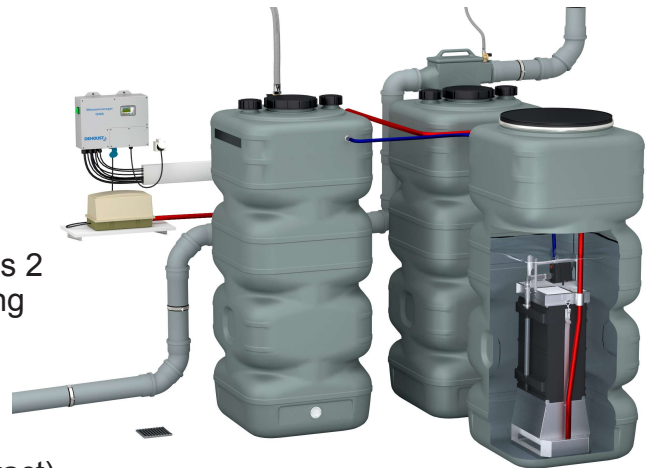


Decentralised greywater treatment system¹⁾ with eco-friendly recycling-technique to reduce the total fresh water consumption up to 40 - 60 % in residential and commercial buildings, hotels, motels, office buildings and sports facilities.

Brief description

- proven and eco-friendly recycling-technique with *BioMembraneTechnology (BMT)*
- no use of chemicals - only bio-mechanical treatment
- energy-saving recycling process
- clear, odourless and germ-free process water quality exceeding the strict requirements of British Standard 8525-1:2010 for greywater reuse systems, EU bathing water directive 2006/7/EC and DIN 19650 class 2
- process water suitable for toilet flushing, house cleaning purposes, garden irrigation and washing machine
- integrated mains water back up system according to DIN EN 1717 (AB)
- full-automated GEP-control unit
- connection to building management system (12 V contact)
- optional: compatible to integrate rainwater
- optional: remote control via SMS and Email and online-monitoring



Standard scope of delivery

Robust full-automated internal greywater treatment system, equipped with coarse filter *TridentMAX*, huge greywater storage tank(s), BMT-unit(s) with submerged *BMT*-membrane filter, process water storage tank(s) incl. mains water back up system and full automated GEP-control unit.

Accessories

GSM-remote control

Item 812534

transmission of all status and error messages via SMS and Email

GSM-Online-Monitoring

Item 812525

transmission of all status and error messages via SMS and Email and evaluation of all performance data at GEP-Webportal

GWM-Rainwater-package

Item 812966

to include additional rainwater into the greywater-reuse-system

Back-Tank AQF 690

Item 813450

active pumping of greywater back from the BMT-units back to the greywater storage tank

Auto-Drainage-System

Item 813455

automated drainage of process water after defined period of water stagnancy (30 days)

Extra-aeration unit for greywater storage tank

Item 813440

additional air compressor-set for large greywater storage tanks

¹⁾ Greywater from showers, bath tubes and handwash basins

How the system works

Based on the *BioMembraneTechnology* the GEP-Watermanager GWM treats greywater from the drains of showers, bath tubes and handwash basins and provides a high-quality process water for different reuse-applications.

Initially the raw greywater is mechanically treated in the coarse filter TridentMAX to remove all undissolved water contents, such as textile fluff or hair. An automatic backwash unit keeps the filter plate clear and ready for a high filtration performance.

In the next step the GEP-control unit takes care that specific purification bacteria decompose all the biodegradable ingredients in the greywater, such as soap or shampoo.

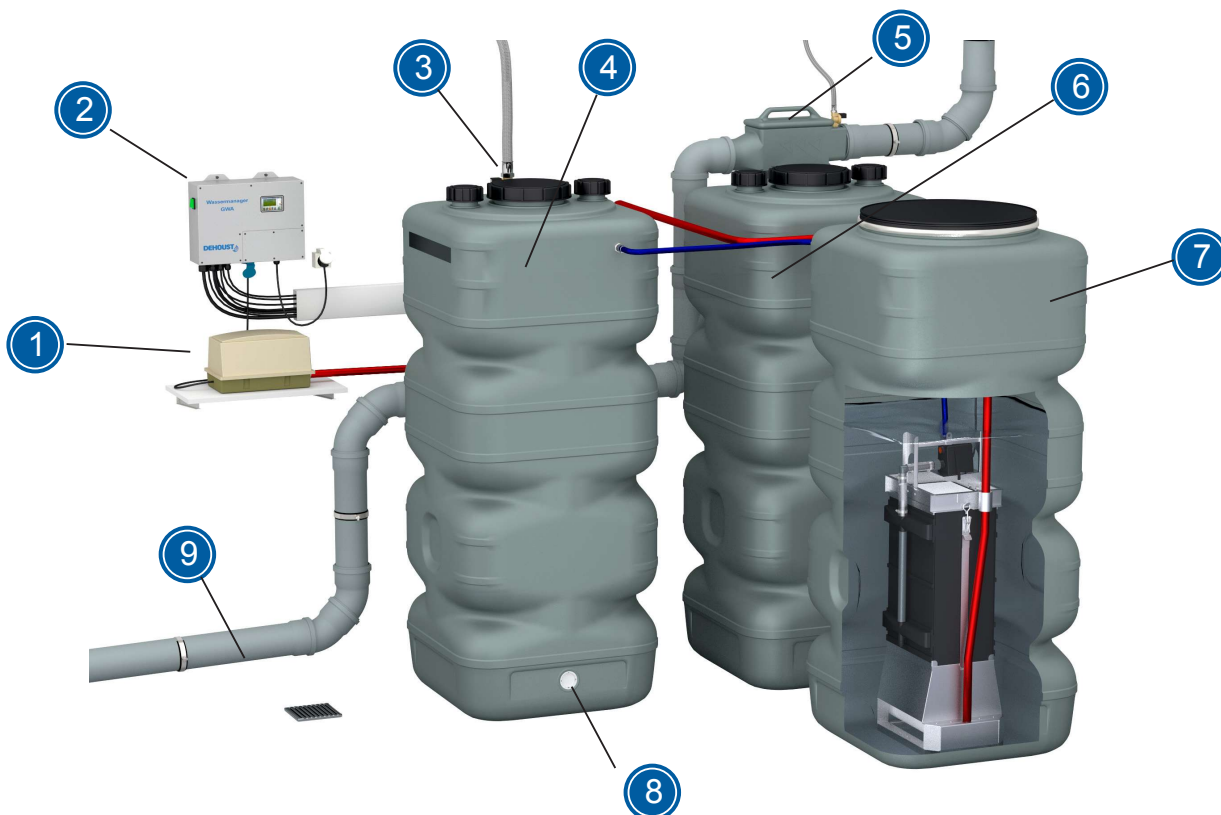
After the biological cleaning the heart of the GEP-Watermanager GWM, the immersed BMT-membrane filter starts to filter out the pre-treated greywater. With a physically pore width of 38 nm (2.500 times finer than a human hair!) all solid particles, germs and individual absorbed viruses are safely retained in the system all the time.

