

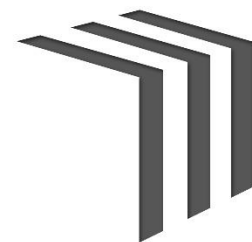
WELCOME TO BERGMANN'S

nihan[®]



DECENTRALIZED WASTEWATER TREATMENT TECHNOLOGY

B E R G M A N N



FACTS AND FIGURES

BERGMANN 

BERGMANN
Beton+Abwassertechnik 

FOUNDATION

PROPERTY

EMPLOYEES

BUSINESS LOCATION

BRANCH OF TRADE

BERGMANN
Umwelttechnik 

1929

100 % FAMILY OWNERSHIP

60

PENIG

ENVIRONMENTAL TECHNOLOGY



Lars Bergmann
CEO



Dr. Jens Ilian
CTO



Dr. André Gerth
CFO

CORE BUSINESS - NATIONAL

- Precast concrete parts
- Small and medium sized wastewater treatment plants
- Maintenance

INTERNATIONAL FOCUS

- Wastewater treatment - municipal and commercial
- Pre-assembled / portable wastewater treatment plants
- Plant management – remote management

WASTEWATER TREATMENT AND ENVIRONMENTAL TECHNOLOGY



- Biological wastewater treatment
- Municipal, commercial and industrial applications
- New construction, retrofit or extension

CONTROL PANELS AND REMOTE MANAGEMENT



- SPS – Ready for operation
- Worldwide remote management
- Flexibility regarding location - size - application

EFFICIENT WASTEWATER TREATMENT IN RURAL AREAS

Requirements on technology and process

- Simplicity
- Insensibility
- Cost-effectiveness



INFLOW

- Domestic
- Commercial
- Industrial
- ...

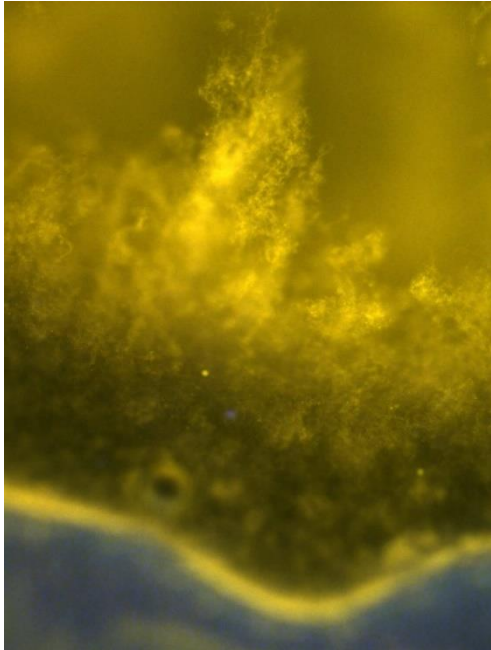


DISCHARGE

- River or reek
- Pond or lake
- Sea or ocean
- Sewer system
- ...

Efficient wastewater treatment





LAMINAR INTERFACE

The surface of the biofilm.

AEROBIC LAYER

Is responsible for the degradation of carbon compounds and the conversion of ammonium to nitrate.

ANOXIC LAYER

In the absence of dissolved oxygen, the bound oxygen is used to turn nitrate into nitrogen and oxygen (denitrification).

ANAEROBIC LAYER

Here sulfate is degraded.



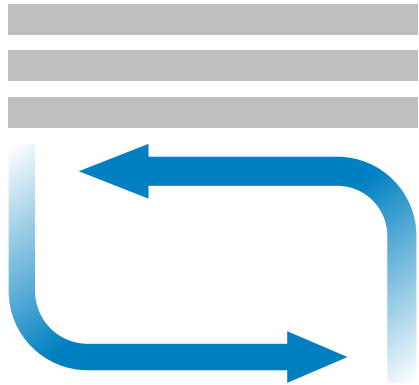
Bioreactor movement



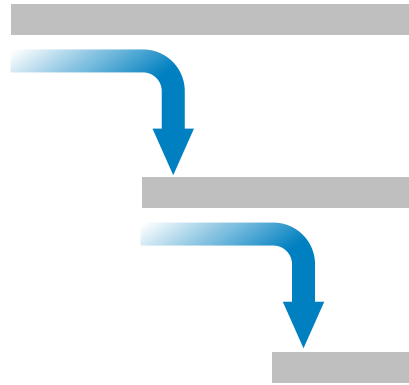
Floating and moving bed



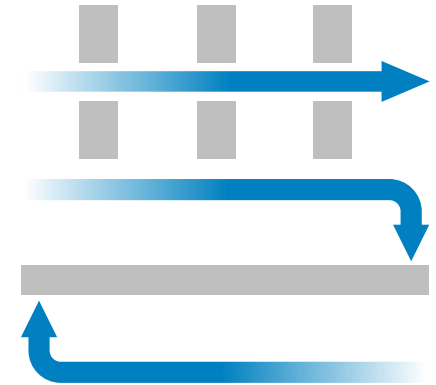
- Oxygen transfer
- Energy consumption
- Flexibility



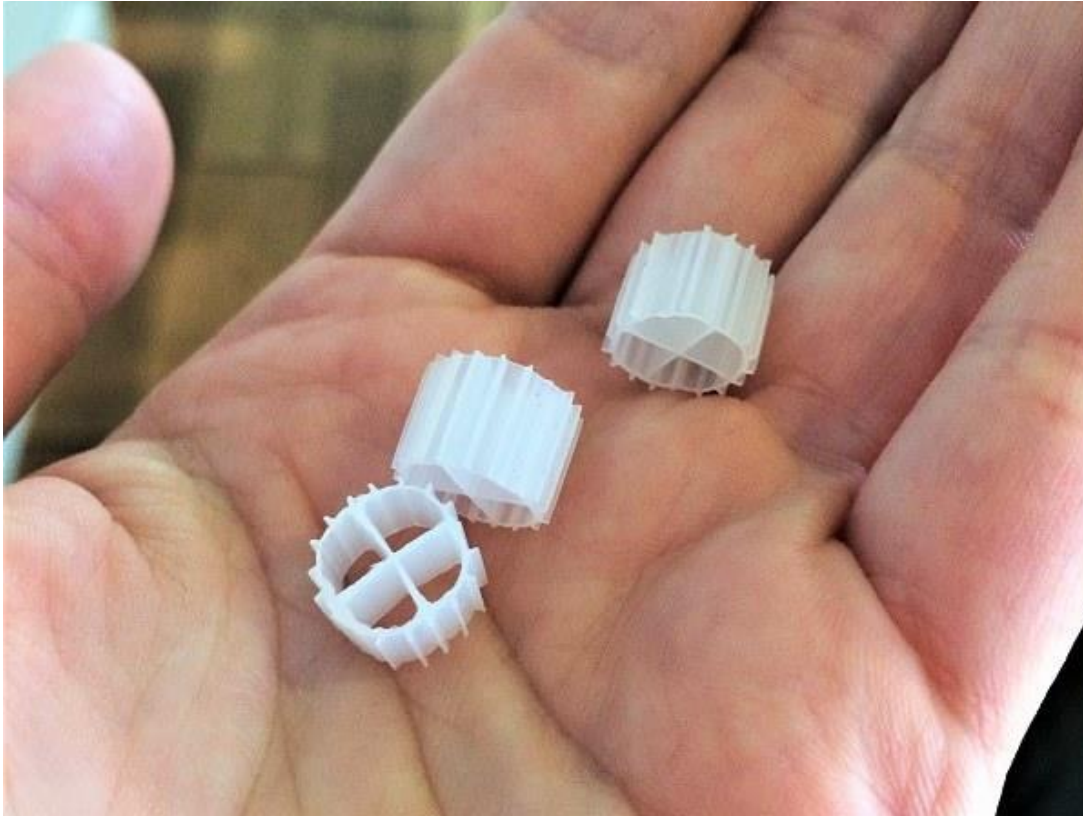
- Gravity flow system
- No pumps
- Reliable and easy



