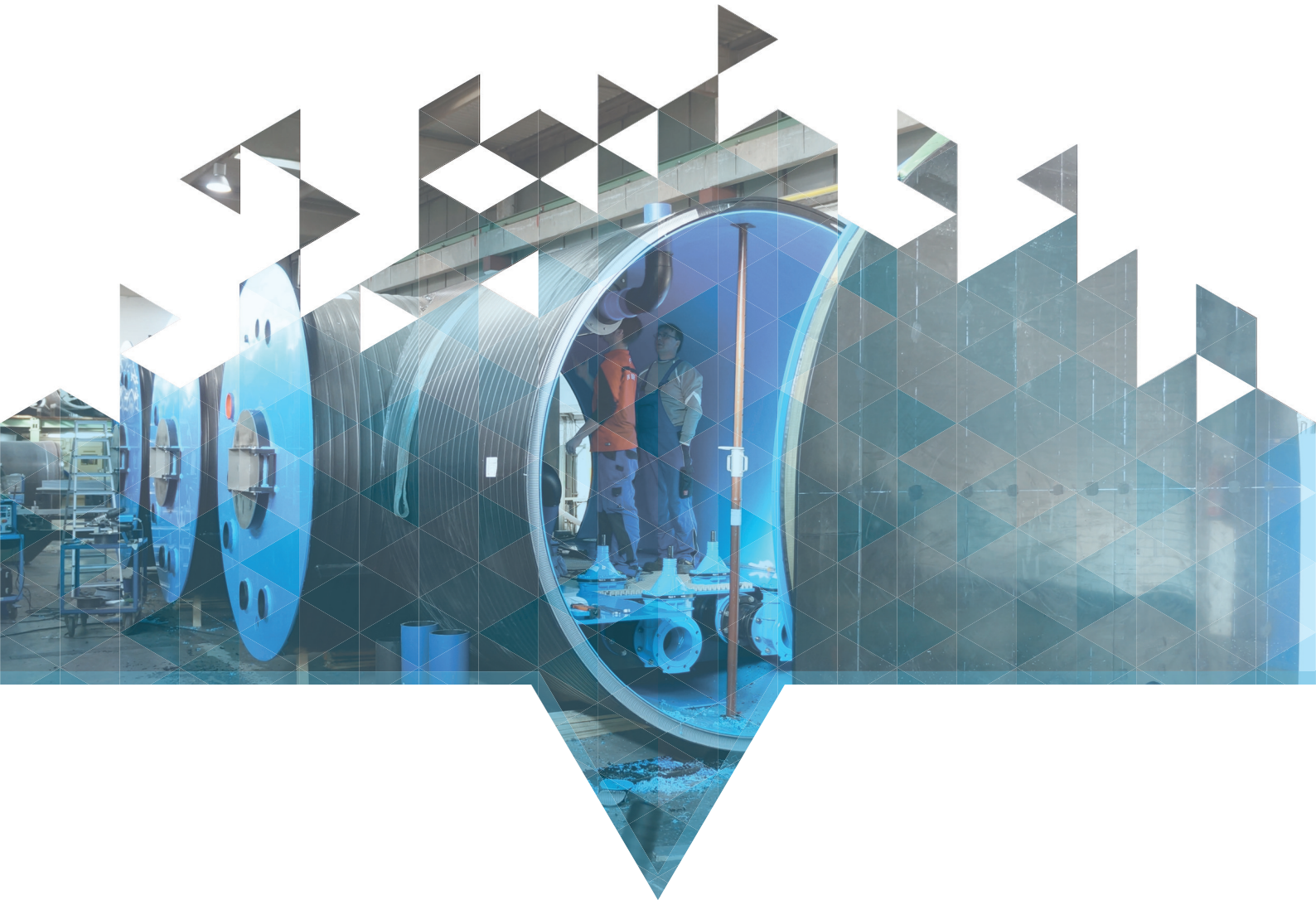
hawle kunststoff



Projects & References

Project reports from potable water,
sewage water & industrial technology

The sustainable end-to-end solution

Plastic shafts made from PP and PE-HD

Our system is based on the plastic profiled winding pipe which can be produced from DN 300 up to DN 3500. Shafts made from polypropylene or polyethylene are remarkably durable with an useful life up to 100 years. The used plastics present the characteristics of high chemical and abrasion resistance.

Thermoplastic synthetics have a high impact strength. Stress crackings or mechanical damage can be almost eliminated. Polypropylene as well as Polyethylene can be recycled completely into mono-materials.

Constructions made of plastic boast a high level of prefabrication. This enables fast and efficient laying on site. Consequently storage tanks up to 150 cbm can be delivered in one piece. Manhole, bottom part and cover as well as pipe openings are completely welded together to ensure a sustainable watertightness. The low weight facilitates transport and logistic of the manhole.

Hawle Kunststoff offers all common connection technologies as Plug-in connection, extrusion or electro fusion welding. The extrusion welding from the inside of the manhole (from ≥ DN 800) guarantees a continuous seamless inner surface which ensures a good self-cleaning function especially appropriate for sewage water use.

Furthermore manholes distinguish themselves by a clear, inspection friendly inner surface and a very low roughness. Due to these good hydraulic properties nucleation and deposition of germs in the pipe and manhole can be reduced. Constructions made from PE and PP are free from solvents which could affect the quality of potable water.

Advantages of plastic constructions

- Prefabricated at the plant
- Short delivery periods
- Very fast installation on site
- Low weight
- Long-lasting material
- Absolutely noncorrosive
- Absolutely leak-proof

Materials and pipe profiles

Structure of the profile types

Pipes for underground installed ducting or storage systems have to be long-lasting as well as cost-effective. For this reason we have developed and patented the profiled winding technology for PEHD and PP already in 1956. The profiled winding pipe provides higher ring stiffness and simultaneous reduction of material compared to a solid wall pipe.

The durability of our pipe systems is assured by the material PEHD and PP. Both materials offer a high chemical and abrasion as well as temperature resistance. Furthermore both plastics are flexible and shock-resistant enough, in order to avoid damages during installation or fine cracks even at temperatures below 0°C.

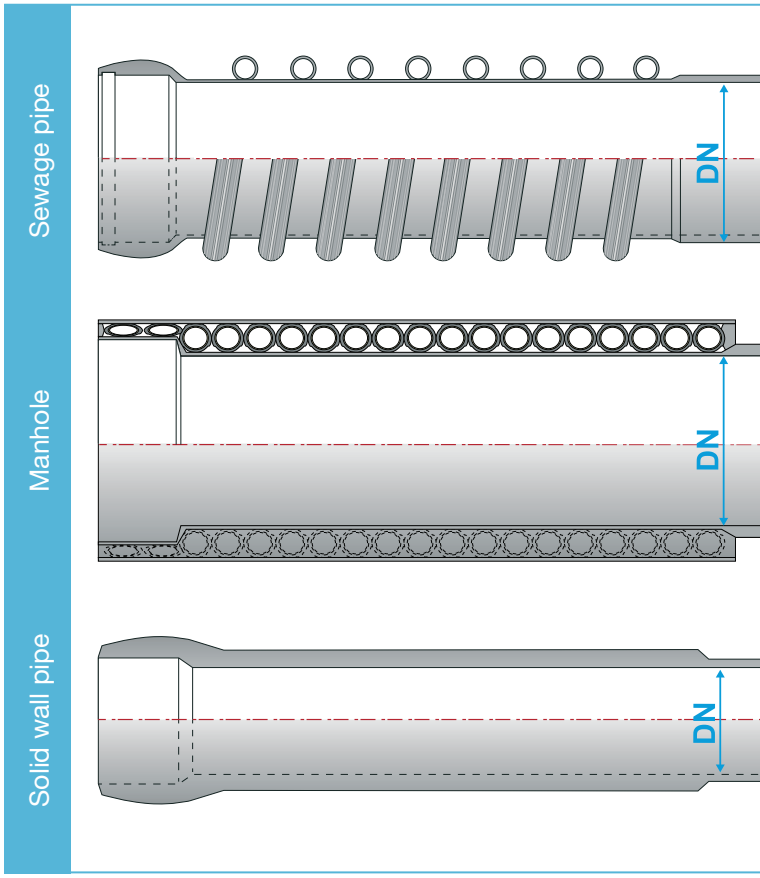
Due to the smooth and non-porous surface of PEHD and PP our pipe system is ideal for the drinking water sector and easy to clean. Solvents, which could reinforce the growth of microorganisms are not used for the production.

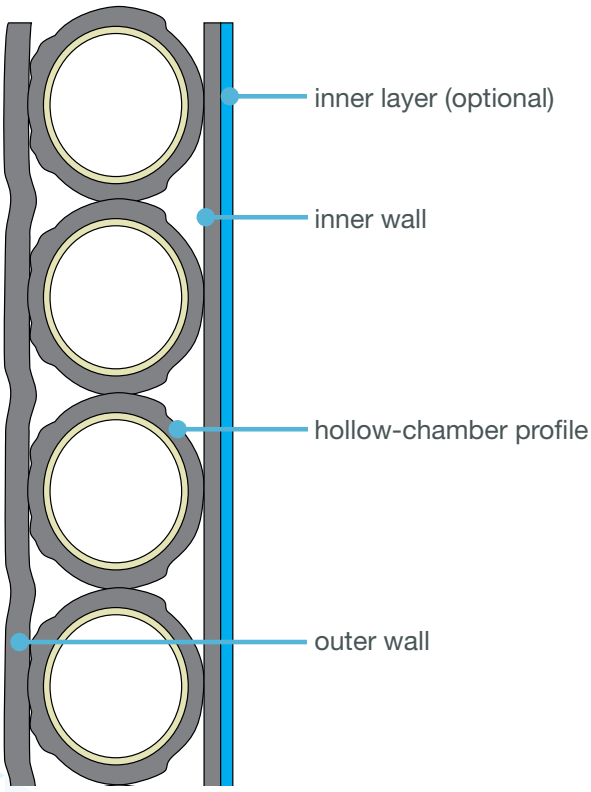
The wall structure of our pipes comprise a inner solid wall, which could include an inner layer with a light inspection-friendly colour (e. g. light blue or yellow). Over this layer we put a coating with round profiles, which bonds permanently and provides high ring stiffness.

The outside bounding can consist again of a solid wall layer if required for example for manholes, fittings or moulded parts. The standard colour for PEHD-pipes is black for PP-pipes light grey.

All nominal diameters can be connected with the extrusion welding technique. The plug-in connection is available for nominal diameters up to DN 1800 and the electro fusion welding is suitable for pipes up to DN 1200. Both can be mounted on the construction site without our fitters.

Our pipe system is manufactured in accordance to the requirements of DIN EN 13476. Moreover we provide test certificates for both materials pursuant to DVGW Code of Practice W 270 and KTW guidelines of the Federal Environmental Agency. The pipes can be recycled into mono-materials at the end of the expected 100 years lifespan.