An optimised air flushing process with periodically increasing air bubbles ensures the filter plates are continually cleaned. This extremely efficient method of self-cleaning increases the life of the system considerably and reduces the maintenance cost to an absolute minimum.

The result of the recycling process is a clear, odourless and germ-free process water!

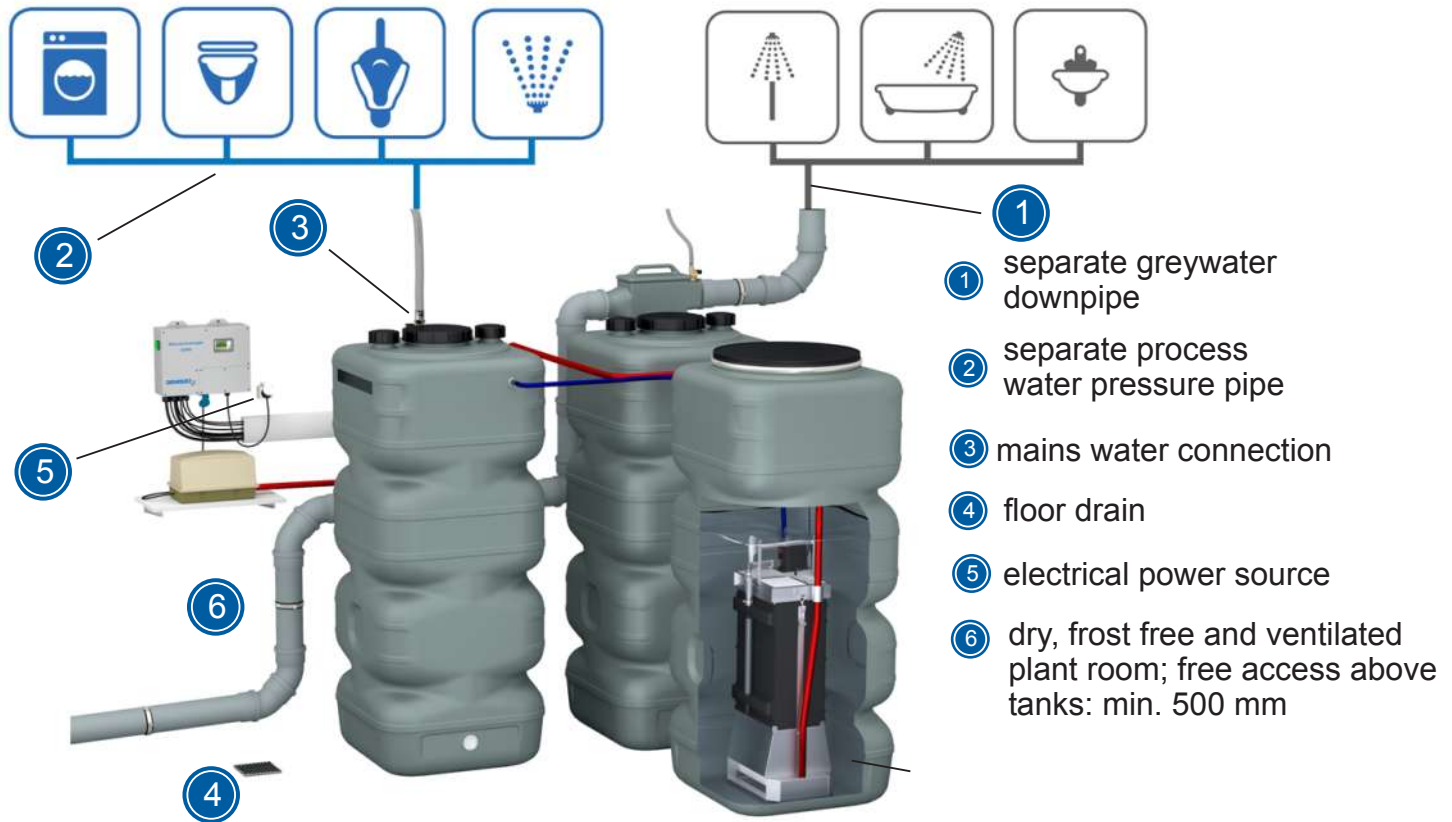
Thanks to the very low remaining nutrient value (BOD5 < 5 mg/L) and rest-biomass the purified process water is suitable for a long storage (toilet flush box) and a variety of safe reuse applications. In case of a lack of process water the automatic mains water back up system will be activated and ensures an safe water supply all the time.

