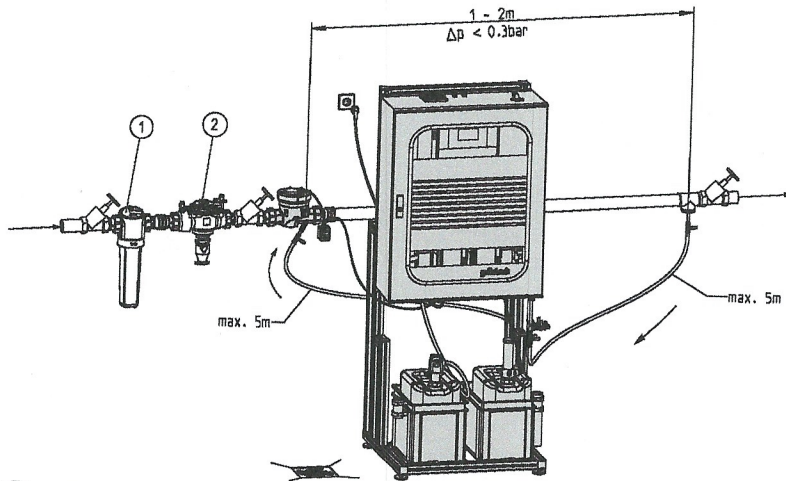


Technical specifications		Chlorine dioxide generation systems GENO®-Bakttox MRX/RX/X					
		10	20	25	30	50/1	50/2
Connection data							
Nominal connection diameter of water meter		DN 32 (R 1¼")	DN 40 (R 1½")	DN 50 (R 2")	DN 50 (R 2")	DN 80	DN 100
Power supply		230 V, 50 Hz					
Power input, min./max.	[VA]	37/63			37/80		
Protection/protection class		IP 54/I					
Connection of blending module		2 x ¼" (female thread)					
Performance data							
Chlorine dioxide generation capacity	[g/h]	10					
Maximum admissible flow Q _{max}	[m³/h]	10	20	25	30	50	
Pressure loss at Q _{max}	[bar]	0.6	0.4	0.7	0.9	0.5	
Pulse sequence of water meter	l/pulse	0.33	1.33			1	
Nominal pressure (PN)	[bar]	8					
Admissible pressure for withdrawal of dilution water	[bar]	2 - 8					
Dimensions and weights (entire system)							
Total height approx.	[mm]	1900					
Depth, approx.	[mm]	725					
Width, approx.	[mm]	800					
Empty weight, approx.	[kg]	80					
Dimensions (water meter)							
Installation length without screw connection	[mm]	190	240	240	240		
Installation length with screw connection	[mm]	280	375	356	356		
Installation length with flange connection	[mm]					310	
GENODOS®-pump							
Number		1			2		
GENODOS®-pump GP (GENO®-Bakttox version)		6/40					
Ambient data							
Water temperature, min./max.	[°C]	5/30					
Ambient temperature, min./max.	[°C]	5/30					
Rel. humidity, max.	[%]	70					
Order no.		569 310	569 325	569 340	569 355	569 370	569 385

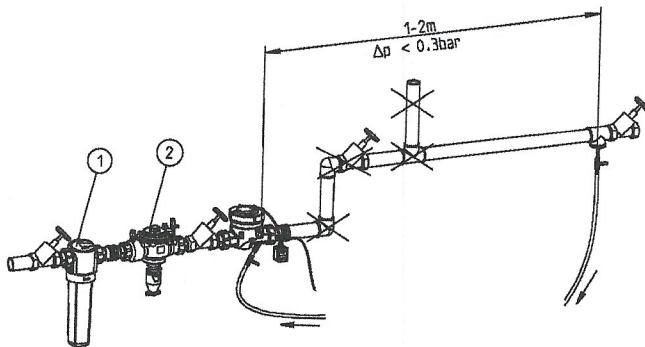
RX version		10	20	25	30	50/1	50/2
Dimensions and weights (entire system)							
Total height approx.	[mm]	1900					
Depth, approx.	[mm]	725					
Width, approx.	[mm]	800					
Empty weight, approx.	[kg]	75					
Connection data							
Connection for withdrawal of dilution water		1 x 1/4" (female thread)					
Connection of dosing point		1 x 1/4" (female thread)					
Order no.		569 305	569 320	569 335	569 350	569 365	569 380