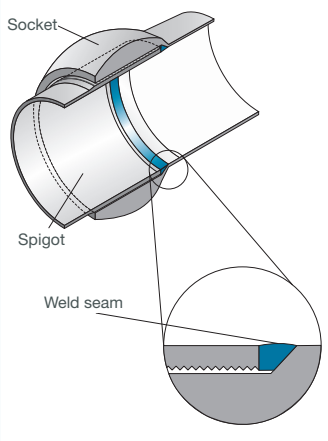
Sewage pipe, manhole, solid wall pipe

Pipe system with different connection types

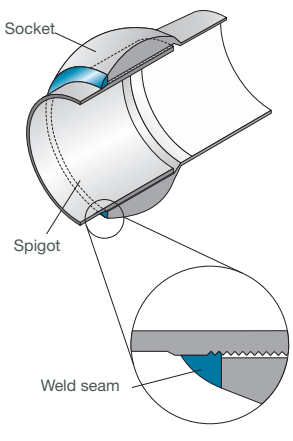
Nominal diameter DN [mm]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2300	2500	2600	3000	3400	3500
Outside diameter * [mm]	390	490	590	690	790	890	990	1090	1190	1330	1430	1530	1630	1730	2000	2200	2500	2700	2800	3200	3600	3700
Max. length [m]	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,90	5,75	5,75	5,75	5,75	5,50	5,50	5,50
Weight * [kg/m]	12	15	19	23	26	30	34	37	45	55	60	64	75	90	104	115	159	201	365	421	477	491
Storage volume [cbm/m]	0,07	0,13	0,20	0,28	0,38	0,50	0,64	0,79	0,95	1,13	1,33	1,54	1,77	2,01	2,54	3,14	4,15	4,91	5,31	7,07	9,08	9,62
Extrusion welding connection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Plug-in connection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Electro fusion welding connection (only PEHD)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	in preparation											
Bendings 5° - 90°	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
House connection, screwed/welded ex works, DN as required	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
House connection for tapping, screwed, DN 150	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
House connection for tapping, welded, DN 150	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
Manhole connection w/ welded joint	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Manhole connection w/ push fit joint	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Manhole liner connection w/ push fit joint	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												

* The given values are an approximate indication. The actual values depend on the project-specific installation conditions and the delivered wall thickness.

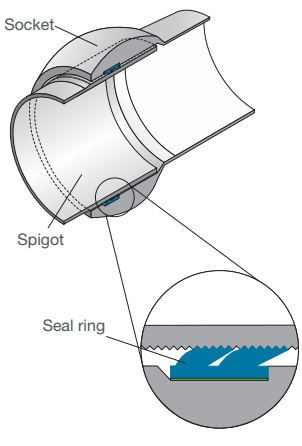
Extrusion welded joint inside



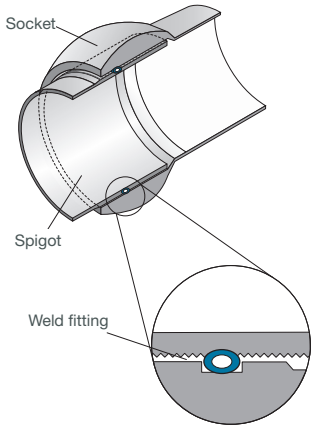
Extrusion welded joint outside



Plug-in joint



Electro fusion welded joint



Fire fighting water tank

Delivery in two parts with welding on site

Poject details:

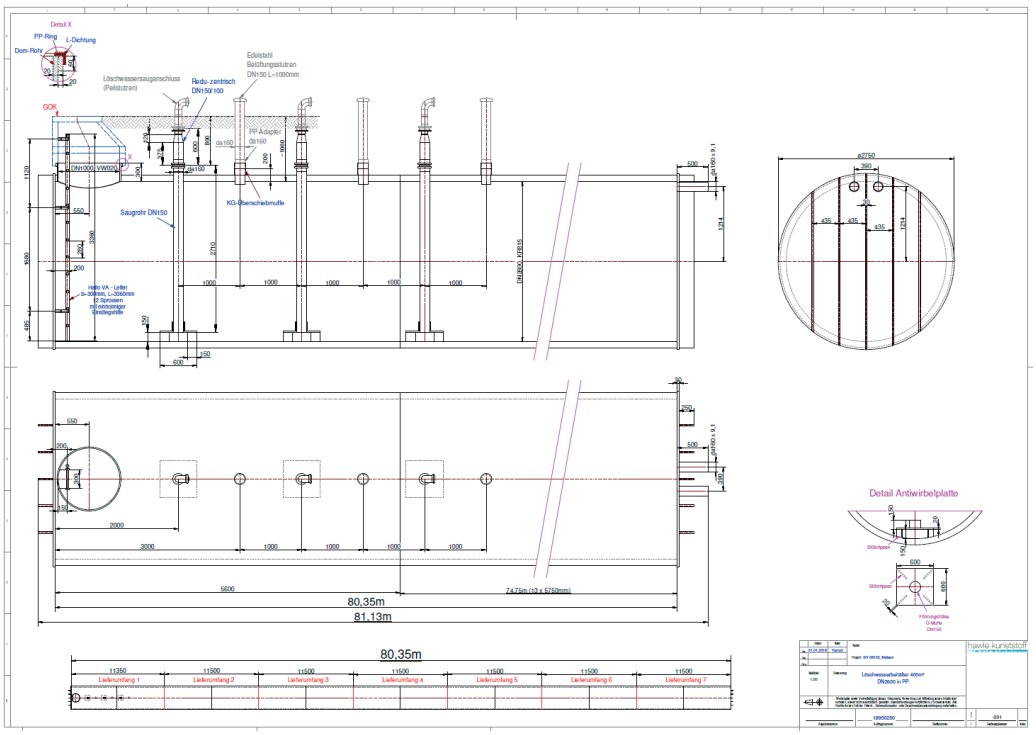
Construction:	Tank in two parts
Length:	21 m
Nominal diameter:	DN 2500
Effective volume:	96 m³
Connection:	Extrusion welding
Load class:	SLW 60

Fire fighting water tank

Fire fighting water tank for the ADAC Rennsportarena Mülsen-Sachsenring

Poject details:

Construction:	Fire fighting water tank
Length:	80 m
Nominal diameter:	DN 2600
Effective volume:	400 m³
Connection:	Extrusion welding



Fire fighting water tank

Fire fighting water tank for a logistics center moved within only 2 hours

Poject details:

Construction:	Tank in three parts
Length:	24 m
Weight:	5.200 kg
Nominal diameter:	DN 2500
Effective volume:	220 m³
Connection:	Extrusion welding

Fire fighting water tank

Fire fighting water tank for an exclusive residential project in Jena

Poject details:

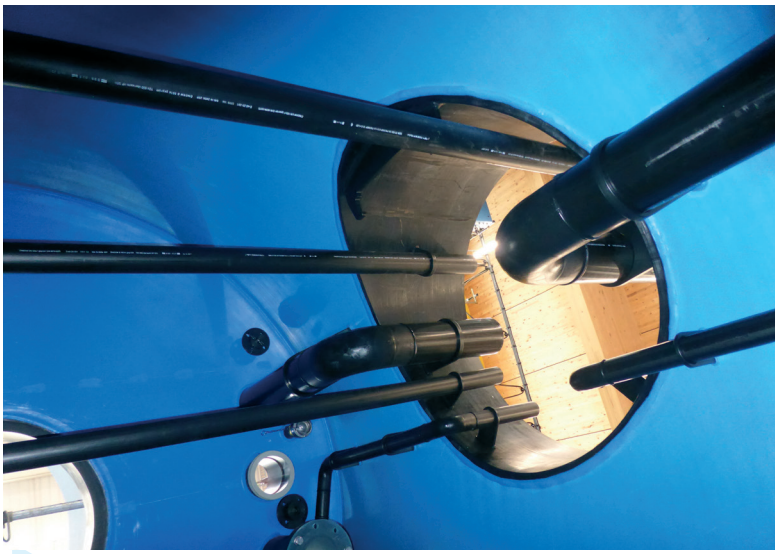
Construction:	Fire fighting water tank
Length:	11 m
Weight:	3.800 kg
Nominal diameter:	DN 2500
Connection:	Extrusion welding

Spa water reservoir

Reservoir for the iodine-sulphur spring at a spa in Bavaria

Poject details:

Construction:	Spa water reservoir
Length:	14 m
Weight:	8.500 kg
Nominal diameter:	DN 3000
Special features:	Buoyancy control with geotextile

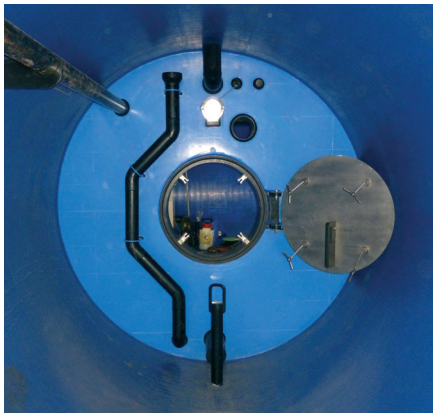


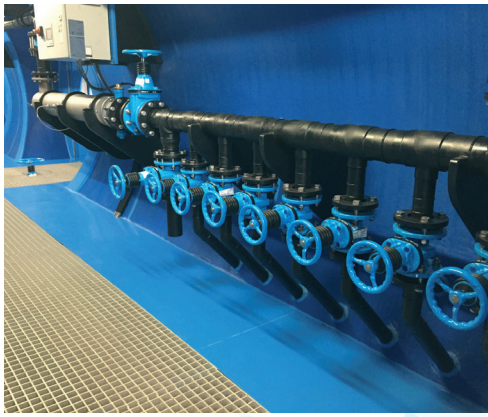
Potable water reservoir

Embedding of two parallel arranged water reservoirs near Bukarest (Romania)

Poject details:

Construction:	2-chamber system of pipes
Length:	Per reservoir pipe: 30 m Valve chamber: 12 m
Weight:	9.000 kg (valve chamber)
Nominal diameter:	Per reservoir pipe: DN 2600 Valve chamber: DN 3000
Effective volume:	2 x 150 m^3
Connection:	Extrusion welding
Special features:	Valve chamber manufactured in one piece with pre-installed valves incl. 7 well feeds, watertreatment with UV-unit, control cabinet and pressure boosting system





Potable water reservoir

Reservoir with 2 x 150 m³ effective volume

Poject details:

Construction:	Potable water reservoir
Length:	incl. valve chamber: 19 m
Weight:	valve chamber: 4.500 kg per reservoir pipe: 4.500 kg
Nominal diameter:	DN 3000
Effective volume:	2 x 150 m³

Potable water reservoir

Construction of two water reservoirs and total effective voluem of 100 m³

Poject details:

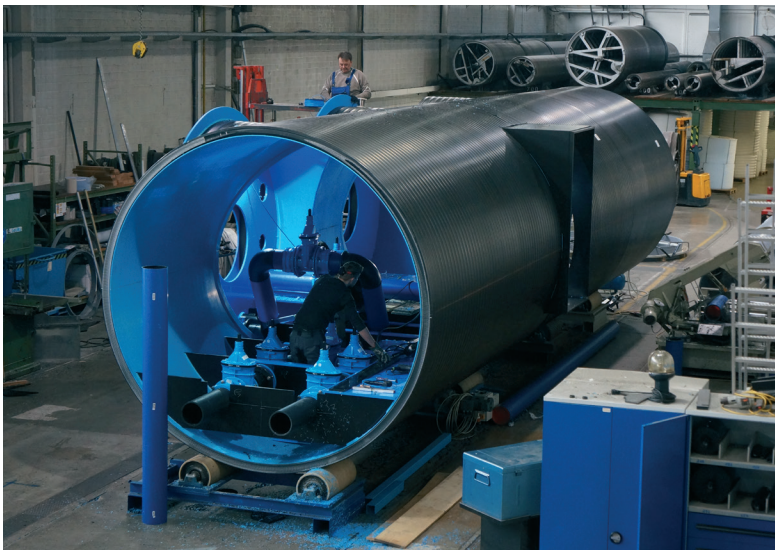
Construction:	2-chamber system of pipes
Length:	Reservoir pipes je 10 m
Weight:	14.000 kg
Nominal diameter:	DN 3000
Special features:	pump unit

Potable water reservoir

Water reservoir made of PEHD for the Energie und Versorgung Butzbach GmbH

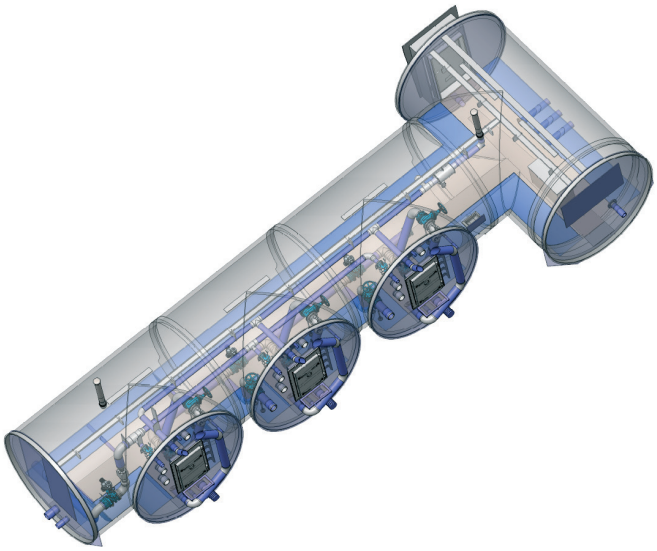
Poject details:

Construction:	3-chamber system of pipes
Length:	Elements je 6 m
Weight:	Valve chamber: 12.000 kg
Nominal diameter:	DN 2600
Effective volume:	500 m³
Special features:	Valve with Auma-drive unit



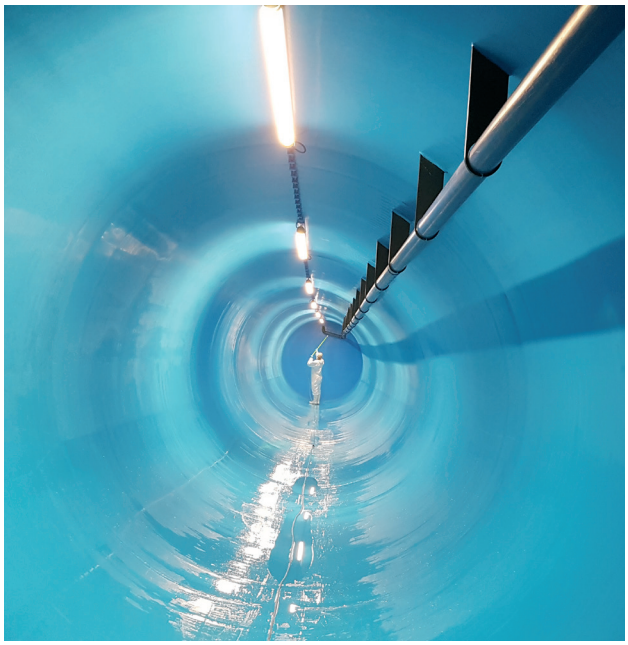
Potable water reservoir

Follow-up project for the Energie und Versorgung Butzbach GmbH



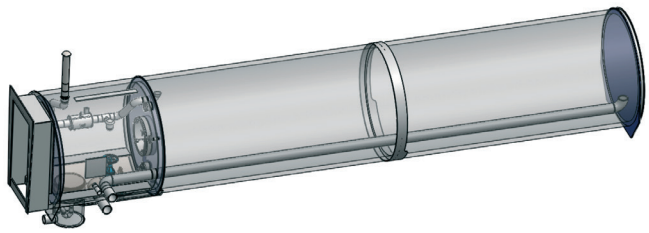
Poject details:

Construction:	3-chamber system of pipes
Length:	3 x 30 m reservoir pipes
Nennweite:	Reservoir pipes: DN 3000
Nominal diameter:	Valve chamber: DN 3400
Special features:	Calculated construction period: Dec / Jan / Feb



Potable water reservoir

Suction tank for potable water with 50 m³ effective volume



Poject details:

Construction:	Suction tank for potable water
Length:	15 m
Weight:	6.000 kg
Nominal diameter:	DN 2500

Potable water reservoir

Construction of two reservoir pipes with 60 m³ effective volume each

Poject details:

Construction:	2-chamber system of pipes
Length:	Valve chamber: 8 m Reservoir pipes: 16 m
Nominal diameter:	Valve chamber: DN 3000 Reservoir pipes: DN 2600
Effective volume:	120 m³

Potable water reservoir

Construction of a potable water reservoir as spare tank in case of a breakdown

Poject details:

Construction:	Potable water reservoir
Length:	12,5 m
Weight:	9.100 kg (total)
Nominal diameter:	DN 3000
Effective volume:	70 m³
Special features:	incl. Hawle valves an on-site supply with WILO-pumps and UV-unit

Potable water reservoir

Modern PE-reservoir replaces old concrete tank

Poject details:

Construction:	3-chamber system of pipes
Length:	Valve chamber: 14 m
	Reservoir: 30 m
Nominal diameter:	DN 3000
Effective volume:	600 m^3

Potable water reservoir

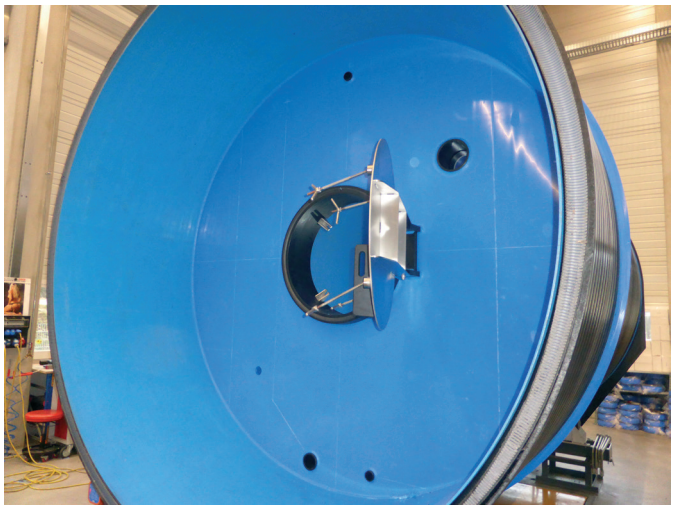
Two PE-pipe storage with 100 m³ effective volume each

Poject details:

Construction:	2-chamber system of pipes
Length:	34 m (gesamt)
Weight:	21.000 kg with valve chamber 5.000 kg
Nominal diameter:	DN 3000
Effective volume:	2 x 100 m³
Special features:	Buoyancy control with liquid soil

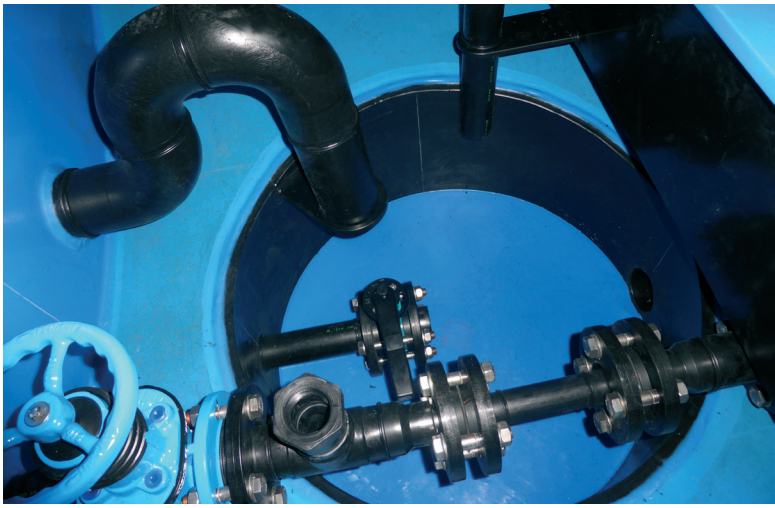
Potable water reservoir

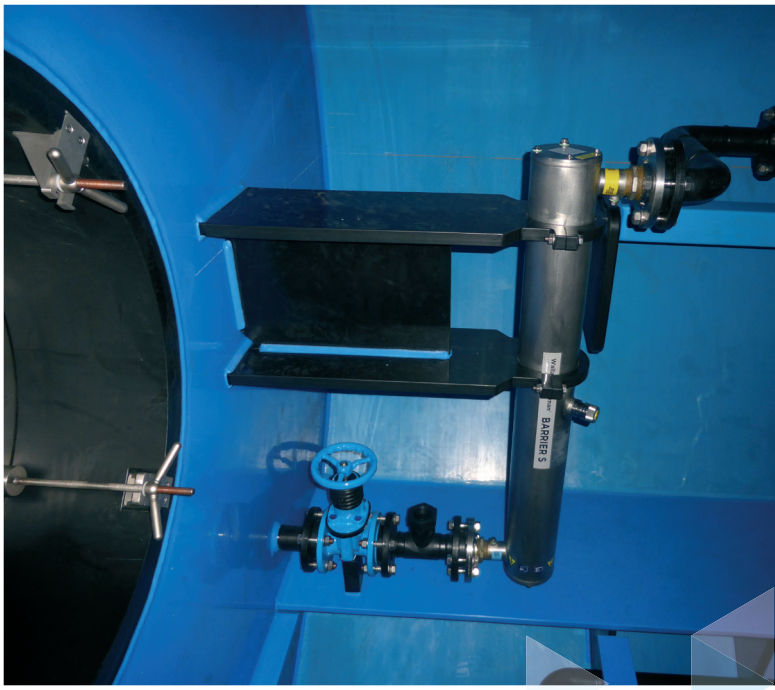
Elevated tank with UV-unit, turbidity measurement and pressure reducing valve