- Sludge production
- Peak loads
- Adaptivity



- I. Significant reduction of energy consumption
- II. Avoids choking and backpressure
- III. Elimination of pumps as far as possible



- Lifetime filling
- No maintenance
- No refilling
- No cleaning
- No exchange
- No chemical dosing

N

Parameters for the discharge quality after denitrification

COD	≤ 75 mg/l
BOD ₅	≤ 10 mg/l
NH ₄ -N	≤ 5 mg/l
N _{tot.}	≤ 25 mg/l
TSS	≤ 10 mg/l

P

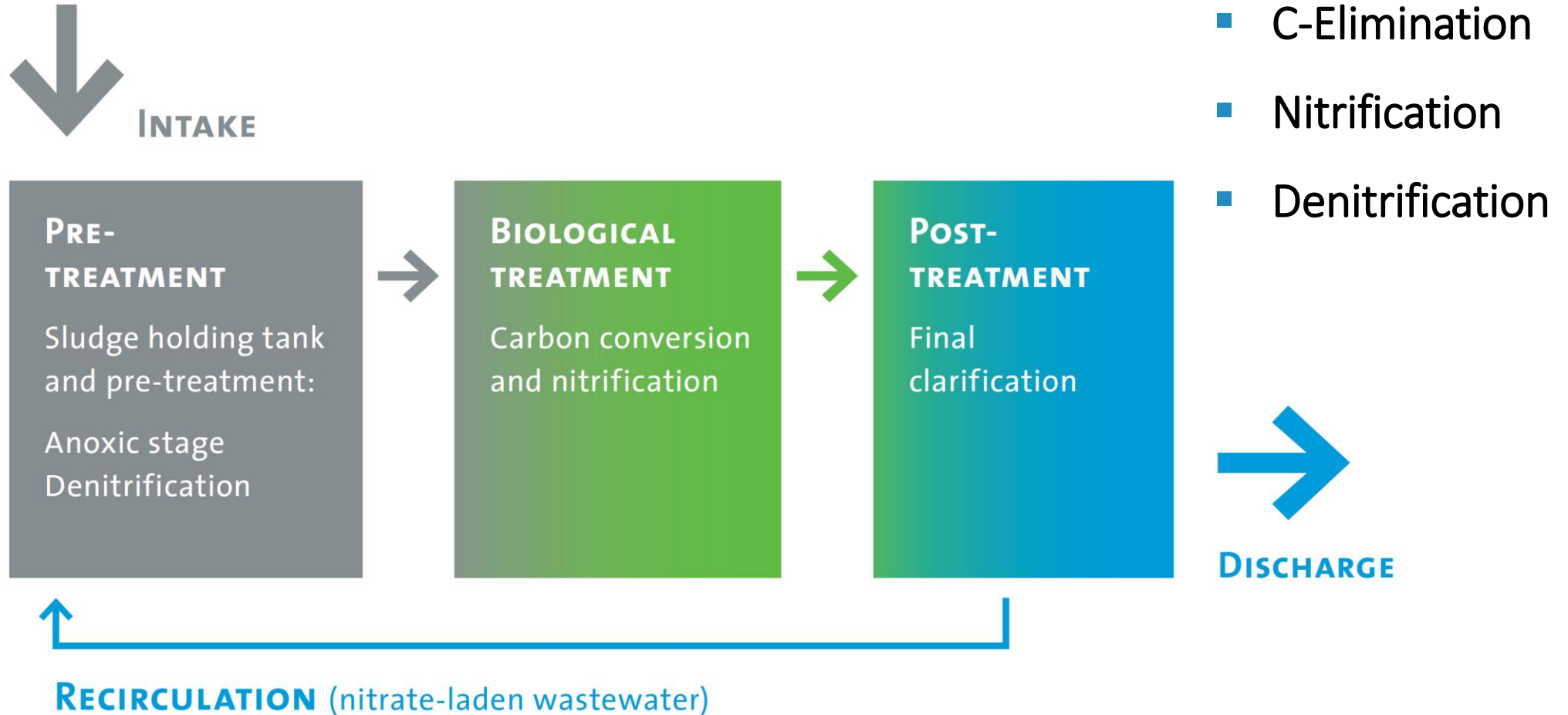
Discharge quality after phosphorus precipitation

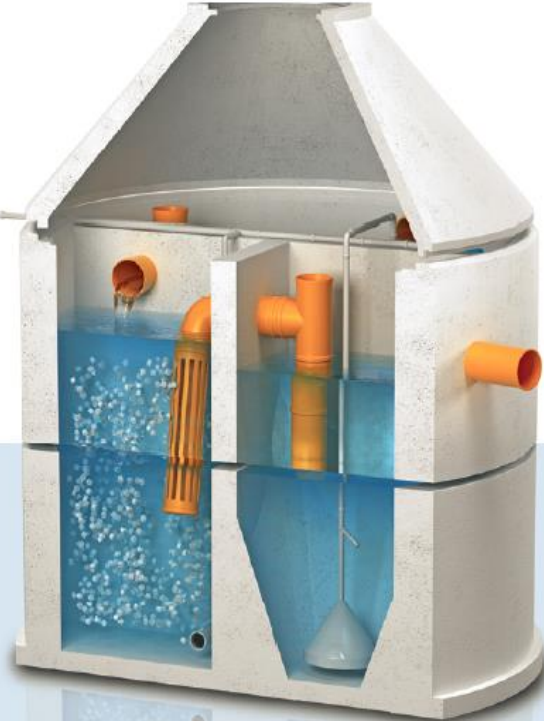
COD	≤ 75 mg/l
BOD ₅	≤ 10 mg/l
P _{tot.}	≤ 1 mg/l
TSS	≤ 10 mg/l

