AQUATO®

COMPLETE CATALOG

Wastewater treatment, rainwater harvesting
and system components

EDITION
2026

OUR SUCCESS STORY

AQUATO® Umwelttechnologien GmbH, headquartered in Herford (East Westphalia), is part of a nationwide group of companies and ranks among the leading manufacturers of wastewater treatment plants and wastewater technology for up to 3,000 population equivalents (PE).

More than 70,000 systems are now successfully in operation worldwide – ranging from compact small wastewater treatment plants and decentralized municipal solutions to customized concepts for international industries and sectors with diverse requirements.

As a core product in the field of small wastewater treatment plants, AQUATO® offers the STABI-KOM system based on the innovative Sequential Sludge Stabilization (SSB®) process.

This process, developed by us, stands for maximum treatment performance, operational reliability, and durability, and has already proven itself in thousands of applications worldwide.

STABI-KOM offers clear advantages:
- Compact design – ideal for homeowners and locations with limited space
- Fully biological – environmentally friendly and without chemical additives
- Reliable treatment – highest standards even under low load or fluctuating operation
- Low maintenance & durable – proven technology with minimal effort
- Eligible for funding in many regions – economically attractive thanks to government support

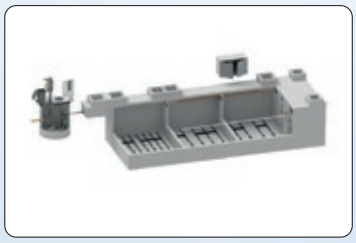
In addition to wastewater treatment and sewage technology, AQUATO® has consistently expanded its expertise in recent years:

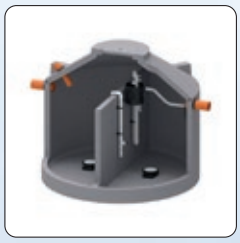
- With a new business division in rainwater utilization, we actively contribute to global environmental protection. Drinking water resources are conserved, groundwater reserves are secured, and wastewater systems worldwide are relieved.

- The latest expansion of our portfolio includes pump technology and pumping stations for wastewater.
These solutions perfectly complement existing systems and enable efficient, reliable, and sustainable wastewater conveyance – for private, municipal, and industrial applications alike.

Our international project teams support partners and customers with in-depth expertise, well-thought-out planning, and field-proven technologies. We adhere to the highest standards – documented by BGHM certification with the “Safe with System” quality seal, confirming our consistent focus on quality, safety, and sustainability.

Our entire portfolio is based on a proprietary, modern product range in wastewater treatment, sewage, rainwater, and pump technology – tailored to a wide variety of markets and requirements.





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OVERVIEW WASTEWATER TREATMENT

SSB®

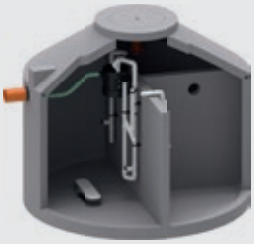
Single-stage activated sludge plants up to 50 PE

STABI-KOM

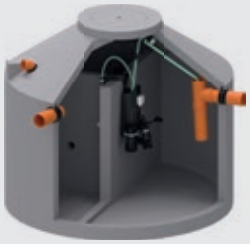
SBR

Multi-stage activated sludge plants up to 50 PE

KOM



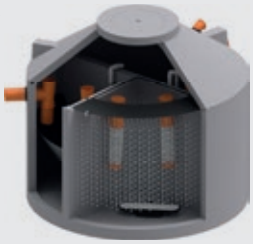
PUMP



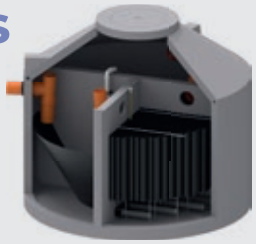
WB / FB

Biofilm treatment systems up to 50 PE

3K-FLOW



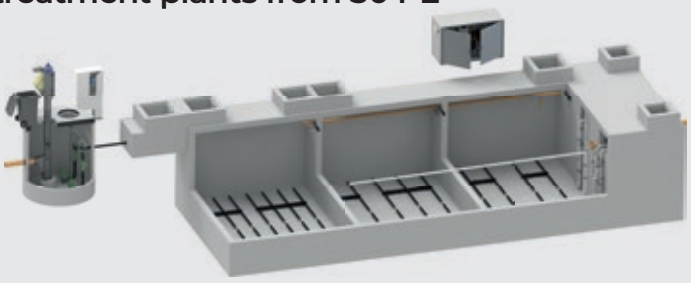
3K-PLUS



ORKA SSB®

Wastewater treatment plants from 50 PE

ORKA



THE NEW K-PILOT 2.4

REVOLUTIONARILY SIMPLE, UNIVERSALLY APPLICABLE

From now on, almost all of our treatment systems are based on the new, compact K-PILOT 2.4 control unit. It is equipped with modern interfaces that ensure expandability and future-proof performance.

WI-FI DIRECT AS STANDARD

The new K-PILOT 2.4 can be accessed easily and independently of the device via Wi-Fi and a web browser. This allows settings to be adjusted, operating data to be retrieved, and software updates to be performed. Depending on the access level, this simplifies servicing for professionals as well as the required logging of operating data for plant operators.

Standard features of K-PILOT 2.4

K-PILOT 2.4

Newly developed control unit for maximum flexibility and long service life.

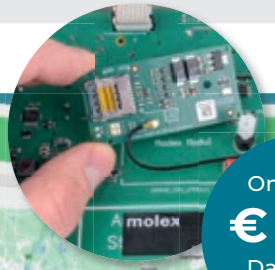
Wi-Fi Direct

Convenient Wi-Fi access and wireless updates.

Smart extension

PRO Cloud

Makes your K-PILOT 2.4 IoT-ready for remote access and cost savings.



One-time
€ 330
Data card included*

PRO Cloud

AQUATO® PROCLOUD – The smart extension for even better service

PROCloud is the integrated solution for connecting K-PILOT control units to the internet. It enables convenient and clear monitoring of all systems within your maintenance portfolio.

The K-PILOT 2.4 is expanded via a compact plug-in module. Existing control units can also be integrated into AQUATO® PROCloud.

PROCLOUD-BENEFITS

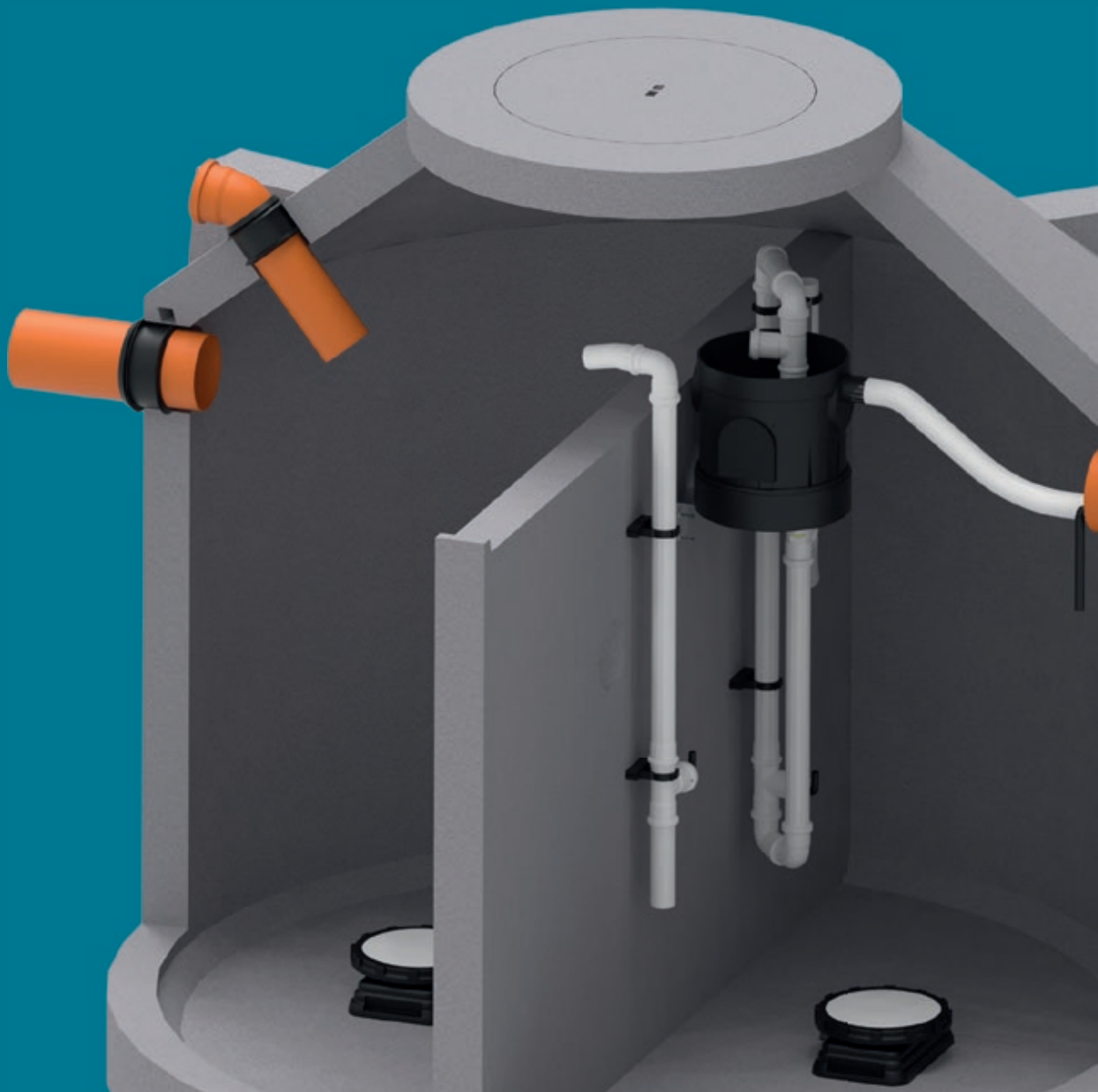
+ **Remote access via GSM or Wi-Fi**
  Convenient monitoring and control by service professionals – anytime, anywhere.
+ **Cost savings**
  Fewer service visits – saving time and money.
+ **Tailored maintenance**
  Optionally only one maintenance per year – subject to approval by the water authority.
+ **Future-proof & digital**
  Ready for the future requirements of modern remote control technology.

* 250 MB of data included; no additional costs until the data volume is used up. An additional 250 MB of data is available at extra cost.

STABI-KOM

SMALL WASTEWATER TREATMENT PLANT
SSB®-PROCESS

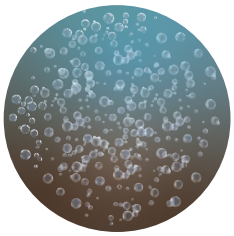
INNOVATIVE, EFFICIENT, ECONOMICAL.



PRINCIPLE

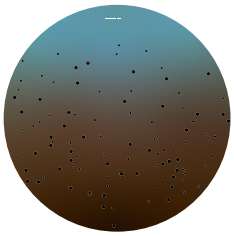
The AQUATO® STABI-KOM uses the SSB® process. This system, developed by us, is a single-stage activated sludge plant with integrated sludge stabilization. The processes are carried out in separate phases (intermittent operation) and follow a regular cycle controlled by the K-PILOT 2.4 control unit.
Only aerobically stabilized sludge is produced, which requires minimal disposal. This results in significant cost savings.

PROCESS



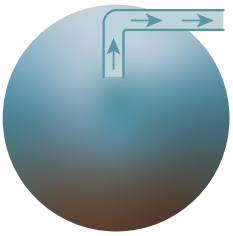
AERATION PHASE

In the first chamber, the coarse wastewater is pre-treated. At the same time, air is introduced to initiate the natural treatment processes.



SEDIMENTATION PHASE

The activated sludge settles at the bottom of the chamber. In the upper section, a clear water layer forms.



DISCHARGE PHASE

The treated water from the clear water supernatant is discharged to the outlet. Subsequently, the excess sludge is returned to the first chamber, and the SSB® cycle starts again.

APPROVAL DOCUMENTS

New installations	Performance declaration for AQUATO® STABI-KOM
Retrofits	National technical approval (abZ) Z-55.8-747 (Class C) and Z-55.8-748 (Class D)
Voluntary manufacturer's declaration	PIA55.31-469/470 (Class C, N or D)

ADVANTAGES

- Easy retrofit of existing tanks
- Suitable for a wide range of tank designs
- Reduced technical complexity
- No electrical components in the water
- High operational reliability thanks to modern technology
- Long service life due to low-wear components
- Low maintenance costs
- Low power consumption
- Eco mode optionally available
- Excellent effluent quality under both overload and underload conditions
- Significantly below required limit values
- No odor nuisance
- Low sludge removal requirements

STABI-KOM

OUTSTANDING TREATMENT PERFORMANCE

COD	95 %
BOD_5	99 %
TSS	96 %
NH_4-N	98 %
$N_{TOT,anor}$	77 %

RETROFIT

The following components are required to retrofit existing tanks:

PRO Cloud via extension

K-PILOT 2.4 control unit
with external rotary valve and compressor mounted on a wall bracket

+

Disc diffuser

AQUATO® STABI-KOM
Standard version for wall mounting

/

AQUATO® STABI-KOM-PAKT
Lifting unit on a practical bracket for concrete or plastic tanks

Art.-Nr.	Type	PE	Control unit	Compressor (l/min)	Number/type of diffuser	Price
116001	STABI-KOM	4–6	K-PILOT 2.4 with rotary valve DV2	80	2× disc	2.461,50 €
116002		7–11		120	2× disc	2.629,50 €
116003		12–16		150	4× disc	3.110,50 €
116004		17–20		200	4× disc	3.316,50 €
116120		17–24 ECO		200	4× disc	3.378,50 €
116005		21–26		2×150	4× disc	4.510,50 €
116121		25–28 ECO		200	6× disc	3.633,00 €
116012		27–30		2×150	6× disc	4.716,50 €
116006		31–40		2×200	6× disc	4.978,00 €
116011		41–50		3×200	8× disc	6.461,00 €
116014	STABI-KOM-PAKT	4–6		80	2× disc	2.654,50 €
116015		7–11		120	2× disc	2.822,00 €
116016		12–16		150	2× disc	3.301,00 €
116021		17–20		200	4× disc	3.496,00 €
116043		21–26		2×150	4× disc	4.691,50 €
116034		27–30		2×150	6× disc	4.941,00 €

All variants include: airlift, control unit, compressor, disc aerators, fastening material and fabric hose.
For higher requirements, see chapter ORKA.

Wastewater treatment specifications by PE

PE	WSS (V_{total})	RSS$^{\#A3}$ (V_{total})	PE	WSS (V_{total})	RSS$^{\#A3}$ (V_{total})
4	3,29	2,64	28	21,60	17,08
6	4,83	3,86	30	23,15	18,30
8	6,37	5,08	32	24,69	19,52
10	7,72	6,10	34	26,23	20,74
12	9,26	7,32	36	27,78	21,96
14	10,80	8,54	38	29,32	23,18
16	12,34	9,76	40	30,86	24,40
18	13,89	10,98	42	32,40	25,62
20	15,43	12,20	44	33,95	26,84
22	16,97	13,42	46	35,49	28,06
24	18,52	14,64	48	37,03	29,28
26	20,06	15,86	50	38,58	30,50

PE = population equivalent
V_{total} = [m³] total volume
WSS = with sludge storage
RSS = reduced sludge storage

Design load: 1 PE = 150 l/d | COD = 120 g/(PE·d) | BOD5 = 60 g/(PE·d)
Technical notes can be found on the fold-out page at the back cover.
Here: #A3

Optional:
Street cabinet X7
Art. No. 101932 – Grey
Art. No. 101960 – Green

All street cabinets / installation variants can be found in chapter “Enclosures” from page 68

COMPRESSOR UPGRADE

Compressor replacement	Surcharge
XP-80 to HP-120	€ 185,50
HP-120 to HP-150	€ 290,00
HP-150 to HP-200	€ 158,00

The XP-80 can be used in **water depths up to 1,80m**.
HP-120 to HP-200 can be in **water depths up to 2,10m**

ACCESSORIES

PARTITION WALL

for retrofitting into an existing single-chamber concrete tank

Art. No.	Item description	Water depth	Price
100917	Partition wall for single-chamber tank incl. crossbeam set	up to 1.70 m	€ 594,00
102414		up to 2.20 m	€ 612,00
102878		up to 2.50 m	€ 638,50

Please specify the internal Ø of the concrete tank and the water depth when ordering. Suitable for Ø 1.50 m to Ø 2.50 m.

Additional disc aerator

Art. No. 102135
with manifold valve
Art. No. 102136
with Y-piece

Float switch with clamps

Art. No. 100615

Baffle

Art. No. 116009

Sampling options can be found from page 52

Clear water pump, model 1

Art. No. 121005

Clear water pump, model 3

Art. No. 121004
(air-lift and partition wall bracket not included in the contents of delivery)

Chain hanger for excess sludge lifter + clear water airlift

Art. No. 121101
(for installation in concrete tanks)
Art. No. 121103
(for installation in plastic tanks)

Crossbeam set for retrofitting

in single-chamber concrete tanks
Art. No. 103018

Emergency overflow

DN100: Art. No. 100630
DN150: Art. No. 100635
Prices see accessories catalogue

Art. No.	Item description	Price
100615	Float switch STABI-KOM with 10 m cable #A1 for economy mode and/or high water alarm	€ 91,50
102910	Additional disc aerator STABI-KOM, ready for connection for 16 mm air hose, Ø 300 mm, with manifold valve	€ 145,00
102911	Additional disc aerator STABI-KOM, ready for connection for 16 mm air hose, Ø 300 mm, with Y-piece	€ 132,00
112051	Sampling with sampling cup, emergency overflow and fastening material for concrete	€ 106,50
112054	Sampling with sampling cup, emergency overflow and fastening material for plastic tanks	€ 106,50
116009	Baffle plate 800 × 600 × 1 mm for STABI-KOM	€ 64,00
121004	Clear water pump STABI-KOM-PAKT, model 3, with 10 m cable #A1 and sampling bottle	€ 620,00
121005	Clear water pump for STABI-KOM, model 1, with 10 m cable #A1 and sampling bottle	€ 658,00
121101	Chain suspension for airlifts, excess sludge and clear water, for concrete tanks	€ 281,00
121103	Chain suspension for airlifts, excess sludge and clear water, for plastic tanks	€ 281,00
103018	Crossbeam set for airlift installation, preconfigured, for concrete tanks Ø 2.00 m to Ø 2.50 m	€ 393,00
121176	AQUATO® Geysir – alternative to electric clear water pump	€ 636,50

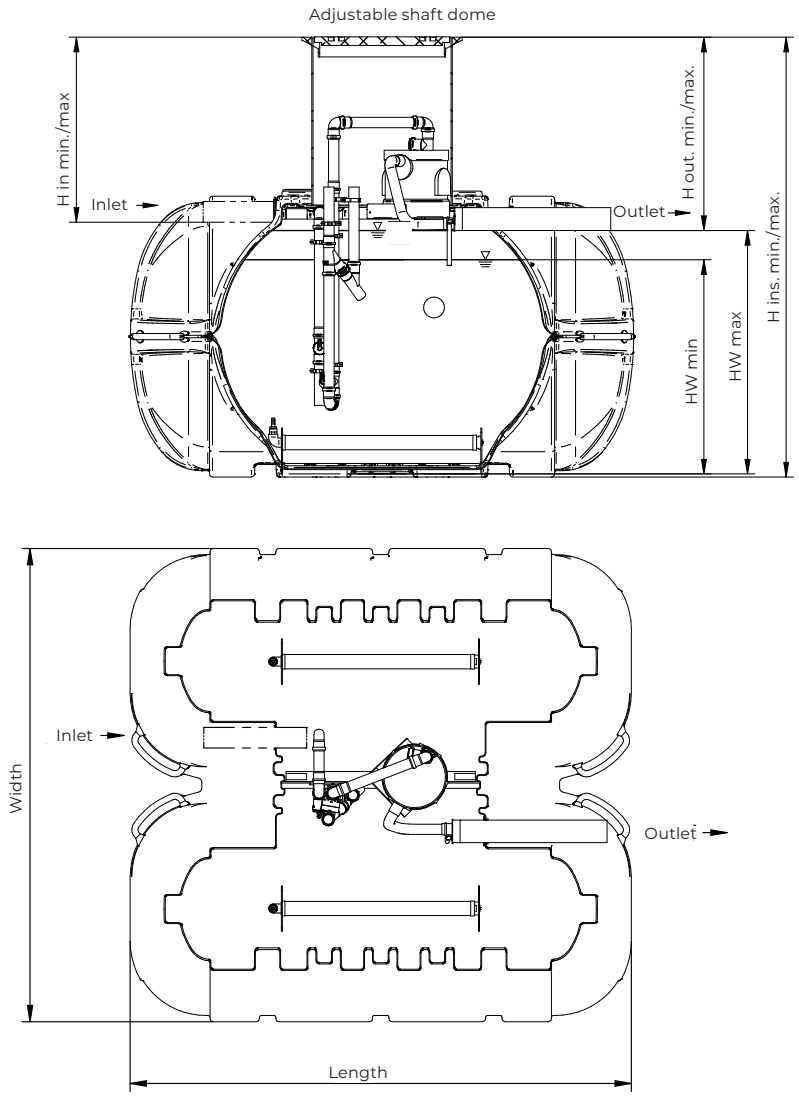
Technical notes can be found on the fold-out page at the back cover. Here: #A1

Complete systems in plastic tanks

TYP KL-02

Single-tank system | Two-chamber system | Walkable manhole cover | Integrated sampling

on site

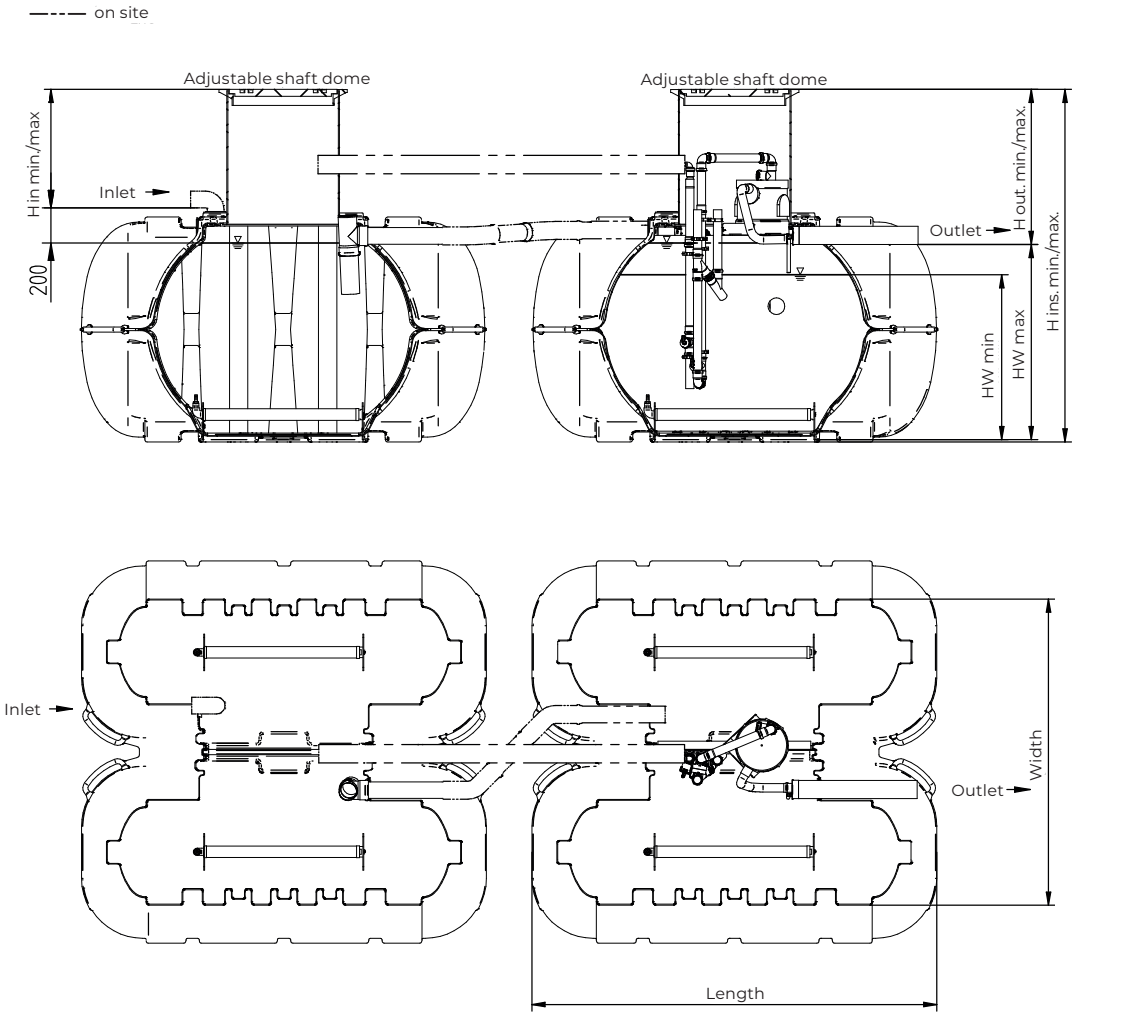


Art. No.	110009
PE	4–6
Usable volume (m^3)	4,94
$H_{W\ min.}$ (m)	1,03
$H_{W\ max.}$ (m)	1,18
Length (m)	2,46
Width (m)	2,35
Installation depth min./max. [H_{ins} (m)]	1,75/2,05
Inlet depth min./max. [H_{in} (m)]	0,52/0,82
Outlet depth min./max. [H_{out} (m)]	0,57/0,87
Manhole cover and dome (DN)	600
Weight (kg)	190
Price	€ 4.614,50