Poject details:

Construction:	Potable water reservoir
Length:	5 m
Weight:	4.200 kg
Nominal diameter:	DN 3000
Effective volume:	ca. 7 m³
Special features:	Valve with Auma-drive unit, UV-system, turbidity measurement, pressure reducing valve



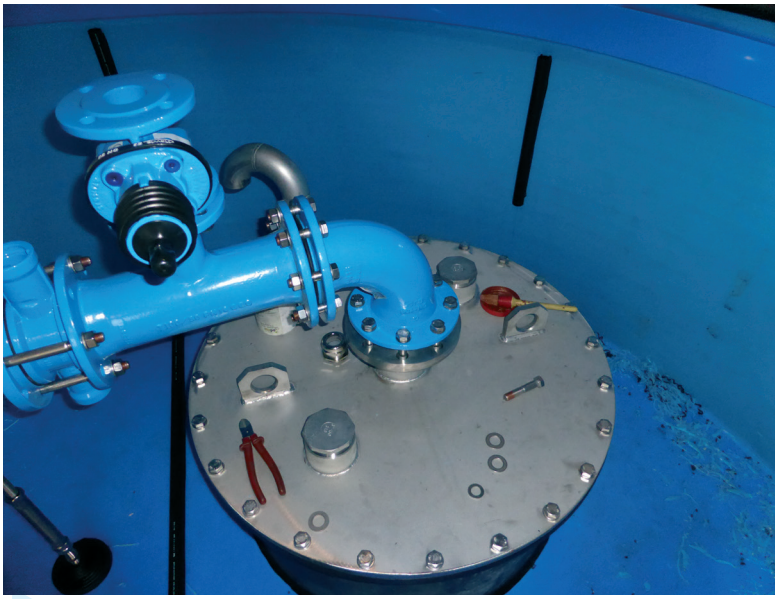


Well shaft

New construction of a well shaft with front entry

Poject details:

Construction:	Well shaft
Weight:	5.000 kg
Nominal diameter:	DN 3000
Special features:	Wellhead DN 800, Inspection opening DN 600



Well shaft

New construction of a well shaft with front entry by stainless steel door

Poject details:

Construction:	2 Well shafts
Nominal diameter:	DN 3000
Weight:	3.500 kg
Special features:	Wellhead DN 800 Inspection opening for pump DA 600

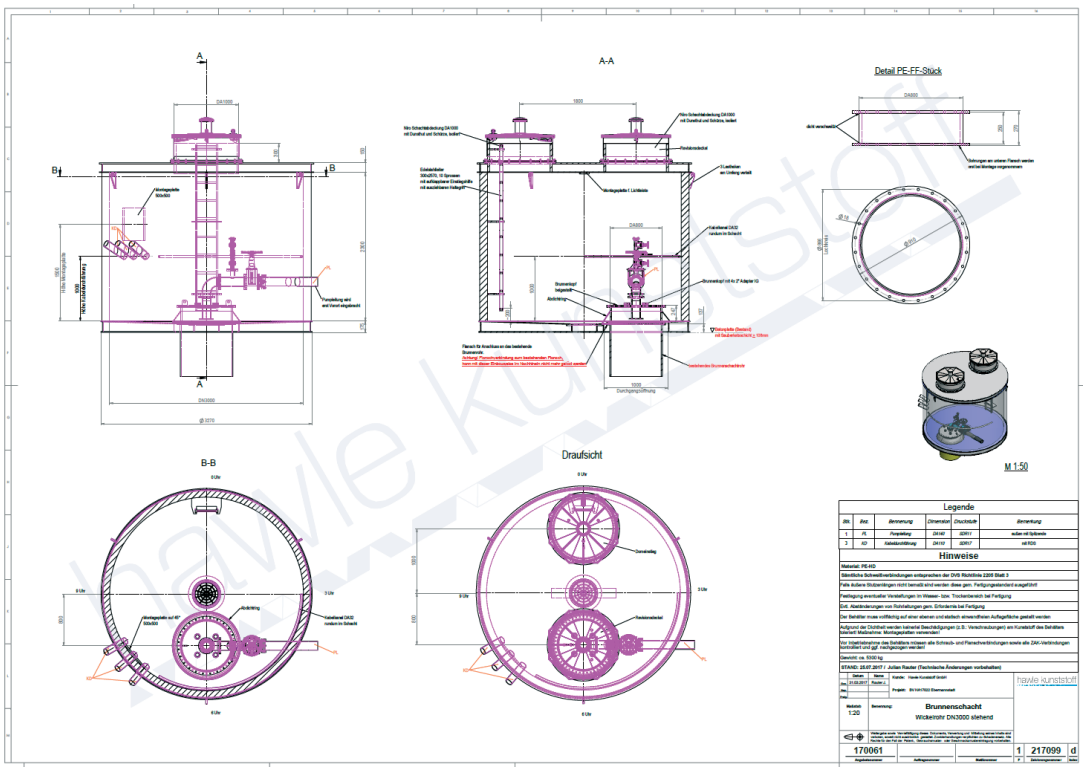

TIEFBAU KEHN

Well shaft

Renovation of a well shaft with Domseinstieg with entry from above

Poject details:

Construction:	Well shaft
Weight:	5.300 kg
Nominal diameter:	DN 3000
Special features:	Wellhead DN 800

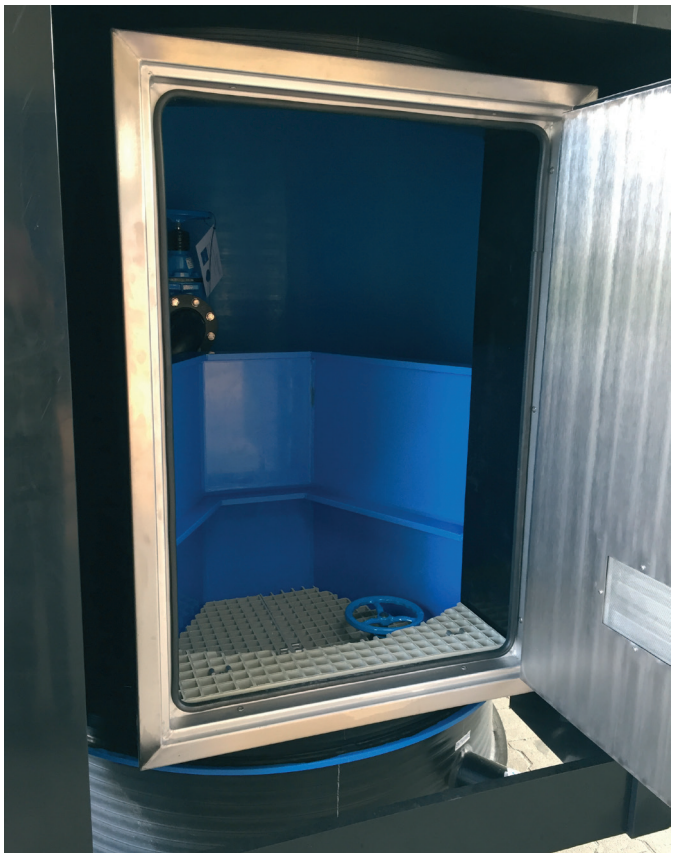


Source collection chamber

Two source collection chambers with front entry

Poject details:

Construction:	Source collection chamber 1/2
Weight:	810 kg / 1.165 kg
Nominal diameter:	DN 1500 / 2000
Special features:	Hawle gate valve DN 80/100/150



Source collection chamber

Horizontal source collection chamber with 5 inflows

Poject details:

Construction:	Source collection chamber
Length:	2,8 m
Weight:	2.300 kg
Nominal diameter:	DN 2500
Special features:	5 inflows

Source collection chamber

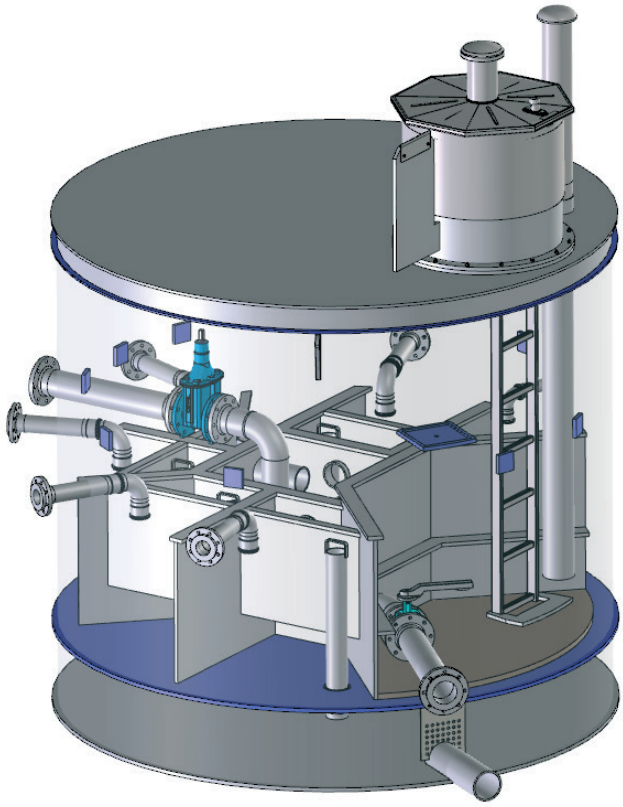
New spring tapping for a water supply association

Poject details:

Construction:	Source collection chamber
Weight:	750 kg
Nominal diameter:	DN 1500
Special features:	Spring tapping, filling with gravel, collection chamber, drainage pipe, 2 inflows, 2 stainless steel measuring weirs for fill measurement

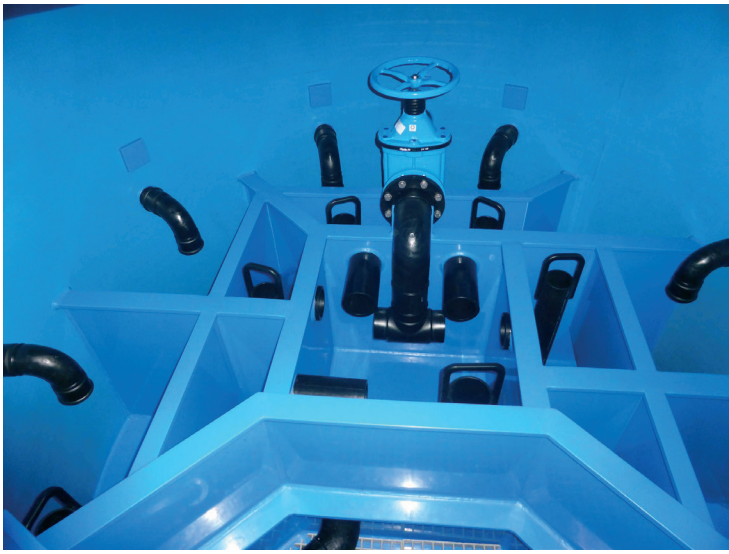
Source collection chamber

Source collection chamber with 7 inflows in total



Poject details:

Construction:	Source collection chamber
Weight:	1.700 kg
Nominal diameter:	DN 2600
Special features:	7 inflows

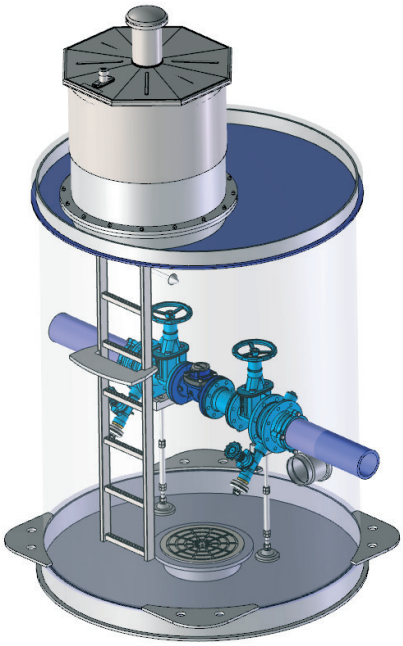


Potable water valve chamberr

Vertical transition chute

Poject details:

Construction:	Transition chute
Weight:	1.600 kg
Nominal diameter:	DN 1500
Special features:	Buoyancy control, mobile-bypass-function



Potable water valve chamber

Water supply association „Weddel-Lehre“ applies PE-chamber

Potable water valve chamber

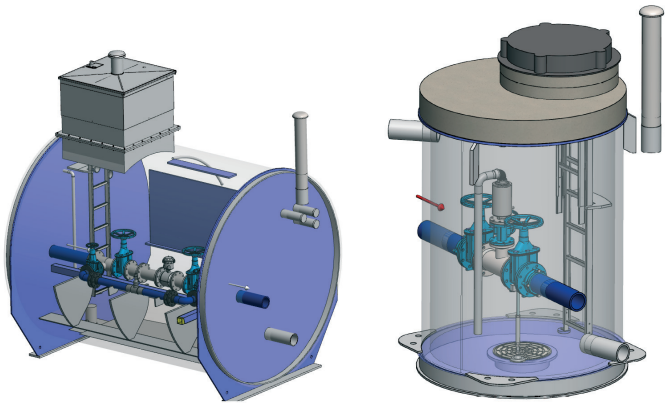
Pressure reducing shaft to improve perfusion in case of feed-in

Poject details:

Construction:	Pressure reducing shaft
Length:	4,5 m
Weight:	3.500 kg (inkl. valves)
Nominal diameter:	DN 2500
Special features:	Pressure reducing valve DN 200

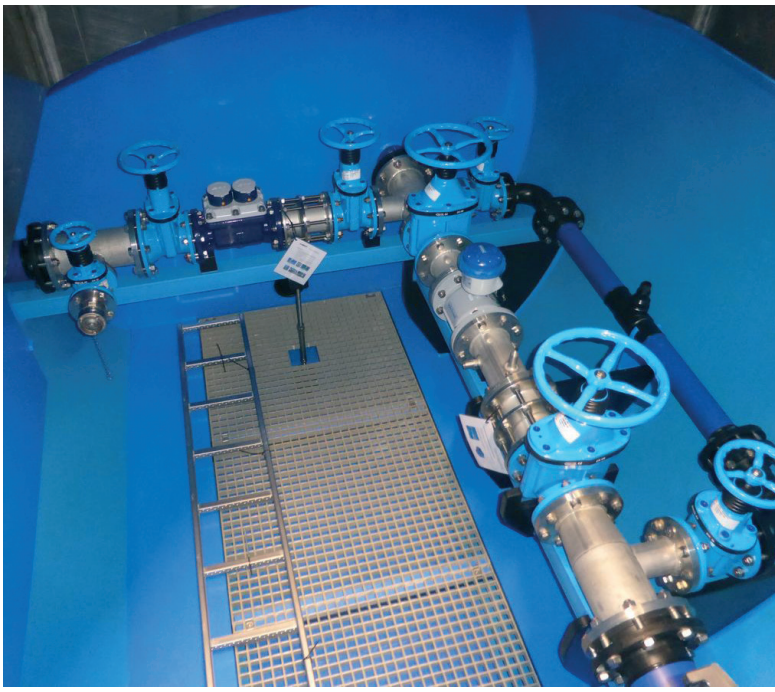
Potable water valve chamber

Horizontal transition chute and air valve chamber



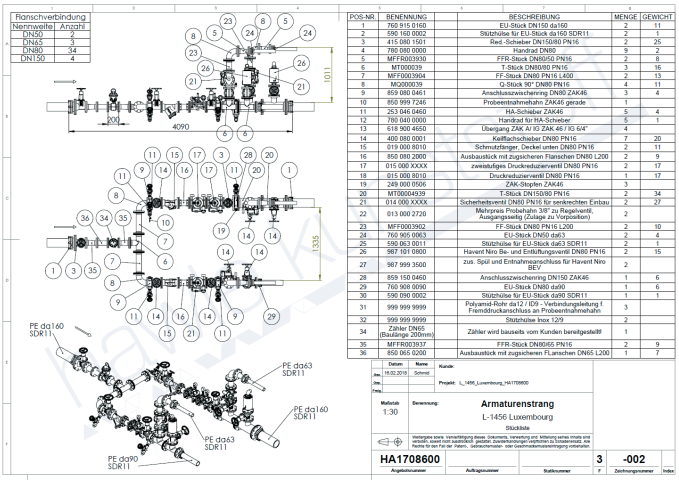
Poject details:

Construction:	Water meter / air valve shaft
Length:	4 m
Weight:	2.704 kg / 1.300 kg
Nominal diameter:	DN 2500 / DN 1500
Special features:	HaVent air valve DN 80 buoyancy control with geo textile



Potable water valve chamber

Trafficable valve chamber with 5 control valves in total



POS-NR	BENENNUNG	BESCHREIBUNG	MENGE	GEWICHT
1	760 915 0160	EU-Stück DN150 da160	2	11
2	590 160 0002	Stützhülse für EU-Stück da160 SDR11	2	1
3	415 080 1501	Red.-Schieber DN150/80 PN16	2	25
4	780 080 0000	Handrad DN80	9	2
5	MFF8003930	FFR-Stück DN80/50 PN16	2	8
6	MT0000039	T-Stück DN80/80 PN16	3	16
7	MFF0003904	FF-Stück DN80 PN16 L400	2	13
8	MQ000039	Q-Stück 90° DN80 PN16	4	11
9	859 080 0461	Anschlussauszwischenring DN80 ZAK46	3	4
10	850 999 7246	Probeentnahmehahn ZAK46 gerade	1	
11	253 046 0460	HA-Schieber ZAK46	5	4
12	780 040 0000	Handrad für HA-Schieber	5	1
13	618 900 4650	Übergang ZAK A/ IG ZAK 46 / IG 6/4"	4	
14	400 080 0001	Keilflachschieber DN80 PN16	7	20
15	019 000 8010	Schmutzfänger_Deckel unten DN80 PN16	2	11
16	850 080 2000	Ausbaustück mit zugsicheren Flanschen DN80 L200	2	9
17	015 000 XXXX	zweistufiges Druckreduzierventil DN80 PN16	2	17
18	015 000 8010	Druckreduzierventil DN80 PN16	1	17
19	249 000 0506	ZAK-Stopfen ZAK46	3	
20	MT0004639	T-Stück DN150/80 PN16	2	34
21	014 000 XXXX	Sicherheitsventil DN80 PN16 für senkrechten Einbau	2	27
22	013 000 2720	Mehrpreis Probehahn 3/8" zu Regelventil, Ausgangsseitig (Zulage zu Vorposition)	2	
23	MFF0003902	FF-Stück DN80 PN16 L200	2	10
24	760 905 0063	EU-Stück DN50 da63	2	4
25	590 063 0011	Stützhülse für EU-Stück da63 SDR11	2	1
26	987 101 0800	Havent Niro Be- und Entlüftungsventil DN80 PN16	2	15
27	987 999 3500	zus. Spül- und Entnahmeanschluss für Havent Niro BEV	2	
28	859 150 0460	Anschlusszwischenring DN150 ZAK46	1	6
29	760 908 0090	EU-Stück DN80 da90	1	6
30	590 090 0002	Stützhülse für EU-Stück da90 SDR11	1	1
31	999 999 9999	Polyamid-Rohr da12 / ID9 - Verbindungsleitung f. Fremddruckanschluss an Probeentnahmehahn	3	
32	999 999 9999	Stützhülse Inox 12/9	2	
34	Zähler DN65 (Baulänge 200mm)	Zähler wird bauseits vom Kunden beigestellt!	1	
35	MFF8003937	FFR-Stück DN80/65 PN16	2	9
36	850 065 0200	Ausbaustück mit zugsicheren FLanschen DN65 L200	1	7

Datum: 18.02.2015 | Name: Schmid

Kunde:

Projekt: L_1456_Luxembourg_HA1706600

Maßstab: 1:30

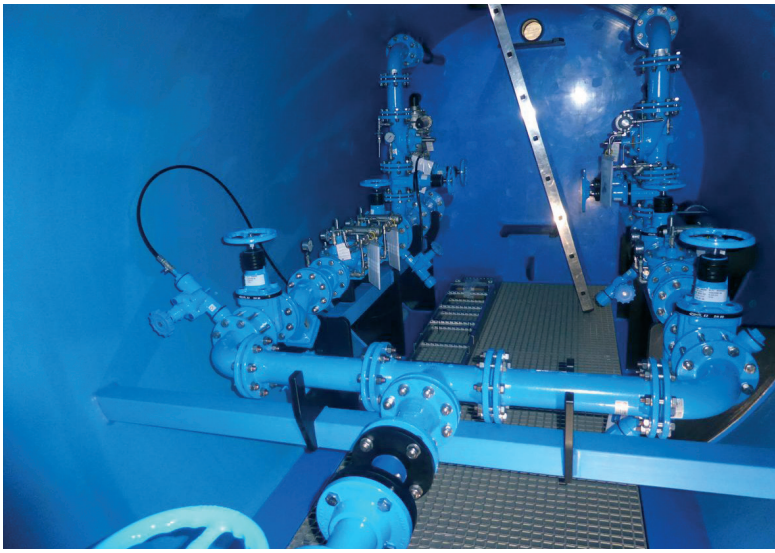
Benennung: **Armaturenstrang**
L-1456 Luxembourg
Stückliste

HA1706600 | 3 | -002

Angebotsnummer | Auftragsnummer | Stücknummer | r | Zeichnungsnummer | Index

Poject details:

Construction:	Valve chamber
Length:	5 m
Weight:	3.360 kg
Nominal diameter:	DN 2500
Special features:	Gate valves DN 80 - 150, HaVent air valve DN 80, 5 control valves DN 80, pressure reducing valve, saftey valve