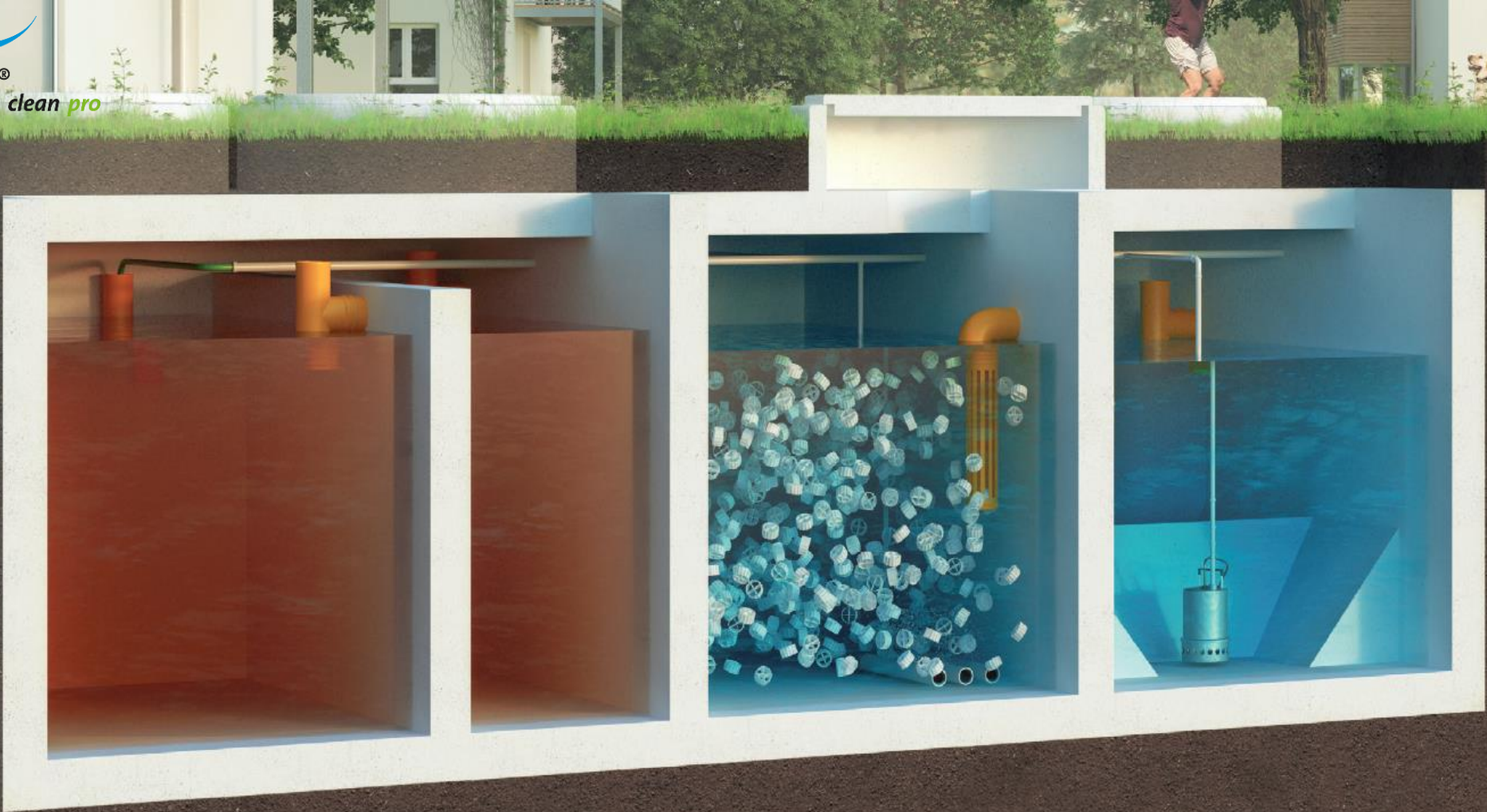
H

Discharge quality after hygienisation

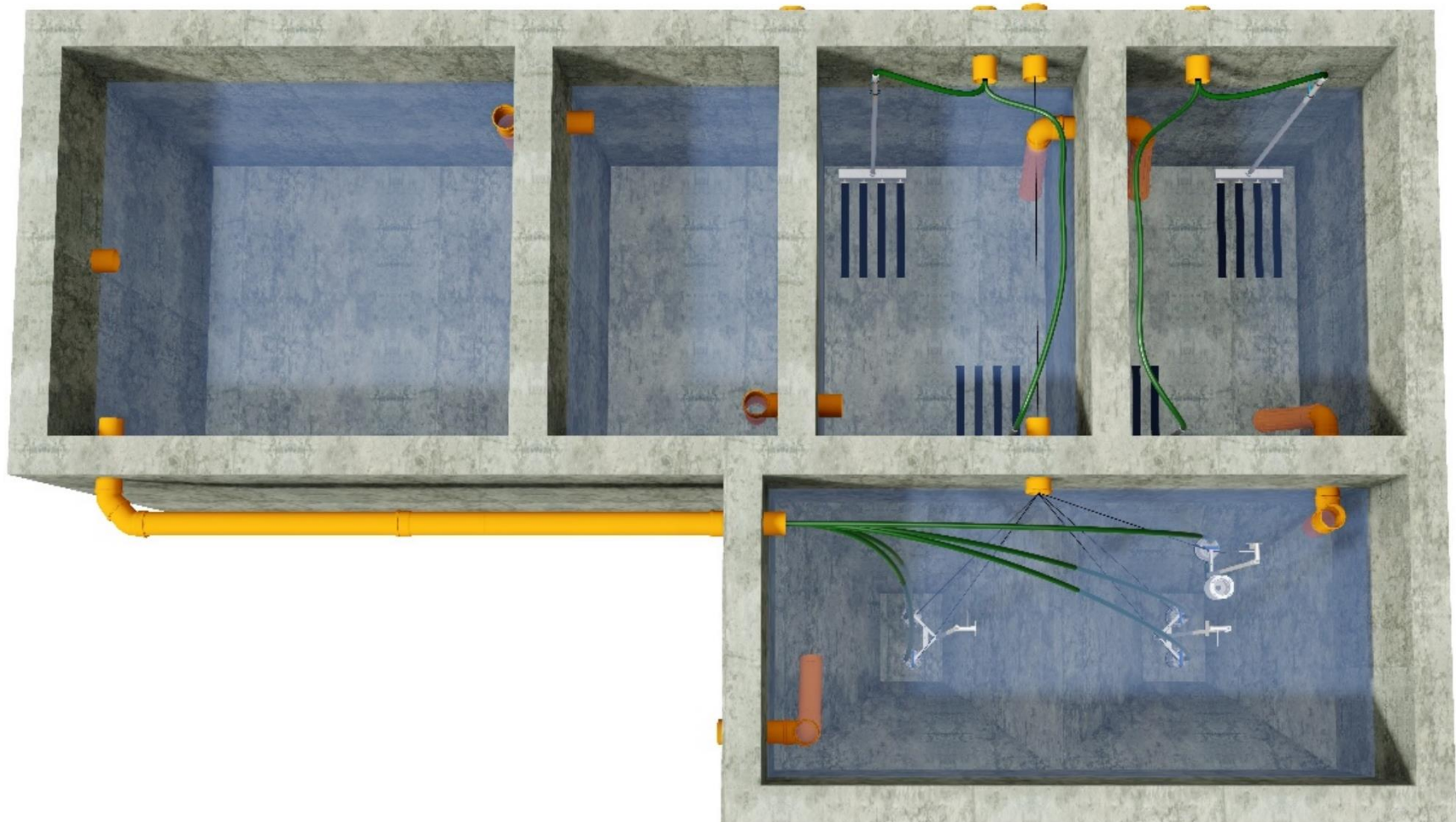
E. coli	≤ 500 CFU/100 ml
Intestinal enterococci	≤ 200 CFU/100 ml