Main plant components



- | | | |
|------------------------------|--------------------------------|---------------------------|
| ① Air compressor | ④ Process water storage tank | ⑦ BMT-unit |
| ② GEP-control unit | ⑤ Coarse filter <i>Trident</i> | ⑧ connection booster pump |
| ③ Mains water back up system | ⑥ Greywater storage tank | ⑨ Overflow to sewer |

Assembly scheme and installation informations



Remote control and Online-Monitoring

- immediate transmission of status and error messages via SMS & Email
- transmission of exact maintenance and inspection points of time

- Login-account for GEP-Webportal
- Visualization of interesting performance data, such as total plant efficiency, current treatment performance, total safed mains water amount



Accessory item 812534



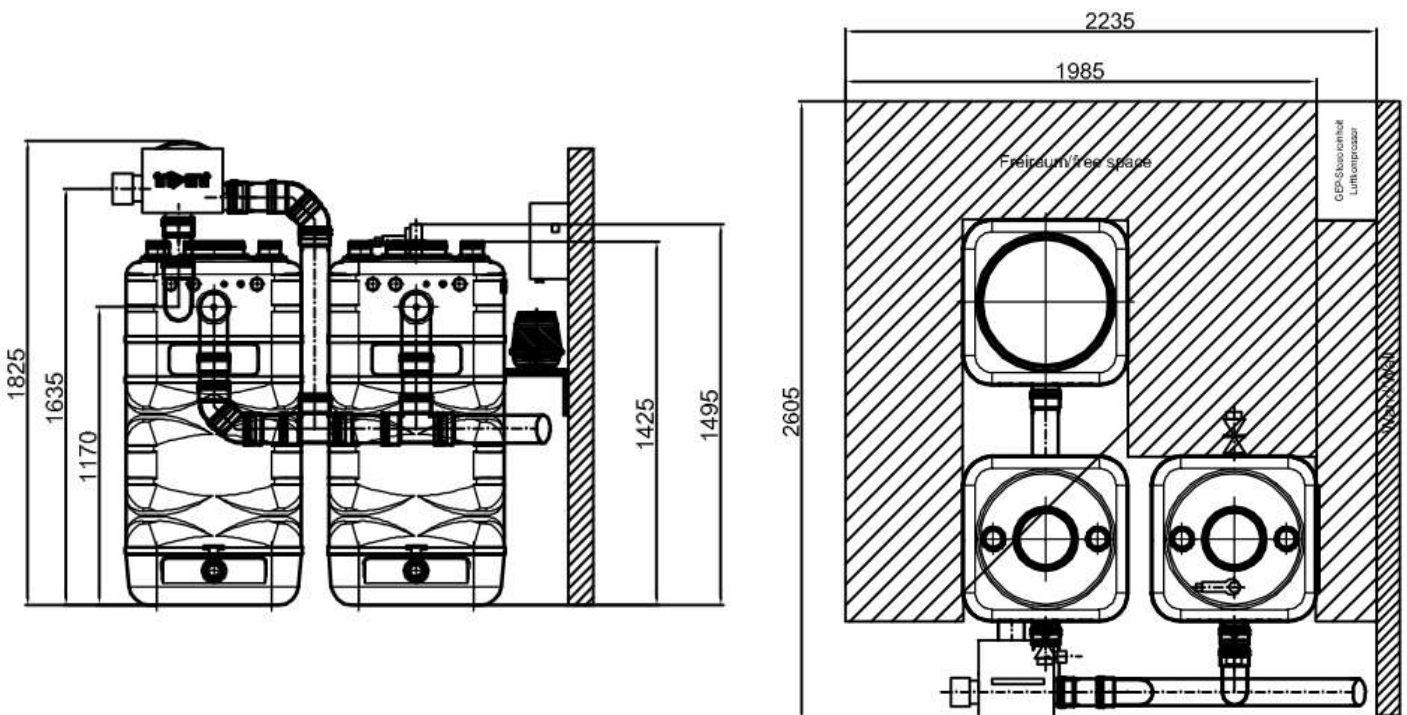
Accessory item 812525

Specifications/connections of all GEP-Watermanager GWM

GEP-Watermanager GWM 950 Item 813345

Designed for	ca. 25 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 950 L/d	Electrical power GEP-Watermanager:	400 W
Energy consumption:	~ 1,75 kWh/m ³	Connection Inflow/Overflow:	DN 100
Coarse filter:	3 mm	Connection mains water back up system:	1" female
BMT-membrane filter:	38 nm	Connection backwash coarse filter:	1/2" female
Free space above tanks:	min . 500 mm	Connection to external booster pump station:	1 1/2" female
Empty weight total plant:	140 kg	Dimension largest component (LxWxH):	720 x 720 x 1.430 mm
Greywater storage volume:	500 litres		
Process water storage volume:	500 litres		