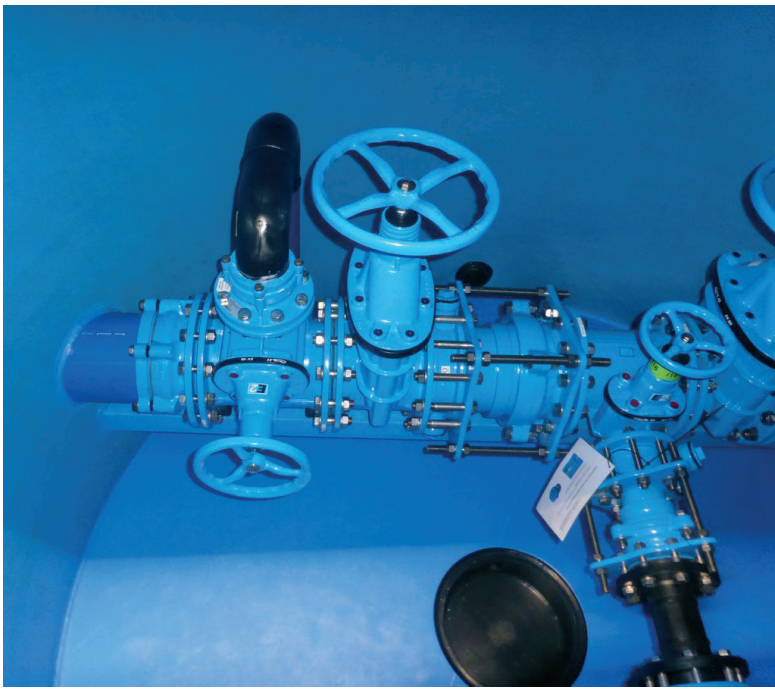


Potable water valve chamber

Before and after comparison

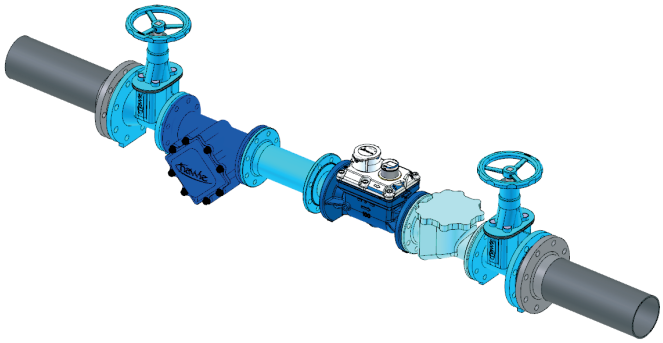
Poject details:

Construction:	Valve chamber
Weight:	3.300 kg
Nominal diameter:	DN 2500
Special features:	Check valve DN 80, buoyancy controled, trafficable



Potable water valve chamber

Water meter shaft for a shopping center



Poject details:

Construction:	Water meter shaft
Nominal diameter:	DN 2300
Special features:	Reducing gate DN 150, strainer DN 100, check valve DN 100, buoyancy control

Potable water valve chamber

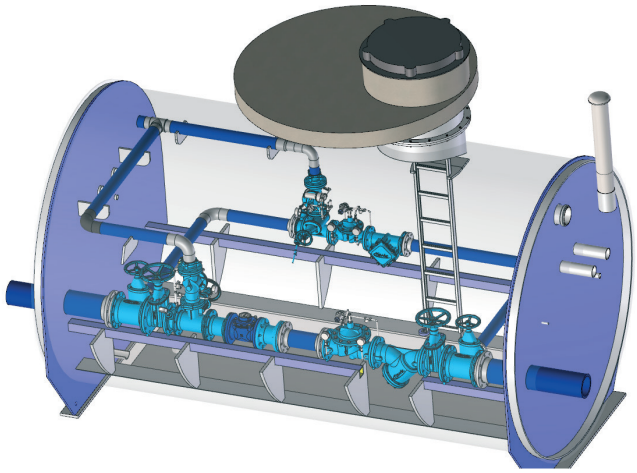
Shaft for protection in case of leakages or pipe breakage

Poject details:

Construction:	Valve chamber
Length:	5,2 m
Weight:	4.200 kg
Nominal diameter:	DN 2500
Special features:	2 butterfly valves DN 400, AUMA-drive unit, flow monitor

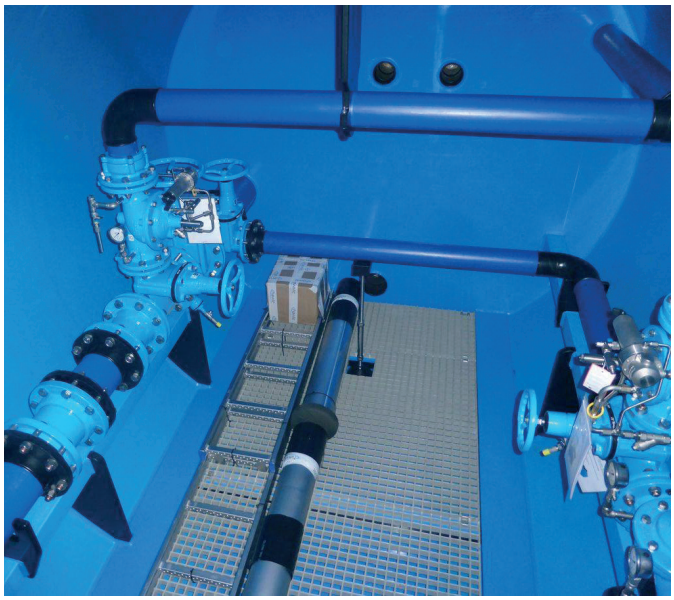
Potable water valve chamber

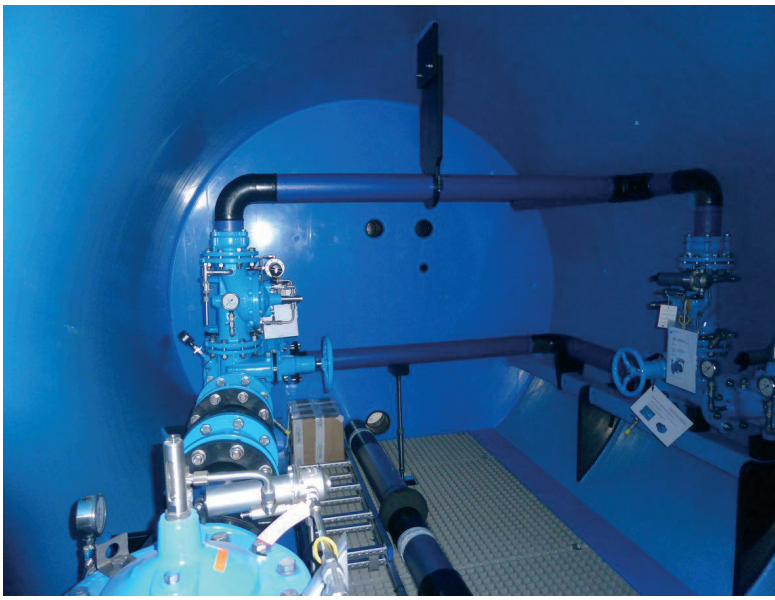
Trafficable valve chamber with 4 control valves

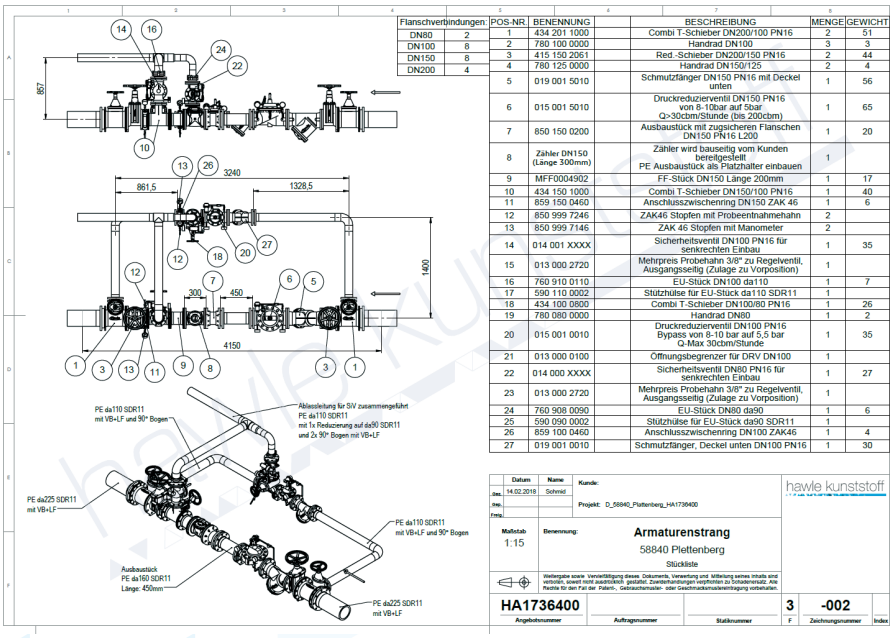


Poject details:

Construction:	Valve chamber
Length:	4,5 m
Weight:	3.350 kg
Nominal diameter:	DN 2500
Special features:	Gate valves DN 80 - DN 200, 2 pressure reducing valves, 2 safety valves







Flanschverbindungen:	POS-NR.
DN80	2
DN100	8
DN150	8
DN200	4

POS-NR.	BENENNUNG	BESCHREIBUNG	MENGE	GEWICHT
1	434 201 1000	Combi T-Schieber DN200/100 PN16	2	51
2	780 100 0000	Handrad DN100	3	3
3	415 150 2061	Red.-Schieber DN200/150 PN16	2	44
4	780 125 0000	Handrad DN150/125	2	4
5	019 001 5010	Schmutzfänger DN150 PN16 mit Deckel unten	1	56
6	015 001 5010	Druckreduzierventil DN150 PN16 von 8-10bar auf 5bar Q>30cbm/Stunde (bis 200cbm)	1	65
7	850 150 0200	Ausbaustück mit zugsicheren Flanschen DN150 PN16 L200	1	20
8	Zähler DN150 (Länge 300mm)	Zähler wird bauseitig vom Kunden bereitgestellt PE Ausbaustück als Platzhalter einbauen	1	
9	MFF0004902	FF-Stück DN150 Länge 200mm	1	17
10	434 150 1000	Combi T-Schieber DN150/100 PN16	1	40
11	859 150 0460	Anschlusszwischenring DN150 ZAK 46	1	6
12	850 999 7246	ZAK46 Stopfen mit Probeentnahmehahn	2	
13	850 999 7146	ZAK 46 Stopfen mit Manometer	2	
14	014 001 XXXX	Sicherheitsventil DN100 PN16 für senkrechten Einbau	1	35
15	013 000 2720	Mehrpreis Probehahn 3/8" zu Regelventil, Ausgangsseitig (Zulage zu Vorposition)	1	
16	760 910 0110	EU-Stück DN100 da110	1	7
17	590 110 0002	Stützhülse für EU-Stück da110 SDR11	1	
18	434 100 0800	Combi T-Schieber DN100/80 PN16	1	26
19	780 080 0000	Handrad DN80	1	2
20	015 001 0010	Druckreduzierventil DN100 PN16 Bypass von 8-10 bar auf 5,5 bar Q-Max 30cbm/Stunde	1	35
21	013 000 0100	Öffnungsbegrenzer für DRV DN100	1	
22	014 000 XXXX	Sicherheitsventil DN80 PN16 für senkrechten Einbau	1	27
23	013 000 2720	Mehrpreis Probehahn 3/8" zu Regelventil, Ausgangsseitig (Zulage zu Vorposition)	1	
24	760 908 0090	EU-Stück DN80 da90	1	6
25	590 090 0002	Stützhülse für EU-Stück da90 SDR11	1	
26	859 100 0460	Anschlusszwischenring DN100 ZAK46	1	4
27	019 001 0010	Schmutzfänger, Deckel unten DN100 PN16	1	30

	Datum	Name
Ges.	14.02.2018	Sohnrid
Ges.		
Freig.		