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #KL2

TYP KL-02

Walkable manhole cover | Two-tank system | Multi-chamber system | Integrated sampling

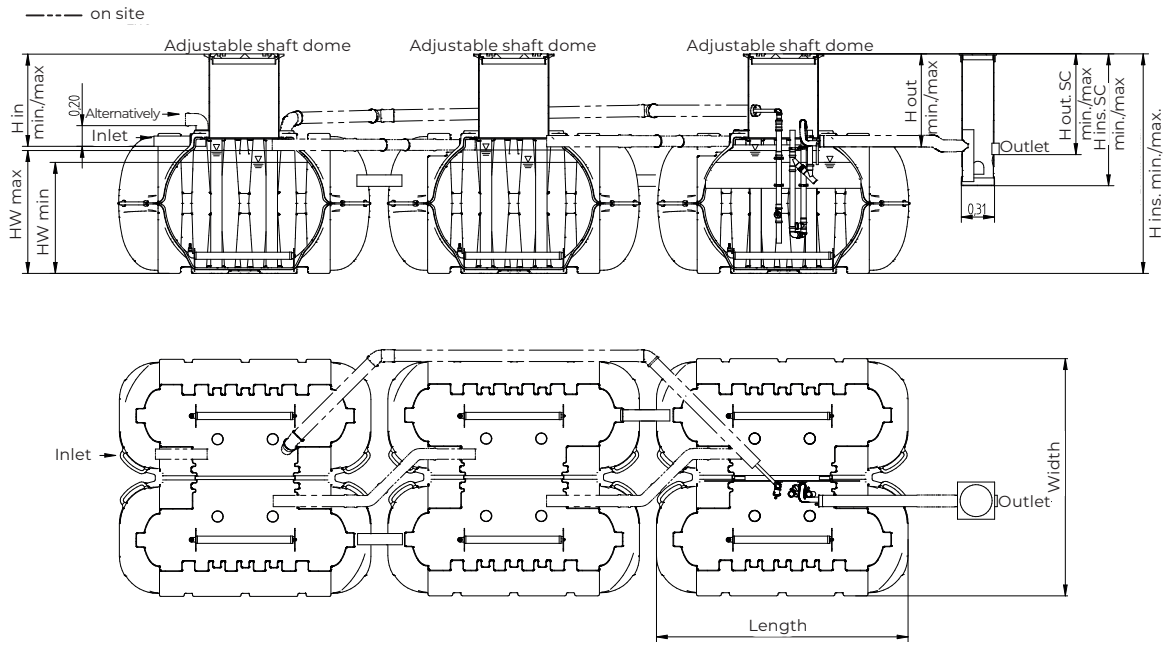


Art. No.	110061	110062
PE	8–10	12 14–16 (FHE)#A3
Number of tanks	2	2
Usable volume (m^3)	9,89	9,89
$H_{W\ min.}$ (m)	1,01	0,93
$H_{W\ max.}$ (m)	1,18	1,18
Length (m)	2,46	2,46
Width (m)	2,35	2,35
Installation depth min./max. [H_{ins} (m)]	1,75/2,05	1,75/2,05
Inlet depth min./max. [H_{in} (m)]	0,37/0,67	0,37/0,67
Outlet depth min./max. [H_{out} (m)]	0,57/0,87	0,57/0,87
Manhole cover and dome (DN)	600	600
Weight (kg)	380	380
Price	€ 6.654,00	€ 6.993,50

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #A3, #KL2

TYP KL-02

Multi-tank system | Multi-chamber system | Walkable manhole cover | Sampling chamber

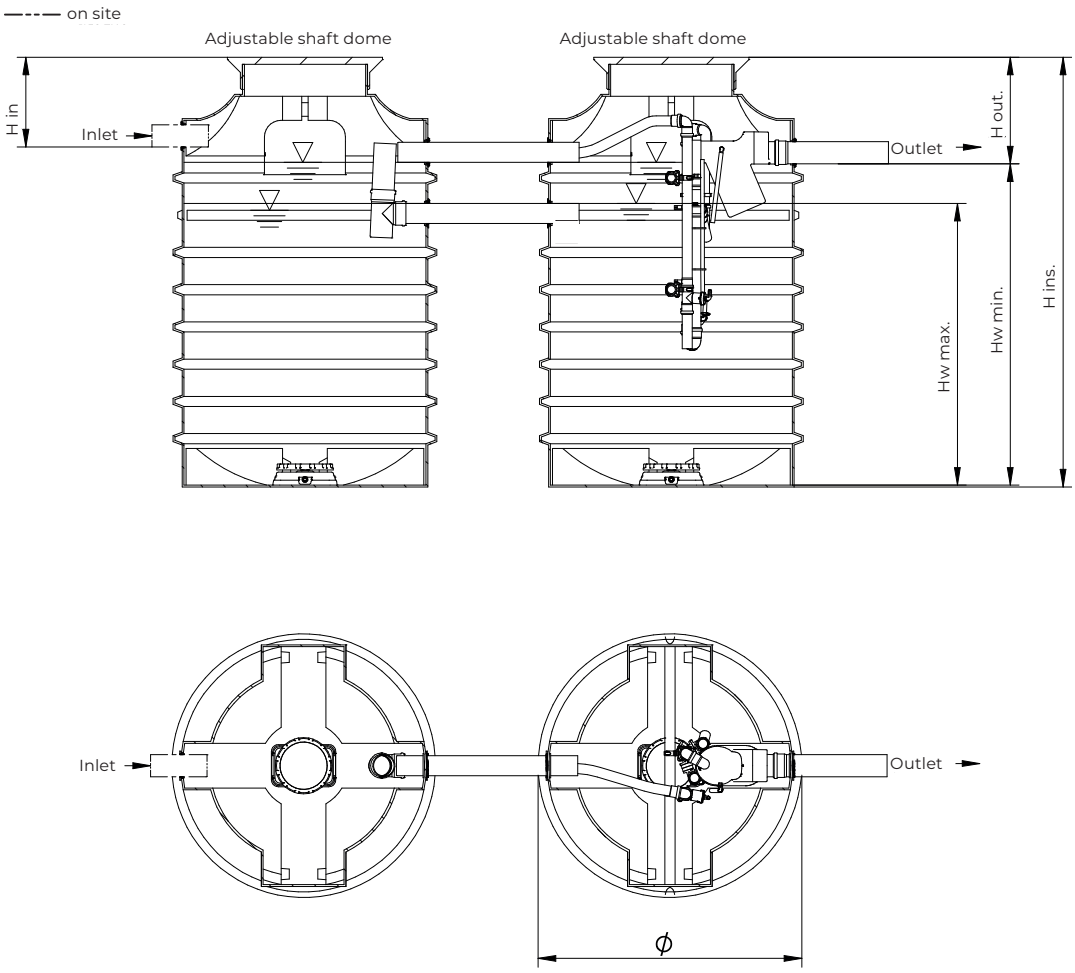


Art. No.	110280	110281	110277
PE	14–16	22 (FHE)#A3	20–24
	18–20 (FHE)#A3		26 (FHE)#A3
Number of tanks	3	3	4
Usable volume (m^3)	14,02	14,02	18,69
$H_{w\ min.}$ (m)	1,07	1,05	1,07
	1,06		1,06
$H_{w\ max.}$ (m)	1,18	1,18	1,18
Length (m)	2,46	2,46	2,46
Width (m)	2,35	2,35	2,35
Installation depth min./max. [H_{ins} (m)]	1,75/2,05	1,75/2,05	1,75/2,05
Inlet depth min./max. [H_{in} (m)]	0,52/0,82	0,52/0,82	0,52/0,82
Outlet depth min./max. [$H_{out\ SSB}$ (m)]	0,57/0,87	0,57/0,87	0,57/0,87
Manhole cover and dome (DN)	600	600	600
Outlet depth SC min./max. [$H_{out\ SC}$ (m)]	0,65/0,95	0,65/0,95	0,65/0,95
Weight (kg)	570	570	760
Price	€ 9.670,00	€ 10.556,00	€ 12.990,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #A3, #KL2

TYP KS-03

Two-tank system | Two-chamber system | Walkable manhole cover | Integrated sampling



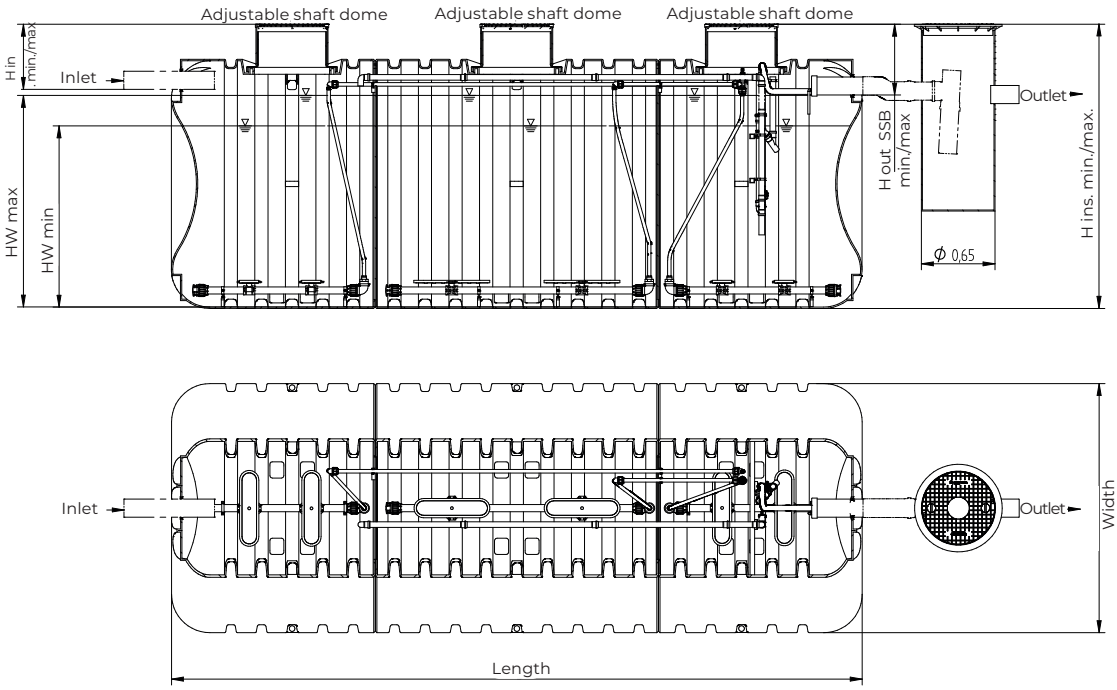
Art. No.	110085
PE	4
Usable volume (m^3)	3,20
$H_{W\ min.}$ (m)	1,40
$H_{W\ max.}$ (m)	1,59
Ø (m)	1,31
Installation depth [H_{ins} (m)]	2,20
Inlet depth [H_{in} (m)]	0,50
Outlet depth [H_{out} (m)]	0,50
Manhole cover and dome (DN)	600
Weight (kg)	190
Price	€ 4.710,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #KS3

TYP KL-09

Single-tank system | Multi-chamber system | Walkable manhole cover | Sampling chamber

on site

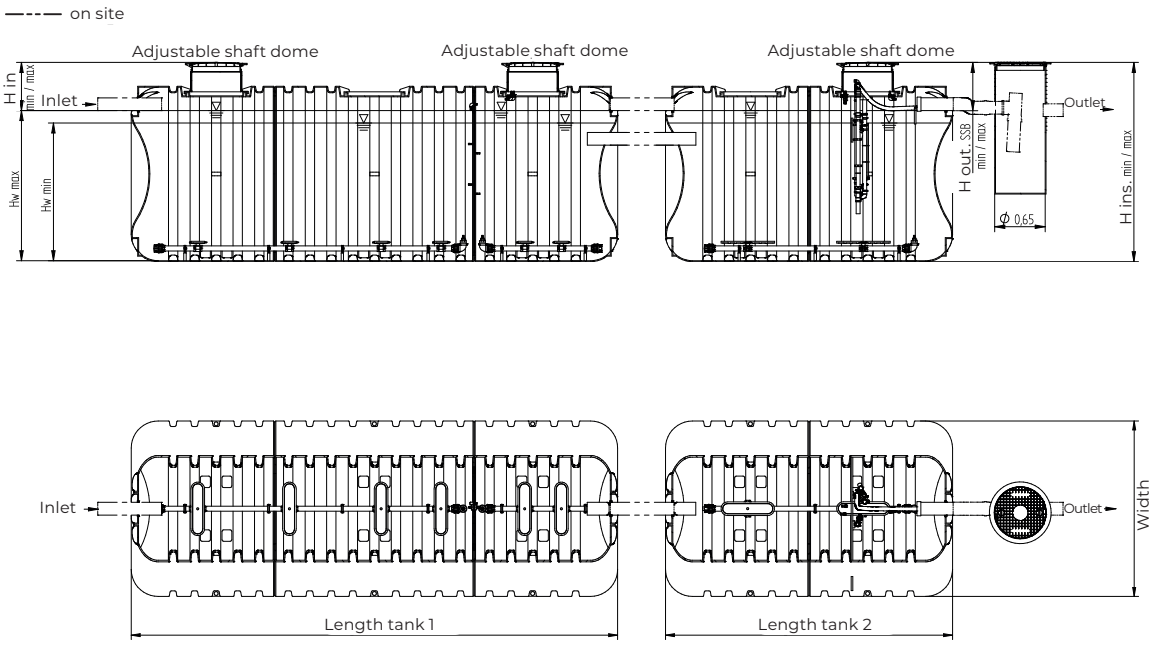


Art. No.	110200	110201	110202	110205	110203	110206
PE	14 16–18 (FHE)#A3	20–25 26–32 (FHE)#A3	26–36 37–45 (FHE)#A3	37–46	47–50 (FHE)#A3	47–50
Usable volume (m^3)	11,30	19,55	27,78	36,02	36,02	44,25
$H_{w\ min.}$ (m)	1,75 1,71	1,74 1,70	1,74 1,70	1,74	1,73	1,76
$H_{w\ max.}$ (m)	1,90	1,90	1,90	1,90	1,90	1,90
Length (m)	3,50	6,00	8,50	11,00	11,00	13,50
Width (m)	2,20	2,20	2,20	2,20	2,20	2,20
Installation depth min./max. [H_{ins} (m)]	2,65/2,89	2,65/2,89	2,65/2,89	2,65/2,89	2,65/2,89	2,65/2,89
Inlet depth min./max. [H_{in} (m)]	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99
Outlet depth min./max. [H_{out} (m)]	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99	0,75/0,99
Manhole cover and dome (DN)	2× 600	3× 600	3× 600	3× 600	3× 600	3× 600
Weight (kg)	550	830	1.100	1.390	1.390	1.670
Price	€ 12.689,50	€ 19.951,00	€ 24.581,00	€ 28.330,00	€ 29.530,00	€ 33.760,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A3, #KL9

TYP KL-09

Two-tank system | Multi-chamber system | Walkable manhole cover | Sampling chamber

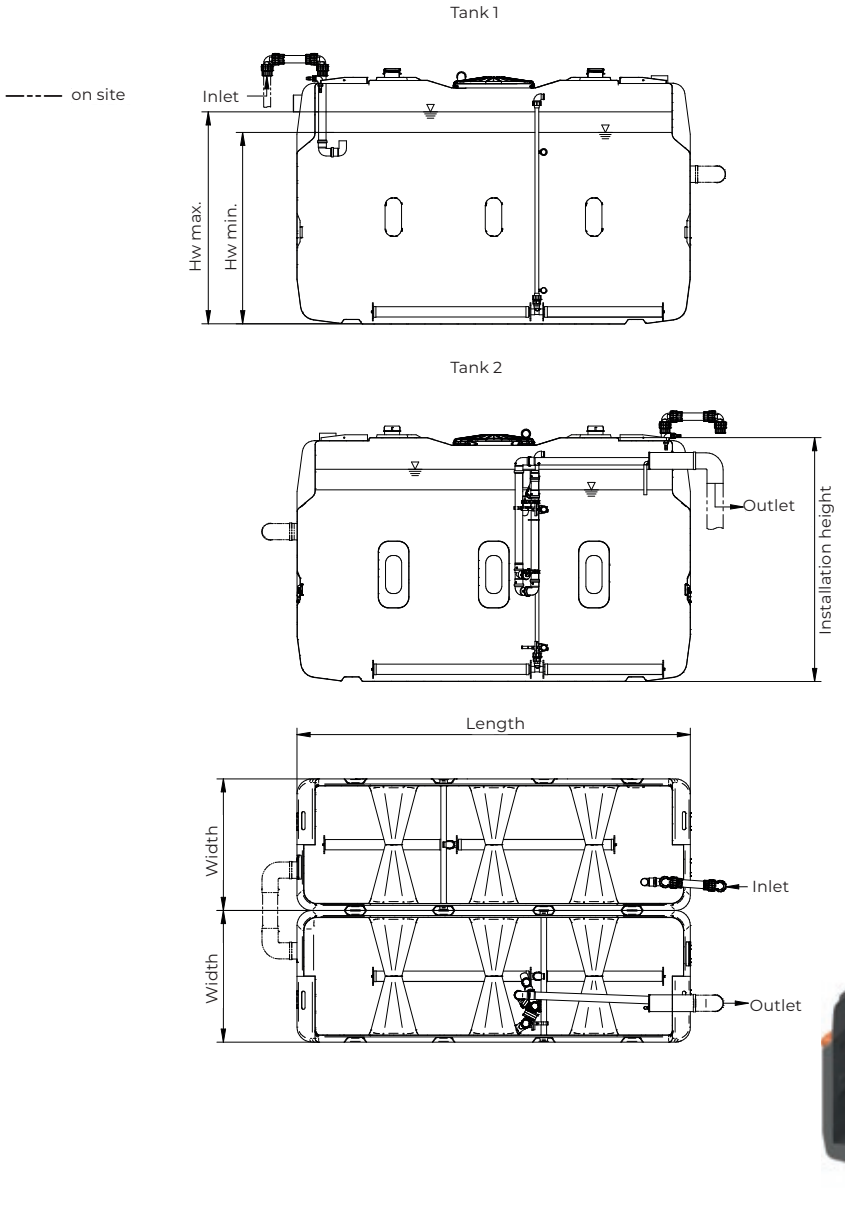


Art. No.	110207	110208	110209
PE	37–40	46–50 (FHE)#A3	41–50
Usable volume (m^3)	30,85	30,85	39,10
$H_{W\ min.}$ (m)	1,74	1,70	1,74
$H_{W\ max.}$ (m)	1,90	1,90	1,90
Length tank 1/2 (m)	6,00/3,50	6,00/3,50	6,00/6,00
Width (m)	2,20	2,20	2,20
Installation depth min./max. [H_{ins} (m)]	2,65/2,89	2,65/2,89	2,65/2,89
Inlet depth min./max. [H_{in} (m)]	0,75/0,99	0,75/0,99	0,75/0,99
Outlet depth min./max. [H_{out} (m)]	0,75/0,99	0,75/0,99	0,75/0,99
Manhole cover and dome (DN)	3× 600	3× 600	4× 600
Weight tank 1/2 (kg)	830/550	830/550	830/830
Price	€ 25.853,00	€ 27.078,50	€ 31.827,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A3, #KL9

TYP KL-04

Multi-tank system | Multi-chamber system | Above-ground installation | Sampling available separately



Art. No.	110197	110243	110223
PE	4–6	8–10	12 14–17 (FHE)[#A3]
Number of tanks	2	3	4
Usable volume (m^3)	5,34	8,01	10,68
$H_{W\ min.}$ (m)	1,24	1,26	1,29 1,25
$H_{W\ max.}$ (m)	1,38	1,38	1,38
Length (m)	2,63	2,63	2,63
Width (m)	0,88	0,88	0,88
Installation height (m)	1,65	1,65	1,65
Manhole cover (mm)	520 × 415	520 × 415	520 × 415
Weight (kg)	280	420	560
Price	€ 4.985,00	€ 6.515,00	€ 8.842,50

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #A3

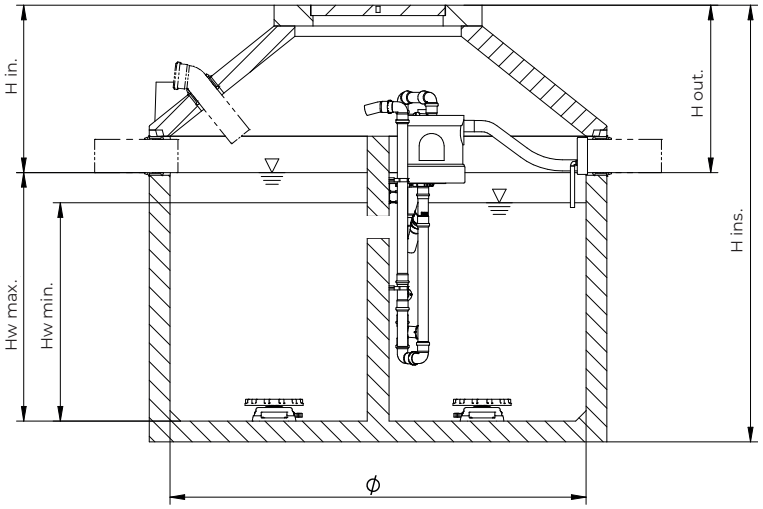
AQUATO®

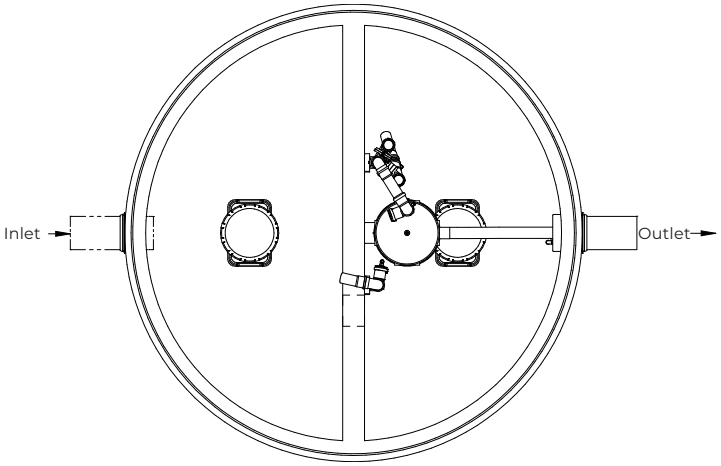
Complete systems in concrete tanks

TYP BM-03

Single-tank system | Two-chamber system | Walkable manhole cover | Integrated sampling