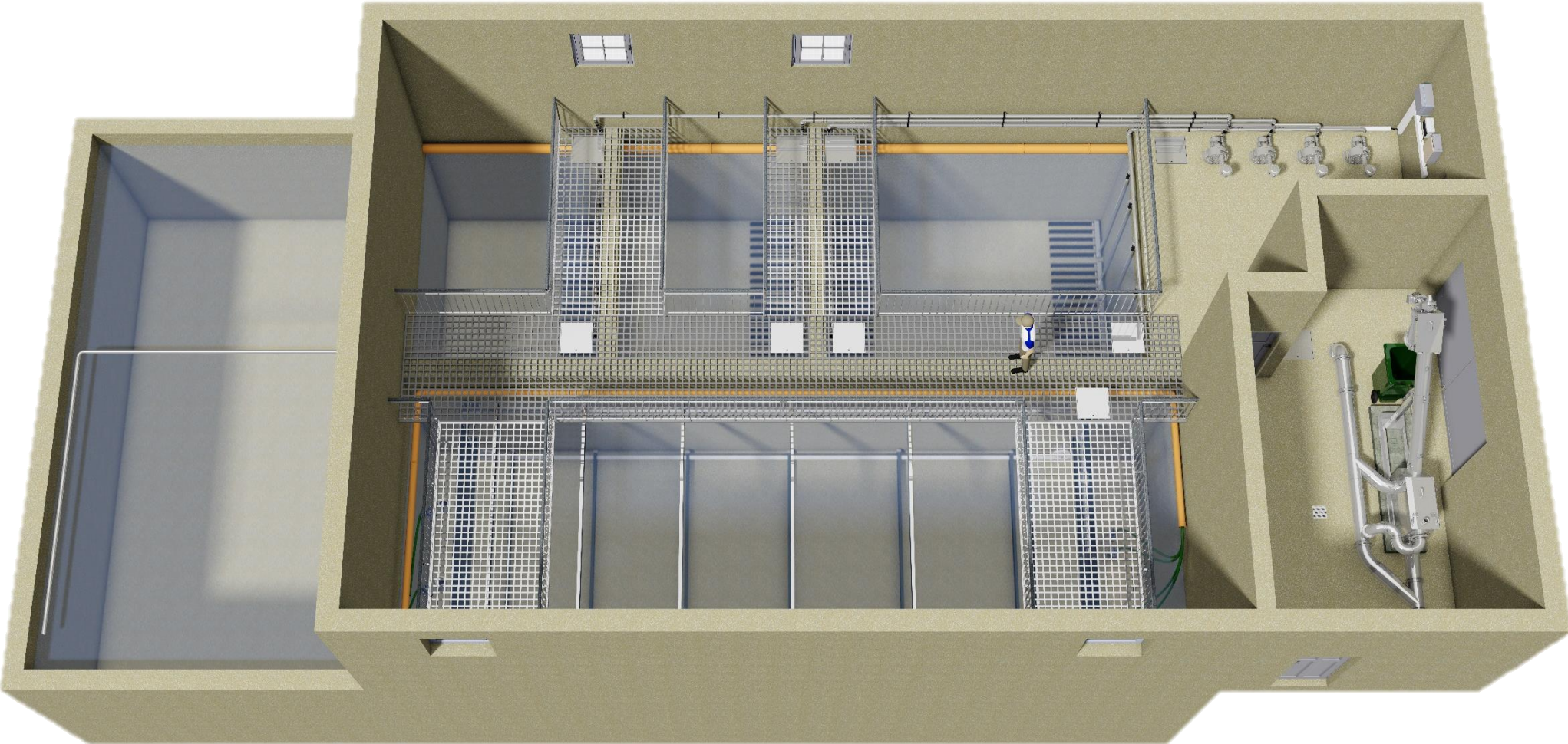




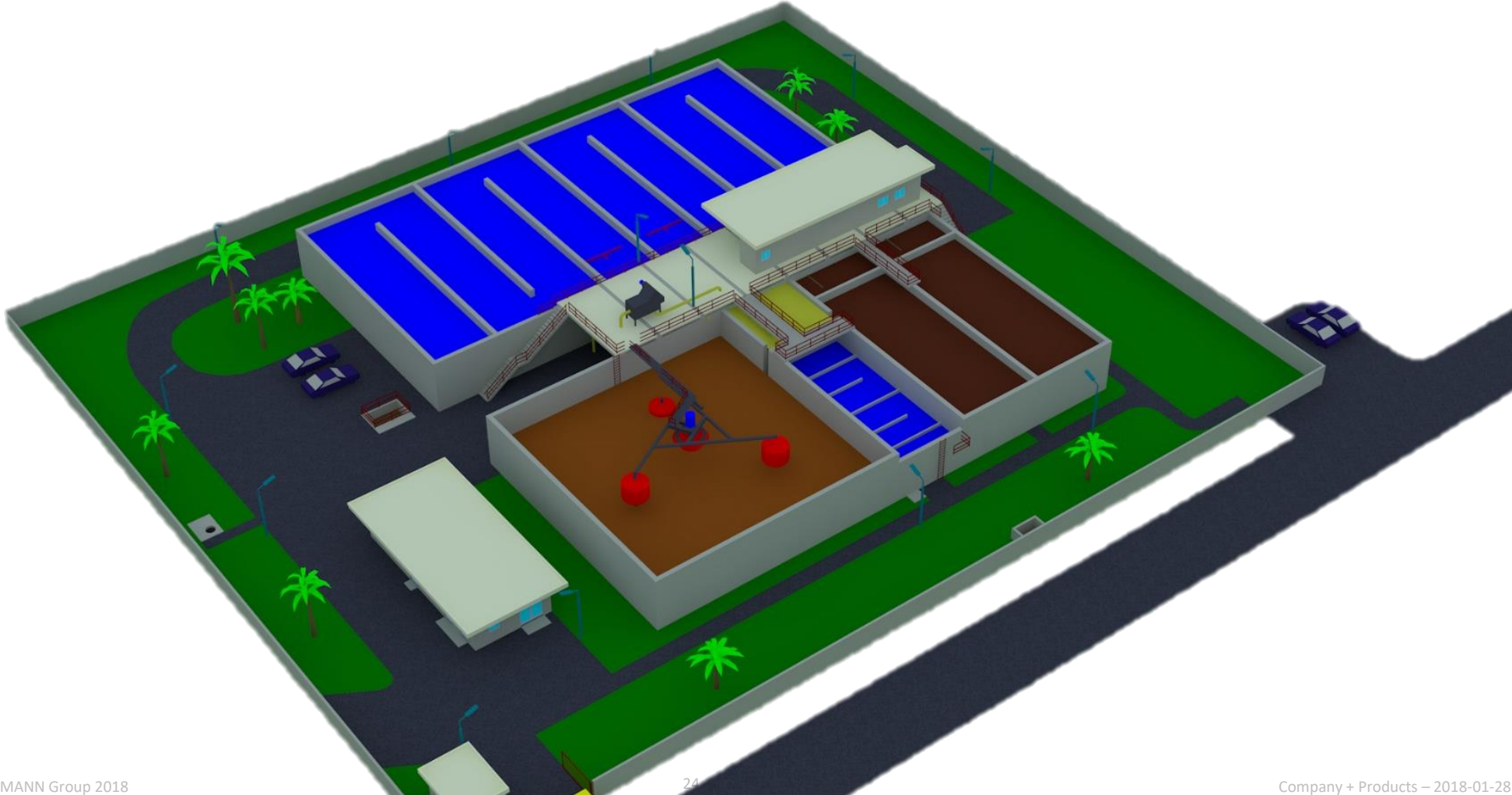
... for up to 1,000 person equivalents



... for up to 5,000 person equivalents



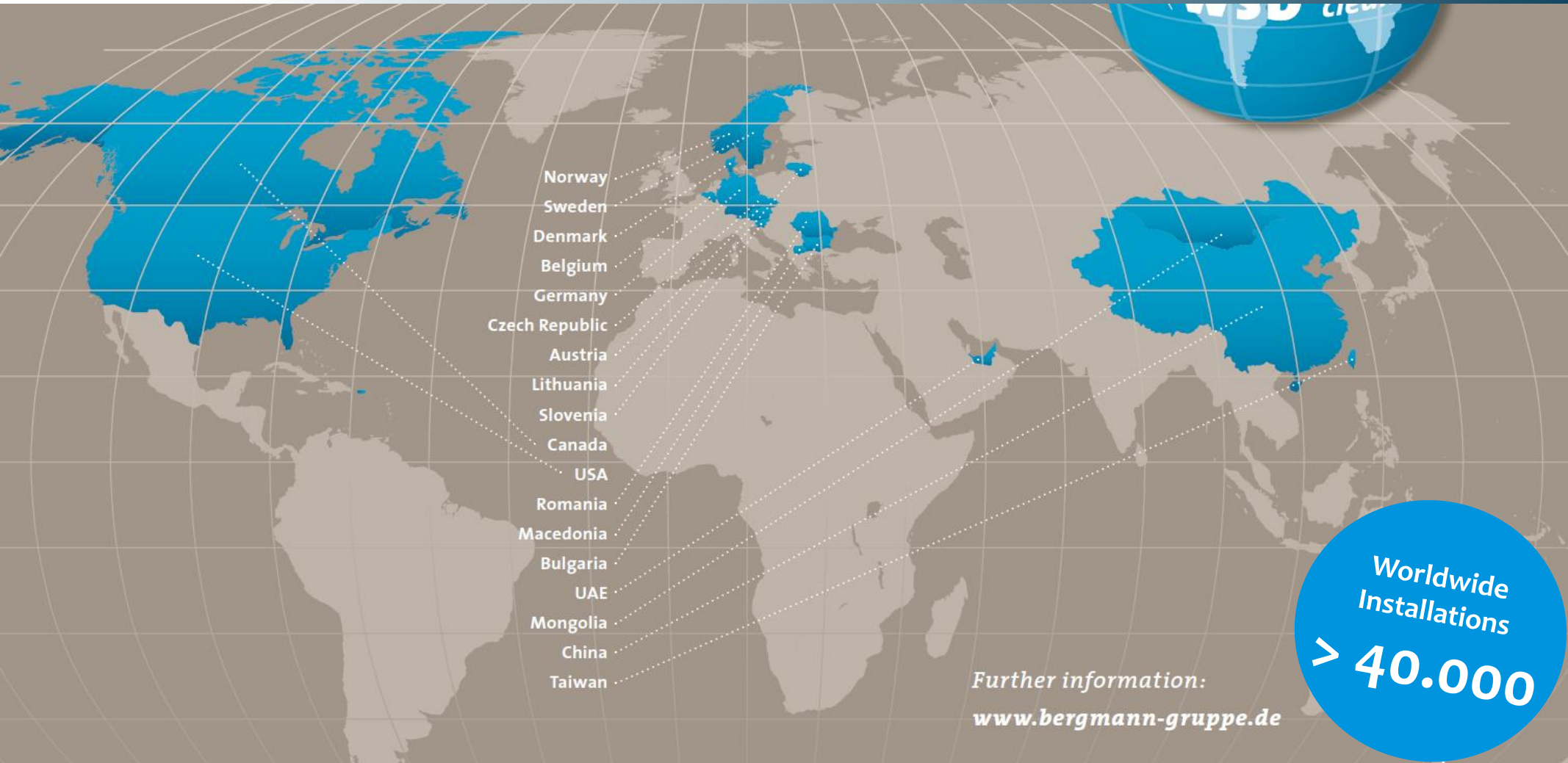
... for up to 50,000 person equivalents





↑ Döbeln (Deutschland)