Kunde:

Projekt: D_56840_Plettenberg_HA1736400

hawle kunststoff

Maßstab 1:15

Benennung: **Armaturenstrang**

58840 Plettenberg

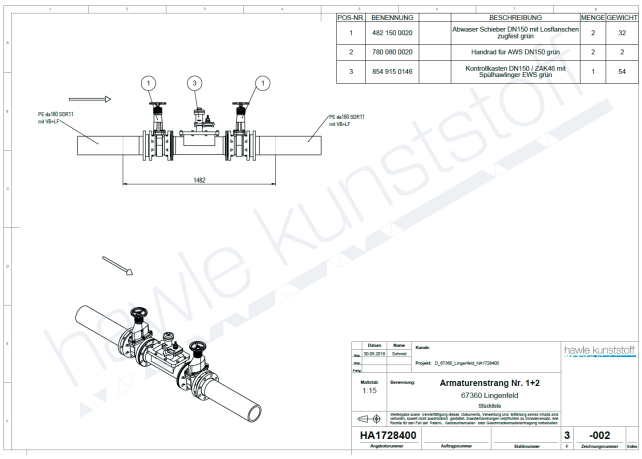
Stückliste

Weitergabe sowie Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet. Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte für den Fall der Patent-, Gebrauchsmuster- oder Geschmacksmustereintragung vorbehalten.

HA1736400			3	-002
Angebotsnummer	Auftragsnummer	Stücklistennummer	F	Zeichnungsnummer / Index

Sewage water valve chamber

Three valve chambers buoyancy controlled and trafficable



POS-NR	BENENNUNG		BESCHREIBUNG	MENGE	GEWICHT
1	482 150 0020		Abwasser Schieber DN150 mit Losflanschen zugfest grün	2	32
2	780 080 0020		Handrad für AWS DN150 grün	2	2
3	854 915 0146		Kontrollkasten DN150 / ZAK46 mit Spülhawlinger EWS grün	1	54

PE da180 SDR11 mit VB-LT

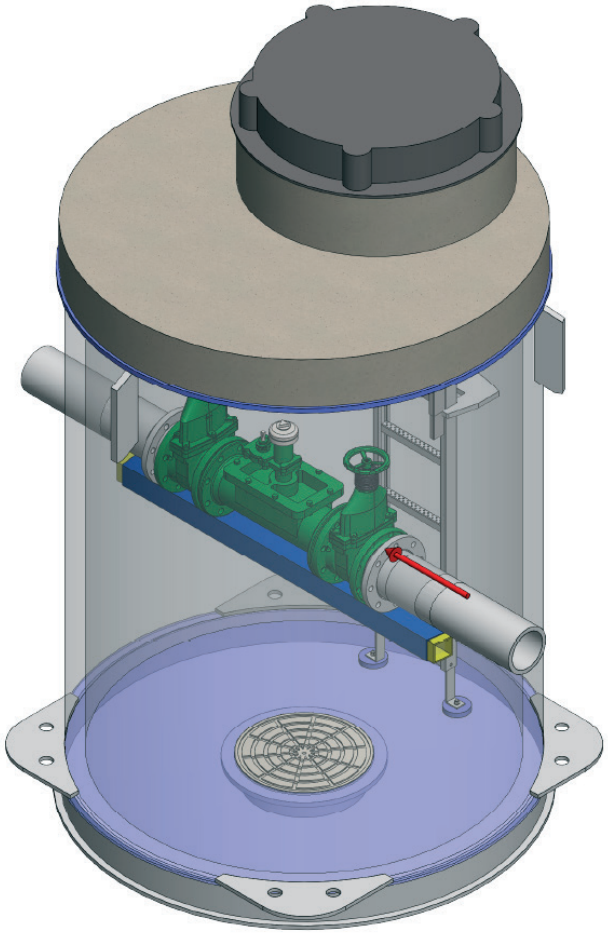
PE da180 SDR11 mit VB-LT

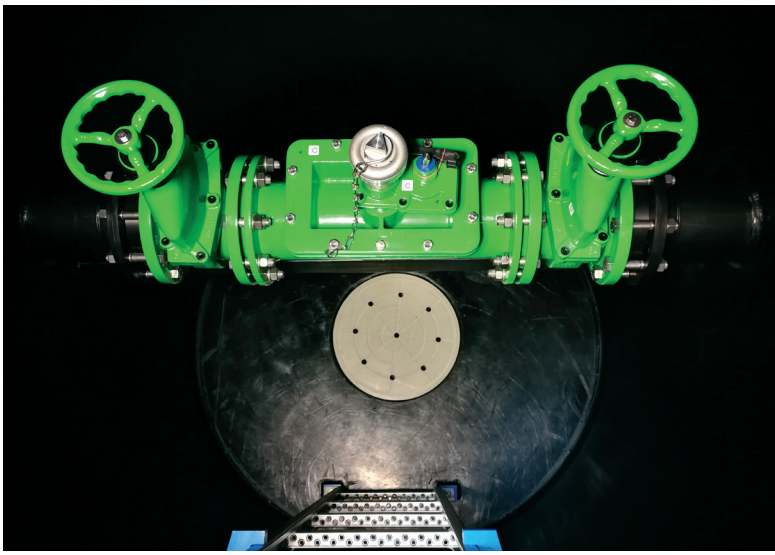
1482

Datum	Name	Kunde:	hawle kunststoff
30.09.2018	Gehrold	Projekt: D_67360_Lingenfeld_HA1728400	
Maßstab 1:15	Benennung: Armaturenstrang Nr. 1+2 67360 Lingenfeld Stückliste		
HA1728400		3	-002
Angebotsnummer	Auftragsnummer	Stücklistenstufe	Zeichnungsnummer / Index

Poject details:

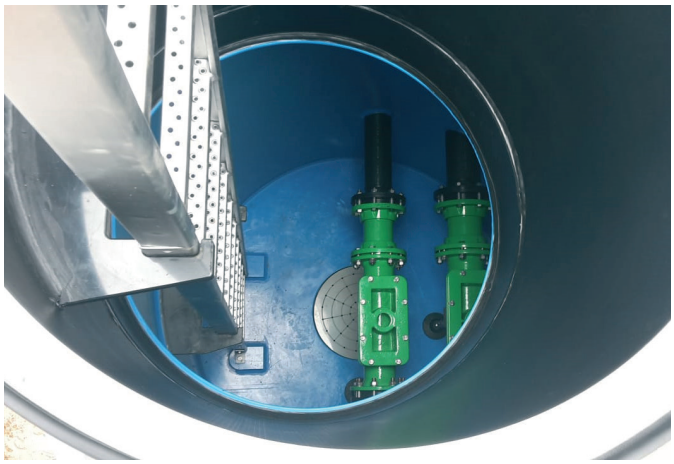
Construction:	Valve chamber
Weight:	1.200 kg
Nominal diameter:	DN 1500
Special features:	Sewage pressure pipe, 2 sewage water gate valves DN 150, hatchbox with ZAK-outlet, trafficable, with buoyancy control





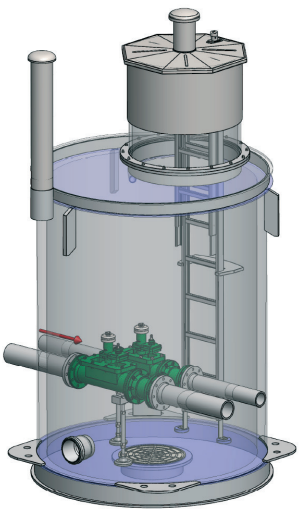
Sewage water valve chamber

Sewage water inspection shaft with buoyancy control



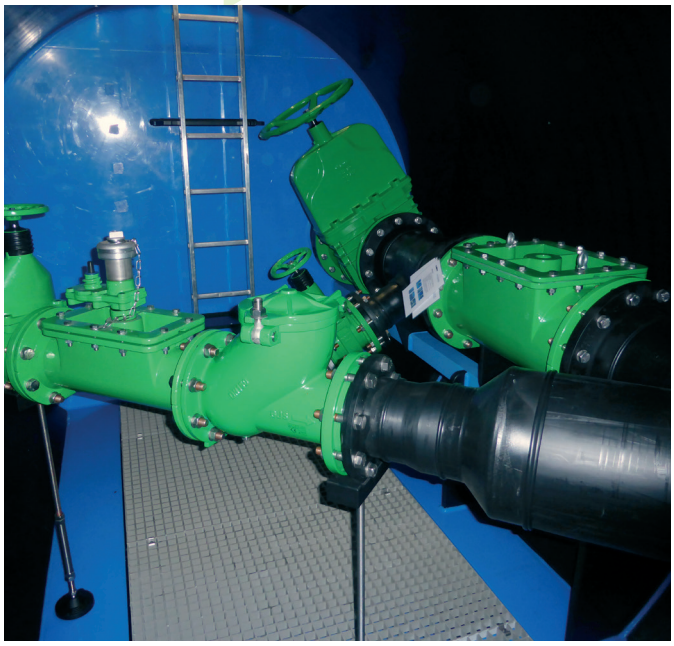
Poject details:

Construction:	Inspection shaft
Weight:	1.350 kg
Nominal diameter:	DN 1500
Special features:	Cleaning and controlling box DN 125, with buoyancy control



