

Systems with ultraviolet lamps for disinfection and oxidation



From the simplest devices to complex solutions

Company

UMEX GmbH, headquartered in Kirchheim Thüringen, has been your partner for more than 26 years offering the highest quality for UV technology devices and solutions for water, air and surfaces.

Facts and figures

- Founded: 1990
- Location: Kirchheim in Thüringen
- Production area: 750 m², plus supplier production area
- Items in stock: more than 500 semifinished goods
- Product range: Development, manufacturing and sales of ABOX® UV technology Consulting, production, device assembly and functional testing, after-sales service and international maintenance service
- Memberships: DVGW, FIGAWA, EFDS, GWP
- Certification: DIN EN ISO 9001

Quality

The standardised quality of our products, our expertise and experience with technology are the foundation of ABOX® UV systems.

In addition to certified quality management in accordance with DIN EN ISO 9001, a series of products of UV systems are certified with the registered trademark ABOX®.

ABOX® is a registered trademark of UMEX GmbH, headquartered in Kirchheim, Germany and is protected by copyright. (EU Community trade mark EM 009 590977, ABOX®).

Overview

ABOX® devices and systems equipped with ultraviolet lamps are designed for UV disinfection, sterilisation and UV oxidation. The delivery programme includes standardised, certified and UV combination systems with the registered trademark ABOX®.

UV low-pressure systems for disinfection

Type	Area of application	Application examples
ABOX® S Standard systems	Drinking, service and waste water, process water	Process water for industry, fish farming and RAS systems, cooling water, swimming pool water
ABOX® PE Plastic systems	Thermal or sea water	Aquaculture and fish farming, service water, salt water
ABOX® TF Thin-layer systems	Service and waste water with low UV transmission	Garden water, greenhouses, cooling lubricants
ABOX® PH Pure water systems	Water purification	Process water for beverage and food industry Process water for pharmaceutical and cosmetics industry, residual ozone elimination
ABOX® SL Air and exhaust	Air and exhaust treatment	Air treatment of production facilities, elimination of odours
ABOX® SB Special systems	Waste water of SBR systems	Small sewage treatment plants, agriculture and aquaculture, service and grey water
ABOX® DF Special systems	Process and service water	Food, fish and aquaculture water swimming pool water
ABOX® M / TRM- Modules	Immersion tube and room air modules	Prevention of bacterial growth in containers, air and exhaust treatment, air conditioning equipment, surfaces and packaging

Certified UV low-pressure systems

Type	Area of application	Application examples
ABOX® C	Certified systems in accordance with ÖNORM M 5873-1:2001	Drinking water, process water of the food industry, production plants
ABOX® GL	Certified systems in accordance with Germanic Lloyd DNV-GL	Maritime applications, oil platforms Water preparation on ships, yachts and fishing boats and

UV low-pressure systems for oxidation

ABOX® TOC	UV treatment for TOC Reduction	Pharmaceutical industry Semiconductor production Medical applications Power plant applications
------------------	-----------------------------------	---

Combination systems

ABOX® WAS	Compact unit filter UV	Private water supply Mobile water preparation Final sterilisation Mountain huts, maritime applications
------------------	------------------------	---

UV medium-pressure systems for oxidation

ABOX® P	UV oxidation	Industrial water treatment UV combination process Breakdown of organic components
ABOX® MS	UV treatment of swimming pool water	Reduction of chloramine, pool and service water disinfection

UV components

Components and spare parts	Components	Lamps, immersion tubes, sensors and, measuring windows, evaluation units for measuring and regulating technology, electronic ballasts, temperature monitoring
---------------------------------------	------------	---