X version		10	20	25	30	50/1	50/2
Dimensions and weights (entire system)							
Total height approx.	[mm]	1050					
Depth, approx.	[mm]	340					
Width, approx.	[mm]	800					
Empty weight, approx.	[kg]	55					
Connection data							
Connection for withdrawal of dilution water	1 x ¼" (female thread)						
Connection of dosing point	1 x ¼" (female thread)						
Order no.	569 300	569 315	569 330	569 345	569 360	569 375	



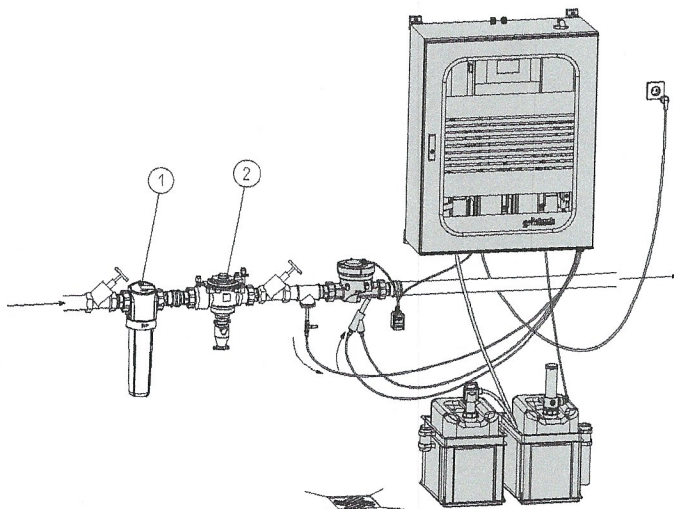
- ① GENO®-fine filter (optional)
- ② Euro-system separator GENO®-DK (optional)

Fig. 2: Installation diagram chlorine dioxide generation system GENO®-Bakttox MRX



- ① GENO®-fine filter (optional)
- ② Euro-system separator GENO®-DK (optional)

Fig. 3: Example for an unfavourable installation of the chlorine dioxide generation system GENO®-Bakttox X



- ① GENO®-fine filter (optional)
- ② Euro-system separator GENO®-DK (optional)

Fig. 4: Installation diagram chlorine dioxide generation system GENO®-Bakttox X

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.03.2015

Version number 12

Revision: 09.03.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: **GENO®-Baktax**

Article number: 170 450, 170 460, 170 470

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the mixture Disinfectant

Manufacturer/Supplier:

Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Str. 1
D-89420 Höchstädt a.d. Donau
GERMANY
gefahrstoff@gruenbeck.de

Further information obtainable from:

Product safety department
Tel +49 9074 41 304
Fax +49 9074 41 70304

1.4 Emergency telephone number: During normal opening times: +49 9074 41-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07



GHS09

Signal word Warning

Hazard-determining components of labelling:

chlorine dioxide

Hazard statements

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P391 Collect spillage.

(Contd. on page 2)

DE/EN

Trade name: **GENO®-Baktax**

- P501 Dispose of contents/container in accordance with local/regional/national/international regulations. (Contd. of page 1)
- **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 10049-04-4	chlorine dioxide	
EINECS: 233-162-8	⚠ Ox. Gas 1, H270; ⚠ Press. Gas C, H280; ⚠ Acute Tox. 2, H330; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400	≤ 2,5%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Protect unharmed eye.
Call a doctor immediately.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
Product itself does not burn
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

Trade name: GENO®-Bakttox

See Section 13 for disposal information.

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Substance/product is oxidising when dry.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from flammable substances.
- **Further information about storage conditions:** Do not seal receptacle gas tight.
- **Storage class:** 12
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

10049-04-4 chlorine dioxide

AGW (Germany)	0,28 mg/m ³ , 0,1 ppm
	1(I);DFG

- **Additional information:** The lists valid during the making were used as basis.

8.2 Exposure controls

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

- **Material of gloves** Nitrile rubber, NBR

- **Penetration time of glove material** Value for the permeation: Level ≤ 480 min

- **Eye protection:**

Goggles recommended during refilling



Safety glasses

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Liquid

Colour:

Light yellow

- **Odour:**

Characteristic

(Contd. on page 4)

DE/EN

Trade name: GENO®-Bakttox

(Contd. of page 3)

- **pH-value at 20 °C:** ca. 1,5
- **Change in condition**
 Melting point/Melting range: Undetermined.
 Boiling point/Boiling range: Undetermined.
- **Flash point:** Not applicable.
- **Self-igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20 °C:** 1,00 - 1,05 g/cm³
- **Solubility in / Miscibility with water:** Fully miscible.
- **Solvent content:**
 Organic solvents: 0,0 %
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Poisonous gases/vapours