—·—·— on site

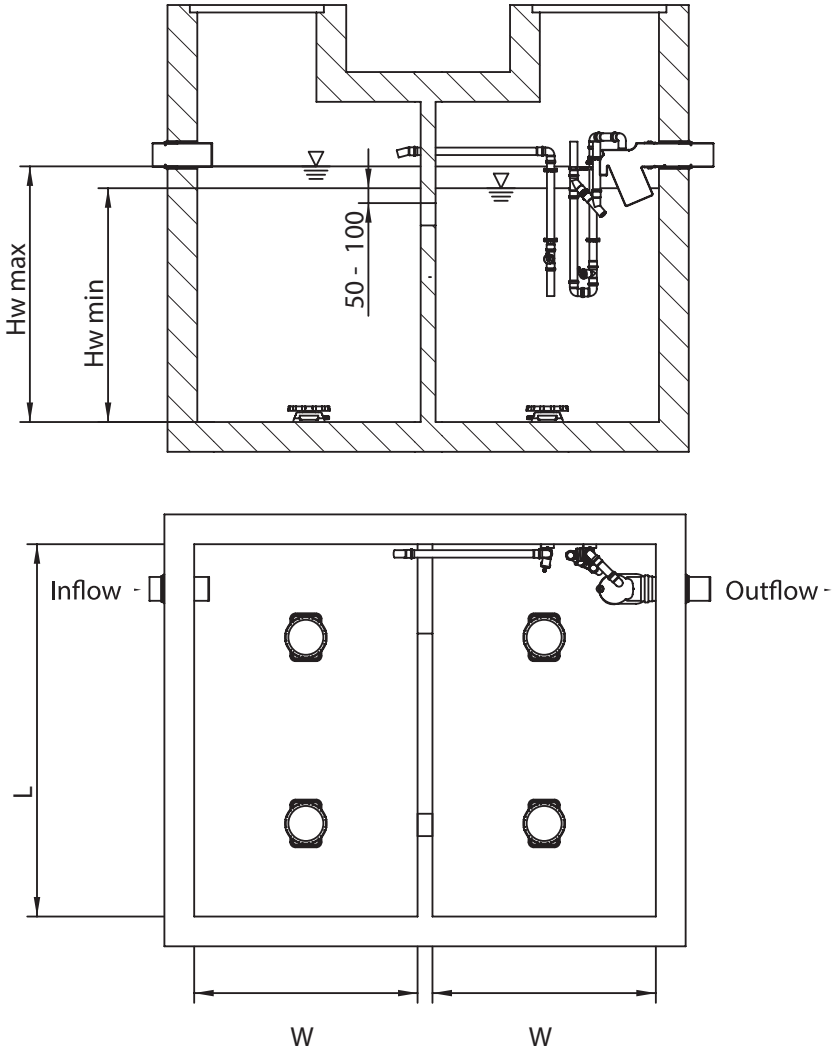




Art. No.	110130	110131	110132	110163#A2	110133	110134
PE	4	4	6	8	8–10	12
Usable volume (m^3)	3,59	4,34	6,14	6,40	8,03	9,91
$H_{W\ min.}$ (m)	1,05	1,30	1,18	1,21	1,56	1,95
$H_{W\ max.}$ (m)	1,30	1,45	1,30	1,35	1,70	2,10
Ø (m)	2,00	2,00	2,50	2,50	2,50	2,50
Installation depth [H_{ins} (m)]	2,10	2,35	2,30	2,30	2,70	3,20
Inlet depth [H_{in} (m)]	0,80	0,80	0,90	0,85	0,90	0,90
Outlet depth [H_{out} (m)]	0,80	0,80	0,90	0,85	0,90	0,90
Weight (kg)	5.270	5.690	7.270	7.270	8.530	9.900
Heaviest component (kg)	4.250	4.670	5.880	5.880	7.140	7.795
Price	€ 4.398,00	€ 4.594,00	€ 5.026,50	€ 5.201,50	€ 5.925,50	€ 6.391,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #B2, #B3, #B4, #B5

Plant example in on-site concrete tank

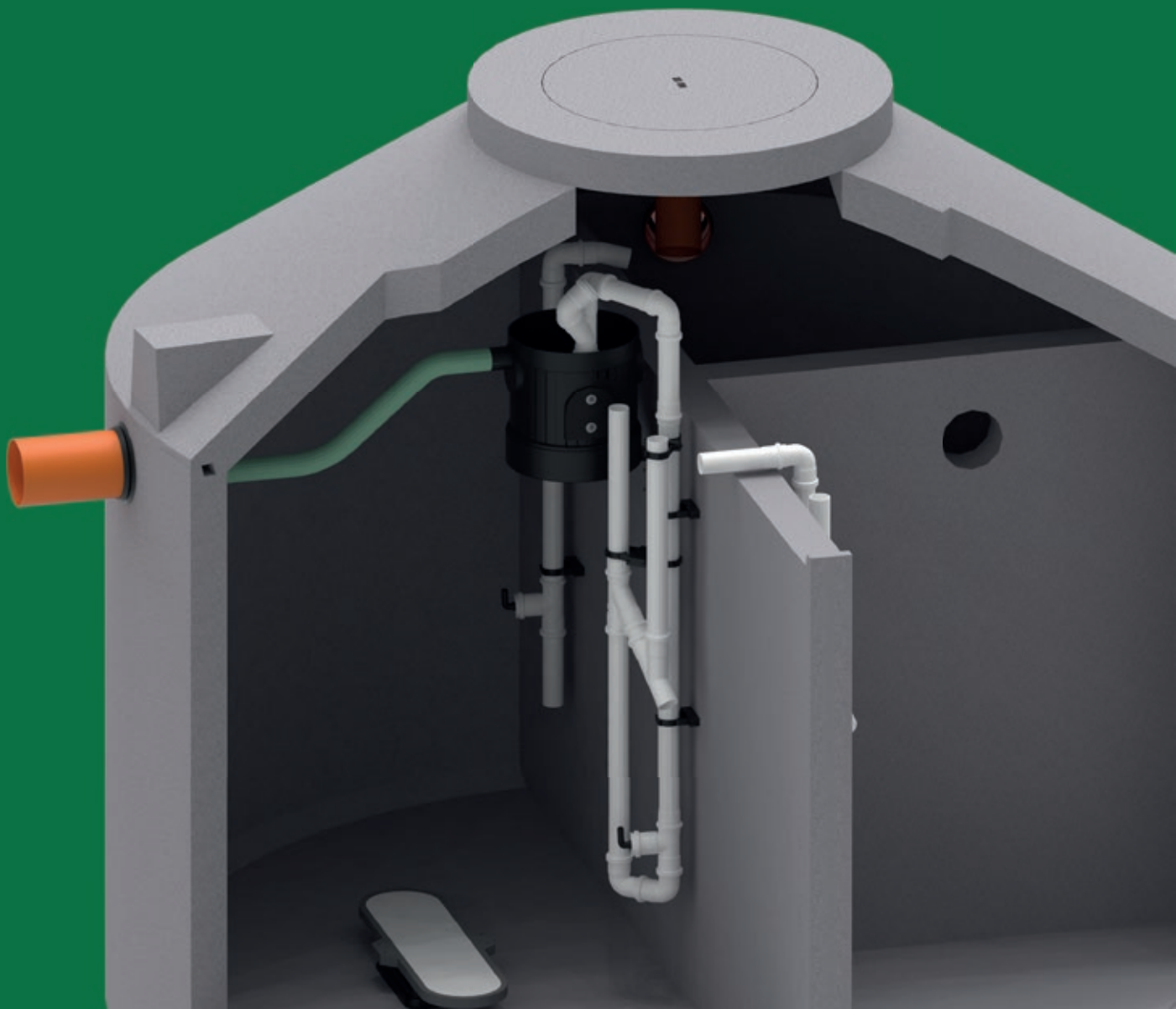


PE	4	6	8	10	12	14-16	18-20
Usable volume (m^3)	3,46	4,9	6,66	7,84	9,52	12,75	15,75
$H_{w\ min.}$ (m)	1,05	1,51	1,53	1,85	1,57	1,57	1,94
$H_{w\ max.}$ (m)	1,20	1,70	1,70	2,00	1,70	1,70	2,10
Number of chambers	2	2	2	2	2	2	2
Length	1,20	1,20	1,40	1,40	2,00	2,50	2,50
Width	1,20	1,20	1,40	1,40	1,40	1,50	1,50
Q_d	0,60	0,90	1,20	1,50	1,80	2,40	3,00

KOM

SMALL WASTEWATER TREATMENT PLANT
SBR PROCESS

DURABLE, PROVEN, RELIABLE.



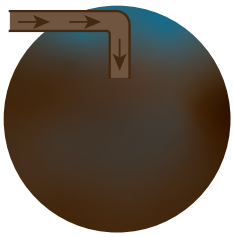
PRINCIPLE

The SBR process (sequencing batch reactor) is a proven technology for small wastewater treatment plants.

Wastewater is treated in a single reactor in a defined 4-phase cycle. These four phases of the SBR process can be implemented in modern single- or multi-chamber tanks – or, without major structural modifications, also in existing older tanks.

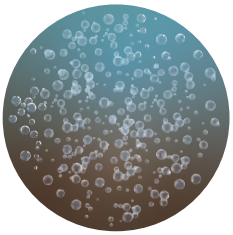
All processes are controlled in regular cycles by the control unit K-PILOT 2.4.

PROCESS



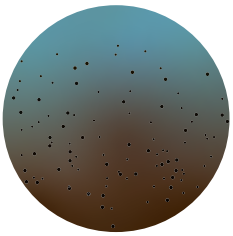
FILLING PHASE

Coarse solids are retained during mechanical pre-treatment; the pretreated wastewater is then transferred to the aeration tank.



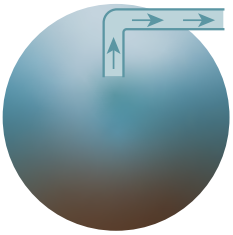
AERATION PHASE

The wastewater in the aeration tank is aerated and mixed, forming activated sludge with purifying microorganisms.
Aeration and pause times are adjustable; at low inflow, the system switches to economy mode.



SETTLING PHASE

The activated sludge settles at the bottom of the tank, forming a layer of clear water above.



DECANTING PHASE

The treated water from the clear water layer is discharged to the outlet.
After completion of this phase, the excess sludge is returned to the primary treatment, and the SBR cycle restarts.

APPROVAL DOCUMENTS

New systems	Declaration of performance for AQUATO® KOM
Retrofits	National technical approval (abZ) Z-55.8-704 (Class C) and Z-55.8-703 (Class D)

ADVANTAGES

- Stable and well tested process
- Submersible motor pump optional
- Low maintenance costs due to simple handling
- Low wear
- Underload and overload capable
- Energy-efficient
- Inexpensive and economical to operate

KOM

TREATMENT PERFORMANCE

COD	94 %
BOB_5	97 %
TSS	95 %
NH_4-N	95 %
$N_{TOT,anor}$	70 %

RETROFIT

The following components are required to retrofit existing tanks:

PRO Cloud via extension module

Control unit K-PILOT 2.4
with external rotary valve and compressor on wall bracket

+

Plate diffuser

AQUATO® KOM
Standard version for wall mounting

/

AQUATO® KOM-PAKT

Removable via practical handle for concrete and plastic tanks

COMPRESSOR UPGRADE

Compressor replacement	Surcharge
XP-80 to HP-120	€ 185,50
HP-120 to HP-150	€ 290,00
HP-150 to HP-200	€ 158,00

The XP-80 can be used in **water depths up to 1,80m**.
HP-120 to HP-200 can be used in **water depths up to 2,10m**.

Art. No.	Type	PE	Control unit	Compressor l/min	Number/type of diffuser	Price
112001	KOM	4–6	K-PILOT [2,4] with external rotary valve DV²	80	1× Plate	€ 2.219,50
112002		7–11		120	1× Plate	€ 2.379,50
112003		12–16		150	2× Plate	€ 2.750,00
112004		17–20		200	2× Plate	€ 2.873,50
112092		17–28 ECO		200	2× Plate	€ 2.939,50
112006		21–30		2×150	3× Plate	€ 4.315,50
112007		31–40		2×200	4× Plate	€ 4.594,00
112008		41–50		3×200	6× Plate	€ 5.938,00
112020	KOM-PAKT	4–6		80	1× Plate	€ 2.431,00
112021		7–11		120	1× Plate	€ 2.598,50
112022		12–16		150	2× Plate	€ 2.952,00
112025		17–20		200	2× Plate	€ 3.090,00

All variants include: airlift, control unit, compressor, disc aerators, fastening material and fabric hose.
For higher requirements, see chapter ORKA.

Optional:
Street cabinet X7
Art. No. 101932 – Grey
Art. No. 101960 – Green

All street cabinets / installation variants can be found in chapter "Enclosures" from page 68

Wastewater treatment specifications by PE – volume tables

with single-chamber primary treatment

PE	V_{total} m³	V_S m³	V_B m³	V_R m³
4	3,44	2,00	0,44	1,00
6	4,61	2,55	0,56	1,50
8	6,08	3,40	0,68	2,00
10	7,35	4,25	0,60	2,50
12	8,82	5,10	0,72	3,00
14	10,29	5,95	0,84	3,50
16	11,76	6,80	0,96	4,00
18	13,23	7,65	1,08	4,50
20	14,70	8,50	1,20	5,00
22	16,17	9,35	1,32	5,50
24	17,64	10,20	1,44	6,00
26	19,11	11,05	1,56	6,50
28	20,58	11,90	1,68	7,00
30	22,05	12,75	1,80	7,50
32	23,52	13,60	1,92	8,00
34	24,99	14,45	2,04	8,50
36	26,46	15,30	2,16	9,00
38	27,93	16,15	2,28	9,50
40	29,40	17,00	2,40	10,00
42	30,87	17,85	2,52	10,50
44	32,34	18,70	2,64	11,00
46	33,81	19,55	2,76	11,50
48	35,28	20,40	2,88	12,00
50	36,75	21,25	3,00	12,50

with multi-chamber primary treatment

PE	V_{total} m³	V_S m³	V_B m³	V_R m³
4	3,44	2,00	0,44	1,00
6	4,31	2,55	0,56	1,20
8	5,68	3,40	0,68	1,60
10	6,85	4,25	0,60	2,00
12	8,22	5,10	0,72	2,40
14	9,59	5,95	0,84	2,80
16	10,96	6,80	0,96	3,20
18	12,33	7,65	1,08	3,60
20	13,70	8,50	1,20	4,00
22	15,07	9,35	1,32	4,40
24	16,44	10,20	1,44	4,80
26	17,81	11,05	1,56	5,20
28	19,18	11,90	1,68	5,60
30	20,55	12,75	1,80	6,00
32	21,92	13,60	1,92	6,40
34	23,29	14,45	2,04	6,80
36	24,66	15,30	2,16	7,20
38	26,03	16,15	2,28	7,60
40	27,40	17,00	2,40	8,00
42	28,77	17,85	2,52	8,40
44	30,14	18,70	2,64	8,80
46	31,51	19,55	2,76	9,20
48	32,88	20,40	2,88	9,60
50	34,25	21,25	3,00	10,00

Design of pre-treatment based on:
425 L/(PE·d)

sludge storage only

PE	V_{total} m³	V_S m³	V_B m³	V_R m³
4	2,64	1,00	0,44	1,20
6	3,86	1,50	0,56	1,80
8	5,08	2,00	0,68	2,40
10	6,10	2,50	0,60	3,00
12	7,32	3,00	0,72	3,60
14	8,54	3,50	0,84	4,20
16	9,76	4,00	0,96	4,80
18	10,98	4,50	1,08	5,40
20	12,20	5,00	1,20	6,00
22	13,42	5,50	1,32	6,60
24	14,64	6,00	1,44	7,20
26	15,86	6,50	1,56	7,80
28	17,08	7,00	1,68	8,40
30	18,30	7,50	1,80	9,00
32	19,52	8,00	1,92	9,60
34	20,74	8,50	2,04	10,20
36	21,96	9,00	2,16	10,80
38	23,18	9,50	2,28	11,40
40	24,40	10,00	2,40	12,00
42	25,62	10,50	2,52	12,60
44	26,84	11,00	2,64	13,20
46	28,06	11,50	2,76	13,80
48	29,28	12,00	2,88	14,40
50	30,50	12,50	3,00	15,00

Design of pre-treatment based on:
250 L/(PE·d)

PE = population equivalent, V_{total} = (m³) total volume, V_S = (m³) sludge storage volume, V_B = (m³) buffer volume, V_R = (m³) reactor volume

Design load: 1 PE = 150 l/d | COD = 120 g/(PE•d) | BOD_5 = 60 g/(PE•d)

ACCESSORIES

Clear water pump, model 1

Art. No. 121027

Clear water pump, model 3

Art. No. 121026
(airlift and partition wall suspension not included)

Chain hanger for excess sludge lifter + clear water lifter

Art. No 121101
(for mounting in concrete tanks)
Art. No 121103
(for mounting in plastic tanks)

Chain hanger for air-lift

Art. No 121102
(for mounting in concrete tanks)
Art. No 121104
(for mounting in plastic tanks)

Emergency overflow

DN100: Art. No. 100630
DN150: Art. No 100635
Prices see accessories catalogue

Traverse set for retrofitting

in 1-chamber concrete tanks
Art. No. 103018

Float switch

Art. No. 100023

Additional plate diffuser

Art. No. 101555
for Ø 16 mm air hose

Sampling options can be found from page 52.

AQUATO® Geysir

Alternative to electric clear water pump

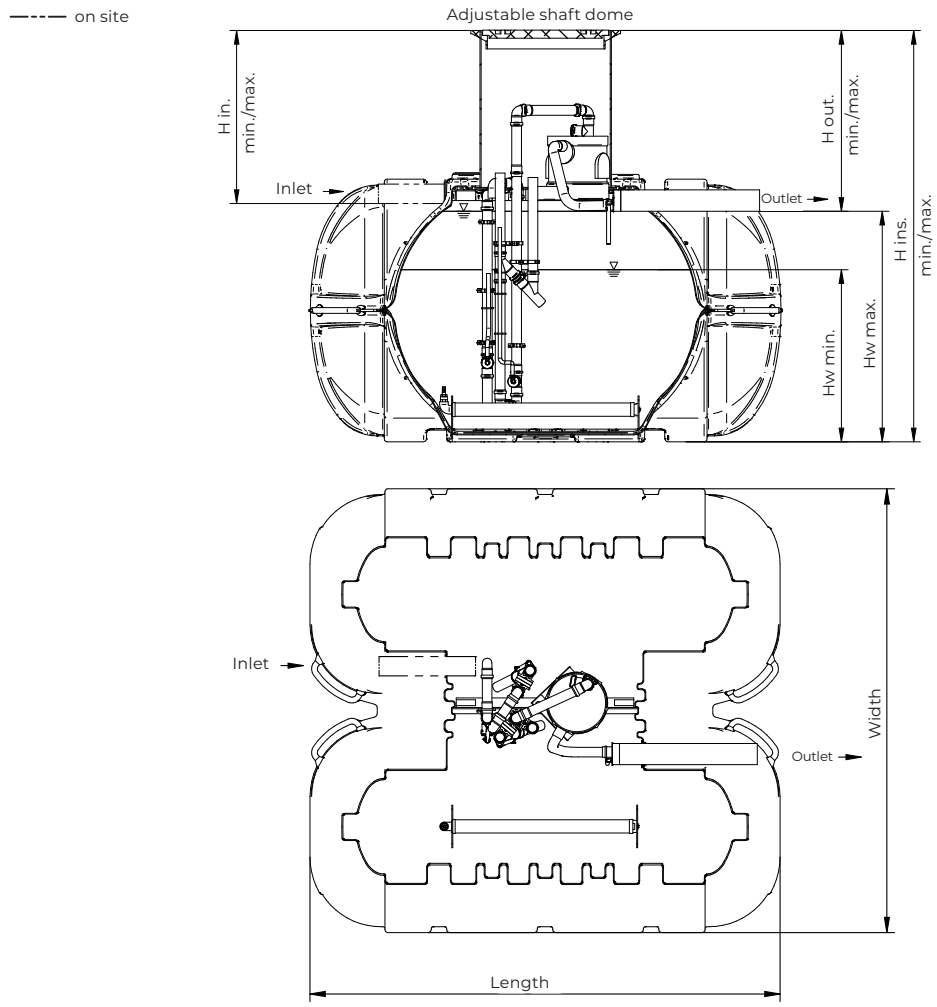
Art. No 121176

Art. No	Item description	Price
100023	Float switch KOM/STABI-KOM with 10 m cable #A1 for economy mode and/or high water alarm	€ 91,50
101555	Additional plate diffuser, ready for connection, connection for Ø 16 mm air hose	€ 157,50
112054	Sampling with sampling cup, emergency overflow and fastening material for plastic tanks	€ 106,50
121027	Clear water pump for KOM, model 1, with 10 m cable #A1 and sampling bottle	€ 659,00
121026	Clear water pump KOM-PAKT, model 3, with 10 m cable #A1 and sampling bottle	€ 602,00
121101	Chain hanger for excess sludge lifter + clear water lifter, for concrete tanks	€ 281,00
121102	Chain hanger for air-lift, feed, for concrete tanks	€ 281,00
121103	Chain hanger for excess sludge lifter + clear water lifter, for plastic tanks	€ 281,00
121104	Chain hanger for air-lift, feed, for plastic tanks	€ 281,00
103018	Traverse set for retrofitting in 1-chamber concrete tanks Ø 2.00 m to Ø 2.50 m	€ 393,00
121176	AQUATO® Geysir – alternative to electric clear water pump	€ 636,50

Technical notes can be found on the fold-out page at the back cover. Here: #A1

TYP KL-02

Single-tank system | Two-chamber system | Walkable manhole cover | Integrated sampling

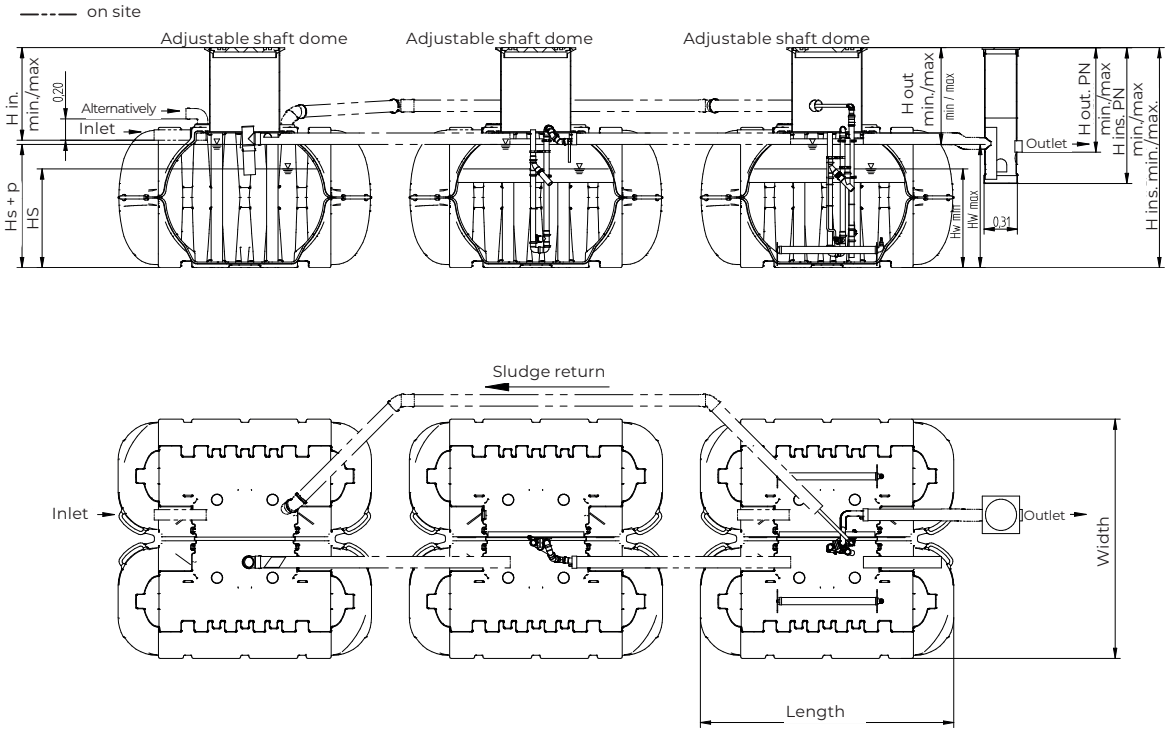


Art. No.	110311
PE	4–6
Usable volume (m^3)	4,94
$H_{W\ min.}$ (m)	0,88
$H_{W\ max.}$ (m)	1,18
H_s (m)	0,88
Length (m)	2,46
Width (m)	2,35
Installation depth min./max. [H_{ins} (m)]	1,75/2,05
Inlet depth min./max. [H_{in} (m)]	0,52/0,82
Outlet depth min./max.[H_{out} (m)]	0,57/0,87
Manhole cover and dome (DN)	600
Weight (kg)	190
Price	€ 4.340,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #KL2

TYP KL-02

Multi-tank system | Multi-chamber system | Walkable manhole cover | Integrated sampling