300 EW

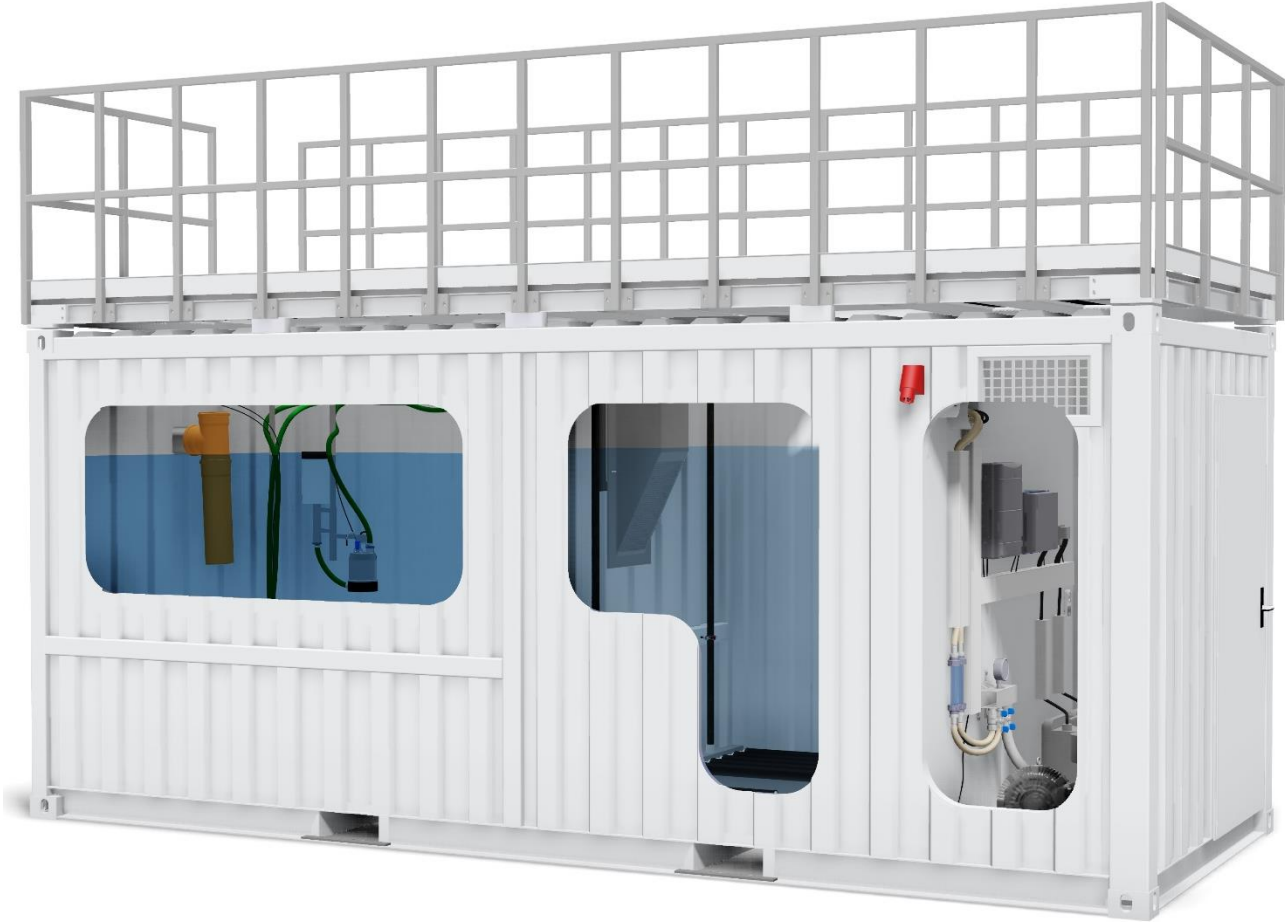


- Norway
- Sweden
- Denmark
- Belgium
- Germany
- Czech Republic
- Austria
- Lithuania
- Slovenia
- Canada
- USA
- Romania
- Macedonia
- Bulgaria
- UAE
- Mongolia
- China
- Taiwan

Further information:
www.bergmann-gruppe.de

Worldwide
Installations
> 40.000

PORTABLE WASTEWATER TREATMENT PLANTS



- **Temporary solutions**
 - >> Repair, maintenance, retrofit
- **Off-shore**
 - >> Oil platforms
- **Military and aid organizations**
 - >> Foreign aid, emergency aid
- **Industry and commerce**
 - >> Industry estates
- **Hotel and restaurant industry**
 - >> Hotels and recreational sites
- **Events**
 - >> Festivals
- **Construction sites**
 - >> Container villages

Applications



<http://www.mena-water.eu/wp-content/uploads/halfa.jpg>; 02.02.2016



http://www.maz-online.de/var/storage/images/maz/lokales/havelland/nauen/fluechtlingsheim-in-dallgow-400-asylbewerber-in-containern/222989748-1-ger-DE/Containerdorf-fuer-400-Fluechtlinge-in-Dallgow_ArtikelQuer.jpg; 02.02.2016

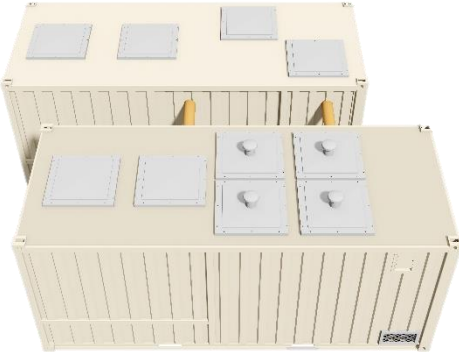


<http://www.unternehmeredition.de/wp-content/uploads/sites/4/2014/03/Peri-Titel.jpg>; 02.02.2016

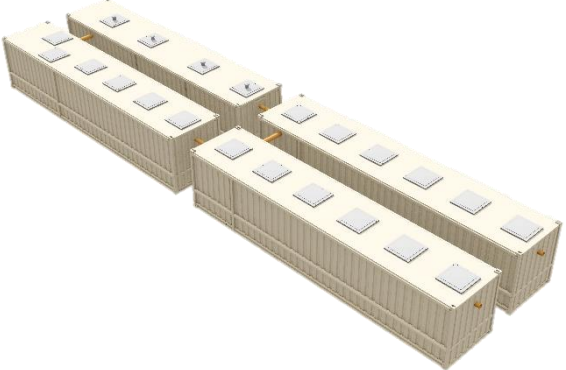
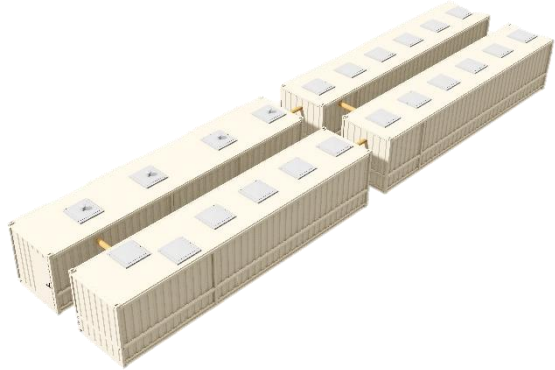
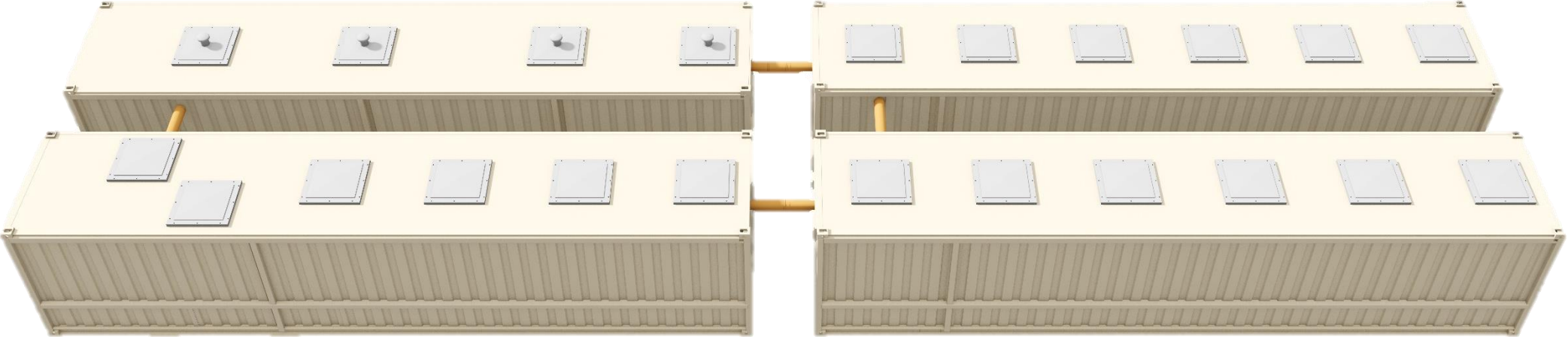
TYPE	PE	Q_d [m ³ /d]	$Q_{h,max}$ [m ³ /h]	COD [mg/l]	BOD ₅ [mg/l]	NH ₄ -N [mg/l]
WSB® clean flex 150	150	22.5	2.25	150	40	-
WSB® clean flex 300	300	45.0	4.5	150	40	-
WSB® clean flex 600	600	90.0	9.0	150	40	-

TYPE	PE	Q_d [m ³ /d]	$Q_{h,max}$ [m ³ /h]	COD [mg/l]	BOD ₅ [mg/l]	NH ₄ -N [mg/l]
WSB® clean flex 100N	100	15.0	1.5	75	10	5
WSB® clean flex 200N	200	30.0	3.0	75	10	5
WSB® clean flex 400N	400	60.0	6.0	75	10	5