Installation example



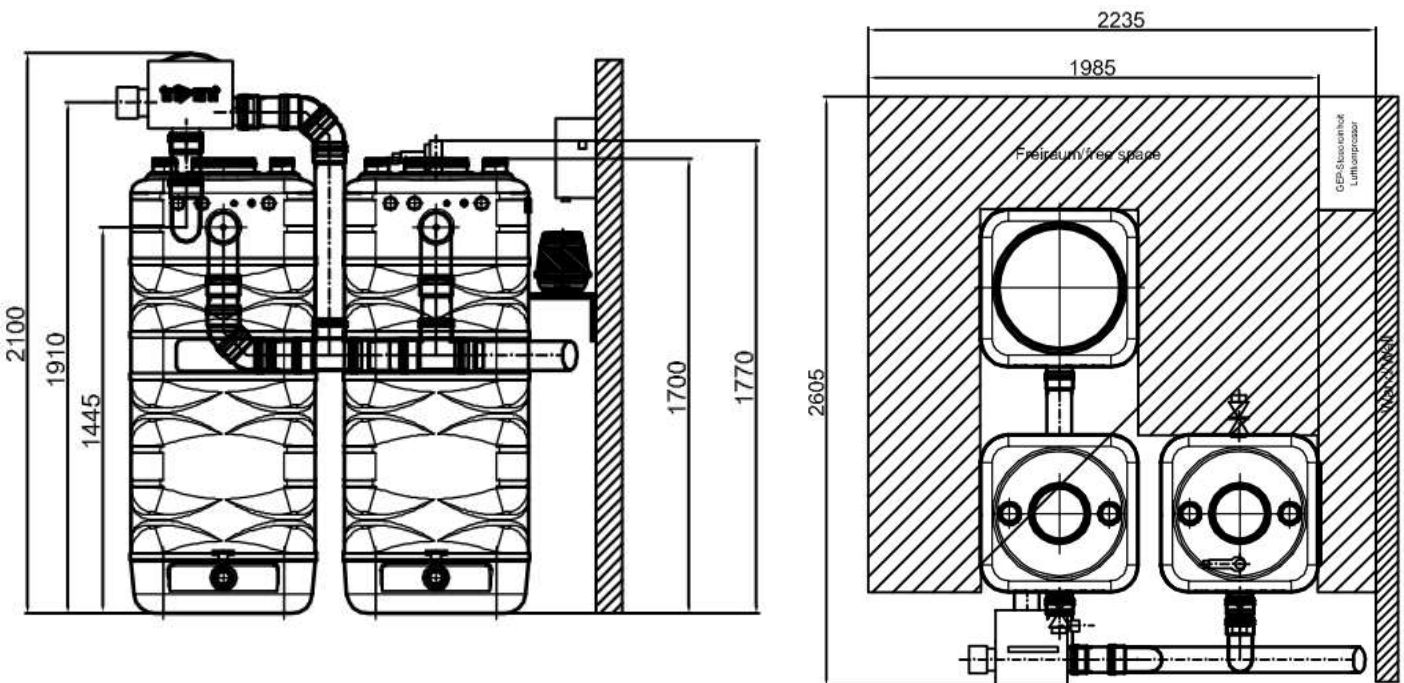
GEP-Watermanager GWM 1.150

Item 813355

Designed for	ca. 30 inhabitants
Treatment capacity:	max. 1.150 L/d
Energy consumption:	~ 1,75 kWh/m ³
Coarse filter:	3 mm
<i>BMT</i> -membrane filter:	38 nm
Free space above tanks:	min . 500 mm
Empty weight total plant:	160 kg
Greywater storage volume:	600 litres
Process water storage volume:	600 litres

Electrical load:	1x 220 V / 16 A / 50 Hz
Electrical power GEP-Watermanager:	400 W
Connection Inflow/Overflow:	DN 100
Connection mains water back up system:	1" female
Connection backwash coarse filter:	1/2" female
Connection to external booster pump station:	1 1/2" female
Dimension largest component (LxWxH):	720 x 720 x 1.700 mm

Installation example

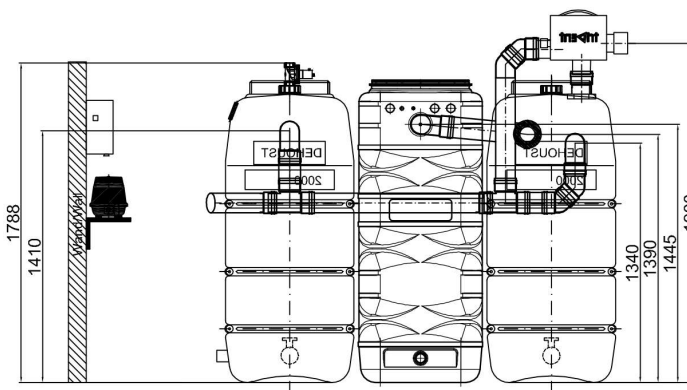
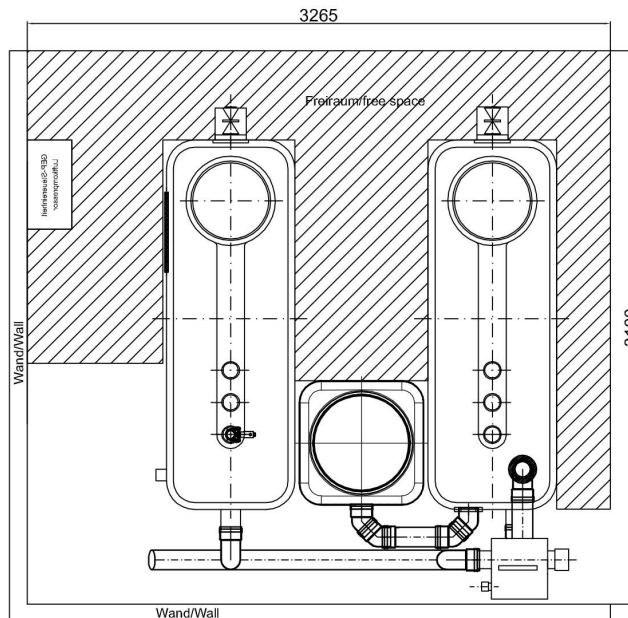


GEP-Watermanager GWM 2.000

Item 813365

Designed for	ca. 50 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 2.000 L/d	Electrical power GEP-Watermanager:	400 W
Energy consumption:	~ 1,75 kWh/m ³	Connection Inflow/Overflow:	DN 100
Coarse filter:	3 mm	Connection mains water back up system:	1" female
BMT-membrane filter:	38 nm	Connection backwash coarse filter:	1/2" female
Free space above tanks:	min . 500 mm	Connection to external booster pump station:	1 1/2" female
Empty weight total plant:	330 kg	Dimension largest component (LxWxH):	2.070 x 720 x 1.690 mm
Greywater storage volume:	1.700 litres		
Process water storage volume:	1.500 litres		