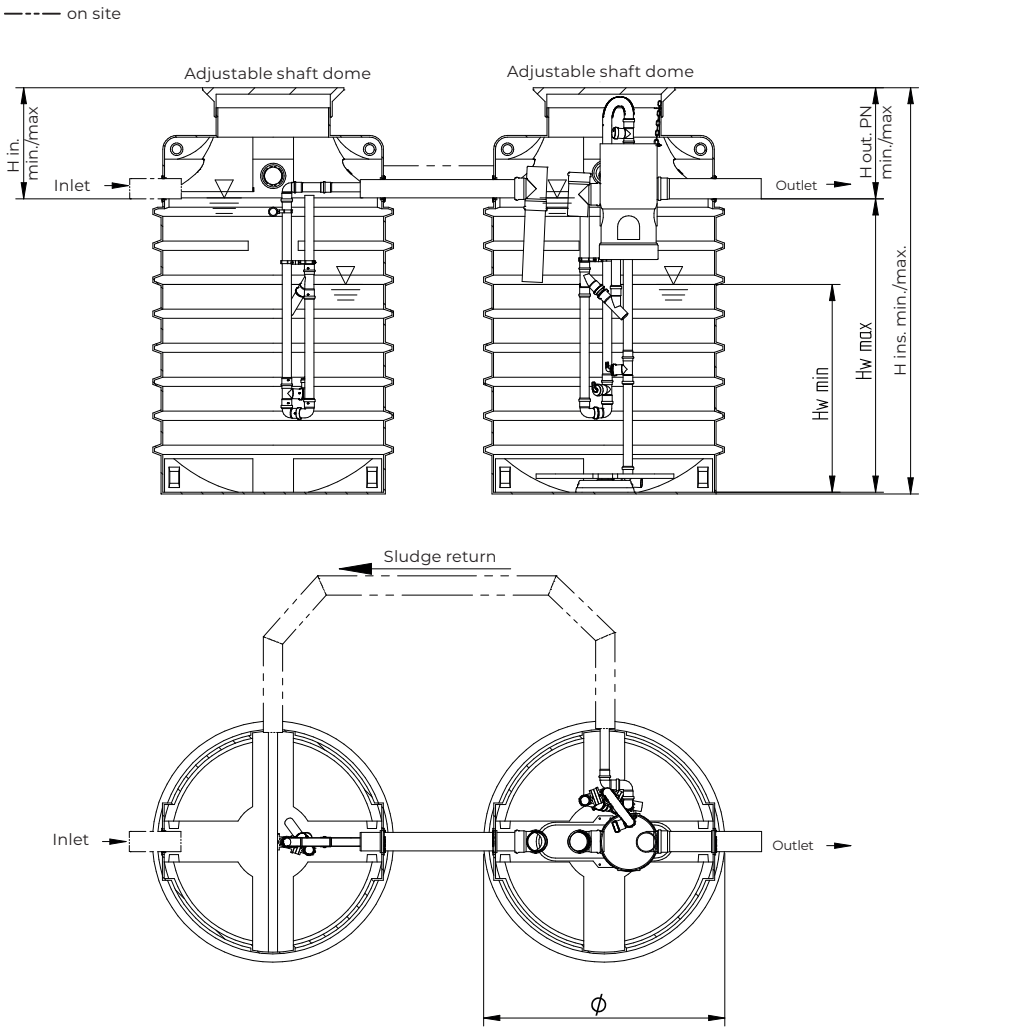


Art. No.	110312	110314	110315	110316	110317	110318
PE	8–10	12–14	16	18	20	22–26
Number of tanks	2	2	3	3	4	4
Usable volume (m^3)	9,89	9,89	14,02	14,02	18,69	18,69
$H_{W\ min.}$ (m)	0,99	0,95	0,92	0,89	0,92	0,85
$H_{W\ max.}$ (m) **/ H_{S+P}** (m)	1,18	1,18	1,18	1,18	1,18	1,18
H_S (m)	0,99	0,95	0,92	0,89	0,92	0,85
Length (m)	2,46	2,46	2,46	2,46	2,46	2,46
Width (m)	2,35	2,35	2,35	2,35	2,35	2,35
Installation depth min./max. [H_{ins} (m)]	1,75/2,05	1,75/2,05	1,75/2,05	1,75/2,05	1,75/2,05	1,75/2,05
Inlet depth min./max. [H_{in} (m)]	0,52/0,82	0,52/0,82	0,52/0,82	0,52/0,82	0,52/0,82	0,52/0,82
Outlet depth min./max. [H_{out} (m)]	0,57/0,87	0,57/0,87	0,57/0,87	0,57/0,87	0,57/0,87	0,57/0,87
Manhole cover and dome (DN)	600	600	600	600	600	600
Outlet depth PN min./max. [$H_{out\ PN}$ (m)]	integrierte Probenahme		0,65/0,95	0,65/0,95	0,65/0,95	0,65/0,95
Weight (kg)	380	380	570	570	760	760
Price	€ 6.385,00	€ 6.610,00	€ 9.550,00	€ 9.670,00	€ 12.460,00	€ 12.990,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #KL2

TYP KS-03

Two-tank system | Two-chamber system | Walkable manhole cover | Integrated sampling



Art. No.	110109
PE	4
Usable volume (m^3)	3,20
$H_{W\ min.}$ (m)	1,13
$H_{W\ max.}$ (m)	1,70
H_s (m)	1,13
Ø (m)	1,31
Installation depth [H_{ins} (m)]	2,20
Inlet depth[H_{in} (m)]	0,50
Outlet depth [H_{out} (m)]	0,50
Manhole cover and dome (DN)	600
Weight (kg)	190
Price	€ 4.738,00

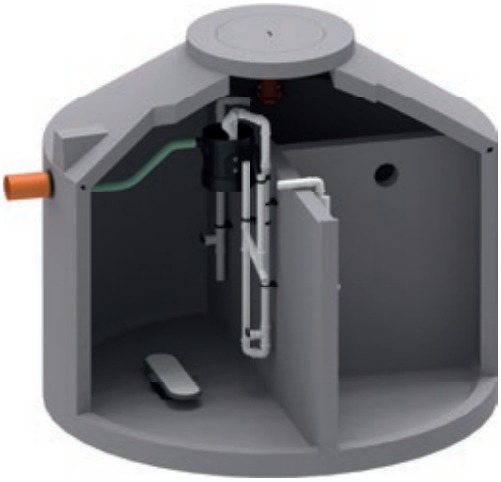
Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #KS3

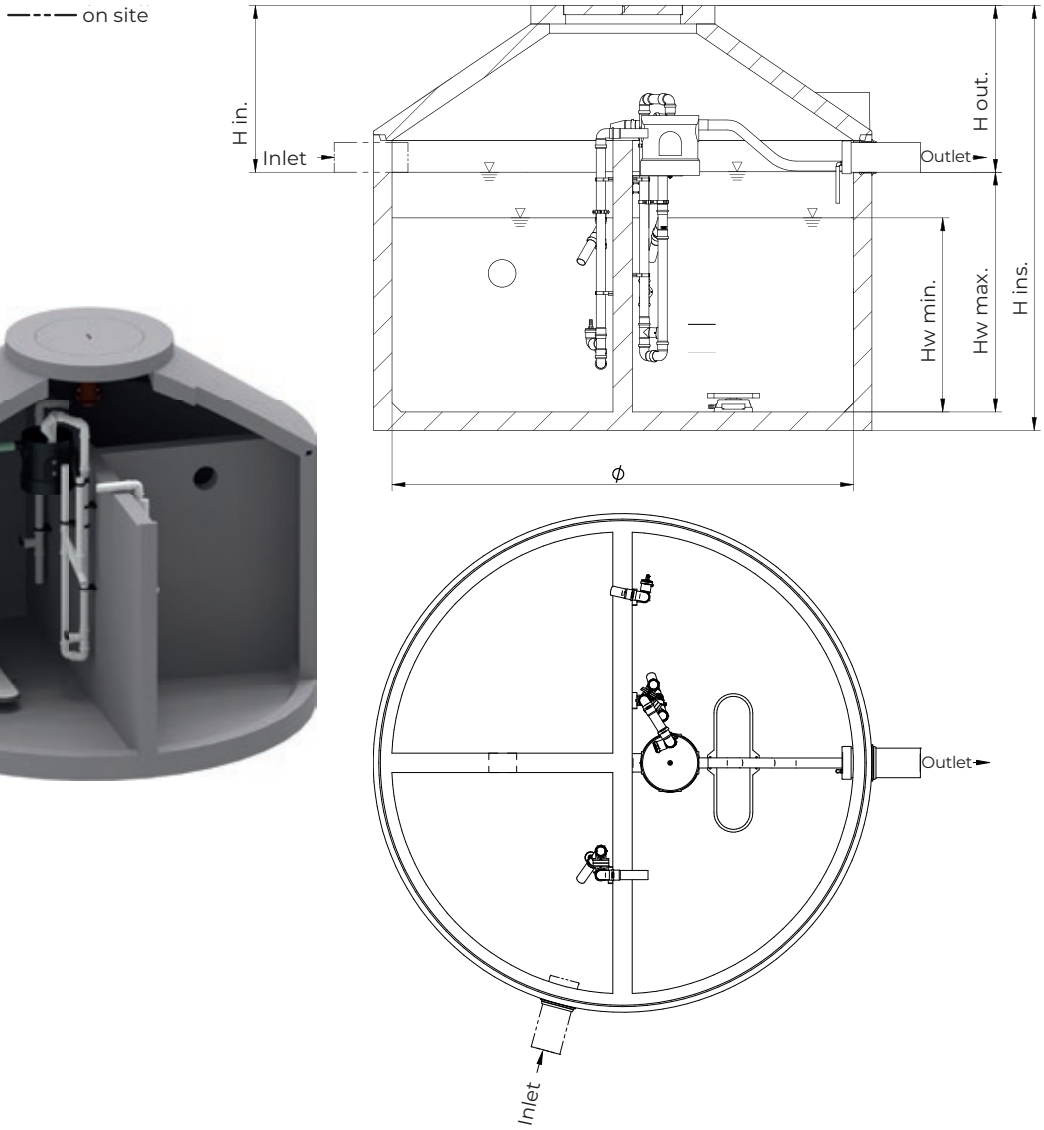
AQUATO®

Complete systems in concrete tanks

TYP BM-03

Single-tank system | Three-chamber system | Walkable manhole cover | Integrated sampling

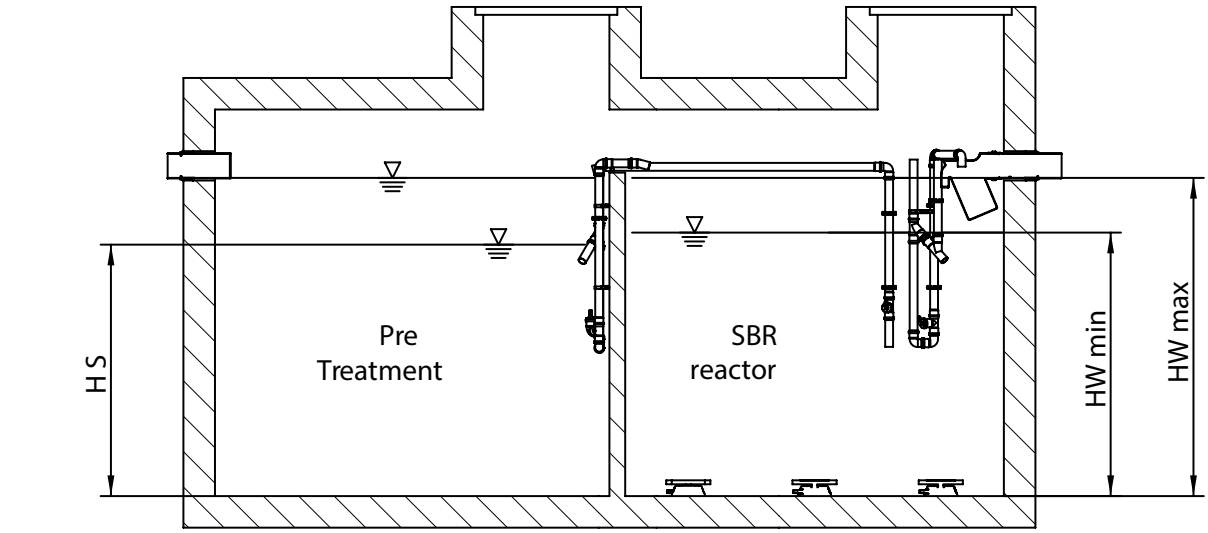


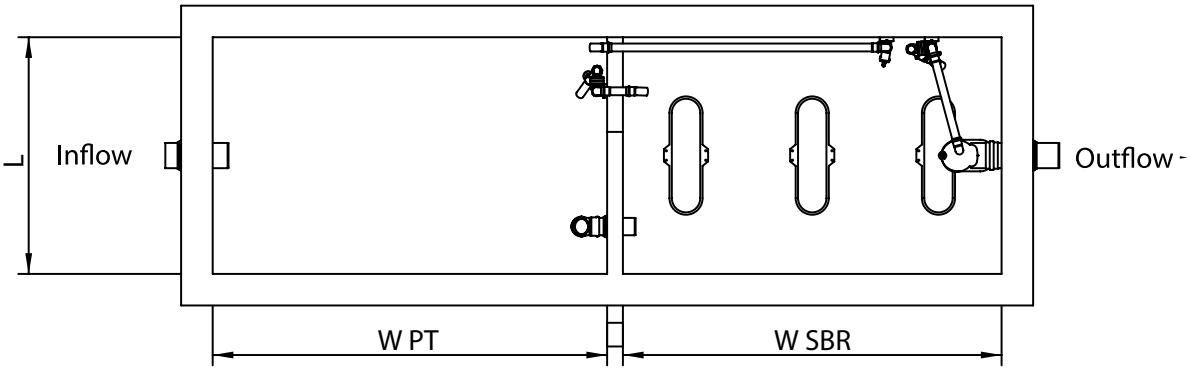


Art. No.	110135	110136	110137	110138	110139
PE	4	6	8	10	12–14
Usable volume (m^3)	4,23	6,02	6,02	7,87	9,72
$H_{W\ min.}$ (m)	1,14	1,05	1,00	1,44	1,73
$H_{W\ max.}$ (m)	1,45	1,30	1,30	1,70	2,10
H_s (m)	1,14	1,05	1,00	1,44	1,73
Ø (m)	2,00	2,50	2,50	2,50	2,50
Installation depth [H_{ins} (m)]	2,35	2,30	2,30	2,70	3,20
Inlet depth [H_{in} (m)]	0,90	0,90	0,90	0,90	0,90
Outlet depth [H_{out} (m)]	0,90	0,90	0,90	0,90	0,90
Weight (kg)	6.220	7.835	7.835	8.500	9.800
Heaviest component (kg)	5.200	6.445	6.445	7.110	8.410
Price	€ 4.614,50	€ 5.093,50	€ 5.258,00	€ 5.824,50	€ 6.684,50

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #B2, #B3, #B4, #B5

Plant example in on-site concrete tank



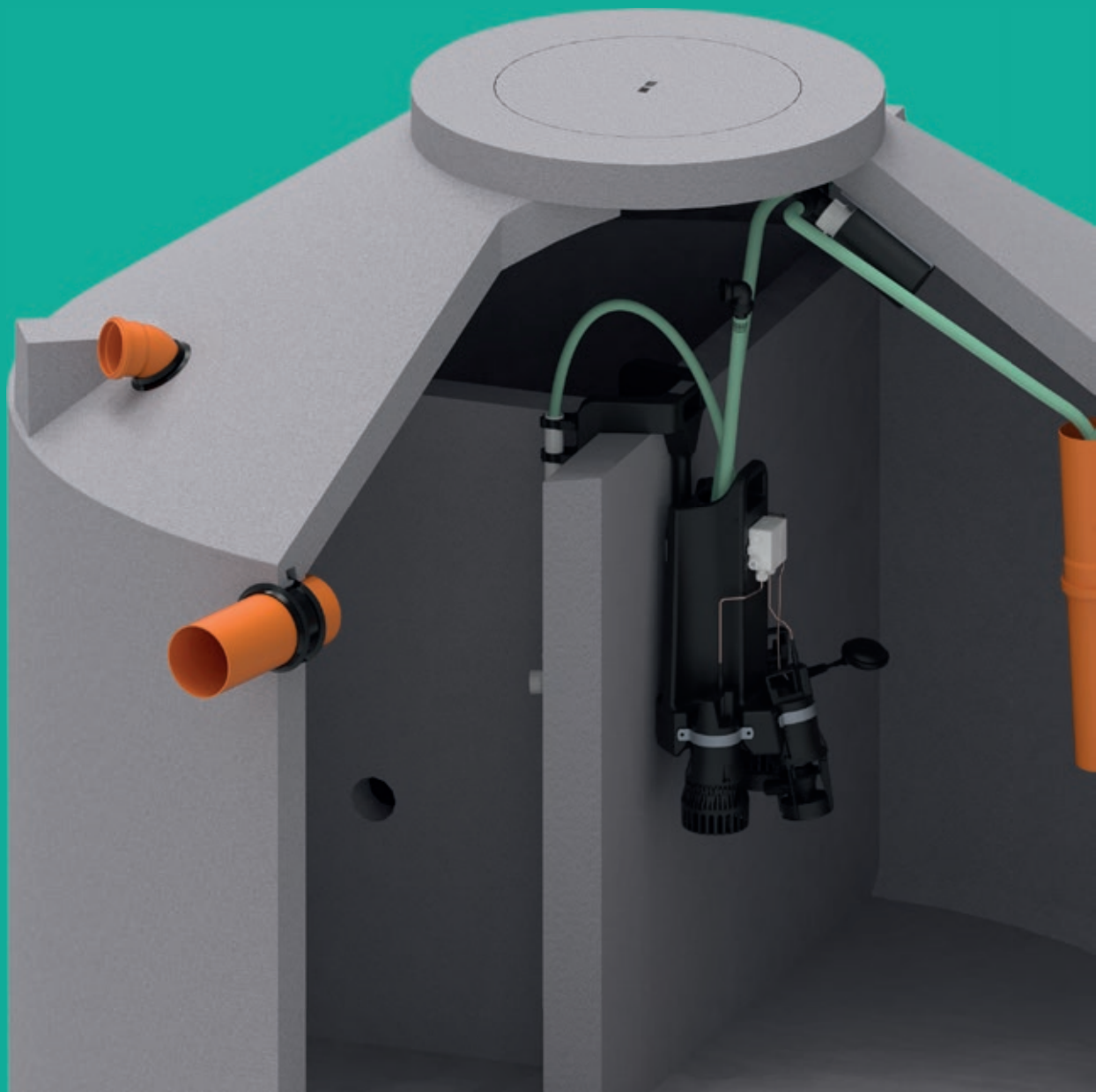


PE	4	6	8	10	12	14-16	18-20
Usable volume (m^3)	2,74	4,03	5,18	6,26	7,56	10,08	12,6
$H_{W\ min.}$ (m)	1,01	1,17	1,34	1,50	1,51	1,51	1,68
$H_{W\ max.}$ (m)	1,20	1,40	1,60	1,80	1,80	1,80	2,00
H_S (m)	0,83	1,04	1,20	1,47	1,47	1,46	1,63
Number of chambers	2	2	2	2	2	2	2
Length	1,20	1,20	1,20	1,20	1,20	1,40	1,50
W_{pt}	1,00	1,30	1,40	1,50	1,80	2,00	2,30
W_{SBR}	0,90	1,10	1,30	1,40	1,70	2,00	2,20
Q_d	0,60	0,90	1,20	1,50	1,80	2,40	3,00

PUMP

SMALL WASTEWATER TREATMENT PLANT
SBR PROCESS
PUMP TECHNOLOGY

COMPACT, ECONOMICAL, POWERFUL.

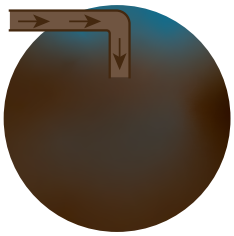


PRINCIPLE

The AQUATO® PUMP uses the SBR process (sequencing batch reactor) for fully biological wastewater treatment. This proven process operates in modern single- or multi-chamber tanks and can also be easily adapted to existing older tanks.

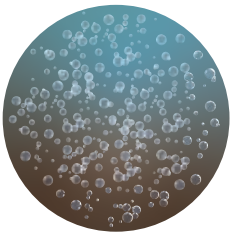
All processes are controlled in a regular 4-phase cycle by the control unit K-PILOT 2.4P

PROCESS



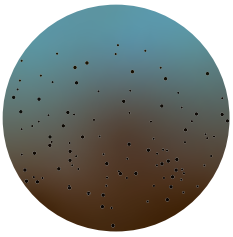
FILLING PHASE

Coarse solids are retained during mechanical pre-treatment; the pretreated wastewater is then transferred to the aeration tank.



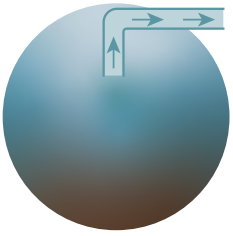
AERATION PHASE

The wastewater in the aeration tank is aerated and mixed, forming activated sludge with purifying microorganisms. Aeration and pause times are adjustable; at low inflow, the system switches to economy mode.



SETTLING PHASE

The activated sludge settles at the bottom of the tank, forming a layer of clear water above.



DECANTING PHASE

The treated water from the clear water layer is pumped to the outlet.
After completion of this phase, the excess sludge is returned to the primary treatment, and the SBR cycle restarts.

APPROVAL DOCUMENTS

New systems	Declaration of performance for AQUATO® PUMP
Retrofits	National technical approval (abZ) Z-55.8-706 (Class C) and Z-55.8-705 (Class D)

ADVANTAGES

- Easy to install system
- Maximum adaptability due to individual adjustment options
- Long service life thanks to proven units
- Energy-efficient with high performance
- Low maintenance costs thanks to simple handling
- Significantly below the required effluent limits
- Suitable for all approved tank geometries

Additional sampling options can be found from page 52

Art. No.	Item description	Up to max	Cable length	Price
111043	AQUATO® PUMP 4–16 PE TW	4–16 PE	15 m	€ 2.230,00
111044	AQUATO® PUMP 4–16 PE TW	4–16 PE	20 m	€ 2.261,00
111045	AQUATO® PUMP 4–16 PE TW	4–16 PE	25 m	€ 2.281,50
111046	AQUATO® PUMP 4–16 PE TW	4–16 PE	30 m	€ 2.302,00
111051	AQUATO® PUMP 4–16 PE KE	4–16 PE	15 m	€ 2.230,00
111052	AQUATO® PUMP 4–16 PE KE	4–16 PE	20 m	€ 2.266,00
111053	AQUATO® PUMP 4–16 PE KE	4–16 PE	25 m	€ 2.281,50
111054	AQUATO® PUMP 4–16 PE KE	4–16 PE	30 m	€ 2.302,00
111058	AQUATO® PUMP 17–28 PE TW	17–28 PE	15 m	€ 3.296,00
111059	AQUATO® PUMP 17–28 PE TW	17–28 PE	20 m	€ 3.327,00
111060	AQUATO® PUMP 17–28 PE TW	17–28 PE	25 m	€ 3.347,50
111061	AQUATO® PUMP 17–28 PE TW	17–28 PE	30 m	€ 3.368,00
111065	AQUATO® PUMP 17–28 PE KE	17–28 PE	15 m	€ 3.296,00
111066	AQUATO® PUMP 17–28 PE KE	17–28 PE	20 m	€ 3.327,00
111067	AQUATO® PUMP 17–28 PE KE	17–28 PE	25 m	€ 3.347,50
111068	AQUATO® PUMP 17–28 PE KE	17–28 PE	30 m	€ 3.368,00

TW = partition wall suspension
KE = chain suspension

Hanger feeding hose
Art. No. 111021

CONTROL UNIT K-PILOT 2.4P

PRO Cloud via extension module

- Ready to plug in
- Integrated power failure monitoring
- Economy mode
- Power monitoring of all components
- Separate user levels for operators and service technicians
- Operating hours counter
- Acoustic and visual fault indication
- Readable error log
- Software update possible
- Effluent classes C + D

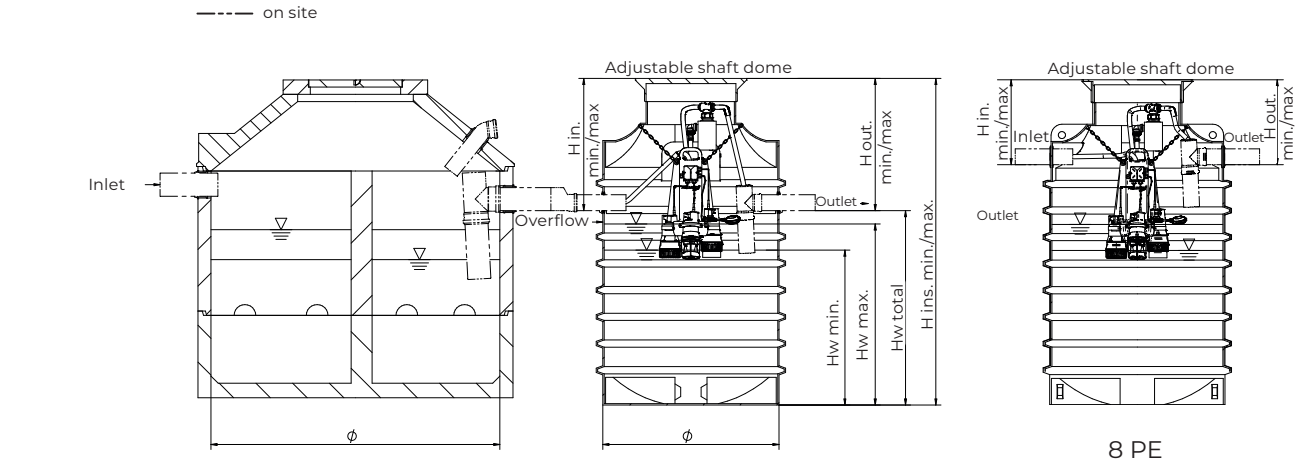
Art. No.	Item description	Price
100556	Wall cabinet, preconfigured, W × H × D: 300 × 300 × 180 mm	€ 154,50
111021	Hanger for feeding hose Ø 30 mm incl. fastening material for concrete tanks	€ 133,00