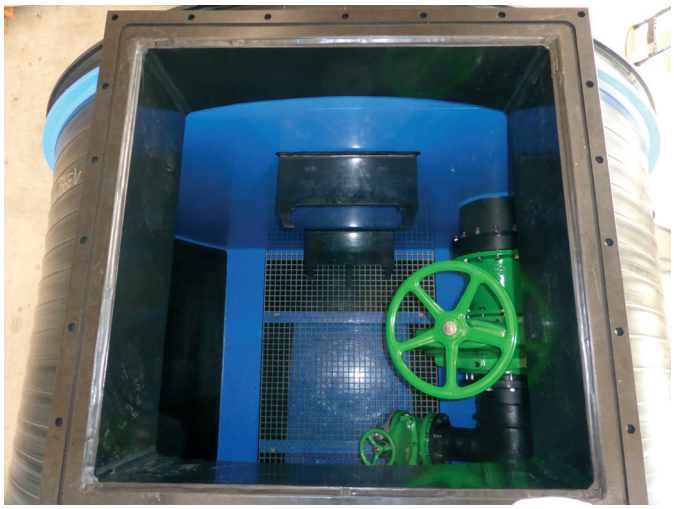
Sewage water valve chamber

Coupling shaft for two sewage pressure pipes and shaft as measuring point



Poject details:

Construction:	Sewage water valve chamber Water meter shaft (vertical)
Length / Nominal diameter:	Shaft horizontal: 4 m / DN 2600 Shaft vertical: DN 2300
Weight:	Shaft horizontal: 3.400 kg (incl. installation) Shaft vertical: 3.300 kg
Special features:	Pipe dimension DA 400, gate valve DN 300, with possibility for rinsing, ball check valve, Cleaning box with B-coupling

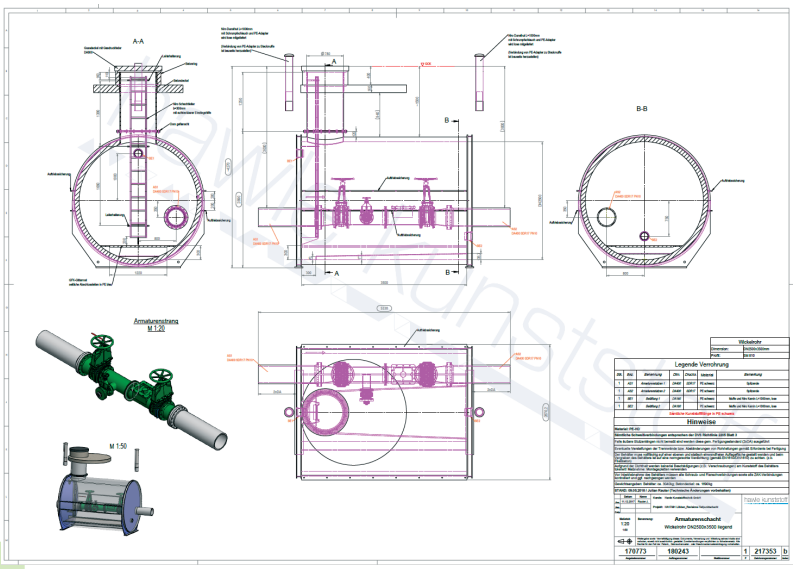


Sewage water valve chamber

Follow-up project for the Stadtentwässerung Lübben

Poject details:

Construction:	Inspection shaft
Length:	5 m
Weight:	3.040 kg
Nominal diameter:	DN 2500
Special features:	Sewage water gate valve DN 150 und DN 300, hatchbox DN 300, stainless steel-B-coupling for rinsing



Drainpiping - Remediation

53 manholes und 2000 m piping laid in Bonn-Beuel

Poject details:

Double wall pipes „SAFE“
DN 1200 » 850 m
DN 1000 » 150 m
DN 800 » 900 m
DN 300 » 30 m

Double wall tangential manholes, verifiable
43 manholes
DN 1000/800 22 pieces
DN 1200/800 1 pieces
DN 1000/1000 3 pieces
DN 1200/1200 9 pieces
DN 1000/1200 8 pieces

Double wall manholes DN 1000, verifiable
10 manholes

Sewage water pipe with E-socket

Connection of the pipes with innovative electro fusion welding

Poject details:

Construction:	Doppelstrang DN 1100 mit je 2 tangential manholes
Length per strand:	237 m
Material:	PE 100, royal blue
Special features:	Electro fusion connection with E-socket Slight gradient with only 1,7 per mil

Sewage water valve chamber

Restructuring of 5 sewage water pump stations for the WWAZ

Poject details:

Construction:	5 sewage water pump stations
Installation depth:	up to 5,95 m
Nominal diameter:	DN 1000 - 1500
Special features:	2 pump stations trafficable prefabricated at the plant incl. sockets, pressure piping, Y-section, possibility for rinsing, ball check valve, gate valves and sliding tubes

Sewage water valve chamber

Air valve chamber made of plastic replaces old concrete shaft

Poject details:

Construction:	Air valve chamber
Length:	Sewage water pressure pipe with 4,3 km length, DN 300, built 1996
Nominal diameter:	DN 1800
Weight:	1.900 kg
Special features:	pipes DA 315, Air valve 986, cleaning and controlling box DN 300

Storm water tank

Storm water tank with built-in dry weather gutter

Poject details:

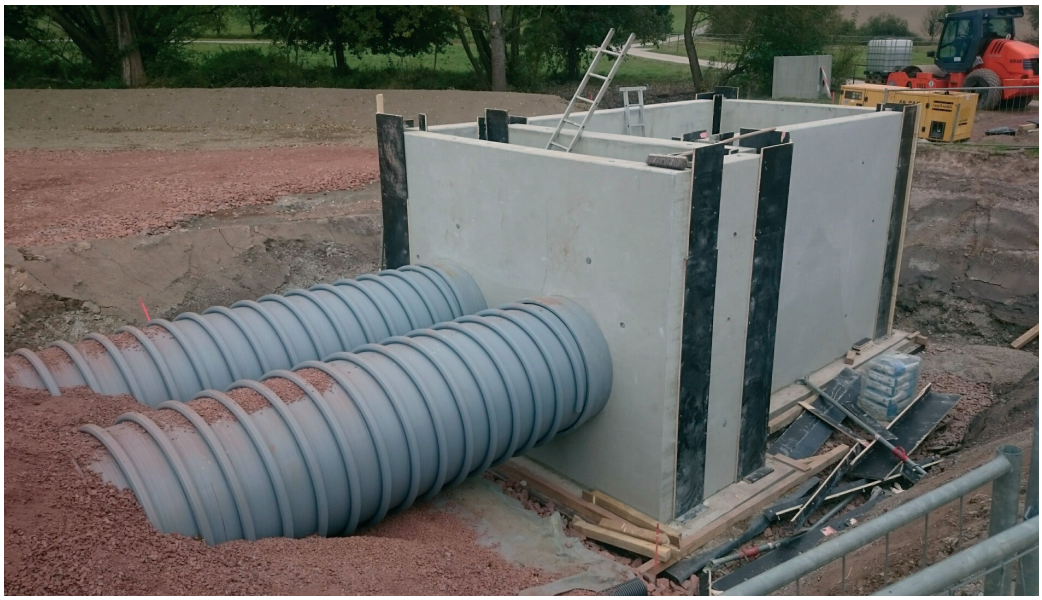
Construction:	Strom water tank with built-in dry weather gutter
Length:	approx. 75 m
Nominal diameter:	DN 1800
Connection:	Socket joint with rubber seal

Storm water relief

Storm water relief made of acid-resistant plastic against corrosive sewage water

Poject details:

Construction:	Storm water relief with storm water tank an tangential manholes
Length:	9 m
Nominal diameter:	DN 1000 / DN 1200
Special features:	Socket joint with rubber seal



Storm water tank

Plastic convinces with flexibility for the construction of a storm water tank

Poject details:

Construction:	Storm water tank 3 parts
Length:	9 m
Nominal diameter:	DN 1000
Connection:	Socket joint with rubber seal
Special features:	Support on site from Hawle Kunststoff

Ventilation duct

Challenging restructuring of a ventilation duct for a leading German meat marketer

Poject details:

Construction:	Ventilation duct
Length:	approx. 184 m
Nominal diameter:	PE sewage pipes DN 1800, DN 1200 T-transition pipe from DN 1800 to DN 1200 Ed fitting piece incl. manhole
Connection:	Extrusion welding

Apparatus and tank building

Expansion tank, storage tank, silo, circular and rectangle container

Expansion tank for a pool

Pool

Expansion tank for a pool

Pool installed

PE-Expansion tank for a pool

Apparatus and tank building

Expansion tank, storage tank, silo, circular and rectangle container

Glue tank

PE-HD storage tank

Storage tank with collection tray
for precipitants and caustic soda

PE circular tank with collection tray
to store 40% urea

Ammoniac / caustic soda storage tanks 40 m³

Apparatus and tank building

Expansion tank, storage tank, silo, circular and rectangle container

PE-container as mobile watering system

Water container incl. toolbox for mounting on a truck

PE-container as mobile watering system

Desludging tank

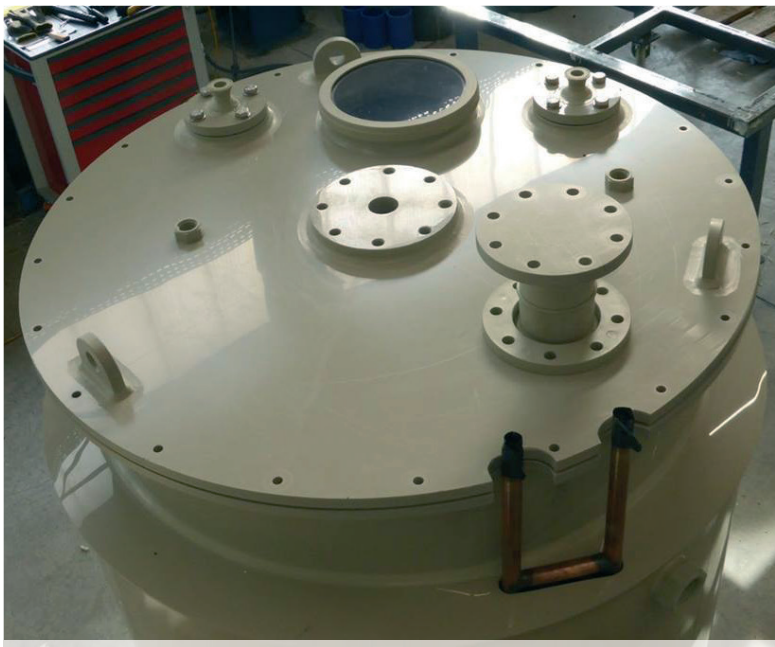
PE coolant reservoir

PP-H washing container

Apparatus and tank building

Expansion tank, storage tank, silo, circular and rectangle container

PP circular tank



Tank for homogenisation with cooling loop

PE sedimentation tank

PP container for process water

Tank for homogenisation with cooling loop

hawle kunststoff

Hawle Kunststoff GmbH
Industriegelände 9 | 51674 Wiehl | Deutschland
Tel.: +49 2262 7207-0 | Fax: +49 2262 7207-26

info@hawle-kunststoff.de
www.hawle-kunststoff.de