ABOX® S series

- ✓ Drinking water
- ✓ Process water
- ✓ Service and waste water

Übersicht UV-Anlagenserie ABOX® - S

Overview UV plant series ABOX® - S

Aperçu UV série d'installation ABOX® - S

Bezeichnung Description Désignation produit	Q _{max} l/h	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® S 6	100	R 1/2 "	390 x 110 mm	180 x 90 x 60 mm	10 Watt
ABOX® S 8	350	R 1/2 "	480 x 120 mm	180 x 90 x 60 mm	15 Watt
ABOX® S 11	500	R 1/2 "	390 x 120 mm	180 x 90 x 60 mm	20 Watt
ABOX® S 16	850	R 1/2 "	480 x 120 mm	180 x 90 x 60 mm	25 Watt
	Q_{max} m³/h				
ABOX® S 25	2	R 3/4"	600 x 160 mm	360 x 254 x 165 mm	40 Watt
ABOX® S 36	3	R 1"	1.000 x 170 mm	360 x 254 x 165 mm	50 Watt
ABOX® S 64	4	R 1"	1.000 x 170 mm	360 x 254 x 165 mm	75 Watt
ABOX® S 80	5	R 1 1/2"	1.000 x 210 mm	360 x 254 x 165 mm	95 Watt
ABOX® S 120	6,9	R 1 1/2"	1.000 x 210 mm	360 x 254 x 165 mm	135 Watt
ABOX® S 200	14	R 2"	1.200 x 210 mm	360 x 254 x 165 mm	210 Watt
ABOX® S 300	18	R 2 / 2 1/2 "	1.600 x 210 mm	360 x 254 x 165 mm	300 Watt
ABOX® S 180	20	DN 80	1.000 x 370 mm	600 x 380 x 210 mm	220 Watt
ABOX® S 240	25	DN 80	1.000 x 370 mm	600 x 380 x 210 mm	290 Watt
ABOX® S 360	30	DN 80...	1.000 x 370 mm	600 x 380 x 210 mm	400 Watt
ABOX® S 480	45	DN 100...	1.000 x 370 mm	600 x 380 x 210 mm	520 Watt
ABOX® S 600	75	DN 150...	1.350 x 470 mm	600 x 600 x 210 mm	640 Watt
ABOX® S 840	115	DN 200	1.000 x 590 mm	760 x 600 x 210 mm	880 Watt
ABOX® S 1000	145	DN 200	1.350 x 490 mm	760 x 760 x 210 mm	1.000 Watt
ABOX® S 1.400	200	DN 250	1.350 x 490 mm	760 x 760 x 210 mm	1.600 Watt
ABOX® S 1.800	225	DN 250	1.350 x 490 mm	760 x 760 x 210 mm	1.800 Watt
ABOX® S 2.400	270	DN 250	1.750 x 590 mm	760 x 760 x 350 mm	2.500 Watt
ABOX® S 3.000	320	DN 250...	1.750 x 660 mm	800 x 800 x 350 mm	3.000 Watt
ABOX® S 3.800	410	DN 300...	1.750 x 680 mm	800 x 800 x 350 mm	3.800 Watt



ABOX® PE series

- ✓ Thermal and sea water
- ✓ Aquaculture and fish farming
- ✓ Swimming pool water
- ✓ Service water

Übersicht UV-Anlagenserie ABOX® - PE

Overview UV plant series ABOX® - PE

Aperçu UV série d'installation ABOX® - PE

Bezeichnung Description Désignation produit	Q _{max} m ³ /h	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® PE 16	1,20	R 1"	550 x 50 mm	180 x 182 x 111 mm	25 Watt
ABOX® PE 36	3,50	R 1"	1.100 x 90 mm	180 x 182 x 111 mm	40 Watt
ABOX® PE 64	4,00	R 2"	1.100 x 125 mm	180 x 182 x 111 mm	75 Watt
ABOX® PE 80	5,00	R 2"	1.100 x 125 mm	180 x 182 x 111 mm	80 Watt
ABOX® PE 120	6,90	R 2"	1.100 x 125 mm	180 x 182 x 111 mm	135 Watt
ABOX® PE 200	14,50	R 3"	1.300 x 140 mm	360 x 254 x 165 mm	210 Watt
ABOX® PE 300	18,00	R 3"...	1.600 x 140 mm	360 x 254 x 165 mm	300 Watt
ABOX® PE 180	20,00	DN 80...	1.100 x 200 mm	600 x 380 x 210 mm	220 Watt
ABOX® PE 240	25,00	DN 80...	1.100 x 200 mm	600 x 380 x 210 mm	280 Watt
ABOX® PE 360	35,00	DN 80...	1.100 x 200 mm	600 x 380 x 210 mm	400 Watt
ABOX® PE 600	68,00	DN 100..	1.100 x 280 mm	600 x 600 x 210 mm	650 Watt
ABOX® PE 1000	115,00	DN 200..	1.300 x 280 mm	600 x 600 x 210 mm	1000 Watt
ABOX® PE 1600	135,00	DN 200..	1.650 x 280 mm	760 x 760 x 210 mm	1600 Watt