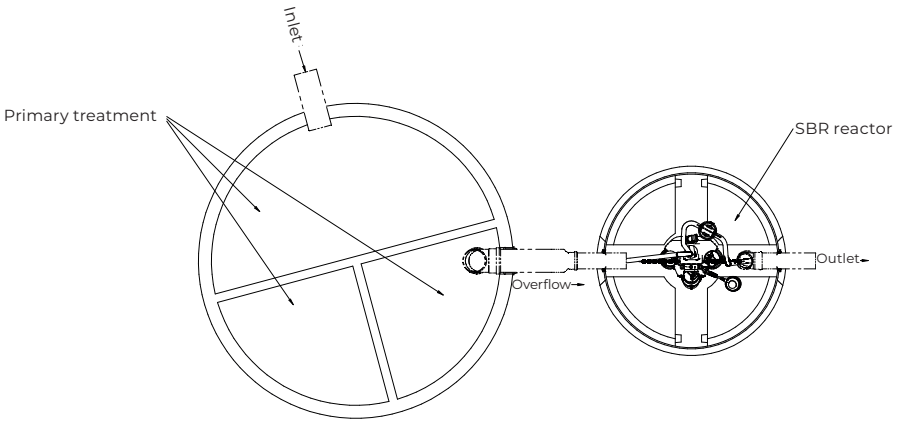
Plastic tanks for retrofit

AQUATO®

TYP KS-03

Single-tank system | For retrofit downstream of an existing tank | Sampling bottle





PE	4	6	8
Primary treatment required (m^3)	2,44	3,11	4,08
SBR required (m^3)	1,00	1,20	1,60
Total volume required (m^3)	3,44	4,31	5,68
$H_{w\ min.}$ (m)	1,12	1,01	0,91
H_s (m)	1,12	1,01	0,91
Ø (m)	1,31	1,31	1,31
Tank height (m)	2,10	2,10	2,10
Installation depth SBR [H_{Et} (m)]	2,20	2,20	2,20
Inlet depth SBR [H_{in} (m)]	0,90	0,90	0,50
Outlet depth SBR [H_{out} (m)]	0,90	0,90	0,50
Manhole cover and dome (DN)	600	600	600
Weight (kg)	95	95	95
Price	Prices on request		

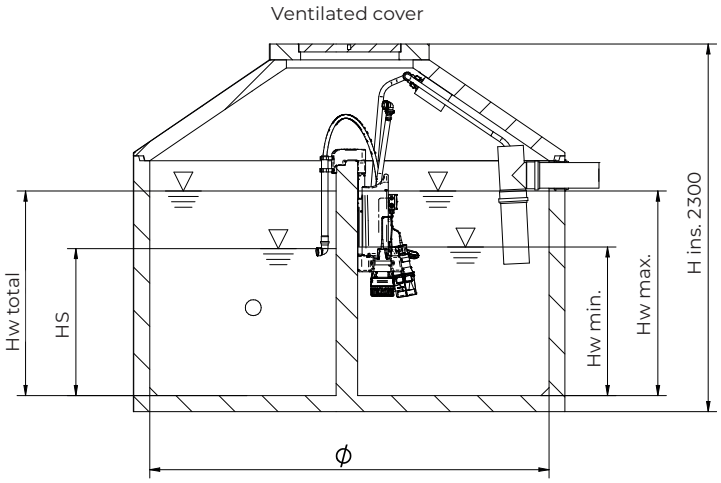
Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover.
Here: #A2, #KS3

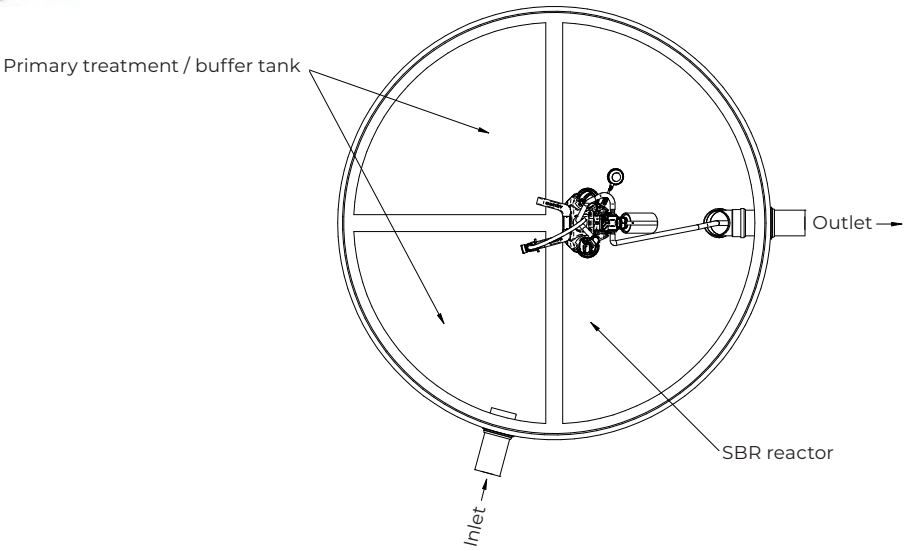
AQUATO®

Systems in concrete tanks

TYP BM-03

Single-tank system | Three-chamber system | Walkable manhole cover | Sampling bottle

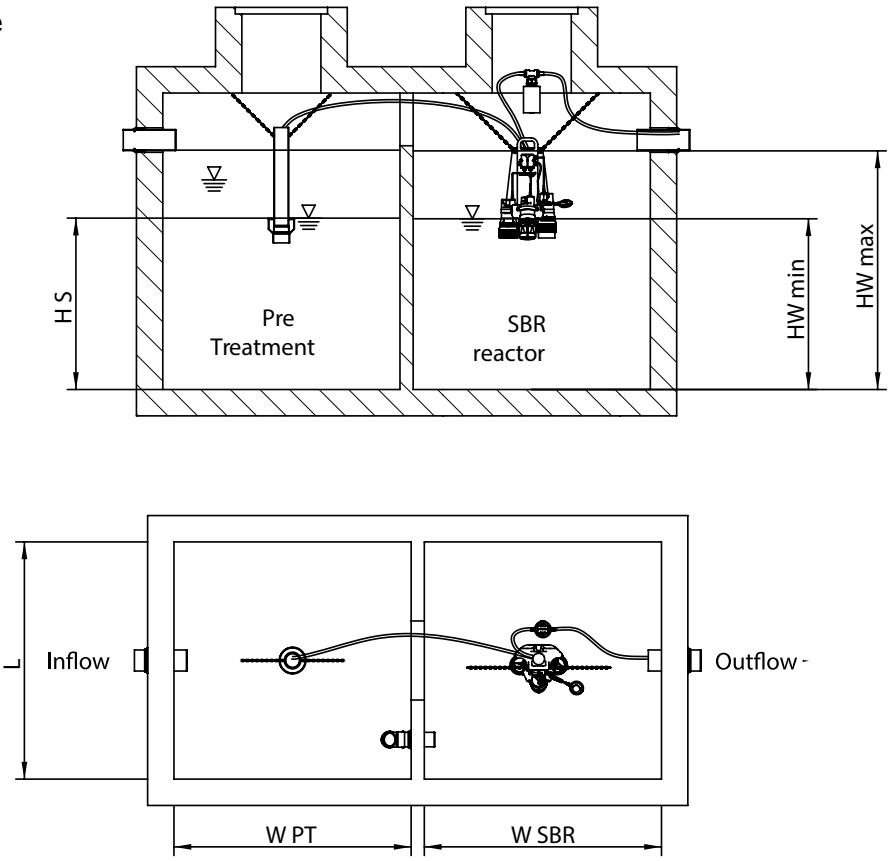




PE	4	6	8	10	12–14
Usable volume (m^3)	4,23	6,02	6,02	7,87	9,72
$H_{W\ min.}$ (m)	1,14	1,05	1,00	1,44	1,73
$H_{W\ max.}$ (m)	1,45	1,30	1,30	1,70	2,10
H_S (m)	1,14	1,05	1,00	1,44	1,73
Ø (m)	2,00	2,50	2,50	2,50	2,50
Installation depth [H_{Et} (m)]	2,35	2,30	2,30	2,70	3,20
Inlet depth [H_{in} (m)]	0,80	0,90	0,90	0,90	0,90
Outlet depth [H_{out} (m)]	0,80	0,90	0,90	0,90	0,90
Weight (kg)	6.220	7.835	7.835	8.500	9.800
Heaviest component (kg)	5.200	6.445	6.445	7.110	8.410

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #B2, #B3, #B4, #B5

– — – on-site

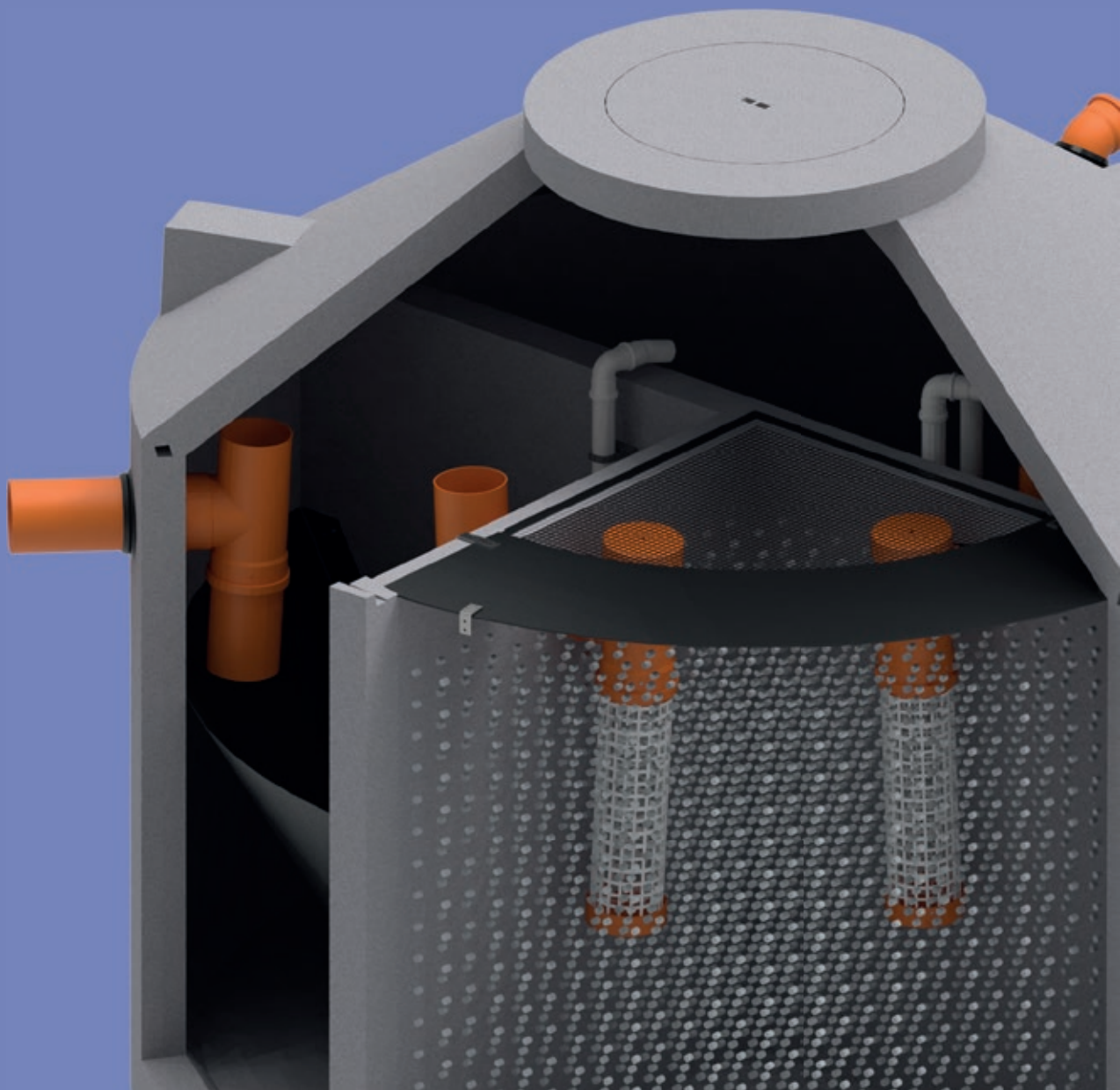


PE	4	6	8	10	12	14-16	18-20
Usable volume (m^3)	2,9	4,35	5,41	6,27	7,69	10,37	12,96
$H_{w\ min.}$ (m)	0,84	1,06	1,20	1,29	1,30	1,30	1,63
$H_{w\ max.}$ (m)	1,20	1,45	1,60	1,60	1,60	1,60	2,00
H_s (m)	0,84	1,09	1,20	1,29	1,30	1,30	1,63
Number of chambers	2	2	2	2	2	2	2
Length	1,10	1,20	1,30	1,40	1,55	1,80	1,80
W_{pt}	1,10	1,30	1,30	1,40	1,55	1,80	1,80
W_{SBR}	1,10	1,20	1,30	1,40	1,55	1,80	1,80
Q_d	0,60	0,90	1,20	1,50	1,80	2,40	3,00

3K-FLOW

SMALL WASTEWATER TREATMENT PLANT
MOVING BED BIOFILM PROCESS

SAFE, BIOLOGICAL, NO MECHANICAL COMPONENTS.

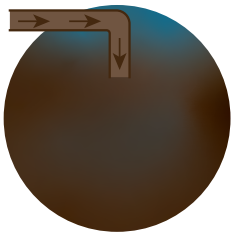


PRINCIPLE

The Moving Bed Biofilm Reactor process (MBBR) is a biological wastewater treatment process using freely moving, small carrier elements. Microorganisms (biofilm) grow on these carriers and treat the wastewater. The carriers are kept in constant motion by aeration.

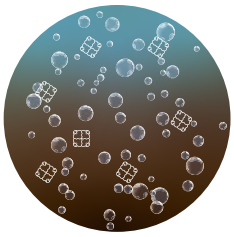
The system is characterized by high treatment performance, compact design and stable operating conditions even under fluctuating loads. All processes are controlled by the control unit K-PILOT 2.4. Sampling takes place in the secondary clarification.

PROCESS



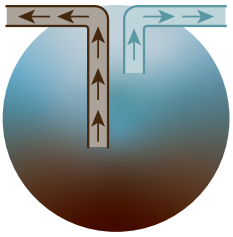
MECHANICAL PRE-TREATMENT

Coarse solids and settleable matter are removed to reduce the load on biological treatment and ensure uniform feeding.



BIOLOGICAL TREATMENT

Mobile carrier elements float in the water, providing a stable biofilm for the degradation of pollutants.
Continuous aeration and movement ensure a highly efficient treatment process.



SECONDARY CLARIFICATION AND SLUDGE RETURN

The treated wastewater settles; clear water flows to the outlet.
Settled solids are returned.

APPROVAL DOCUMENTS

New systems	Declaration of performance for DEWATEC 3K-FLOW
Retrofits	National technical approval (abZ) Z-55.8-735 (Class C)

ADVANTAGES

- Easy to install system
- Wear-free tank installations
- Modular system design
- Underload capable

3K-FLOW

TREATMENT PERFORMANCE

COD	88 %
BOD_5	95 %
TSS	91 %
NH_4	88 %

RETROFIT

The following components are required to retrofit existing tanks:

Carrier elements, overflow protection and reactor cover

+

Plate diffuser

+

Excess sludge lifter

+

PRO Cloud
via expansion module

Control unit K-PILOT 2.4
with external rotary valve and compressor on wall bracket

VERDICHTER UPGRADE

Compressor upgrade	Surcharge
AP-80H to AP-120	182,50 €
AP-120 to LP-150HN	372,00 €
LP-150HN to LP-200HN	121,00 €

TThe AP-80H can be used in **water depths up to 1,80m.**
AP-120 to LP-200HN can be used in **water depths up to 2,10m.**

Art. No.	Type	PE	Design type	Control unit	Compressor (l/min)	Number of diffuser	Price
700701	3K-FLOW	4	Type V	K-PILOT 2.4	80	1× Plate	€ 2.519,50
700702		6	Type V		80	1× Plate	€ 2.616,00
700703		8	Type V		120	1× Plate	€ 2.897,50
700704		10	Type V		120	1× Plate	€ 3.015,00
700705		12	Type V		150	1× Plate	€ 3.532,00
700706		14	Type V		150	1× Plate	€ 3.656,50
700707		16	Type H		150	2× Plate	€ 4.254,00
700708		18	Type H		200	2× Plate	€ 4.458,00
700709		20	Type H		200	2× Plate	€ 4.635,00
700731	3K-FLOW-S	4	Type V	D-PILOT 22.2 incl. wall cabinet	80	1× Plate	€ 2.261,00
700732		6	Type V		80	1× Plate	€ 2.325,50
700733		8	Type V		120	1× Plate	€ 2.639,00
700734		10	Type V		120	1× Plate	€ 2.756,50
700735		12	Type V		150	1× Plate	€ 3.273,50
700736		14	Type V		150	1× Plate	€ 3.398,00
700737		16	Type H		150	2× Plate	€ 3.995,50

Additional retrofit kits for different connection sizes and designs, also > 20 PE available on request

All variants include airlift, control unit, compressor, plate diffuser, carrier elements, reactor cover, overflow protection, fastening material and fabric hose.

Design explanation:
Type V = 1-tank retrofit kit | Primary treatment in half chamber; reactor and secondary clarification each in a quarter chamber (V) of one tank
Type H = 2-tank retrofit kit | Primary treatment in the 1st tank; reactor and secondary clarification each in a half chamber (H) of a 2nd tank

3K-FLOW-S retrofit kits

Variant 3K-FLOW-S, suitable for up to 16 PE.
The 3K-FLOW-S retrofit kit is supplied with control unit D-PILOT 22.2 incl. wall cabinet instead of K-PILOT 2.4.

Wastewater treatment specifications by PE

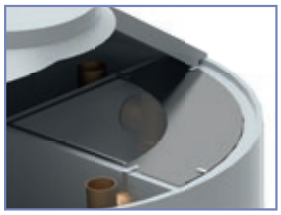
PE	V_{total} (m^3)	V_{PT} (m^3)	V_R (m^3)	V_{SC} (m^3)	PE	V_{total} (m^3)	V_{PT} (m^3)	V_R (m^3)	V_{SC} (m^3)
4	4,00	2,00	1,00	1,00	28	19,60	9,80	4,90	4,90
6	5,00	2,50	1,25	1,25	30	21,00	10,50	5,25	5,25
8	6,00	3,00	1,50	1,50	32	22,40	11,20	5,60	5,60
10	7,20	3,60	1,80	1,80	34	23,80	11,90	5,95	5,95
12	8,40	4,20	2,10	2,10	36	25,20	12,60	6,30	6,30
14	9,80	4,90	2,45	2,45	38	26,60	13,30	6,65	6,65
16	11,20	5,60	2,80	2,80	40	28,00	14,00	7,00	7,00
18	12,60	6,30	3,15	3,15	42	29,40	14,70	7,35	7,35
20	14,00	7,00	3,50	3,50	44	30,80	15,40	7,70	7,70
22	15,40	7,70	3,85	3,85	46	32,20	16,10	8,05	8,05
24	16,80	8,40	4,20	4,20	48	33,60	16,80	8,40	8,40
26	18,20	9,10	4,55	4,55	50	35,00	17,50	8,75	8,75

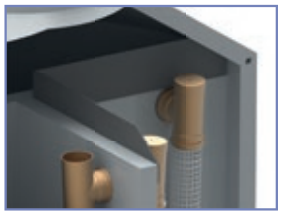
PE = population equivalent | V_{total} = m^3 total volume | V_{PT} = volume of primary treatment
V_R = reactor volume | V_{SC} = volume of secondary clarification

Design load: 1 PE = 150 l/d | COD = 120 g/(PE•d) | BOD_5 = 60 g/(PE•d)

ACCESSORIES

Additional sampling options can be found from page 52





Retention system for carrier elements
Reactor cover (left, standard)
Alternatively replaceable with
partition wall extension Art. No. 102609 (right)
Exchange within the retrofit kit at no extra charge

Optional buffer volume
Feed airlift for installation in the primary treatment

Feeding air-lift
Art. No. 700720

Excess sludge pump, model 1
Art. No. 121137

Art. No.	Item description	Price
101555	Additional plate aerator, ready for connection, connection for Ø 16 mm air hose	€ 157,50
102451	Buffer pump, model 1, with 10 m cable[#A1]	€ 612,00
121137	Excess sludge pump, model 1, with 10 m cable[#A1]	€ 564,50
700720	Feeding air-lift for 3K-FLOW with buffer operation in the main flow	€ 150,00
700740	Partition wall bracket PAKT for 3K-FLOW	€ 203,00
102609	Partition wall extension for 3K-FLOW reactor	€ 180,50

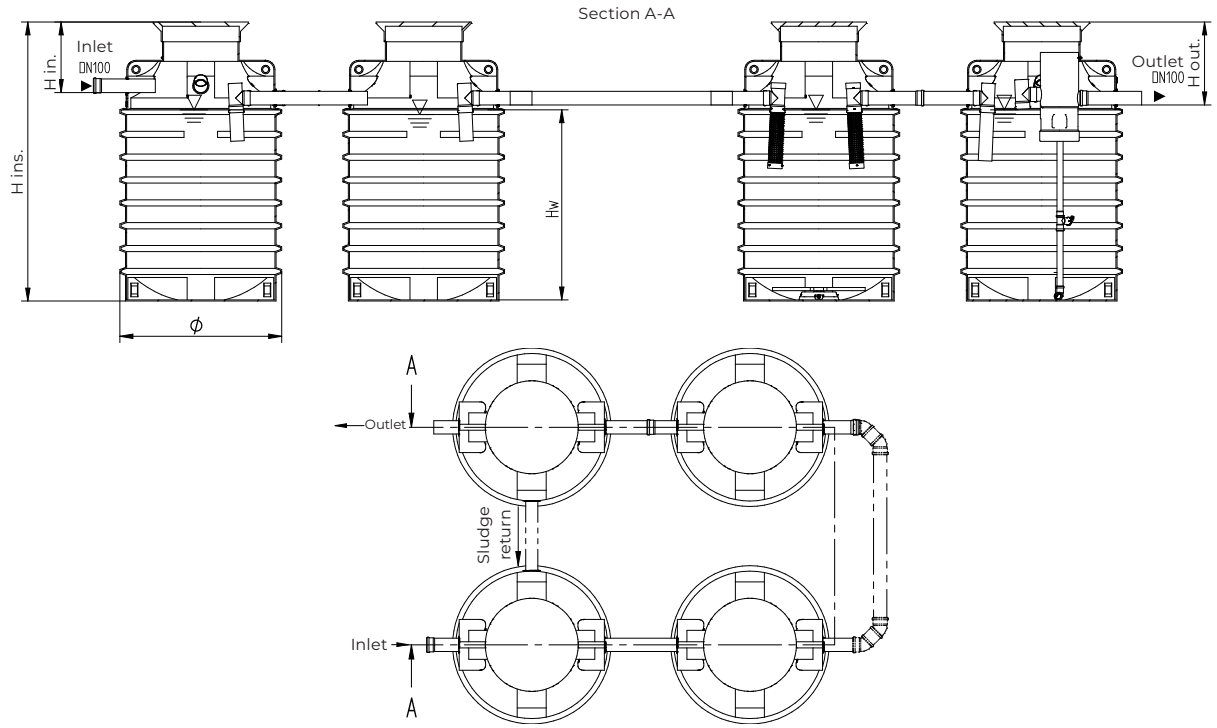
Technical notes can be found on the fold-out page at the back cover. Here: #A1

TYP KS-03

Complete systems in concrete tanks

Four-tank system | Three-chamber system | Walkable manhole cover | Integrated sampling

—·-·— on site



Art. No.	700908	700906	700907
PE	4	4–6	8
Usable volume (m^3)	4,4	6,40	6,40
H_w (m)	1,1	1,6	1,6
Ø (m)	1,31	1,3	1,3
Installation depth [H_{ins} (m)]	1,8	2,22	2,22
Inlet depth [H_{in} (m)]	0,5	0,5	0,5
Outlet depth [H_{out} (m)]	0,6	0,6	0,6
Manhole cover and dome (DN)	600	600	600
Weight (kg)	380	380	380
Heaviest component (kg)	95	95	95
Price	€ 5.562,00	€ 5.883,50	€ 6.198,50

