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Bioteg's Memberships and Certifications



Mitglied in der
 Deutschen Vereinigung
 für Wasserwirtschaft,
 Abwasser und Abfall e.V.



**Fachbetrieb
 nach § 19 I WHG**



**Zertifiziert nach
 DIN ISO EN 9001**



Mitglied im Fachverband
 Biogas e.V.

bioteg Biofilters and Biofilter Systems: Some Examples of Applications



Project: City of Hermiston
 Location: Hermiston, OR, USA
 Bioteg System: MCBF8000 QSW
 Application: WWTP
 Contaminants: Waste air from WWTP
 Removal: H₂S, odors
 No odor nuisance to neighbors
 Airflow Rate: 8,500 m³/h
 Footprint: 12.6 m x 5.20 m
 Installed in: January 2008



Project: Oberes Kyrbachtal
 Location: Sohrschied
 Bioteg System: MCBF 3500 QSW
 Application: WWTP
 Contaminants: Waste air from WWTP
 Removal: H₂S, odors
 No odor nuisance to neighbors
 Airflow Rate: 3,500 m³/h
 Footprint: 12.10 m x 2,20 m
 Installed in: November 2009



Project: Montenauer
 Location: Amel, Belgium
 Bioteg System: MCBF 500 QSW
 Application: Industrial WWTP
 Contaminants: Waste air from WWTP
 Removal: H₂S, odors
 No odor nuisance to neighbors
 Airflow Rate: 500 m³/h
 Footprint: 4.10 m x 2.20 m
 Installed in: August 2009



Project:	Nitrochemie Aschau GmbH
Location:	Aschau, Germany
Bioteg System:	BW 1000 Bioscrubber
Application:	VOCs from the production of propellants
Contaminants:	Acetone, Ethanol, DNG
Removal:	Limits according to Environmental restrictions
Airflow Rate:	1,000 m³/h
Footprint:	8.00 m x 2.30 m
Installed in:	January 2008



Project:	Danone
Location:	Budapest, Hungary
Bioteg System:	MCBF 3000 QSW
Application:	H ₂ S and odors from WWTP
Contaminants:	Odors, H ₂ S
Removal:	Limits according to local Environmental restrictions
Airflow Rate:	3000 m³/h
Footprint:	12.6 m x 2.20 m
Installed in:	May 2009



Project:	Nitrochemie Aschau GmbH
Location:	Aschau, Germany
Bioteg System:	BW 2400 Bioscrubber
Application:	VOCs from the production of propellants
Contaminants:	DEGN, GTN
Removal:	Limits according to Environmental restrictions
Airflow Rate:	1,000 m³/h
Footprint:	8.00 m x 2.30 m + 2.00 m x 3.00 m
Installed in:	May 2008



Project:	PCS
Location:	Mönchengladbach Germany
Bioteg System:	MCBF 800 QSW
Application:	H ₂ S and odors from waste treatment
Contaminants:	Odors, H ₂ S
Removal:	Limits according to local Environmental restrictions
Airflow Rate:	800 m³/h
Footprint:	5.10 m x 2.20 m
Installed in:	June 2009



Project: Pump Station Dieselstrasse
Location: Potsdam, Germany
Bioteg System: MCBF1000 QSW, Ex protected
Application: Waste air from WW Pump station
Contaminants: H₂S, odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1200 m³/h
Footprint: 6.10 m x 2.20 m
Installed in: Nov 2008



Project: Brecize
Location: Brecize, Slovenia
Bioteg System: MCBF1200 QSW, Ex protected
Application: Waste air from WWTP
Contaminants: H₂S, odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1200 m³/h
Footprint: 6.10 m x 2.20 m
Installed in: March 2008



Project: Grafenwöhr
Location: Grafenwöhr, Germany
 on top of a waste water treatment plant
Bioteg System: MCBF 1000 QSW
Application: H₂S from WWTP
Contaminants: Odors, H₂S
Removal: Limits according to Environmental restrictions
Airflow Rate: 1000 m³/h
Footprint: 6.10 m x 2.20 m
Installed in: November 2007



Project: Pump Station Drewitz
Location: Potsdam, Germany
Bioteg System: MCBF200 QSW, Ex protected
Application: Waste air from Pump station
Contaminants: H₂S, odors
Removal: No odor nuisance to neighbors
Airflow Rate: 300 m³/h
Footprint: 2.60 m x 2.20 m
Installed in: Dec 2007