Installation example

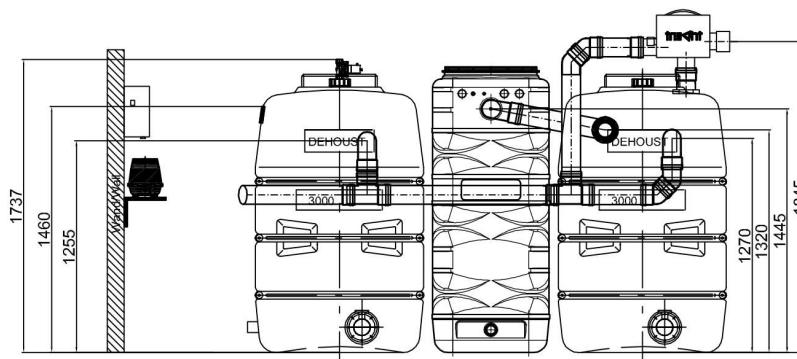
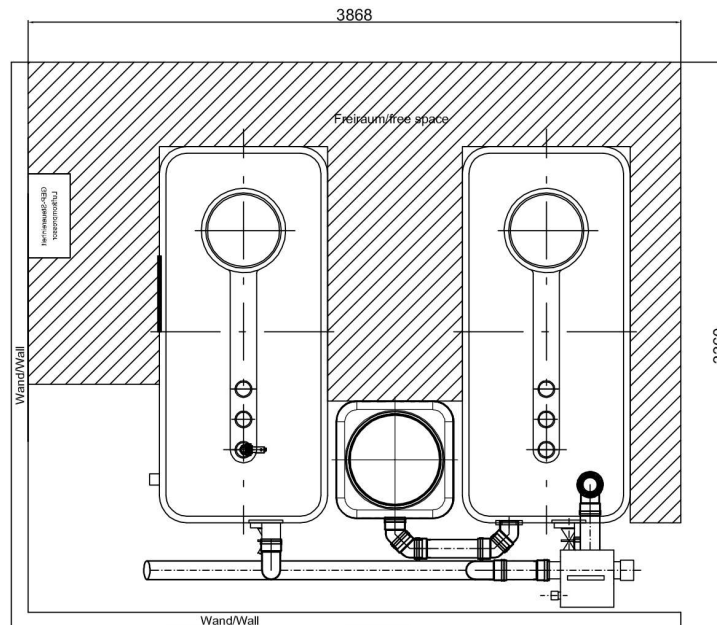


GEP-Watermanager GWM 3.000

Item 813375

Designed for	ca. 75 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 3.000 L/d	Electrical power GEP-Watermanager:	400 W
Energy consumption:	~ 1,75 kWh/m ³	Connection Inflow/Overflow:	DN 100
Coarse filter:	3 mm	Connection mains water back up system:	1" female
BMT-membrane filter:	38 nm	Connection backwash coarse filter:	1/2" female
Free space above tanks:	min. 500 mm	Connection to external booster pump station:	1 1/2" female
Empty weight total plant:	440 kg	Dimension largest component (LxWxH):	2.230 x 995 x 1.650 mm
Greywater storage volume:	2.500 litres		
Process water storage volume:	2.200 litres		

Installation example



GEP-Watermanager GWM 6.000

Item 813385

Designed for: ca. 150 inhabitants

Treatment capacity: max. 6.000 L/d

Energy consumption: ~ 1,75 kWh/m³

Coarse filter: 3 mm

BMT-membrane filter: 38 nm

Ceiling height plant room: min . 500 mm

Empty weight total plant: 890 kg

Greywater storage volume: 5.000 litres

Process water storage volume: 4.000 litres

Electrical load: 1x 220 V / 16 A / 50 Hz

Electrical power GEP-Watermanager: 550 W

Connection coarse filter/ greywater tank: DN 150

Connection process water storage tank: DN 150

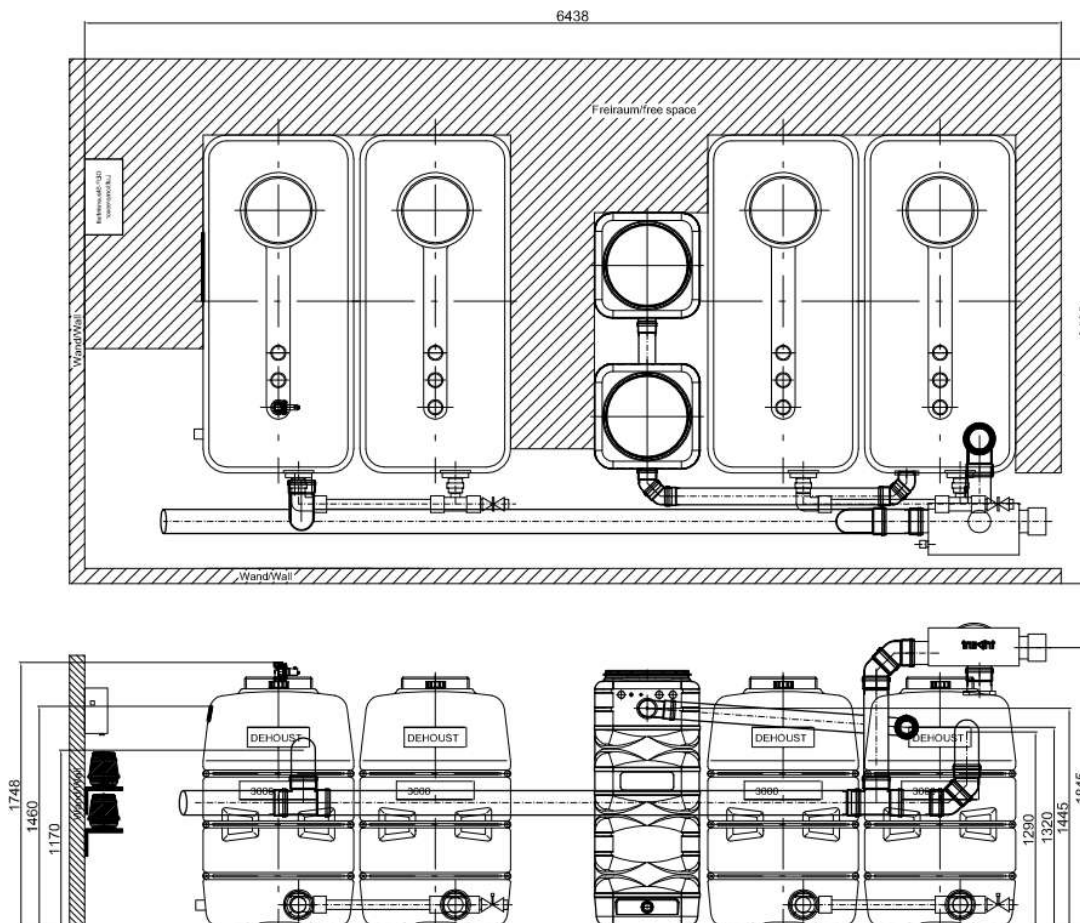
Connection mains water back up system: 1 1/2" female

