water	Irrigation / Agricultural use COD: < 100 mg/l
Biogas production	6,25 m ³ /h methane concentration 70 %
Location	Germany / Munich
Completion	07/2018



Wastewater – process water treatment HTC plant

Sector: Food industry

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AF-050
Treatment capacity	4000 m ³ /a
Pollution of wastewater	COD: 30000 – 50000 mg/l
Quality of treated water	Indirect discharge (sewerage) COD: < 2000 mg/l
Biogas production	11 m ³ /h methane concentration 70 %
Location	Switzerland / Chur
Completion	03/2018



Biogas plant – pilot plant ReBi 2.0e

Innovative process for demand-based biogas production

Sector: Agriculture

Design / Planning / Supervision

Hydrolysis and anaerobic fixed bed for biogas production as required

Treatment capacity	4000 m ³ /a
Biogas production	40 m ³ /h, methane concentration 65 %
Energy production	75 kW electric, 130 kW thermic
Location	Germany / Bad Hersfeld
Completion	2017



Anaerobic-aerobic wastewater treatment

Sector: Agriculture

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AFBB-075-P
Treatment capacity	5400 m ³ /a COD: 1000 – 17000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 500 mg/l TP (total phosphorus): 10 -100 mg/l
Quality of treated water	Irrigation / Agriculture use COD: < 100 mg/l TN (total nitrogen): < 20 mg/l TP (total phosphorus): 5 mg/l
Biogas production	10 m ³ /h methane concentration 80 %
Location	Germany / Oyten
Completion	06/2017



Anaerobic-aerobic wastewater treatment

Sector: Agriculture

Design / Planning / Construction / Supervision

Compact container plant	FLEXBIO-AFBB-075-P
Treatment capacity	6000 m ³ /a COD: 1000 – 40000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 2000 mg/l TP (total phosphorus): 10 -300 mg/l
Quality of treated water	Direct discharge COD: < 100 mg/l TN (total nitrogen): < 20 mg/l TP (total phosphorus): 5 mg/l
Biogas production	10 m ³ /h methane concentration 80 %
Location	Germany / Wilstedt
Completion	03/2017



Anaerobic-aerobic wastewater treatment

Sector: Agriculture

Design / Planning / Construction / Supervision

Compact container plant	Type FLEXBIO-AFBB-010
Treatment capacity	4000 m ³ /a
Pollution of wastewater	COD: 1500 – 25000 mg/l TN (total nitrogen): 60 – 700 mg/l
Quality of treated water	Direct discharge COD: < 15 mg/l TN (total nitrogen): < 10 mg/l
Biogas production	5 m ³ /h methane concentration 80 %
Location	Germany / Bad Gandersheim
Completion	01/2016

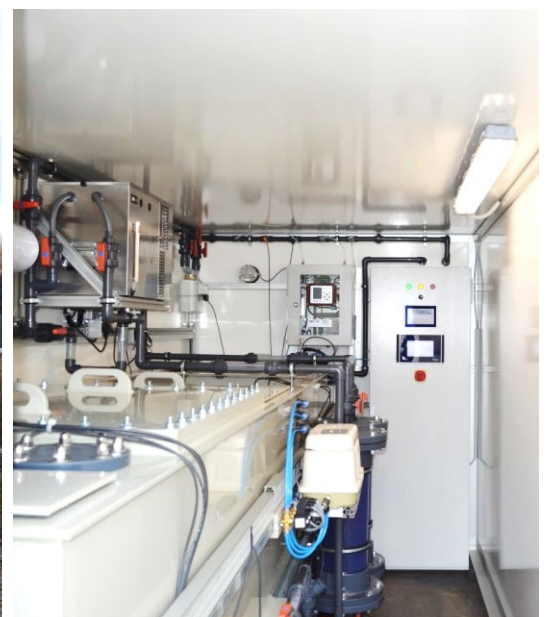


1. Mobile demonstration plant – wastewater treatment

Anaerobic and aerobic treatment in trailer

Development / planning / construction / utilization for potential studies and preliminary investigations

Compact trailer system	Typ FLEXBIO-AFBB-MV1
Treatment capacity	100l – 4000 l/d COD (organic): 200 – 100000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 3000 mg/l TP (total phosphorus): 10 -1000 mg/l
Quality of treated water	Direct / indirect discharge COD: < 100 mg/l TN (total nitrogen): < 20 mg/l TP (total phosphorus): < 2 mg/l
Biogas production	Max. 0,25m ³ /h / methane concentration 50 - 90 %
Location	Germany / Einbeck
Completion	2017



2. Mobile demonstration plant – wastewater treatment

Anaerobic and aerobic treatment in trailer

Development / planning / construction / utilization for potential studies and preliminary investigations

Compact trailer system	Typ FLEXBIO-AFBBM-MV2
Treatment capacity	100l – 4000 l/d COD: 200 – 100000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 3000 mg/l TP (total phosphorus): 10 -1000 mg/l
Quality of treated water	Direct / indirect discharge COD (organic): < 15 mg/l TN (total nitrogen): < 10 mg/l TP (total phosphorus): < 2 mg/l
Biogas production	Max. 0,25m ³ /h / methane concentration 50 - 90 %
Location	Germany / Einbeck
Completion	2019



3. Mobile demonstration plant – wastewater treatment

Anaerobic and aerobic treatment in trailer

Development / planning / construction / utilization for potential studies and preliminary investigations

Compact trailer system	Typ FLEXBIO-AFBBM-MV3
Treatment capacity	100l – 4000 l/d COD (organic): 200 – 100000 mg/l
Pollution of wastewater	TN (total nitrogen): 50 – 3000 mg/l TP (total phosphorus): 10 -1000 mg/l
Quality of treated water	Direct / indirect discharge CSB (organisch): < 15 mg/l TN (total nitrogen): < 10 mg/l TP (total phosphorus): < 2 mg/l
Biogas production	Max. 0,25m ³ /h / methane concentration 50 - 90 %
Location	Germany / Einbeck
Completion	2020



Everything from one source.

PLANNING



PRODUCTION



DELIVERY AND COMMISSIONING



SERVICE