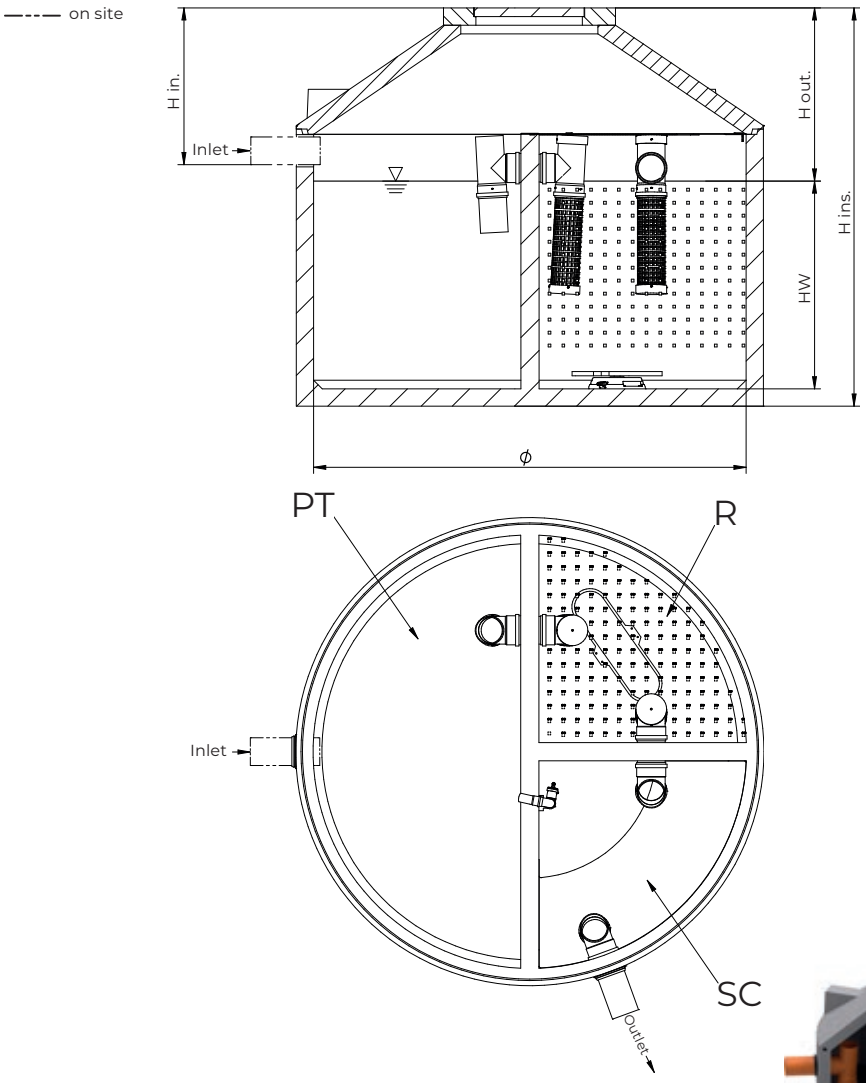
Note: Schematic illustration, not a structural drawing.
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #KS3

Complete systems in concrete tanks

AQUATO®

TYP BM-03

Single-tank system | Three-chamber system | Walkable manhole cover



Custom configuration possible
Inlet and outlet freely configurable

Art. No.	700931[#A2]	700932	700950	700934	700935
PE	4	6	8	10	12
Usable volume (m^3)	4,10	5,53	6,06	7,73	9,68
H_w (m)	1,40	1,20	1,50	1,60	2,10
Ø (m)	2,00	2,50	2,30	2,50	2,50
Installation depth [H_{ins} (m)]	2,35	2,30	2,45	2,70	3,20
Inlet depth [H_{in} (m)]	0,75	0,90	0,75	0,90	0,90
Outlet depth [H_{out} (m)]	0,85	1,00	0,85	1,00	1,00
Weight (kg)	6.220	7.835	6.360	8.500	9.800
Heaviest component (kg)	5.200	6.445	5.780	7.110	8.410
Price	€ 4.815,50	€ 5.387,00	€ 5.953,50	€ 6.406,50	€ 7.545,00

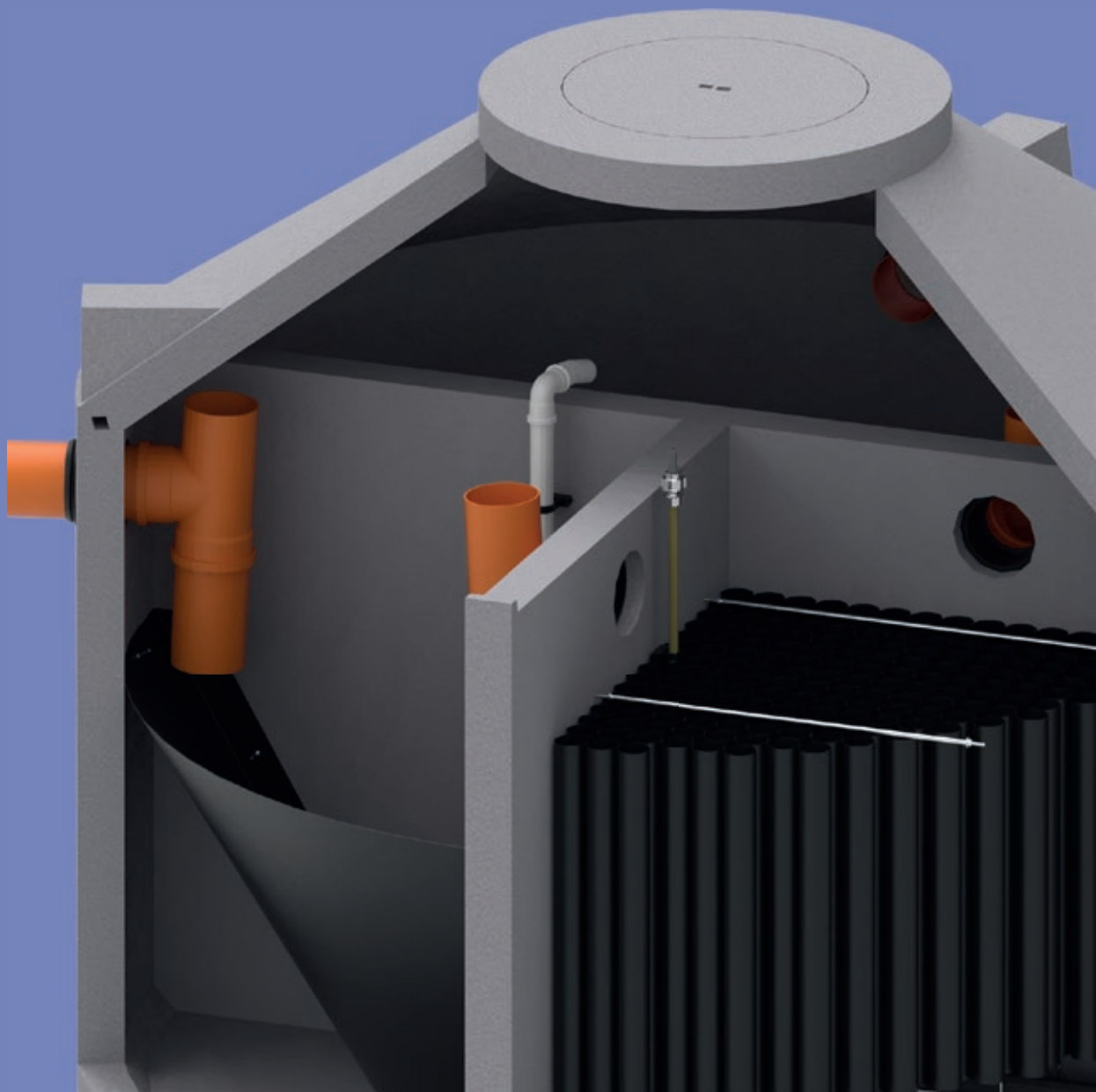
Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #B2, #B3, #B4, #B5

Notes

3K-PLUS

SMALL WASTEWATER TREATMENT PLANT
FIXED-BED PROCESS

EFFICIENT, SIMPLE, RELIABLE.



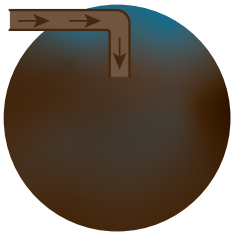
PRINCIPLE

The fixed-bed process (FB) is a proven, continuously operating method for biological wastewater treatment. It uses fixed-bed media on which microorganisms form a biofilm. The wastewater passes through several chambers and is treated step by step.

This process is simple, robust and low-maintenance. As biological degradation mainly takes place on the fixed-bed media, the system operates very reliably even under fluctuating loads.

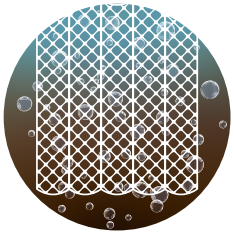
All processes are controlled by the control unit K-PILOT 2.4. Sampling takes place in the secondary clarification.

PROCESS



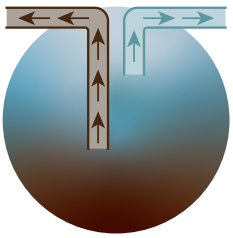
MECHANICAL PRE-TREATMENT

Coarse and settleable matter are removed in the first chamber to reduce the load on subsequent biological treatment.



BIOLOGICAL TREATMENT

Pretreated wastewater flows through the fixed-bed media. Microorganisms growing on it degrade pollutants. Intermittent aeration supports this process for efficient treatment.



SECONDARY CLARIFICATION AND SLUDGE RETURN

The treated wastewater settles; clear water flows to the outlet. Settled solids are returned.

APPROVAL DOCUMENTS

New systems	Declaration of performance for DEWATEC 3K-PLUS
Retrofits	National technical approval (abZ) Z-55.8-736 (Class C)

ADVANTAGES

- Installation-friendly system
- Wear-free internal components
- Modular system design
- Particularly suitable for low-load operation

3K-PLUS

TREATMENT PERFORMANCE

COD	94 %
BOD_5	98 %
TSS	97 %
NH_4	86 %

RETROFIT

The following components are required to retrofit existing tanks:

Fixed bed unit
with aeration elements

Excess sludge lifter

PRO Cloud
via extension module

Control unit K-PILOT 2.4
with external rotary valve and compressor on wall bracket

COMPRESSOR UPGRADE

Compressor replacement	Surcharge
AP-80H to AP-120	€ 182,50
AP-120 to LP-150HN	€ 372,00
LP-150HN to LP-200HN	€ 121,00

The AP-80H can be used in **water depths up to 1,80m.**
AP-120 to LP-200HN can be used in **water depths up to 2,10m.**

Art. No.	Type	PE	Design type	max. W_t (m)	Control unit	Compressor (l/min)	Price
700601	3K-PLUS	4–6	Type V20	1,60	K-PILOT 2.4	80	€ 2.423,50
700602		4–8	Type V25	1,60		120	€ 2.735,50
700603		4–8	Type H20	1,60		120	€ 3.580,50
7006011		4–8	Type V20	2,10		150	€ 3.004,50
700604		9–14	Type V25	2,10		200	€ 3.393,00
700605		9–12	Type H20	1,90		200	€ 3.618,50
700628		9–12	Type H25	2,50		DT 4.16 + 40	€ 5.047,00
700623		13–16	Type V25	2,50		DT 4.8 + 40	€ 3.744,00
700608		13–16	Type H20	1,90		200	€ 3.962,50
700624		13–16	Type H25	2,50		DT 4.16 + 40	€ 4.679,50
700625		17–18	Type H20	2,50		DT 4.10 + 40	€ 5.006,00
700626		19–20	Type H20	2,50		DT 4.16 + 40	€ 5.062,50
700627		17–20	Type H25	2,50		DT 4.16 + 40	€ 5.201,50
700631	3K-PLUS-S	4–6	Type V20	1,60	D-PILOT 22.2 incl. wall cabinet	80	€ 2.165,00
700632		4–8	Type V25	1,60		120	€ 2.477,00
700633		4–8	Type H20	1,60		120	€ 3.322,00
7006311		4–8	Type V20	2,10		150	€ 2.746,00

Additional retrofit kits for different connection sizes and designs, also > 20 PE available on request

All variants include airlift, control unit, compressor, pipe aerator, fixed bed, fixed-bed support, hold-down device, fastening material and fabric hose.

Design explanation:
Type V20/25 = 1-tank retrofit kit | Primary treatment in half chamber; reactor and secondary clarification each in a quarter chamber (V) of one tank Ø 2.00 m / 2.50 m (20/25)
Type H20/25 = 2-tank retrofit kit | Primary treatment in the 1st tank; reactor and secondary clarification each in a half chamber (H) of a 2nd tank Ø 2.00 m / 2.50 m (20/25)

3K-PLUS-S retrofit kits

Variant 3K-PLUS-S, suitable for up to 8 PE.
The 3K-PLUS-S retrofit kit is supplied with control unit D-PILOT 22.2 incl. wall cabinet instead of K-PILOT 2.4.

Wastewater treatment specifications by PE

PE	V_{total} (m^3)	V_{PT} (m^3)	V_R (m^3)	V_{SC} (m^3)	PE	V_{total} (m^3)	V_{PT} (m^3)	V_R (m^3)	V_{SC} (m^3)
4	4,00	2,00	1,00	1,00	28	19,60	9,80	4,90	4,90
6	5,00	2,50	1,25	1,25	30	21,00	10,50	5,25	5,25
8	6,00	3,00	1,50	1,50	32	22,40	11,20	5,60	5,60
10	7,20	3,60	1,80	1,80	34	23,80	11,90	5,95	5,95
12	8,40	4,20	2,10	2,10	36	25,20	12,60	6,30	6,30
14	9,80	4,90	2,45	2,45	38	26,60	13,30	6,65	6,65
16	11,20	5,60	2,80	2,80	40	28,00	14,00	7,00	7,00
18	12,60	6,30	3,15	3,15	42	29,40	14,70	7,35	7,35
20	14,00	7,00	3,50	3,50	44	30,80	15,40	7,70	7,70
22	15,40	7,70	3,85	3,85	46	32,20	16,10	8,05	8,05
24	16,80	8,40	4,20	4,20	48	33,60	16,80	8,40	8,40
26	18,20	9,10	4,55	4,55	50	35,00	17,50	8,75	8,75

PE = population equivalent | V_{total} = m^3 total volume | V_{PT} = volume of primary treatment
V_R = reactor volume | V_{SC} = volume of secondary clarification

Design load: 1 PE = 150 l/d | COD = 120 g/(PE•d) | BOD_5 = 60 g/(PE•d)

ACCESSORIES

Sampling options can be found from page 52

Optional buffer volume
Feed airlift for installation in the primary treatment

Feeding air-lift
Art. No 700720

Excess sludge pump, model 1
Art. No 121137

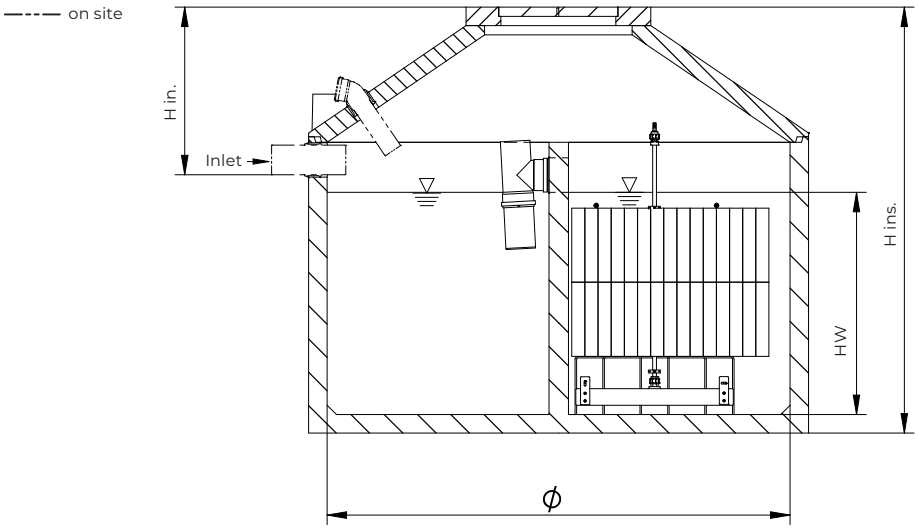
Art. No	Item description	Price
102451	Buffer pump, model 1, with 10 m cable#A1	€ 612,00
121137	Excess sludge pump, model 1, with 10 m cable#A1	€ 564,50
700720	Fedding air-lift for 3K-PLUS with buffer operation in the main flow	€ 150,00
700740	Partition wall bracket PAKT for 3K-PLUS	€ 203,00

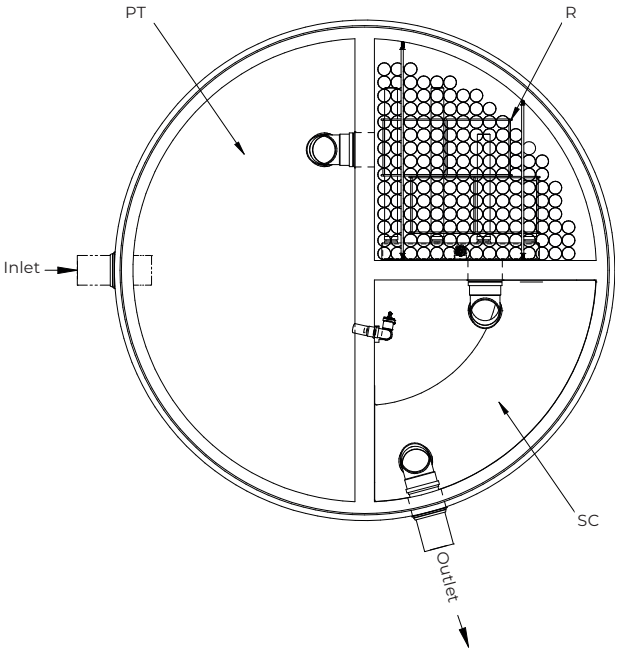
Technical notes can be found on the fold-out page at the back cover. Here: #A1

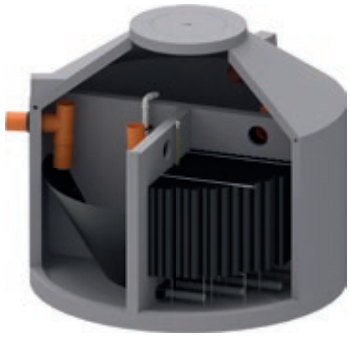
Complete systems in concrete tanks

TYP BM-03

Single-tank system | Three-chamber system | Walkable manhole cover



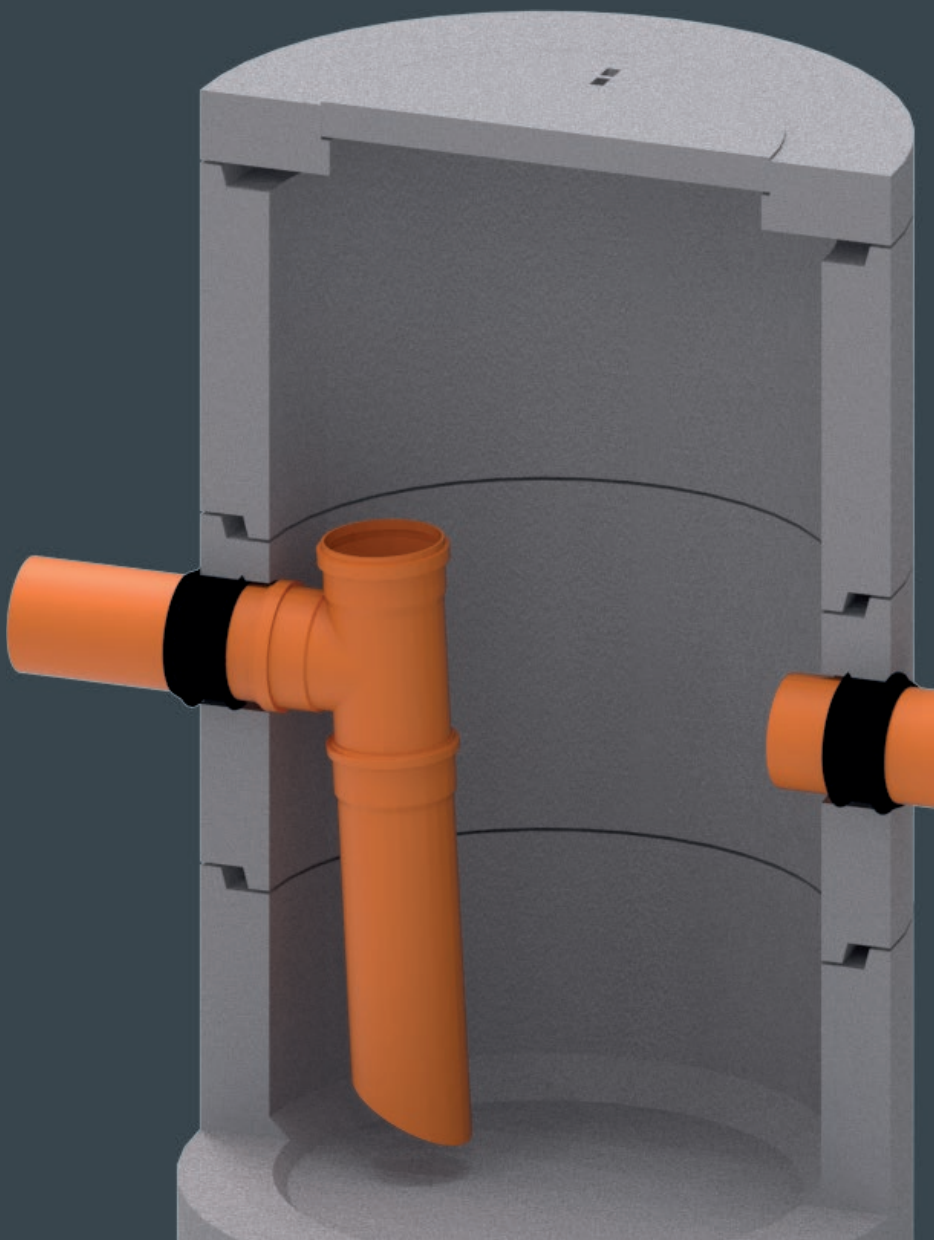




Art. No.	700830#A2	700831	700833	700834
PE	4	6	8–10	12
Usable volume (m^3)	4,10	5,53	7,37	9,68
H_w (m)	1,40	1,20	1,60	2,10
Ø (m)	2,00	2,50	2,50	2,50
Installation depth [H_{ins} (m)]	2,35	2,30	2,70	3,20
Inlet depth [H_{in} (m)]	0,75	0,90	0,90	0,90
Outlet depth [H_{out} (m)]	0,85	1,00	1,00	1,00
Weight (kg)	6.220	7.835	8.500	9.800
Heaviest component (kg)	5.200	6.445	7.110	8.410
Price	€ 4.825,50	€ 5.654,50	€ 6.999,00	€ 7.586,00

Note: Schematic illustration, not a structural drawing
Technical notes can be found on the fold-out page at the back cover. Here: #A2, #B2, #B3, #B4, #B5

SAMPLING



SAMPLING CHAMBER TYPE 300

- DWA-A 221 compliant
- Forced flow-through
- 21 L sampling volume
- Downstream installation for underground use
- Walkable manhole cover
- Inlet/outlet connection DN100

Art. No.	Description	Ø (m)	Inlet depth (m)	Outlet depth (m)	Installation depth (m)	Price
102611	Sampling chamber type 300 with cover	0,31	0,42	0,45	0,745	€ 212,00
102615	Extension 0.6 m for chamber type 300	0,31	+0,60	+0,60	+0,60	€ 70,50

PE SAMPLING CHAMBER

- Downstream installation for underground use
- incl. seals, drillings on site
- Lockable cover (Ø 600 mm only)

Art. No.	Description	Ø (m)	Installation depth (m)	Price
160001	PE Sampling chamber Ø 400 – DN100	0,40	1,14	€ 256,00
160002	PE Sampling chamber Ø 600 – DN100	0,60	1,66	€ 485,00
160004	PE Sampling chamber Ø 600 – DN150	0,60	1,66	€ 517,50

BASIC PE SAMPLING CHAMBER

- Downstream installation for underground use
- Inlet/outlet connection DN100/150
- 2 upper and 2 lower connection ports
- Lockable cover (Ø 600 mm only)
- Installation, inlet and outlet depths adjustable

Art. No.	Description	Ø (m)	Installation depth min./max.(m)	Inlet depth min./max. (m)	Outlet depth min./max. (m)	Price
103677	BASIC PE sampling chamber Ø 600	0,60	1,05/1,17	Top: 0,26/0,38 Bottom: 0,76/0,88	Top: 0,31/0,43 Bottom: 1,05/1,17	€ 499,00
103678	BASIC PE sampling chamber Ø 600,	0,60	1,27/1,43	Top: 0,48/0,88 Bottom: 0,98/1,14	Top: 0,53/0,69 Bottom: 1,27/1,43	€ 697,00

SAMPLING TYPE 300

- DWA-A 221 compliant
- Forced flow-through
- 15 L sampling volume
- Integrated sampling for installation in the wastewater treatment plant
- Large diameter for easy sample collection with sampling cup

Art. No.	Description	Price
102610	Sampling type 300 for concrete tanks, installation on partition wall	€ 157,00
103503	Sampling type 300 for plastic tanks, installation on partition wall	€ 161,50
103505	Sampling type 300 for stainless steel crossbeam	€ 152,50
103507	Sampling type 300 for partition wall bracket PAKT	€ 146,50
102756	Sampling type 300 – connection set for clear water pump	€ 10,00

SAMPLING “MONO” DN100/150

- Integrated sampling for installation in the wastewater treatment plant
- Installation on outlet pipe DN100 or DN150
- 3 L sampling volume
- With emergency overflow

Art. No.	Description	Price
112096	Sampling “MONO” DN100/150, for concrete tanks	€ 92,50
103405	Sampling “MONO” DN100/150, for plastic tanks	€ 92,50

SAMPLING BOTTLE

- For use with a clear water pump
- Ø 25 mm hose connection
- 1.5 L sampling volume
- Incl. holder cup

Art. No.	Description	Price
100490	Sampling bottle 1,500 ml, complete	€ 70,00

Notes

ADVANCED TREATMENT STAGES

WASTE WATER TREATMENT USING ADDITIONAL MODULES

UV DISINFECTION
CHLORINATION
PHOSPHATE REMOVAL
CARBON DOSING

DISINFECTION

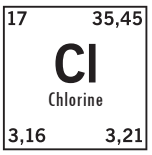
Disinfection is the final and decisive step in wastewater treatment in modern small wastewater treatment plants. The aim of this process is to reduce pathogenic microorganisms such as bacteria, viruses and parasites, ensuring safe discharge or reuse of the treated water.