Project: KA Bodenheim
Location: Bodenheim, Germany
Bioteg System: MCBF 500 QSW
Application: H₂S from WWTP
Contaminants: Odors, H₂S
Removal: Limits according to Environmental restrictions
Airflow Rate: 500 m³/h
Footprint: 4.10 m x 2.20 m
Installed in: May 2006



Project: Magdeburg Pump Station
Location: Magdeburg, Germany
Bioteg System: MCBF 500 QSW
Application: H₂S from sewage pump station
Contaminants: Odors, H₂S
Removal: Limits according to Environmental restrictions
Airflow Rate: 500 m³/h
Footprint: 4.10 m x 2.20 m
Installed in: October 2006



Project: Gewerbepark Mutters
Location: Mutters, Austria
Bioteg System: MCBF 500 + SRBF 400
Application: H₂S from pump station
Contaminants: Odors, H₂S
Removal: No odor nuisance to neighbors
Airflow Rate: 500 m³/h
Footprint: 4,10 m x 2,20 m
Installed in: May 2007



Project: Zywiec
Location: Zywiec, Poland
Bioteg System: MCBF 1600 QSW, MCBF 6000 QSW both made from stainless steel 1.4301
Application: H₂S and odors from waste treatment
Contaminants: Odors, H₂S
Removal: No odor nuisance to neighbors
Airflow Rate: 1660 m³/h and 6000 m³/h
Footprint: 8.00 m x 2.50 m and 12.00 m x 5.50 m
Installed in: September 2009



Project: Unidrink AG
Location: Hochdorf, Switzerland
Bioteg System: MCBF1500 QSW with integrated NaOH dosing station
Application: Producer of juices
Contaminants: Waste air from WTP
Removal: H₂S, odors
 No odor nuisance to neighbors
Airflow Rate: 1,500 m³/h
Footprint: 8.00 m x 2.20 m
Installed in: May 2005



Project: WTP Schielo
Location: Schielo, Germany
Bioteg System: MCBF1000 QSW GT
Application: Waste air from WTP
Contaminants: H₂S, odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1,000 m³/h
Footprint: 7.10 m x 2.20 m
Installed in: Dec 2005



Project: Kerry Food Industries
Location: Glendale, Ireland
Bioteg System: MCBF1000 QSW
Application: Waste air from WTP
Contaminants: H₂S, odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1,000 m³/h
Footprint: 6.10 m x 2.20 m
Installed in: Oct 2005



Project: City of Newberg
Location: Newberg, Oregon, USA
Bioteg System: MCBF 24000
Application: Compost plant
Contaminants: H₂S, NH₃, odorous nitrogen compounds
Removal: No odor nuisance to neighbors
Airflow Rate: 24,000 m³/h
Footprint: 16.0 m x 14.0 m
Installed in: July, 2004



Project:	Erd
Location:	WWTP Erd, Hungary
Bioteg System:	MCBF 6500 QSW
Application:	WWTP, Sludge treatment
Contaminants:	H ₂ S, odorous nitrogen compounds
Removal:	No odor nuisance to neighbors
Airflow Rate:	6,500 m ³ /h
Footprint:	6.0 m x 14.0 m
Installed in:	September, 2005



Project:	Balatonfüred
Location:	WWTP Balatonfüred, Hungary
Bioteg System:	2 plants: MCBF 3500 QSW and MCBF 1500 QSW
Application:	WWTP, Sludge treatment
Contaminants:	H ₂ S, odorous organic compounds
Removal:	No odor nuisance to neighbors
Airflow Rate:	3,500 m ³ /h; 1,500 m ³ /h
Footprint:	3.2 m x 14.0 m ; 3.0 m x 10.0 m
Installed in:	July, 2005



Project:	GBAV
Location:	Berlin, Germany
Bioteg System:	MCBF 2000 QSW
Application:	Waste treatment
Contaminants:	H ₂ S, odorous organic compounds
Removal:	No odor nuisance to neighbors
Airflow Rate:	2,000 m ³ /h
Footprint:	11.0 m x 3.2 m
Installed in:	June, 2005