Connection backwash coarse filter: 1" female

Connection to external booster pump station: 1 1/2" female

Dimension largest component (LxWxH): 2.230 x 995 x 1.650 mm

Installation example

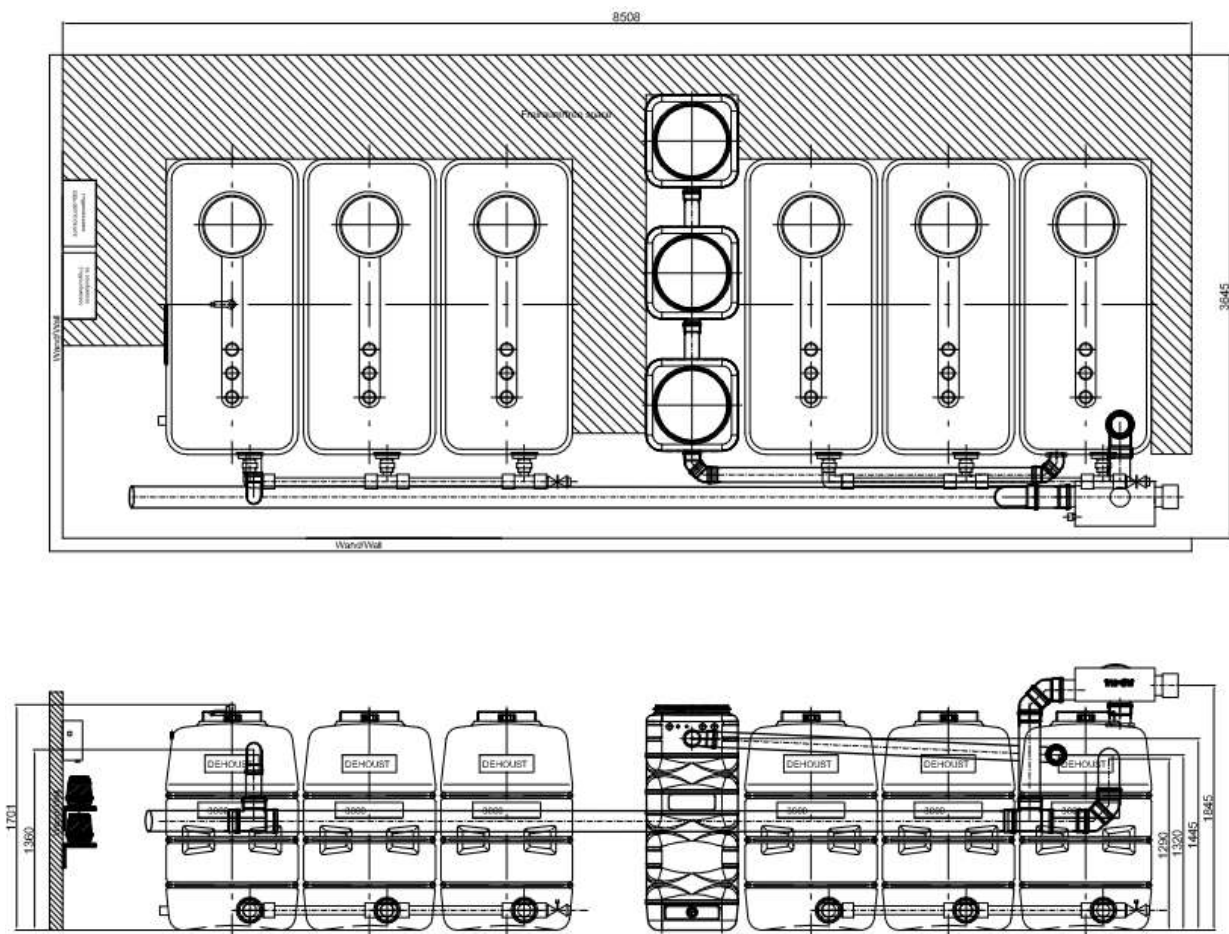


GEP-Watermanager GWM 9.000

Item 813395

Designed for	ca. 225 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 9.000 L/d	Electrical power GEP-Watermanager:	700 W
Energy consumption:	~ 1,75 kWh/m ³	Connection coarse filter/ greywater tank:	DN 150
Coarse filter:	3 mm	Connection process water storage tank:	DN 150
<i>BMT</i> -membrane filter:	38 nm	Connection mains water back up system:	1 1/2" female
Free space above tanks:	min . 500 mm	Connection backwash coarse filter:	1" female
Empty weight total plant:	1.295 kg	Connection to external booster pump station:	1 1/2" female
Greywater storage volume:	7.500 litres	Dimension largest component (LxWxH):	2.230 x 995 x 1.650 mm
Process water storage volume:	6.000 litres		