Especially in case of water reuse for irrigation or discharge into sensitive water bodies, hygienic quality plays a key role. Targeted disinfection methods – such as UV disinfection or chlorination – effectively inactivate pathogens without placing additional strain on the environment.

Our systems use energy-efficient, low-maintenance and environmentally friendly technologies that can be seamlessly integrated into existing treatment processes.

UV-MODULE

Chemical-free UV disinfection for maximum hygiene and water reuse

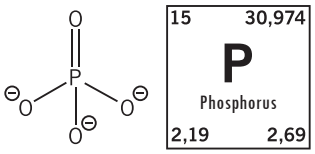


CL-MODULE

Cost-effective chlorination for compliance with specific requirements

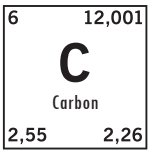
NUTRIENT REDUCTION

To reduce the impact on receiving waters, the removal of phosphates and nitrates can be optimized by dosing precipitation agents and a carbon source. In treatment stage +P, a precipitation agent is added to the biological process. It binds phosphates, removes them from the effluent and stores them in the sludge. With carbon dosing, nutrients are added to the biological process at specific points in the treatment cycle. This may be required during extended periods of low load and can also improve denitrification for nitrogen removal.



P-MODULE

Effective phosphate removal for protection of sensitive water bodies



C-MODULE

Stable nitrogen removal even under fluctuating system loads

H-MODULE

UV disinfection as an additional cleaning stage

- In stainless steel housing
- High operational reliability
- Low maintenance
- Ideal maintenance due to installation in street cabinet
- Retrofittable for sewage treatment plants already in operation

Hygienization also available as Cl module

H module for AQUATO® KOM/STABI-KOM
(clear water pump required)
Compressor and control unit not included

H module for AQUATO® PUMP
Control unit not included

Art.-No.	Item description	Suitable up to PE	Price
121038	H-Modul AQUATO® KOM/STABI-KOM, for use without street cabinet	16*	€ 2.807,00
121209	H-Modul AQUATO® KOM/STABI-KOM, for use without street cabinet	50*	€ 6.406,50
121017	H-Modul AQUATO® KOM/STABI-KOM, installed in street cabinet	16*	€ 3.800,50
121025	H-Modul AQUATO® KOM/STABI-KOM, installed in street cabinet	20*	€ 7.380,00
121034	H-Modul AQUATO® KOM/STABI-KOM, installed in street cabinet	50*	€ 8.065,00
121018	H-Modul AQUATO® PUMP, installed in street cabinet	16	€ 3.594,50
121019	H-Modul AQUATO® PUMP, installed in street cabinet	50	€ 7.380,00
121020	Replacement UV tube 55 W	16	€ 270,00
121021	Replacement quartz glass tube 25 × 1.3 × 560 mm for 55 W tube	–	€ 99,00
121039	Replacement UV tube 85 W	50	€ 290,00
121040	Replacement quartz glass tube 25 × 1.3 × 910 mm for 85 W tube	–	€116,00

Larger UV lamps on request
*PE rating for AQUATO® KOM; for STABI-KOM on request

Dosing

P/C/CL MODULE

Dosing tank for chemical dosing

- Tank/tray made of robust plastic
- Low-maintenance dosing pump
- High operational reliability
- Easy to refill
- Easy to install thanks to chain mounting (up to 8 PE)
- Can be retrofitted for sewage treatment plants already in operation

Dosing module, free-standing
for use in combination with
on-site dosing chemical canister

Dosing module, double-walled
free-standing
200 L

Dosing module integrated
in the treatment tank
10 L

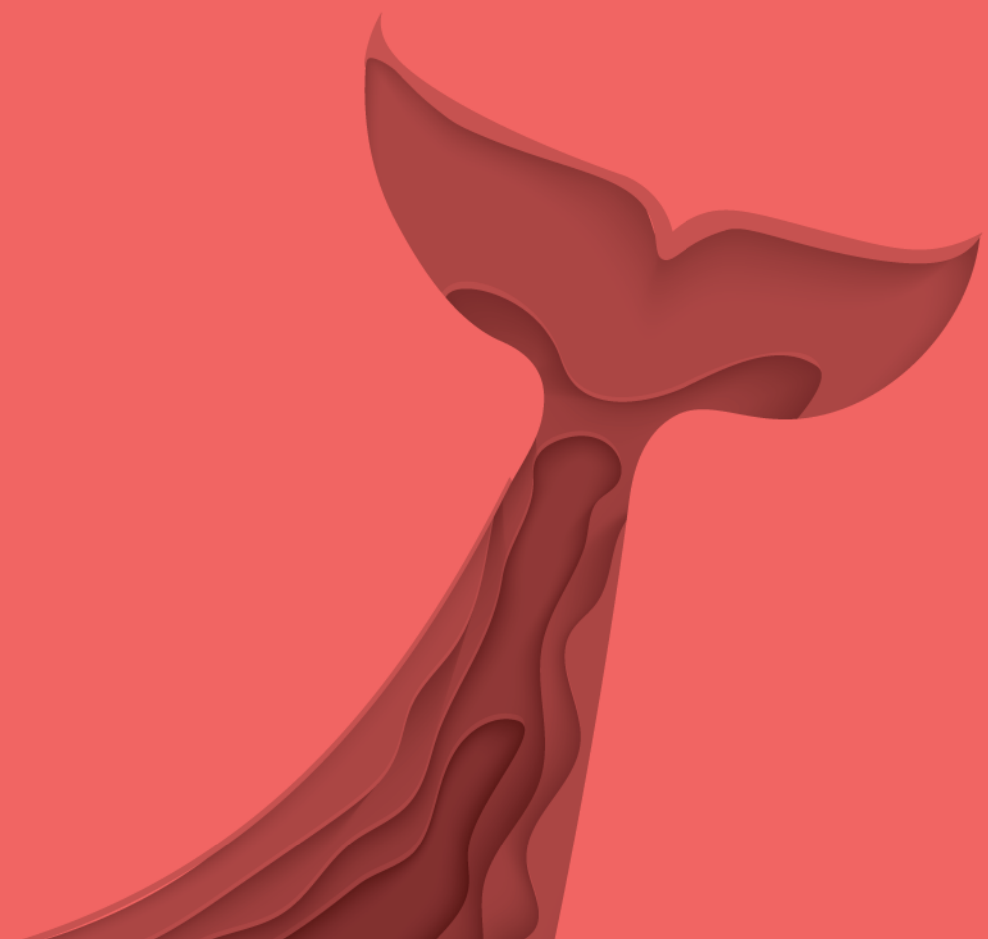
Art.-No.	Item description	Can be used as P module up to PE	Can be used as C/Cl module	Price
121012	Dosing module integrated in the treatment tank, 10 L for AQUATO® KOM/STABI-KOM	4**	Project-specific design	€ 2.049,50
121015	Dosing module integrated in the treatment tank, 20 L for AQUATO® KOM/STABI-KOM	8**		€ 2.243,50
121013	Dosing module integrated in the treatment tank, 10 L for AQUATO® PUMP	4		€ 2.049,50
121014	Dosing module integrated in the treatment tank 20 L for AQUATO® PUMP	8		€ 2.243,50
122005	Dosing module, free-standing, for 40 L canister	Project-specific design		€ 2.240,50
122008	Dosing module, free-standing, for 2×40 L canister			€ 2.590,50
121109	Dosing module, free-standing, for 200 L canister			€ 3.275,00
100225*	Precipitant iron(III) chloride 40%, 30 kg	–	–	€ 185,50
–	Carbon source (C source) e.g. methanol / ethanol / glycerin	–	–	on request

* Freight costs on request – special transport
** PE for AQUATO® KOM; for STABI-KOM on request

ORKA

SUSTAINABLE SOLUTIONS
FOR LARGE WASTEWATER QUANTITIES.

SCALABLE, PROVEN, LONG LASTING.



LARGER WASTEWATER VOLUMES?

A sustainable solution requires a consistent analysis of requirements, competent planning and reliable technology. Regardless of whether it is a new build or the expansion of an existing wastewater treatment plant. Our goal is to provide a reliable wastewater treatment plant as a cost-effective and coherent concept with all our 'know how' for your requirements.

The selection and use of high-quality components plays just as important a role in the success of our ORKA solutions as the simple installation of the components on site. Our AQUATO® ORKA is already being used in housing estates, campsites, leisure centres, hotels, restaurants and other commercially used areas.

MODULAR DESIGN

The ORKA system is precisely adapted to your requirements and demands.
We will be happy to advise you.

- Wide range of inlet and outlet conditions
- All structural configurations
- In concrete or plastic tanks
- Can be combined with pre- and post-treatment modules

SYSTEM CONTROL

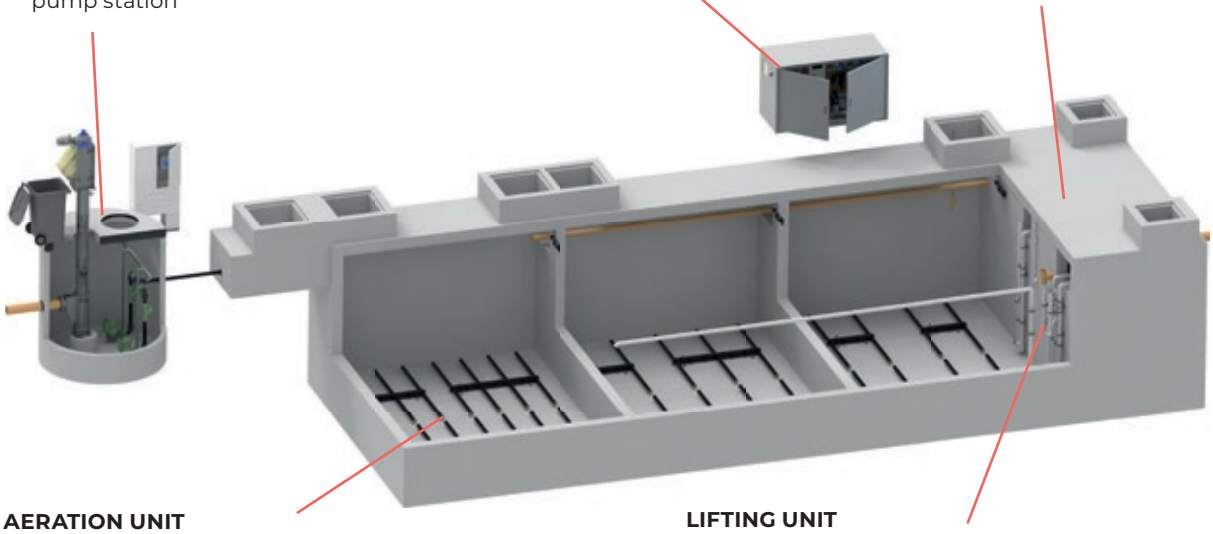
- Customized technical package
- Supplemented by intuitively operable control unit
- Can be combined with various cabinet types or installed in a underground shaft

COARSE SOLIDS SEPARATION

- Optional mechanical pre-treatment of wastewater
- Can be combined with pump station

ADDITIONAL TREATMENT STAGE

- Enhanced wastewater treatment
- Via various dosing and hygienization modules



AERATION UNIT

- High-efficiency membrane diffusers
- Custom configurations available
- High-performance side channel blowers for effective wastewater aeration

LIFTING UNIT

- Low-maintenance and reliable air-lift systems with diaphragm compressors
- Optionally available with submersible pumps

VOLUMES

Inlet		System volume*
75 PE	11,3 m³/d	33 m³
100 PE	15,0 m³/d	44 m³
150 PE	22,5 m³/d	66 m³
200 PE	30,0 m³/d	88 m³
250 PE	37,5 m³/d	109 m³
300 PE	45,0 m³/d	123 m³
350 PE	52,5 m³/d	143 m³
400 PE	60,0 m³/d	163 m³
450 PE	67,5 m³/d	184 m³
500 PE	75,0 m³/d	204 m³
600 PE	90,0 m³/d	233 m³
700 PE	105,0 m³/d	272 m³
800 PE	120,0 m³/d	310 m³
900 PE	135,0 m³/d	349 m³
1.000 PE	150,0 m³/d	388 m³
1.500 PE	225,0 m³/d	539 m³
2.000 PE	300,0 m³/d	719 m³
2.500 PE	375,0 m³/d	898 m³
3.000 PE	450,0 m³/d	1.078 m³

CONTROL UNIT

- Easy adjustment of control parameters
- Clear menu structure
- Controllable via WiFi Direct
- With IoT remote monitoring/control
- BMS connection possible

ORKA-PILOT 9.7

K-PILOT 18.4 ORKA-S

PRO Cloud

via expansion module

OUTSTANDING TREATMENT PERFORMANCE

COD	95 %
BOD_5	99 %
TSS	96 %
NH_4-N	98 %
TN (inorganic)	77 %

Inlet		Equipment*						
PE	Q m³/d	Control unit	Piston compressor	Side channel blower	Aerator	Clear water air-lift	Sludge air-lift	Guide price
≤ 60	9,00	K-PILOT 18.4 ORKA-S FI 400 V	1× 200 l/min	1× 55 m³/h | 1,8 kW	16× Pipe	1× D75	1× D75	€ 17.200,00
≤ 80	12,00		1× 200 l/min	1× 55 m³/h | 1,8 kW	16× Pipe	1× D75	1× D75	€ 18.900,00
≤ 100	15,00		1× 200 l/min	1× 80 m³/h | 2,5 kW	20× Pipe	2× D75	1× D75	€ 22.200,00
≤ 120	18,00		1× 200 l/min	1× 80 m³/h | 2,5 kW	24× Pipe	2× D75	1× D75	€ 23.400,00
≤ 140	21,00		1× 200 l/min	1× 80 m³/h | 2,5 kW	24× Pipe	2× D75	1× D75	€ 24.900,00
≤ 160	24,00		1× 200 l/min	1× 80 m³/h | 2,5 kW	28× Pipe	2× D75	1× D75	€ 25.700,00
≤ 180	27,00		1× 200 l/min	1× 130 m³/h | 3,5 kW	34× Pipe	2× D75	1× D75	€ 28.000,00
≤ 200	30,00		1× 200 l/min	1× 130 m³/h | 3,5 kW	40× Pipe	2× D75	2× D75	€ 29.400,00
≥ 201		Project-specific design on request						

All kits include: air-lift systems, control unit, compressor, membrane aerators, air distributor, mounting material, and fabric hose

* Equipment, volumes, and guide price are based on the following boundary conditions:
Water depth = 2.20 m
Design load: 1 PE = 150 l/d | COD = 800 mg/l | BOD_5 = 400 mg/l | TSS = 465 mg/l | TKN = 73 mg/l
Design effluent limits: COD = 150 mg/l | BOD_5 = 40 mg/l

Equipment and price may vary depending on deviating boundary conditions.

CUSTOMIZED SYSTEM DESIGN TAILORED TO YOUR REQUIREMENTS INDEPENDENT OF SIZE AND PROCESS.

Below is a selection of implemented projects.

SSB® 160 PE KIT

- Wastewater treatment for a youth education center
- Kit installed in newly placed precast concrete tanks

- Year of construction: 2023

COMPLETE SYSTEM SSB® 450 PE

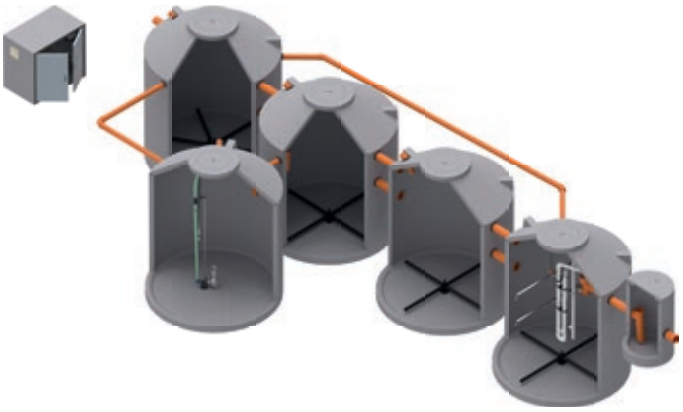
- Decentralized wastewater treatment plant for a holiday home settlement
- Complete system in large-volume plastic tanks

- Year of construction: 2021

SSB® 80 PE KIT

- Wastewater treatment plant for restaurant wastewater with peak load buffer in side stream
- Kit installed in newly placed precast concrete tanks

- Year of construction: 2025



PUMPING STATIONS
FOR WASTEWATER

FLEXIBLE, LICENSED, NEEDS-ORIENTED.

COMPLETE SYSTEMS, PUMPS AND INSTALLATION COMPONENTS

We offer a selected range of pump stations and technical equipment from leading manufacturers. This ensures the ideal solution for new installations or the modernization of existing pump shafts across a wide range of applications.

With attention to detail, we assemble all required components for your specific application. Components are pre-configured and largely pre-assembled to enable fast and trouble-free installation on site.

Complete systems made of polyethylene

Modernization kit for small pump stations

Valve installation kits in plastic or stainless steel

Wet-installed wastewater pump on coupling base

PKS 800 with grinder pump

- PE pump shaft PKS-B 800-32
- Manhole cover concrete/ plastic walkable
- Pump Multicut Ex
- Discharge piping set with stainless steel chain
- Control unit HighLogo LC with pressure bell set

Basic configuration with one MultiCut 20/2M plus and HighLogo control unit

€ 4.440

PKS 800 with two grinder pumps

- PE pump shaft PKS-B 800-D32
- Manhole cover concrete/ plastic walkable
- 2× pump Multicut Ex
- 2× discharge piping set with stainless steel chain
- Control unit HighLogo LC with pressure bell set

Basic configuration with two MultiCut 20/2M plus and HighLogo control unit

€ 8.140

AQUATO Your benefits!

Only from us: pump station components pre-assembled for site installation and optimally equipped. Increase operational reliability and minimize on-site effort:

- Pump shaft incl. ventilation cap
- Pump and discharge piping unit pre-assembled
- Pump control unit ready to plug in with CEE phase inverter and NiMH battery
- Outdoor cabinet (optional) with integrated control unit and CEE/230 V combo socket
- Alarm unit (optional) pre-wired

to the **configurator**

REFURBISHMENT KITS FOR EXISTING SYSTEMS

Replacement kit for polyethylene shafts

incl. discharge piping unit and stainless steel chain
(for single pump stations only)

Installation kits DN 40 for concrete shafts

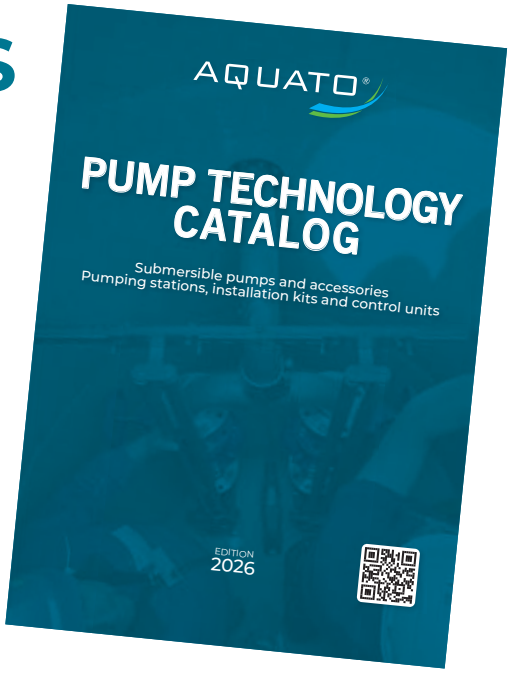
Piping and valves in stainless steel/GRP
Pump base and claw in cast iron

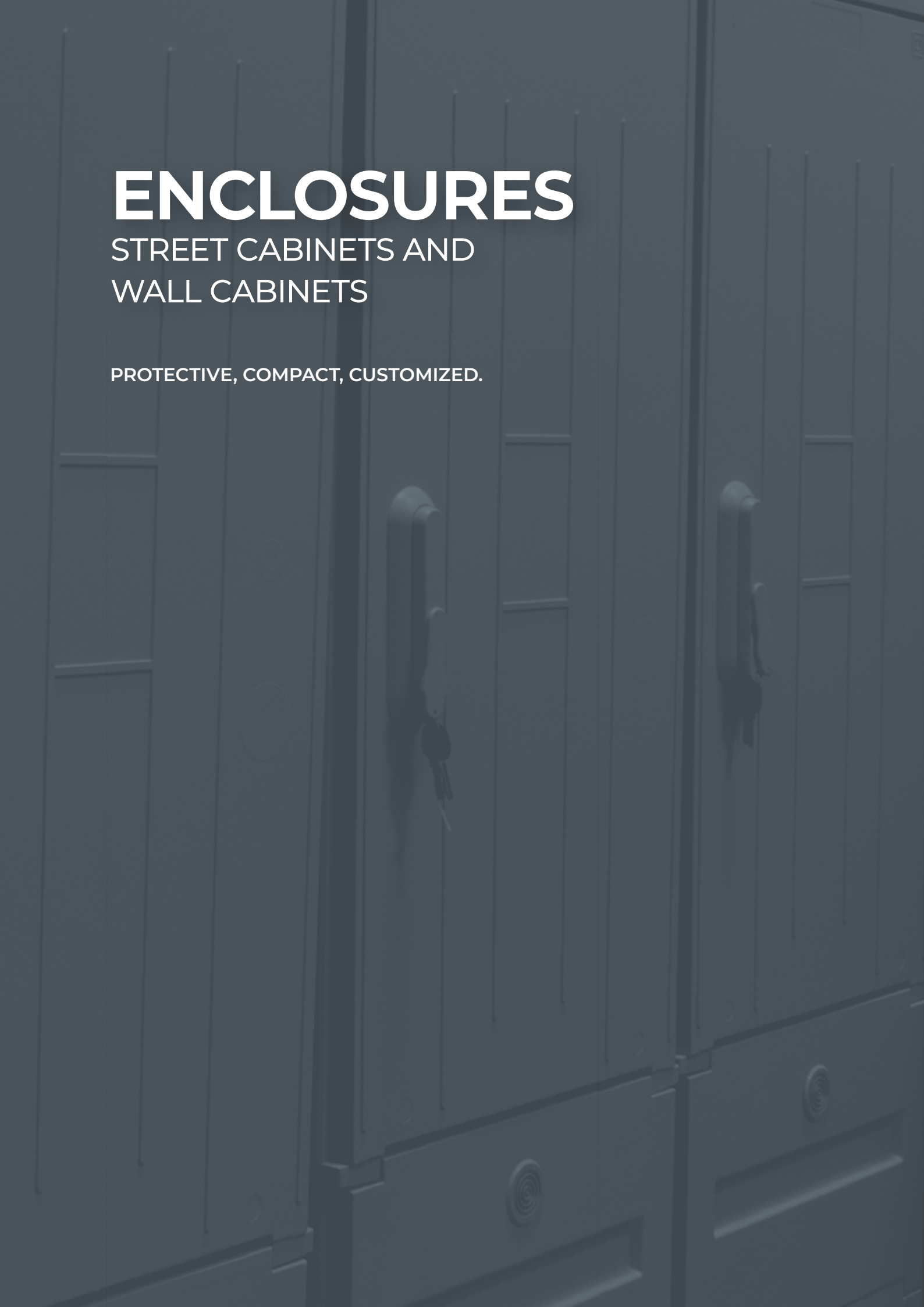
Art. No.	Item description	Application area	Price
140230	Jung Pumpen PKS 800 Year of construction 89–96	Polyethylene shafts	€ 1.390,00
140231	Jung Pumpen PKS 800 Year of construction 97–07	Polyethylene shafts	€ 1.390,00
140240	Installation kit DN 40, single	Concrete shafts	€ 1.690,00
140241	Installation kit DN 40, duo (for twin systems, order both kits)	Concrete shafts	€ 1.760,00

MORE PRODUCTS AND OPTIONS HERE

With the new pump technology catalog, you get a complete overview of our range of submersible pumps, accessories, pump stations, installation kits, and control units for property drainage.