Project:	Győr
Location:	WWTP Győr, Hungary
Bioteg System:	5 plants: MCBF 2000 QSW
Application:	WWTP, Sludge treatment
Contaminants:	H ₂ S, odorous organic compounds
Removal:	No odor nuisance to neighbors
Airflow Rate:	2,000 m ³ /h
Footprint:	3.2 m x 11.0 m
Installed in:	October, 2005 (three plants) November, 2005 (two plants)



biotechTM
Biofilter Systems



Project:	British American Tobacco (BAT)
Location:	Bayreuth, Germany
Biotech System:	Old Biofilter Plant built by a third part company, Renewed by biotech
Application:	Tobacco fermentation
Contaminants:	NH ₃ , odorous nitrogen compounds
Removal:	No odour nuisance to neighbors
Airflow Rate:	120,000 m ³ /h
Footprint:	100 m x 40 m
Installed in:	March 2000



Project:	Stolzenau WWTP
Location:	Nienburg San District, Germany
Biotech System:	MCBF 2000 GSW, separate scrubber
Application:	Ventilated Grit Chamber
Contaminants:	H ₂ S, wastewater odors
Removal:	No odor nuisance to employees and neighbors
Airflow Rate:	2,000 m ³ /h
Footprint:	7.50 m x 2.20 m
Installed in:	October 1999



Project:	Radom
Location:	Radom, Poland
Bioteg System:	MCBF 30 000
Application:	Sewage Sludge Treatment
Contaminants:	NH ₃ , sludge odors
Removal:	No odor nuisance to neighbors
Airflow Rate:	30 000 m ³ /h
Footprint:	17.00 m x 13.00 m
Installed in:	July 2008



Project:	Potsdam Water District
Location:	Potsdam (Berlin), Germany
Biotech System:	2 Plants: MCBF1000 QSW MCBF 500 QSW with integrated scrubbers
Application:	Primary Clarifier
Contaminants:	H ₂ S, wastewater odors
Removal:	H ₂ S <2 ppm
Airflow Rate:	1,000 m ³ /h
Footprint:	7.0 m x 2.2 m, 5.0 m x 2.2 m
Installed in:	May 1999, January 2004

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Project: Lemke WWTP
Location: Nienburg San District, Germany
Bioteg System: MCBF 200 QSW with integrated scrubber
Application: Sewage Sludge Silage
Contaminants: NH₃, sludge odors
Removal: No odor nuisance to neighbors
Airflow Rate: 200 m³/h
Footprint: 2.20 m x 1.60 m
Installed in: December 1999



Project: Brewery Leikeim
Location: Altenkunstadt, Germany
Bioteg System: MCBF 1500 QSW with external NaOH GSW scrubber
Application: WWTP of a brewery
Contaminants: H₂S (-1000ppm), 50,000 OU/m³
Removal: < 4 ppm H₂S, OU removal > 92.5%
Airflow Rate: 1,500 m³/h
Footprint: 8.2 m x 2.2 m
 + 2.0 m x 3.0 m (scrubber)
Installed in: July 2002

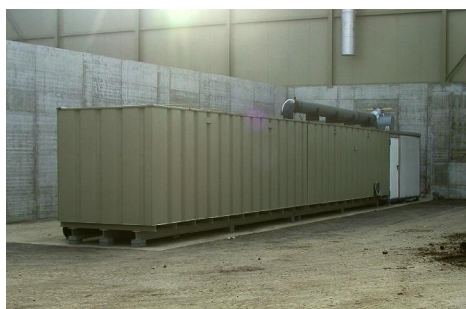


Project: WWTP Sitzendorf
Location: Sitzendorf, Germany
Bioteg System: MCBF 1500 QSW
Application: Odors from WWTP
Contaminants: H₂S and odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1,500 m³/h
Footprint: 8.2 m x 2.2 m
Installed in: August 2009



Project: Pulp and Paper Factory
Location: Bremgarten, Switzerland
Biotech System: MCBF 4000 QSW
Application: On-site wastewater treatment
Contaminants: High concentrations of H₂S
Removal: No odor nuisance to neighbors
Airflow Rate: 4,000 m³/h
Footprint: 2 units, 8.2 m x 2.2 m with separate technique central

Installed in: June 2001



New Location

Lenzburg, Switzerland

The MCBF 4000 QSW was sold to a compost company after the paper factory stopped production in 2004.

The biofilter plant was serviced by bioteg, moved, and installed at the compost plant.