Example



Example



WWTP'S MADE OF LYING CYLINDRICAL PLASTIC TANKS



- + LOW WEIGHT
- + PRE-ASSEMBLED EX WORKS
- + FOR UP TO 600 PE





- + TANK DIAMETER: 2.20 m
- + TRAFFIC LOAD CLASSES: A15 – D400
- + UPWELLING PROTECTION OPTIONAL

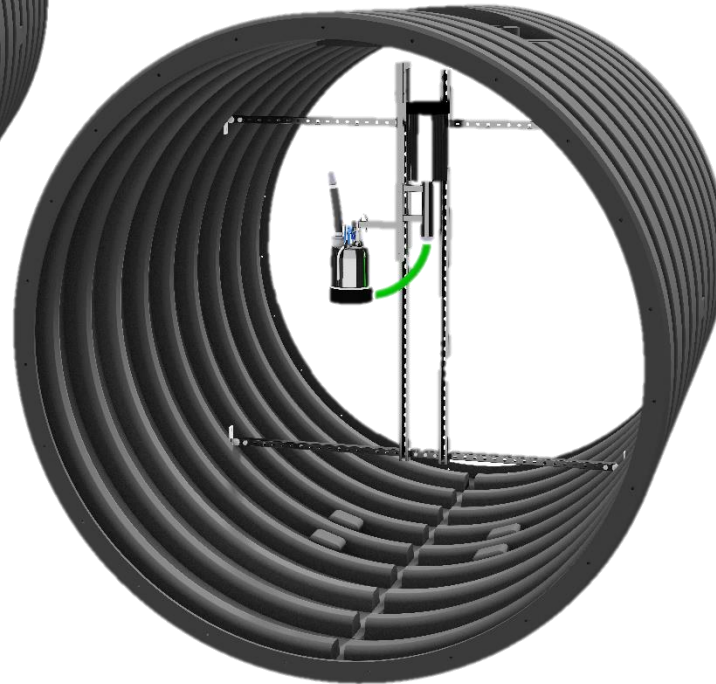
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WSB® clean pro PE 100N	100	15.0	1.5	75	10	5
WSB® clean pro PE 200N	200	30.0	3.0	75	10	5
WSB® clean pro PE 400N	400	60.0	6.0	75	10	5