The catalog is available in digital form on the AQUATO® website – a printed copy can be provided on request.





ENCLOSURES

STREET CABINETS AND WALL CABINETS

PROTECTIVE, COMPACT, CUSTOMIZED.

... FOR ALL APPLICATIONS

- Lightweight
- Easy and quick to work with
- Extremely impact-resistant
- Heat-resistant
- Corrosion-resistant
- Weatherproof
- Lockable

Outdoor enclosure solutions for housing control units and compressors. They provide cost-effective and reliable protection for the components and are therefore used in many areas of application.

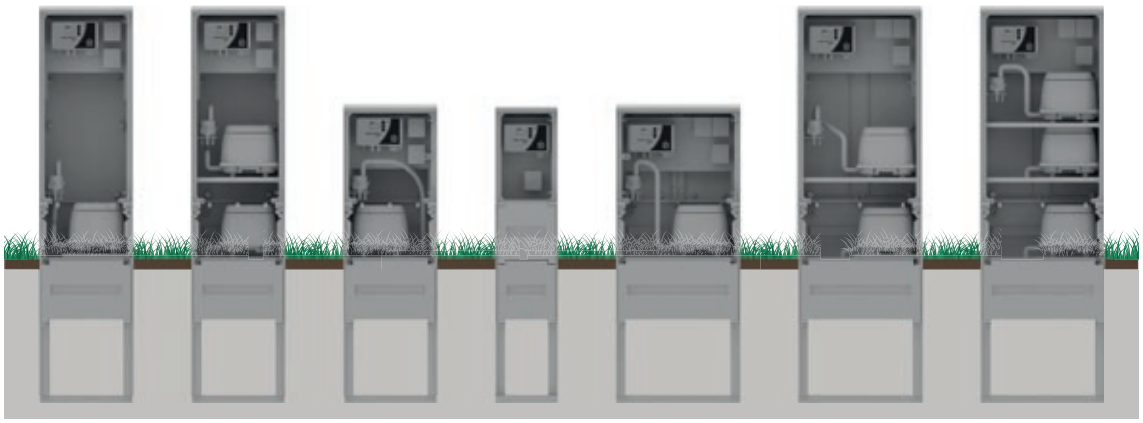
OUR RECOMMENDATION

AQUATO® design street cabinets made of robust polyethylene integrate wastewater treatment technology into your garden in a visually appealing way and are highly weather-resistant.

- Low weight
- Easy and fast to process
- Extremely impact-resistant
- Heat-resistant
- Corrosion-resistant
- Lockable

Art. No.	Item description	Capacity	Dimensions W×H×D	Height above ground	Price
101932	Street cabinet model X7, grey	01–20 PE	422 × 1.510 × 316 mm	920 mm	€ 308,50
101960	Street cabinet model X7, olive	01–20 PE	422 × 1.510 × 316 mm	920 mm	€ 346,50
All variants include: preparation for control unit, compressor installation space, lock and 2 keys					

Outdoor cabinets – general



Model 2.1T Model 3.1T Model 6.1T Model 1 Model 9N.1 Model 4.2V Model 4.3V

Art. No.	Item description	Capacity for	Dimensions W×H×D	Height above ground	Price
102608	Street cabinet model 2.1T	01–20 PE	400 × 1.695 × 320 mm	1.105 mm	€ 409,50
102605	Street cabinet model3.1T[1]	21–40 PE	400 × 1.695 × 320 mm	1.105 mm	€ 524,00
102604	Street cabinet model 6.1T	01–20 PE	400 × 1.275 × 320 mm	685 mm	€ 342,00
100550T[2]	Street cabinet model 1	01–50 PE	265 × 1.275 × 250 mm	685 mm	€ 252,50
102203	Street cabinet model 6N.1	01–20 PE	530 × 1.275 × 250 mm	685 mm	€ 357,00
102320	Street cabinet model 9N.1	01–20 PE	530 × 1.275 × 320 mm	685 mm	€ 396,00
102622	Street cabinet model 4.2V1	01–40 PE	530 × 1.695 × 320 mm	1.105 mm	€ 823,50
102648	Street cabinet model 4.3V3	01–50 PE	530 × 1.695 × 320 mm	1.105 mm	€ 892,00
All variants include: preparation for control unit, compressor installation space, lock and 2 keys					

[1] Recommended version with axial fan incl. filter
[2] Prepared for AQUATO® PUMP control unit without compressor installation space
[3] Standard version with axial fan incl. filter

Enclosures for pump control units

OUTDOOR CABINETS FOR PUMP CONTROL UNITS

- IP44
- GRP
- Dimensions W×H×D: 400 × 1,275 × 320 mm
- Incl. profile cylinder, spare key, and sealing plug DN 100 for cable entries
- Pump control unit and socket not included

Art. No.	Description	Price
140516	Outdoor cabinet 6.1T, for pump control unit	€ 273,00
140518	Outdoor cabinet 3.1T, for pump control unit	€ 319,50

WALL CABINETS

- For accommodating the control unit and compressor
- Various configurations possible

Art. No	Item description	Dimensions W×H×D	Price
102354	Wall cabinet model 6N	530 × 580 × 250 mm	€ 277,00
102355	Wall cabinet model 9N	530 × 580 × 320 mm	€ 316,50
103251	Wall cabinet model S	400 × 420 × 250 mm	€ 282,50

All variants include: preparation for control unit, compressor installation space, lock and 2 keys

ACCESSORIES

PEDESTAL FOR WALL CABINETS

- Optional, for installation of wall cabinets
- Available in various versions

Art. No	Suitable for	Price
102636	Wall cabinet 6N	€ 141,00
102627	Wall cabinet 9N	€ 155,50
102638	Wall cabinet S (STABI-S, 3K-FLOW/PLUS-S)	€ 124,50

EXTENSION PIECE

- For increasing the height of outdoor cabinets 6.1T and 3.1T by 250 mm
- For example, for an additional compressor installation space

Art. No.	Description	Price
103609	Extension piece for outdoor cabinet 6.1	€ 72,00

Art. No.	Description	Price
140002	Flashing beacon, red, 230 V, 15 mA, pre-assembled	€ 184,50
173158	Axial fan incl. filter	€ 236,00

Both options not available for design cabinet X7

Axial fan incl. filter

INFILTRATION & RETENTION

INFILTRATION

Comprehensive ecological considerations for rainwater use also include infiltration. In soils with good permeability, excess water can be infiltrated directly on site.

In combination with a rainwater harvesting system, this can fully relieve the sewer system of stormwater. This is becoming increasingly important in residential areas due to more frequent heavy rainfall events.

SAVING POTENTIAL

Infiltration of stormwater on your own property can be beneficial, e.g. through reduced wastewater charges, exemption from stormwater or surface sealing fees, or subsidies from your local municipality.

SYSTEM DESIGN

The planning and design of infiltration systems are regulated in DWA-A 138 “Planning, construction and operation of systems for infiltration of stormwater” by the German Association for Water, Wastewater and Waste (DWA).

Get advice now!

Design of stormwater infiltration with trench infiltration elements

Simplified design – without flood verification
according to DWA-A 138

Project: Mustermann

We support you in calculating your infiltration system!

Design parameters

Planned catchment area

$A_{E,b,1}$	Sealed area type 1 in the catchment area	Surface type:	Pitched roof (tiles, roofing felt)	410	m²
$\Psi_{m,b,1}$	Average runoff coefficient for sealed area type 1 in the catchment area			1	
$A_{E,b,2}$	Sealed area type 2 in the catchment area	Surface type:	Traffic area, flat (paving with sealed joints)	410	m²
$\Psi_{m,b,2}$	Average runoff coefficient for sealed area type 2 in the catchment area			0,75	
$A_{E,nb}$	Unsealed area in the catchment area (optional)	Surface type:		0	m²
$\Psi_{m,nb}$	Average runoff coefficient for unsealed area in the catchment area (optional)			0	
A_u	Total impervious area			718	m²
k_f	Permeability coefficient of the infiltrable soil			5,0E-05	m/s

Planned infiltration

Method:	Trench infiltration elements
Product:	Infiltration cubes

m_R	Number of trench elements (infiltration cubes) per width of the overall trench system	2		
b_R	Width of one trench element (infiltration cube)	0,6	m	
l_R	Length of one trench element (infiltration cube)	0,6	m	
h_R	Height of one trench element (infiltration cube)	0,6	m	
V	Storage volume of one trench element (infiltration cube)	0,205	m³	
s_R	Storage coefficient	0,95		
Q_S	Infiltration rate of one trench element	1,35E-05	m³/s	

Design for selected duration steps

f_Z	Surcharge factor for risk level	1,2	
$l_{R,n}$	Required trench length	s.u.	m

from KOSTRA-DWD-2010R

Postal code:	277777
Grid cell:	28023
Return period a:	5

D	h_N	$r_{D,n}$	$l_{R,n}$
Duration step	Precipitation depth for selected n	Corresponding rainfall intensity	Required trench length
min	mm	l/(s·ha)	m
20	15,90	132,50	18,6
30	19,20	106,67	21,6
45	22,60	83,70	24,2
60	25,10	69,72	25,6
90	27,40	50,74	25,5

Trench elements
Infiltration cubes
single row

Two rows

$l_{R,n}$	Required trench length	Maximum value from table	25,6	m

Required system size

$l_{R,n}$	**Required trench length for arrangement in two rows**	**25,6**	**m**
m_{cubes}	**Minimum number of required infiltration cubes**	**86**	

Note: The design is based on information provided by the operator.

INFILTRATION KITS

For retention, infiltration, and drainage of rainwater and treated wastewater. Infiltration kits must be adapted to the respective soil conditions.

INFILTRATION CUBE

Technical data of an infiltration cube:

- Length: 0.60 m
- Width: 0.60 m
- Height: 0.60 m
- Weight: 10 kg
- Net volume: 205 L

- Load capacity: walkable (passable by car / see installation instructions)
- Inlet: DN 100 or DN 150 possible
- Soil cover: min. 0.40 m (0.60 m for car traffic), max. 1.40 m

Art. No.	189012	189013	189014	189015	189016	189017
Number of infiltration cubes	5 pcs	8 pcs	11 pcs	14 pcs	17 pcs	23 pcs
Number of pallets	1 pallet			2 pallets		
Population equivalent	4 PE	6 PE	8 PE	10 PE	12 PE	16 PE
Net volume (L)	1.025	1.640	2.255	2.870	3.485	4.715
Installation length in row (m)	3,00	4,80	6,60	8,40	10,20	13,80
Price	€ 512,00	€ 729,00	€ 971,50	€ 1.187,50	€ 1.436,00	€ 1.917,00

INFILTRATION TUNNEL

Technical data of an infiltration tunnel:

- Length: 1.20 m
- Width: 0.80 m
- Height: 0.51 m
- Weight: 11.8 kg
- Net volume: 300 L

- Load capacity: truck-accessible, load capacity up to max. SLW 60 (60 t)
- Inlet: DN 100 or DN 300
- Soil cover: see table in installation instructions

Quelle: Otto Graf GmbH

Art. No.	182053	182052	182054	182055	182056	182057
Number of infiltration tunnels	4 pcs	6 pcs	8 pcs	10 pcs	12 pcs	14 pcs
Scope of delivery	Tunnel, 2 end plates, ventilation end DN 100, GRAF-Tex geotextile					
Number of pallets	1 pallet					
Population equivalent	4 PE	6 PE	8 PE	10 PE	12 PE	14 PE
Net volume (L)	1.200	1.800	2.400	3.000	3.600	4.200
Installation length in row (m)	4,70	7,02	9,34	11,66	13,98	16,30
Price	€ 509,00	€ 702,50	€ 881,50	€ 1.251,50	€ 1.341,00	€ 1.432,50

We recommend carrying out an infiltration test in order to adapt the number of infiltration elements to the infiltration capacity of the soil.

RETENTION TANKS

DELAYED DISCHARGE INTO THE SEWER SYSTEM

The retention tank collects incoming precipitation, stores it, and discharges it into the sewer system in a delayed and throttled manner. This helps to relieve the sewer system during heavy rainfall events and allows new sewer networks to be designed more cost-effectively.

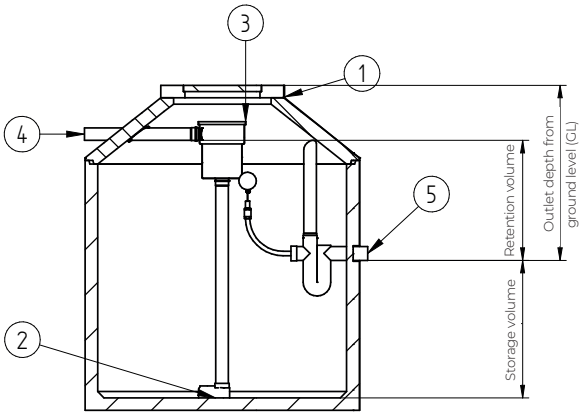
Many municipalities charge fees for sealed surfaces and require stormwater retention; in some cases, it is also subsidized.

CONSERVE RESOURCES

In combination with a rainwater harvesting system, the collected water can be used efficiently. Valuable resources are conserved and drinking water consumption is significantly reduced.

SYSTEM DESIGN

The planning and design of retention systems are regulated in DWA-A 117 “Design of stormwater retention facilities” by the German Association for Water, Wastewater and Waste (DWA).



Pos.	Title
5	Retention flow regulator
4	KG pipe DN 100
3	Inlet filter
2	Calmed inlet
1	Concrete tank

Illustration shows an example configuration of a retention tank.

Retention tank incl. rainwater harvesting

	V	D	Wt	Inlet	Outlet depth	Retention volume	Storage volume	Installation height	Heaviest component	Weight	Price
MZ 4	4,58 m³	2 m	1,47 m	0,44 m	1 m	1,44 m³	3,14 m³	2,1 m	4.750 kg	3.710 kg	€ 1.525,00
					1,1 m	1,75 m³	2,83 m³				
					1,2 m	2,07 m³	2,51 m³				
					1,3 m	2,38 m³	2,2 m³				
MZ 6	6,15 m³	2 m	1,97 m	0,44 m	1 m	1,44 m³	4,71 m³	2,6 m	5.500 kg	4.475 kg	€ 1.772,00
					1,1 m	1,75 m³	4,4 m³				
					1,2 m	2,07 m³	4,08 m³				
					1,3 m	2,38 m³	3,77 m³				
MZ 8	7,72 m³	2 m	2,47 m	0,44 m	1 m	1,44 m³	6,28 m³	3,1 m	6.400 kg	5.390 kg	€ 2.009,00
					1,1 m	1,75 m³	5,97 m³				
					1,2 m	2,07 m³	5,65 m³				
					1,3 m	2,38 m³	5,34 m³				
MZ 6a	7,87 m³	2,5 m	1,63 m	0,48 m	1 m	1,98 m³	5,89 m³	2,3 m	7.000 kg	5.650 kg	€ 2.153,00
					1,1 m	2,47 m³	5,4 m³				
					1,2 m	2,96 m³	4,91 m³				
					1,3 m	3,45 m³	4,42 m³				
MZ 10	9,83 m³	2,5 m	2,03 m	0,48 m	1 m	1,98 m³	7,85 m³	2,7 m	7.500 kg	6.075 kg	€ 2.339,00
					1,1 m	2,47 m³	7,36 m³				
					1,2 m	2,96 m³	6,87 m³				
					1,3 m	3,45 m³	6,38 m³				
MZ 12	12,29 m³	2,5 m	2,53 m	0,48 m	1 m	1,98 m³	10,31 m³	3,2 m	8.300 kg	6.880 kg	€ 2.905,00
					1,1 m	2,47 m³	9,82 m³				
					1,2 m	2,96 m³	9,33 m³				
					1,3 m	3,45 m³	8,84 m³				

Overview of possible combinations of storage volume and retention volume when using rainwater harvesting.
Installation of the throttle in the tank on request.

Flow regulators & drainage packages

Floating flow regulator 1" to 4"

Flow-adjustable floating regulator for retention tanks.

Connection Ø up to 2" DN100 **3"**: DN125 **4"**: DN150

Art. No.	Throttle	Flow rate (l/s)	Price
102886	1″	0,07–0,45	€ 154,00
102887	2″	0,66–1,64	€ 287,00
102888	3″	0,83–3,85	€ 441,00
102889	4″	3,68–12,07	€ 538,00

Tested with test report

Flow regulator with overflow siphon

Flow-adjustable floating regulator for retention tanks, complete with overflow siphon.

Connection Ø for 1" to 3: DN100 **4":** DN150

Art. No.	Throttle	Flow rate (l/s)	Price
102890	1″	0,07–0,45	€ 287,00
102891	2″	0,66–1,64	€ 328,00
102892	3″	0,83–3,85	€ 482,00
102893	4″	3,68–12,07	€ 590,00

Tested with test report

Retention flow regulator, stainless steel

Flow-adjustable floating regulator for retention tanks. The regulator adapts to the water level, allowing the retention volume to be reduced by approx. 30%. Low maintenance due to self-cleaning brushes on the outlet regulator.

Adjustable flow rates: 0,4/0,35/0,3/0,2/0,1 l/s
Dimensions: 390 × 515 mm
Weight: 2,3 kg

Art. No.	Throttle body	Price
102894	DN100	€ 287,00

Tested with test report

Outlet flow regulator

Outlet flow regulator for retention tanks. Continuous discharge with dynamic orifice opening via float.

Adjustable flow rate: 2,5–3,0 l/s

Art. No.	Connectio Ø	Price
102895	DN100–DN200	€ 2.373,00

Tested with test report

Retention drainage package pump

Drainage package for retention systems without free discharge to the sewer or infiltration.

- With defined flow rate: 0.25 / 0.4 / 0.5 / 0.75 / 1.0 l/s
- Incl. pump with float switch and hose 1¼", length 10 m

Please specify the required flow rate when ordering!

Art. No.	Package	Price
102918	Pump	€ 395,00

Retention drainage package pump PRO

Drainage package for retention systems where the overflow is too deep or too far from the sewer or infiltration point.

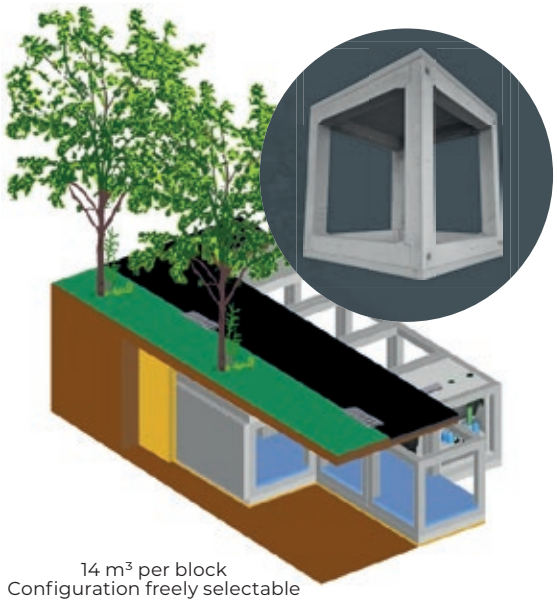
- With defined flow rate: 1.0 / 2.0 / 2.6 / 3.2 / 3.6 / 4.0 l/s
- Incl. pump with float switch and hose 1½", length 10 m

Please specify the required flow rate when ordering!

Art. No.	Package	Price
102919	Pump PRO	€ 590,00

JUMBO BLOCK®

LARGE-VOLUME RETENTION, WATER STORAGE AND INFILTRATION TANKS MADE TO MEASURE



14 m³ per block
Configuration freely selectable

THE SYSTEM

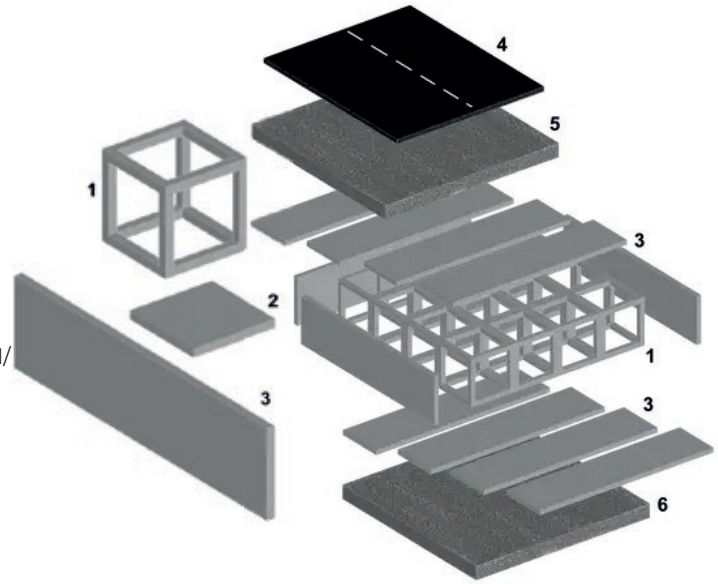
Extremely stable, designed for high structural loads, overbuildable and suitable for heavy-duty traffic!

RETENTION ZONES

- Municipalities
- Industrial and chemical sites
- Areas near water bodies
- Port areas
- Airports
- Agricultural areas
- Flood-prone valleys and lowlands
- And many other applications!

SYSTEM STRUCTURE

1. JUMBO BLOCK® system block
2. Square cover, closure or base plate
3. Rectangular cover, closure or base plate
4. Roadway (or building structure)
5. Base layer (typically gravel mix)
6. Bearing/infiltration layer (typically gravel/sand mix)



USE SUBGRADE FOR RETENTION

Road subgrade retention is not only understood as a storage volume for floodwater (e.g. during heavy rainfall events), but also as an adaptation to the effects of climate change, as water storage is becoming increasingly important:

JUMBO BLOCK® is a structurally robust framework that remains flexible within the system – even after installation.

This provides significant advantages for maintenance, expansion, and installation of wastewater and utility lines. Once installed, the road surface remains intact in the long term.

Notes

DELIVERY CONDITIONS

Prices in this catalogue are list prices ex works, valid at the time of printing. These may change during the year for individual items or product groups. Please refer to the digital catalog on our website, which is regularly updated.

TECHNICAL NOTES

GENERAL

#A1 Other cable lengths on request

#A2 Inlet and outlet DN 100

#A3 FHE = with reduced sludge storage, design basis BR = 0.20

CONCRETE TANK

#B2 Deviating dimensions for version with load class D 400: tank + 6 cm / approx. 150 kg

#B3 Technical opening in cone DN 100 with EPDM seal

#B4 Shaft cone and cover for load class B 125 or D 400, surcharge per tank from **€300.00**

#B5 Joint mortar 25 kg | per joint Ø 2 m: 1 bag | Ø 2.5 m: 1.5 bags Art. No. 70108 for **€39.00**

		Dimension	Note	Art. No	Price
#KL2	Adjustable shaft dome, with plastic cover	–			Series
	Extension piece, adjustable	max. 0,3 m		186012	€ 186,50
	Plastic cover, suitable for car traffic wheel load 1.5 t (replacement)	–	Load distribution via concrete base to be provided on site	186016	€ 132,00
	Shaft dome, truck-accessible up to 12 t, without cover	+ 0,41 m		186079	€ 420,00
	Manhole cover concrete-cast iron class D, without ventilation	0,16 m		140205	€ 490,00
#KL9	Telescopic shaft dome, with plastic cover	Adjustment range 0.24 m			Series
	Additional telescopic dome with plastic cover	–	For additional access openings	189025	€ 296,00
	Extension piece	+ 0,24 m	Not adjustable	189062	€ 92,50
	Car traffic load, wheel load 0.6 t with plastic cover	+ 0,1 m	Min. soil cover above tank 0.6 m	189003	€ 270,50
	Shaft chamber SLW 30 for truck traffic, without cover, replaces telescopic dome	1,08 m	Concrete compensation rings required, shaft can be shortened, not telescopic	189004	€ 406,00
	Manhole cover concrete-cast iron class D, without ventilation	0,16 m		140205	€ 490,00
	For new installations and treatment tanks, the above dome options are considered and included in the total price.				
#KS3	Telescopic shaft dome with plastic cover, suitable for passenger cars up to 1.5 t	+ min. 0.5 m Adjustment range: 0.25 m	Load distribution via concrete base to be provided on site	181014	€ 287,00

AQUATO®

Notes

AQUATO®

Errors, price changes, and deviations in models, colors, and dimensions reserved. Prices exclude applicable VAT and shipping costs. Our general terms and conditions apply, available in their current version at www.aquato.de.

Presented by:

AQGK EN VER. 05/2026

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