Installation example



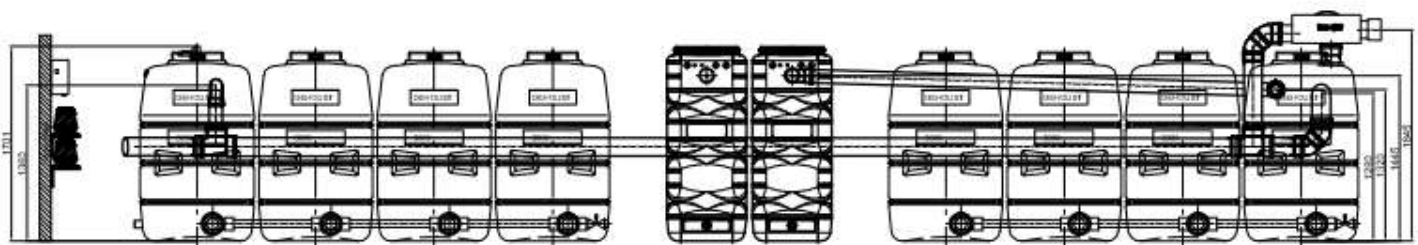
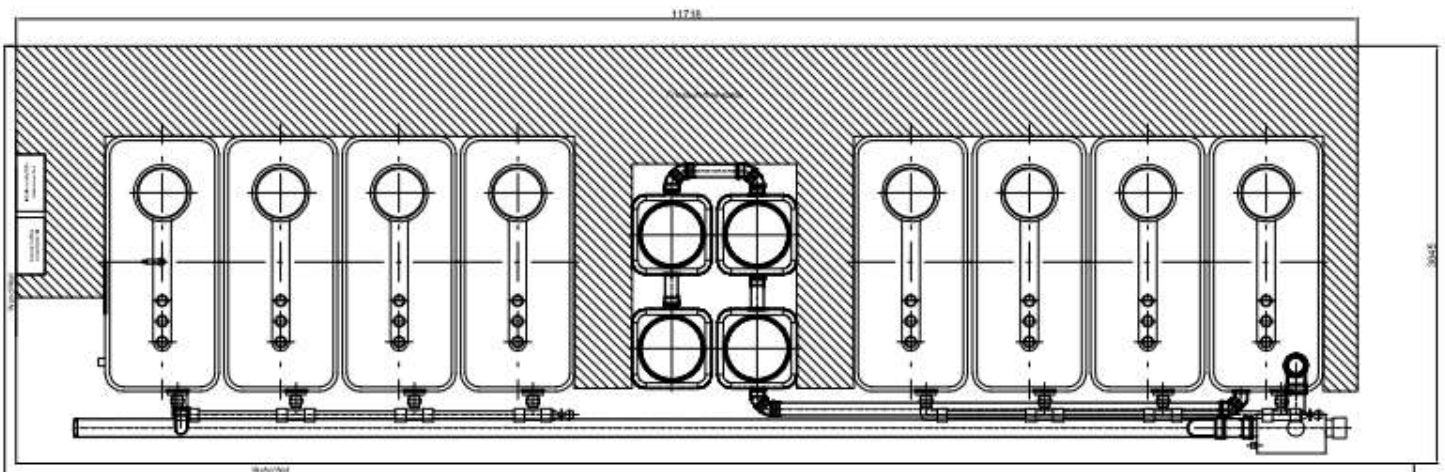
GEP-Watermanager GWM 12.000

Item 813605

Designed for	ca. 300 inhabitants
Treatment capacity:	max. 12.000 L/d
Energy consumption:	~ 1,75 kWh/m ³
Coarse filter:	3 mm
<i>BMT</i> -membrane filter:	38 nm
Free space above tanks:	min. 500 mm
Empty weight total plant:	1.700 kg
Greywater storage volume:	10.000 litres
Process water storage volume:	8.000 litres

Electrical load:	1x 220 V / 16 A / 50 Hz
Electrical power GEP-Watermanager:	850 W
Connection coarse filter/ greywater tank:	DN 150
Connection process water storage tank:	DN 150
Connection mains water back up system:	1 1/2" female
Connection backwash coarse filter:	1" female
Connection to external booster pump station:	1 1/2" female
Dimension largest component (LxWxH):	2.230 x 995 x 1.650 mm

Installation example

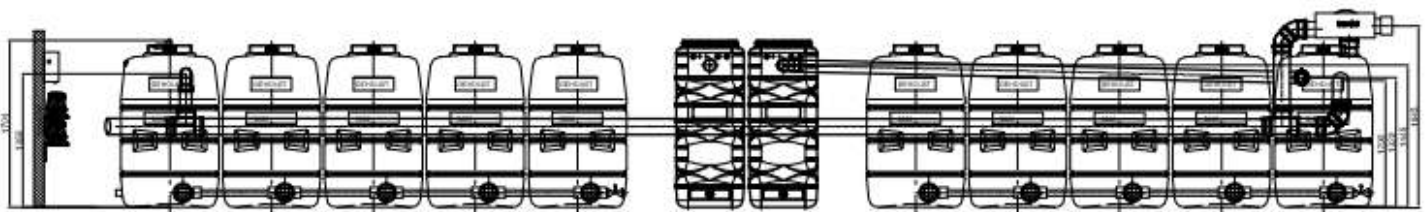
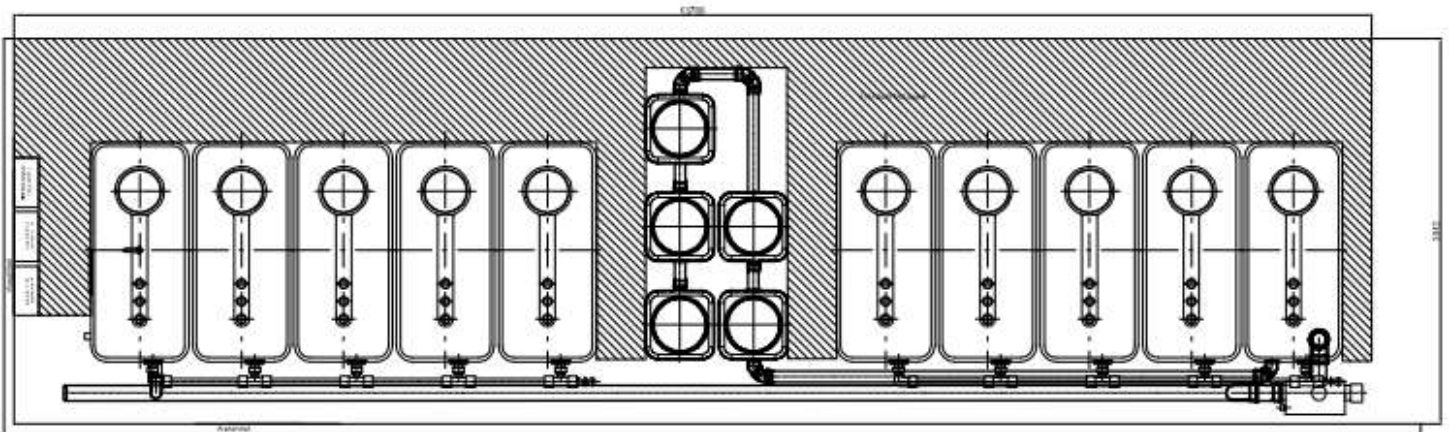