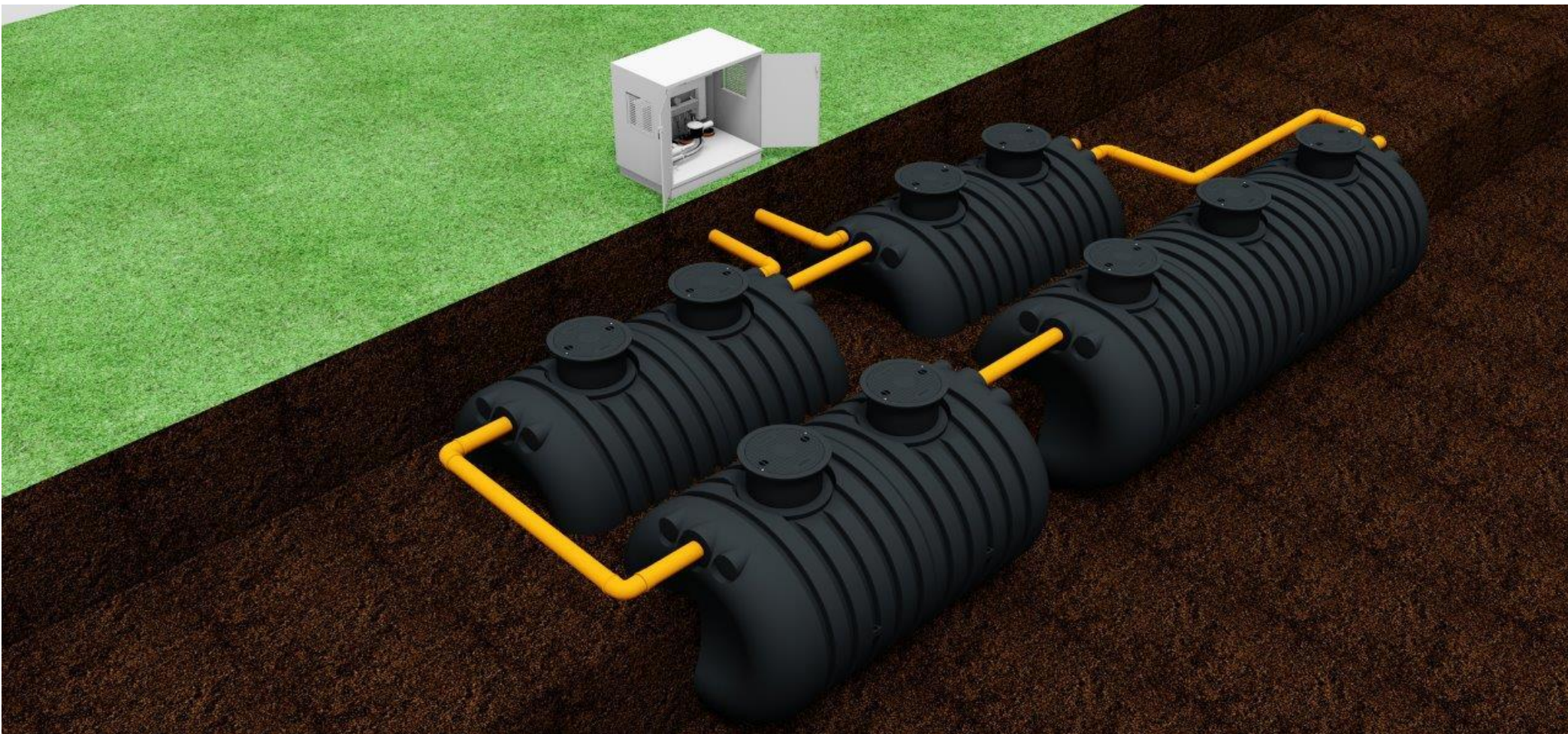
Fine bubble
aeration

Floating sludge
skimming



Ground sludge
skimming

Example



+ LOW WEIGHT

+ FLEXIBLE INSTALLATION

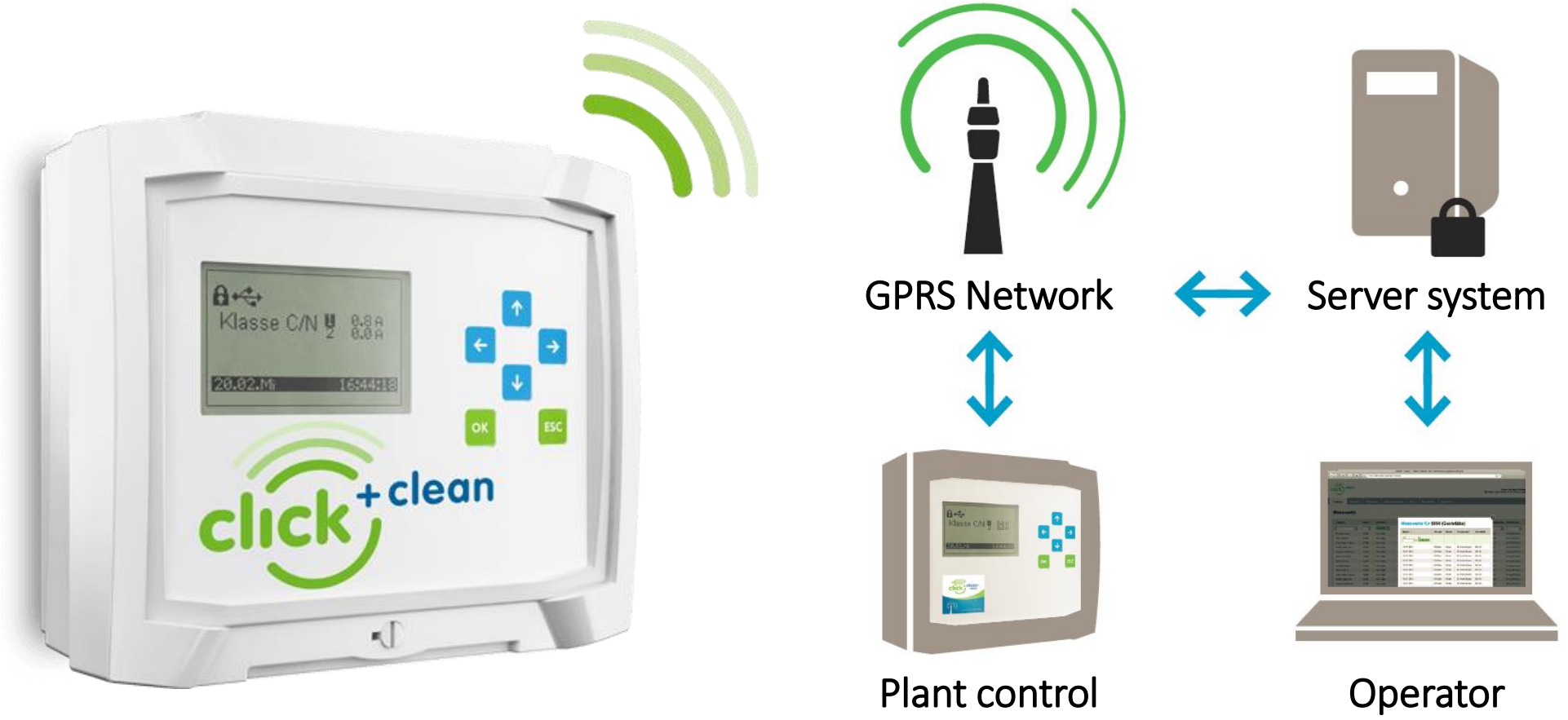
+ PRE-ASSEMBLED + READY FOR OPERATION

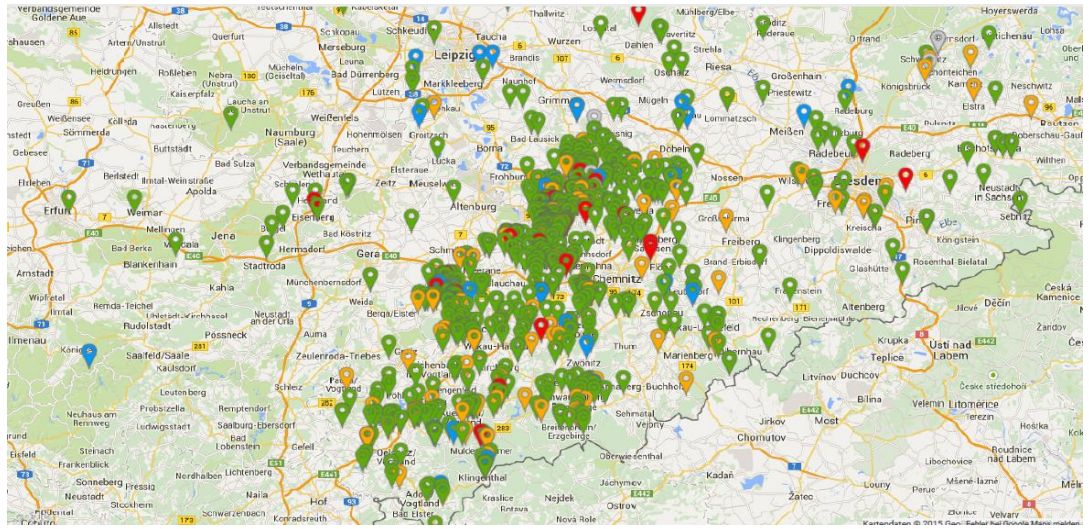
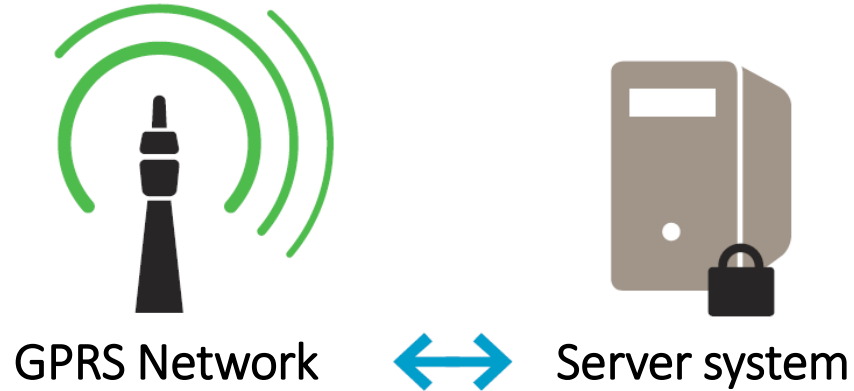
+ WORLDWIDE SHIPPING VIA ISO CONTAINERS

Equipment enclosure



CONTROL PANELS AND REMOTE MANAGEMENT





WVNG BETA SYSTEM x +
https://cuc-wsb.de/app/dashboard_user/ Suchen

Kläranlage Iven Herr Kroggel
Eigentümer

UTC +01:00
European Central Time

logout

wsb clean

Willkommen Kläranlage Iven Herr Kroggel, im WEB-Viewer 2.0 dem Verwaltungsportal ihrer Kläranlage

A2 | Kläranlage Iven | Iven

Letzter Login: 16.06.2015, 09:54:30
System-Version: 0.4.10.67a

Auswertung der Systembereitschaft

Start: 2015-KW01
Ende: 2015-KW25

System-OK-Zähler Auswertung

Funktionsstörung: 0 %



Betriebsbereit: 100 %

Highcharts.com

Kontakt zu Ihrem Wartungsbetrieb

Firma: Mirko, Glöckner Adresse: Am Zeisig 8 , 09322 Penig
Telefon: 037381 8610 E-Mail: mirko.gloeckner@bergmann-abwassertechnik.com


Downloadbereich

Betriebsbuch entsprechend der Zulassung herunterladen: [hier klicken](#)

Betriebsnachweis für Behörde herunterladen: [hier klicken](#)

Downloads:

Aktuelle Betriebsmeldung

 **Letzte Meldung:**
Status: Betriebsbereit(keine Störung vorhanden)
Meldungscode: 0
Datum, Uhrzeit: 16.06.2015, 00:54

Weitere Informationen

Gehe zu: [Übersicht der Betriebsstunden](#)
Gehe zu: [Übersicht der Meldungen](#)
Gehe zu: [Übersicht der Messwerte](#)
Gehe zu: [Übersicht der Parameter](#)

THANKS FOR BEING WITH US!

Bergmann AG
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09322 Penig – Germany