ABOX® TF series

- ✓ Waste water
- ✓ Garden and greenhouse water
- ✓ Cooling lubricants

Übersicht UV-Anlagenserie ABOX® - TF
 Overview UV plant series ABOX® - TF
 Aperçu UV série d'installation ABOX® - TF

Bezeichnung Description Désignation produit	$Q_{\max}$ m ³ /h - $T_{1\text{cm}}$ 30%		Reaktor / Kollektor- Maße L x B Reactor / collector dimensions L x W Dimensions réacteur / collecteur Lo x La	Nennleistung Total power plant Puissance nominale
	2.500 J/m ²	1.200 J/m ²		
ABOX® TF 1	0,2	0,5	1.000 x 115 x 51	130
ABOX® TF 2	0,5	1,2	1.000 x 250 x 51	250
ABOX® TF 4	1,2	2,5	1.400 x 450 x 450	495
ABOX® TF 6	1,8	4,4	1.400 x 650 x 450	740
ABOX® TF 8	2,5	5,8	1.400 x 850 x 450	980
ABOX® TF 10	3,2	7,2	1.400 x 1.050 x 450	1.250
ABOX® TF 12	3,8	8,2	1.400 x 1.250 x 450	1.500
ABOX® TF 14	4,5	9,5	1.400 x 1.450 x 450	1.750
ABOX® TF 16	5,3	11,5	1.400 x 1.650 x 450	1.980



ABOX® PH series

High-quality systems for water purification

- ✓ Process water for beverage and food industry
- ✓ Process water for pharmaceutical and cosmetic industry
- ✓ Residual ozone elimination

Übersicht UV-Anlagenserie ABOX® - PH
 Overview UV plant series ABOX® - PH
 Aperçu UV série d'installation ABOX® - PH

Bezeichnung Description Désignation produit	Q _{max} m³/h 1000 J/m²	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® PH 120	3,2	DN 25...	1.000 x 155 mm	380 x 300 x 210 mm	145 Watt
ABOX® PH 200	5,3	DN 40...	1.300 x 180 mm	380 x 300 x 210 mm	210 Watt
ABOX® PH 300	10,4	DN 50...	1.700 x 180 mm	380 x 300 x 210 mm	380 Watt
ABOX® PH 600	26,2	DN 65...	1.300 x 270 mm	600 x 380 x 210 mm	710 Watt
ABOX® PH 800	31,8	DN 80...	1.300 x 270 mm	600 x 380 x 210 mm	900 Watt
ABOX® PH 1000	52	DN 100...	1.300 x 320 mm	600 x 600 x 210 mm	1100 Watt
ABOX® PH 1200	60	DN 100...	1.700 x 355 mm	760 x 760 x 300 mm	1300 Watt



ABOX® C series

Biodosimetrically tested and certified UV systems in accordance with
 ÖNORM M 5873-1:2001

- ✓ Drinking water
- ✓ Process water for beverage and food industry
- ✓ Drinking water stations

Übersicht UV-Anlagenserie ABOX® - C
 Overview UV plant series ABOX® - C
 Aperçu UV série d'installation ABOX® - C

Bezeichnung Description Désignation produit	Q _{max} m³/h	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® C 60	0,8 - 1,45	R 3/4"	600 x 160 mm	255 x 360 x 165 mm	75 Watt
ABOX® C 200	2,6 - 6,60	R 2"	1.300 x 185 mm	255 x 360 x 165 mm	210 Watt
ABOX® C 600	8,5 - 28	DN 80	1.300 x 370 mm	380 x 600 x 210 mm	700 Watt



ABOX® GL series

Certified UV systems in accordance with Germanic Lloyd

- ✓ Water preparation on ships, yachts and boats
- ✓ Maritime applications
- ✓ Oil platforms

Übersicht UV-Anlagenserie ABOX® - GL
 Overview UV plant series ABOX® - GL
 Aperçu UV série d'installation ABOX® - GL

Bezeichnung Description Désignation produit	Q _{max} l/h	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® GL 40	1.800	R 3/4"	600 x 165 mm	400 x 255 x 120 mm	55 Watt
ABOX® GL 64	4.300	R 1"	1.000 x 165 mm	400 x 255 x 120 mm	75 Watt
ABOX® GL 120	6.900	R 1 1/2"	1.000 x 210 mm	400 x 255 x 120 mm	135 Watt
ABOX® GL 200	14.500	R 2"	1.200 x 210 mm	400 x 255 x 120 mm	210 Watt