GEP-Watermanager GWM 15.000

Item 813615

Designed for	ca. 375 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 15.000 L/d	Electrical power GEP-Watermanager:	1.000 W
Energy consumption:	~ 1,75 kWh/m ³	Connection coarse filter/ greywater tank:	DN 150
Coarse filter:	3 mm	Connection process water storage tank:	DN 150
<i>BMT</i> -membrane filter:	38 nm	Connection mains water back up system:	1 1/2" female
Free space above tanks:	min. 500 mm	Connection backwash coarse filter:	1" female
Empty weight total plant:	2.170 kg	Connection to external booster pump station:	1 1/2" female
Greywater storage volume:	12.500 litres	Dimension largest component (LxWxH):	2.230 x 995 x 1.650 mm
Process water storage volume:	10.000 litres		

Installation example



GEP-Watermanager GWM 22.500

Item 813625

Designed for: ca. 560 inhabitants

Treatment capacity: max. 22.500 L/d

Energy consumption: ~ 1,75 kWh/m³

Coarse filter: 3 mm

BMT-membrane filter: 38 nm

Free space above tanks: min. 1.500 mm

Empty weight total plant: 2.750 kg

Greywater storage volume: 15.000 litres

Process water storage volume: 15.000 litres

Electrical load: 1x 220 V / 16 A / 50 Hz

Electrical power GEP-Watermanager: 1.400 W

Connection coarse filter/ greywater tank: DN 150

Connection process water storage tank: DN 150

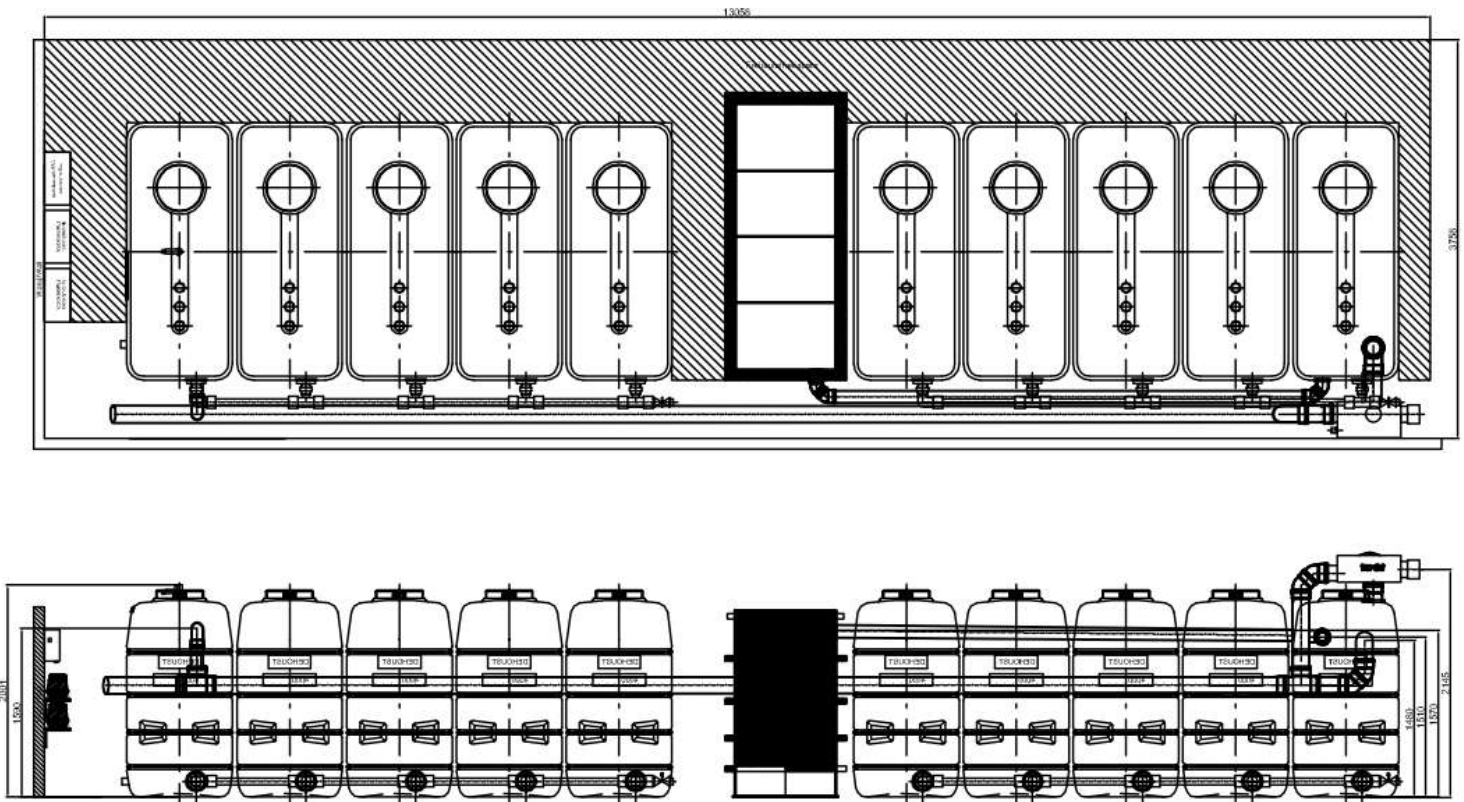
Connection mains water back up system: 1 1/2" female

Connection backwash coarse filter: 1" female

Connection to external booster pump station: 1 1/2" female

Dimension largest component (LxWxH): 2.710 x 1.140 x 1.800 mm

Installation example



GEP-Watermanager GWM 33.750

Item 813635

Designed for	ca. 840 inhabitants	Electrical load:	1x 220 V / 16 A / 50 Hz
Treatment capacity:	max. 33.750 L/d	Electrical power GEP-Watermanager:	2.800 W
Energy consumption:	~ 1,75 kWh/m ³	Connection coarse filter/ greywater tank:	DN 150
Coarse filter:	3 mm	Connection process water storage tank:	DN 150
<i>BMT</i> -membrane filter:	38 nm	Connection mains water back up system:	1 1/2" female
Free space above tanks:	min. 1.500 mm	Connection backwash coarse filter:	1" female
Empty weight total plant:	3.840 kg	Connection to external booster pump station:	1 1/2" female
Greywater storage volume:	24.000 litres	Dimension largest component (LxWxH):	2.710 x 1.140 x 1.800 mm
Process water storage volume:	24.000 litres		

Installation example

