## The one2clean system

The only wastewater underground tank of it's kind!



✓ Less energy consumption and less wear

✓ No mechanical elements in the wastewater

✓ No pumps in the wastewater

✓ No electrical components in the wastewater

✓ Incredibly low volume of sewage sludge



#### one2clean set-up kit

- Conventional wastewater treatment systems require up to three pumping processes. one2clean only requires one pumping process, which saves energy and extends the lifetime of the air compressor – the core part of the system
- Rugged clear water lifter manufactured in one seamless piece. No connectors or screws necessary
- Simple maintenance via an integrated, self-cleaning sampling container



#### one2clean system control

- The one2clean has a compact controller
- The microprocessor control system ensures simple operation and maintenance

#### Wastewater tank

GRAF

- Telescopic cover
- State-of-the-art manufacturing for maximum stability

warranty
n technology if serviced &

commissioned by a Graf UK accredited service provider

- Suitable for vehicle loading in conjunction with telescopic vehicle dome shaft
- 100% watertight and corrosionresistant
- Can be installed in groundwater up to the middle of the tank

#### Technical data

System	one <b>2clean</b>			
System conformity	EN 12566-3			
Purifying technology	fully biological SBR lifting technology			
One-tank systems available up to	9 inhabitants   1,350 l/d			
Two-tank systems available up to	18 inhabitants   2,700 l/d			
Maintenance interval	1 – 2 per year			
Warranty for underground tank	10 years			
Warranty for purifying technology	1 or 3 years			
Cleaning performance	7, 14, 0.5			

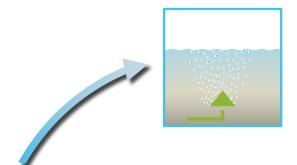
Control	
Holiday mode	Manual
+D Removal of nitrogen	•
+C Carbon infeed	0
Logbook function	•
Operation	4 keys
External control cabinet for installing control unit outdoors	0
Daily energy usage	From 0.59 KWH

Parameter	%	mg/l
COD (chemical oxygen demand)	94.2%	43
BOD <sub>5</sub> (biochemical oxygen demand)	98.0%	7
SS (suspended solids)	96.3%	14
NH, -N	98.3%	0.5
N <sub>total</sub>	87.0%	7.9
$P_{total}$	80.2%	1.6

Results of practical testing undertaken by the Prüfinstitut für Abwassertechnik (Testing Institute for Wastewater Technology), Aachen

- Standard equipment
   Available as entions
- O Available as options
- not available





#### 3. Clear water extraction

The treated clear water is extracted from the system and the cleaning process can begin once more.

#### 1. Wastewater treatment

The wastewater arrives directly in the biological zone without the need for pumping processes. Aeration of the entire container leads to immediate wastewater activation. The microorganisms begin the biological cleaning process without delay.

#### Incredibly low volume of sewage sludge

- · Aeration of the entire wastewater tank
- Immediate wastewater activation
- Minimisation of the sludge
- Less sludge removal
- Cost savings

Conventional wastewater treatment systems



one*2clean* 





#### Minimum maintenance costs

- Simple construction
- High-quality components
- As much technology as necessary, as little technology as possible.
- Integrated sampling point

#### Minimum power consumption

- · one2clean has only one pumping process, reducing energy consumption and running costs
- Economical motor valve
- Energy-optimised membrane compressor





#### 2. Settling phase

Aeration is interrupted by the control unit, the activated sludge sinks to the bottom. A clear water zone develops in the upper part of the container.

#### one2clean only needs 3 steps to produce clear water

The wastewater treatment is carried out in one chamber in just one tank. This eliminates unnecessary pumping processes and sludge return.

#### one2clean is odourless

The entire volume of wastewater is immediately activated with oxygen using the unique one2clean technology. The final process of the one2clean produces an odourless, clear treated water for extraction to soakaway or waterway.