New installed in: December 2004



Project: US Army Terrain, Landfill
Location: Hohenfels, Germany
Biotech System: MCBF 3000 QSW
Application: Off-Gases from Landfill
Contaminants: 2.5% Methane
Removal: Methane <1.5%, OU/m³ < 300
Airflow Rate: 3,000 m³/h
Footprint: 2 units, each 13.2 m x 2.2 m
Installed in: September 2002



Project: W.H. White PLC
Location: Wimborne, UK
Biotech System: MCBF 6000 GSW, NH₃ scrubber
Application: Compost plant
Contaminants: NH₃, odors from compost plant
Removal: No odor nuisance to neighbors
Airflow Rate: 6,000 m³/h
Footprint: 14.50 m x 5.50 m
Installed in: May 2003

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Project: WWTP Stenwede
Location: Stenwede, Germany
Bioteg System: MCBF 500 QSW, integrated scrubber
Application: Waste water Pump station
Contaminants: H₂S, waste water odors
Removal: No odor nuisance to neighbors
Airflow Rate: 500 m³/h
Footprint: 4.50 m x 2.20 m
Installed in: March, 2002



Project: Lanor BioEnergy Systems
Location: Erkenschwick, Germany
Bioteg System: 2 plants: MCBF 5000 QSW
Application: Odors from Bio-Waste Plant
Contaminants: H₂S, odors
Removal: < 400 OU/m³
Airflow Rate: each 5,000 m³/h
Footprint: each 12.2 m x 5.0 m
Installed in: November 2005



Project: Bad Kreuznach
Location: Bad Kreuznach, Germany
Bioteg System: MCBF 3000 QSW
Application: Odors from WWTP
Contaminants: H₂S, odors
Removal: < 400 OU/m³
Airflow Rate: 3,000 m³/h
Footprint: 14.0 m x 3.0 m
Installed in: June 2005



Project: WWTP Adelsdorf
Location: Adelsdorf, Germany
Bioteg System: MCBF 500 QSW
Application: Sludge Container
Contaminants: NH₃, H₂S, sludge odors
Removal: No odor nuisance to neighbors
Airflow Rate: 500 m³/h
Footprint: 4.80 m x 3.00 m
Installed in: September 2002

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Project: Community Liebenburg
Location: WWTP Othfresen, Germany
Bioteg System: MCBF 1500 QSW
Application: Sludge Container
Contaminants: Sludge odors
Removal: No odor nuisance to neighbors
Airflow Rate: 1,500 m³/h
Footprint: 8.20 m x 2.20 m
Installed in: January 2003



Project: BBSK Grimme
Location: Lindau, Germany
Bioteg System: MCBF 500 QSW
Application: Pump station
Contaminants: H₂S, waste water odors
Removal: No odor nuisance to neighbors
Airflow Rate: 300 cfm
Footprint: 4.20 m x 2.20 m
Installed in: September 2002



Project: WWTP Baumholder
Location: Baumholder, Germany
Bioteg System: MCBF 300 QSW
Application: Sludge Container
Contaminants: NH₃, H₂S, sludge odors
Removal: No odor nuisance to neighbors
Airflow Rate: 300 m³/h
Footprint: 4.20 m x 2.20 m
Installed in: October 2002



Project: Sludge Dewatering Facility
Location: Becknang, Germany
Bioteg System: MCBF 6000 QSW GSW, NH₃ scrubber
Application: Off-Gas from Sludge Dewatering
Contaminants: NH₃ max. 5 000 vpm, 70,000 OU/m³
Removal: Max. 300 OU/m³
Airflow Rate: 6,000 m³/h
Footprint: overall 10.50 m x 8.50 m
Installed in: January 2002

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Project: Stadtentwässerung Hamburg
Location: Hamburg, Germany
Bioteg System: SRBF 300 OBR
Application: Waste water pump station
Contaminants: H₂S, sludge odors
Removal: No odor nuisance to neighbors
Airflow Rate: 300 m³/h
Diameter: 1.75 m
Installed in: November 2001



Project: Community Stams
Location: Stams, Austria
Bioteg System: SRBF 400 OBR under ground
Application: Pump station
Contaminants: H₂S, waste water odors
Removal: No odor nuisance to neighbors
Airflow Rate: 300 m³/h
Diameter: 1.75 m
Installed in: October 2002



Project: Schwarzbier Brauerei
Location: Bad Köstritz, Germany
Bioteg System: EBF 50, 2 units
Application: Brewery WWTP
Contaminants: H₂S, waste water odors
Removal: No odor nuisance to neighbors
Airflow Rate: 50 m³/h
Diameter: 0.81 m
Installed in: February 1998