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

LD/LC50 values relevant for classification:

10049-04-4 chlorine dioxide

Oral LD50 292 mg/kg (rat)

Primary irritant effect:

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

• **Sensitisation:** No sensitising effects known.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, disziness, etc.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

10049-04-4 chlorine dioxide

LC50/96 h 6400-6500 mg/l (rat)

Oral LC50/48h 500-610 mg/l (crustaceans)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish

(Contd. on page 5)

DE/EN

Trade name: **GENO®-Baktox**

- **Additional ecological information:**

(Contd. of page 4)

- **General notes:**

Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Generally not hazardous for water

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.

- **Uncleaned packaging:**

- **Recommendation:**

Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, ADN, IMDG, IATA**

Void

- **14.2 UN proper shipping name**

- **ADR, ADN, IMDG, IATA**

Void

- **14.3 Transport hazard class(es)**

- **ADR, ADN, IMDG, IATA**

- **Class**

Void

- **14.4 Packing group**

- **ADR, IMDG, IATA**

Void

- **14.5 Environmental hazards:**

- **Marine pollutant:**

No

- **14.6 Special precautions for user**

Not applicable.

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

- **UN "Model Regulation":**

-

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS07



GHS09

- **Signal word** Warning

(Contd. on page 6)

DE/EN

Trade name: GENO®-Baktox

(Contd. of page 5)

• **Hazard-determining components of labelling:**

chlorine dioxide

• **Hazard statements**

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

• **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant phrases**

H270 May cause or intensify fire; oxidiser.

H280 Contains gas under pressure; may explode if heated.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

H400 Very toxic to aquatic life.

• **Department issuing MSDS:** Department for products and innovations

• **Contact:** Department PI-2

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Gas 1: Oxidising Gases, Hazard Category 1

Press. Gas C: Gases under pressure: Compressed gas

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

• *** Data compared to the previous version altered.**



Prisliste for Klordioxid

Artikel nr.	KLORDIOXID			Pris i NOK
GENO®-Baktax MRX				
569 310	MRX 10	R 1¼"	10m³/h	kr 143.100.-
569 325	MRX 20	R 1½"	20m³/h	kr 149.450.-
569 340	MRX 25	R 2"	25m³/h	kr 154.650.-
569 355	MRX 30	R 2"	30m³/h	kr 162.800.-
569 370	MRX 50/1	DN 80	50m³/h	kr 173.100.-
569 385	MRX 50/2	DN 100	50m³/h	kr 175.400.-
GENO®-Baktax RX				
569 305	RX 10	R 1¼"	10m³/h	kr 108.400.-
569 320	RX 20	R 1½"	20m³/h	kr 114.800.-
569 335	RX 25	R 2"	25m³/h	kr 120.000.-
569 350	RX 30	R 2"	30m³/h	kr 128.700.-
569 365	RX 50/1	DN 80	50m³/h	kr 138.400.-
569 380	RX 50/2	DN 100	50m³/h	kr 140.800.-
GENO®-Baktax X				
569 300	X 10	R 1¼"	10m³/h	kr 102.700.-
569 315	X 20	R 1½"	20m³/h	kr 109.000.-
569 330	X 25	R 2"	25m³/h	kr 114.250.-
569 345	X 30	R 2"	30m³/h	kr 122.600.-
569 360	X 50/1	DN 80	50m³/h	kr 132.700.-
569 375	X 50/2	DN 100	50m³/h	kr 135.000.-
Tilbehør / reservedele				
569 880	Rumløftovervågning for klordioxid, klor og ozon			kr 15.650.-
170 490	Saltsyre 9% Blanding 25 liters kanne			kr 599.-
170 485	Natriumkloritt 7% 25 liters kanne			kr 799.-
170 430	Klordioxid testsæt 0,02 - 0,55 ppm			kr 2.080.-
569 815	Personlig sikkerhedssæt			kr 950.-
569 805	Personlig sikkerhedssæt incl. åndedrætsværn			kr 7.200.-
569 332	Gasneutraliserende middel (halvårlig udskiftning)			kr 350.-
569 871	Servicekit 1. Til ½-årlig service, 1 eller 2 pumper			kr 1.750.-
569 882	Servicekit 2. Til 1/1-årlig service, 1 pumpe			kr 4.900.-
569 884	Servicekit 4. Til 1/1-årlig service, 2 pumper			kr 7.850.-
Alle priser eks.mva.				
Frakt tilkommer				