#### one2clean already meets the needs of tomorrow

one2clean achieves sustainable discharge values with an efficiency factor of up to 99%! This offers high investment security - even if legal requirements become stricter.

#### One-tank system

Inhabitants [max.]	Max. daily flow [l/d]	Max. organic load [kg BOD5/d]	Total volume [l]	Volume [l]	Length [mm]	Width [mm]	Height [mm]	Weight [kg]
5	750	0.3	3,750	3,750	2280	1755	1880	150
7	1,050	0.42	4,800	4,800	2280	1985	2110	185
9	1,350	0.54	6,500	6,500	2390	2190	2390	220
12	1,800	0.66	8,500	8,500	3500	2040	2515	380

#### Two-tank system

10 1,500	7,500	2 X 3,750	5160	1755	1880	300
14 2,100 0.	.84 9,600	2 x 4,800	5160	1985	2110	370
18 2,700 1.	08 13,000	2 x 6,500	5380	2190	2390	440

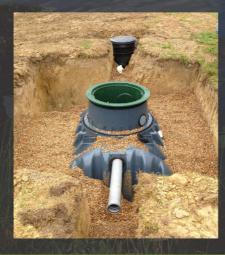


# **Wastewater Treatment**

## One2Clean system

## Benefits of the Graf system

- Extremely strong & robust injection moulded underground tank
- No concrete required, just gravel base and backfill
- Completely groundwater stable up to the centre line
- CE Certified system to EN 12566-3
- Market leading effluent quality of 7, 14, 0.5 guaranteed on a 95 percentile basis. SBR Technology
- Integrated sampling chamber at no extra cost
- No moving parts inside the tank, easy to install, easy to maintain.
- Plug in and play system, no wiring required
- 10 year warranty on the tank, 2 years on compressor and parts, German engineered
- Low energy consumption of just 46 kWh per person, per year
- · Quiet operation





Graf UK Ltd Regen House Beaumont Road Banbury OX16 1RH

T: 01608 661500 F: 01295 211333 E: info@grafuk.co.uk www.grafuk.co.uk Please contact:



## PERFORMANCE RESULTS

#### Otto Graf GmbH

Carl-Zeiss-Str. 2 - 6, 79331 Teningen, Germany

#### EN 12566-3

Small wastewater treatment systems for up to 50 PT

### Small wastewater treatment system one2clean

SBR plant in one two-zone polypropylene tank

Test report PIA2014-216B14.01.e

Nominal organic daily load* Nominal hydraulic daily load	0.27 0.75	kg/d m³/d	
Material	polyprop	ylene	
Treatment efficiency (nominal sequences)	COD BOD <sub>5</sub> SS NH <sub>4</sub> -N** N <sub>tot</sub> ** P <sub>tot</sub>	Efficiency 94.2 % 98.0 % 96.3 % 98.3 % 87.0 % 80.2 %	Effluent 43 mg/l 7 mg/l 14 mg/l 0.5 mg/l 7.9 mg/l 1.6 mg/l
Electrical consumption *at a test influent of ≥ 300 mg/l BOD₅ (mean)	0.63	kWh/d	

Performance tested by:

#### PIA - Prüfinstitut für Abwassertechnik GmbH

\*\*determined for temperatures ≥ 12°C in the bioreactor

(PIA GmbH) Hergenrather Weg 30 52074 Aachen, Germany

This document replaces neither the declaration of performance nor the CE marking.



Notified Body No.: 1739



Certified according to ISO 9001:2008



DAKKS

Deutsche
Akkreditierungsstelle
D-PL-17712-01-00

Seprist - tested - teste

Elmar Lancé

November 2014

# Protect your investment Protect the environment...



with **FREE** professional commissioning of your wastewater treatment system

It's so important not only to have your wastewater treatment system professionally installed but also commissioned, giving you peace of mind that your investment will operate cost-effectively and correctly, both for yourself and the environment.