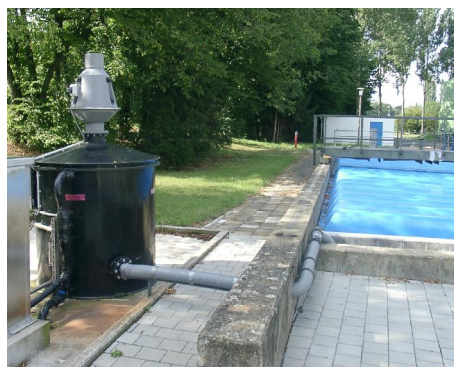
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Project:	Community Riethnordhausen
Location:	Riethnordhausen, Germany
Bioteg System:	SRBF 200 OBR
Application:	Waste water pump station
Contaminants:	H ₂ S, waste water odors
Removal:	No odor nuisance to neighbors
Airflow Rate:	200 m ³ /h
Diameter:	1.5 m
Installed in:	July 2003



Project:	San Francisco WWTP
Location:	San Francisco, USA
Bioteg System:	SRBF 150 OBR
Application:	Waste water pump station
Contaminants:	H ₂ S, waste water odors
Removal:	No odor nuisance to neighbors
Airflow Rate:	150 m ³ /h
Diameter:	1.3 m
Installed in:	August 2001



Project:	KA Neustadt
Location:	Neustadt / Aisch, Germany
Bioteg System:	SRBF 100 OBR
Application:	Sludge storage tank
Contaminants:	NH ₃ , sludge odors
Removal:	No odor nuisance to neighbors
Airflow Rate:	100 m ³ /h
Diameter:	1.3 m ²
Installed in:	October 2000



Project: WWTP Szob
Location: Szob, Hungary
Bioteg System: MCBF 3000 QSW, integrated scrubber
Application: WWTP
Contaminants: H₂S, sludge odors
Removal: < 400 OU/m³
Airflow Rate: 3,400 m³/h
Footprint: 12.2 m x 2.2 m
Installed in: January 2003



Project: IFK Berlin
Location: Berlin, Germany
Bioteg System: Scrubber GSW 1500, 3 units
Special construction
Application: Research Institute
Contaminants: White and red phosphor dust
Removal:
Airflow Rate: 1,500 m³/h
Footprint: 1.4 m x 1.4 m
Installed in: November 2002 (first unit)
 May 2003 (second unit)
 March 2004 (third unit)



Project: WWTP Lohmen
Location: Lohmen, Germany
Bioteg System: MCBF 700 QSW, integrated scrubber
Application: WWTP
Contaminants: H₂S, sludge odors
Removal: < 400 OU/m³
Airflow Rate: 700 m³/h
Footprint: 5.10 m x 2.2 m
Installed in: May 2004



Project: Häfeli II
Location: Lenzburg Switzerland
Bioteg System: MCBF 9000 QSW
Application: Compost Plant
Contaminants: Odours from compost plant
Removal: No odor nuisance to neighbors
Airflow Rate: 9,000 m³/h
Footprint: 20.0 x 3.0 m
Installed in: July 2005



Project:	Grossrethbach
Location:	Grossrethbach, Germany
Bioteg System:	EKBF 400/1.7
Application:	Pump station
Contaminants:	Odours from waste water
Removal:	No odor nuisance to neighbors
Airflow Rate:	55 m³/h passiv
Footprint:	0.6 m x 0.6 m
Installed in:	December 2007



Project:	Grossfurtner
Location:	Ried am Inn, Austria
Bioteg System:	MCBF 500 QSW, MCBF 1000 QSW
Application:	Meat Factory
Contaminants:	Odours from production wastes
Removal:	No odor nuisance to neighbors
Airflow Rate:	500 m³/h, 1000 m³/h
Footprint:	4.8 m x 2.2 m
Installed in:	September 2003: MCBF 500 QSW March 2004: MCBF 1000 QSW



Project:	Fujairah UAE
Location:	WWTP Fujairah
Bioteg System:	3 units MCBF 1000 QSW DS 1 unit MCBF 8000 QSW 2 DS 1 unit MCBF 12000 QSW DS
Application:	Odours from WWTP
Contaminants:	H ₂ S, NH ₃ up to 250 ppm
Removal:	No odor nuisance to neighbors
Airflow Rate:	1,000 to 12,000 m³/h
Footprint:	
Installed in:	March to July 2007