ABOX® TOC series

UV system for TOC Reduction

- ✓ Pharmaceutical industry
- ✓ Semiconductor production
- ✓ Medical applications
- ✓ Power station applications

Übersicht UV-Anlagenserie ABOX® - TOC
 Overview UV plant series ABOX® - TOC
 Aperçu UV série d'installation ABOX® - TOC

Bezeichnung Description Désignation produit	Q _{max} m ³ /h 1600 J/m ²	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® TOC 11	0,05	DN 15	390 x 120 mm	360 x 255 x 165 mm	20 Watt
ABOX® TOC 25	0,35	DN 20	600 x 180 mm	360 x 255 x 165 mm	55 Watt
ABOX® TOC 120	2,3	DN 25	1.000 x 210 mm	360 x 255 x 165 mm	135 Watt
ABOX® TOC 200	3,1	DN 40	1.350 x 210 mm	360 x 255 x 165 mm	250 Watt
ABOX® TOC 320	5,5	DN 50	1.700 x 210 mm	360 x 255 x 165 mm	380 Watt
ABOX® TOC 600	8	DN 50...	1.350 x 370 mm	600 x 380 x 210 mm	650 Watt
ABOX® TOC 800	10	DN 65...	1.350 x 370 mm	600 x 600 x 210 mm	900 Watt
ABOX® TOC 1000	14	DN 80...	1.350 x 470 mm	600 x 600 x 210 mm	1100 Watt
ABOX® TOC 1400	18	DN 80...	1.350 x 470 mm	760 x 760 x 300 mm	1400 Watt
ABOX® TOC 1800	24	DN 80...	1.350 x 470 mm	760 x 760 x 300 mm	1800 Watt
ABOX® TOC 2400	28	DN 100...	1.700 x 590 mm	760 x 760 x 300 mm	2400 Watt
ABOX® TOC 3000	32	DN 150...	1.700 x 590 mm	760 x 760 x 300 mm	3000 Watt



ABOX® SL series

- ✓ Air treatment of production facilities
- ✓ elimination of odours

Übersicht UV-Anlagenserie ABOX® - SL
 Overview UV plant series ABOX® - SL
 Aperçu UV série d'installation ABOX® - SL

Bezeichnung Description Désignation produit	Q _{max} N m³/h	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® SL 240	60	1500 x 250 mm	600 x 380 x 210 mm	290 Watt
ABOX® SL 360	110	1.500 x 255 mm	600 x 380 x 210 mm	410 Watt
ABOX® SL 600	170	1.700 x 255 mm	600 x 600 x 210 mm	650 Watt
ABOX® SL 1000	255	2.100 x 255 mm	600 x 600 x 210 mm	1100 Watt



ABOX® M air/exhaust

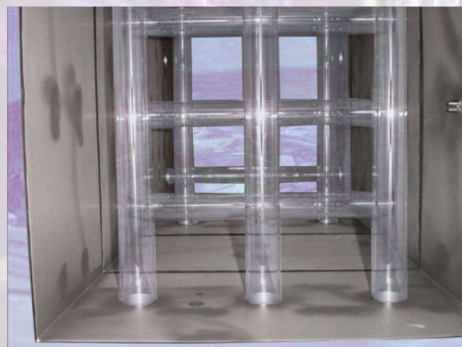
- ✓ Air and exhaust treatment
- ✓ Elimination of odours
- ✓ Air sterilisation in the food industry
- ✓ Air treatment of air conditioning systems

Übersicht UV-Anlagenserie ABOX® - ML

Overview UV plant series ABOX® - ML

Aperçu UV série d'installation ABOX® - ML

Bezeichnung Description Désignation produit	Q _{max} N m ³ /h Rel. LF 50-90%	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® ML 1	75	1500 x 300 x 200 mm	360 x 255 x 165 mm	95 Watt
ABOX® ML 2	300	1500 x 400 x 300 mm	360 x 255 x 165 mm	200 Watt
ABOX® ML 3	500	1500 x 610 x 300 mm	500 x 500 x 210 mm	290 Watt
ABOX® ML 4	1.200	1500 x 500 x 400 mm	600 x 380 x 210 mm	400 Watt
ABOX® ML 6	3.000	1500 x 610 x 400 mm	600 x 380 x 210 mm	650 Watt
ABOX® ML 8	4.000	1500 x 610 x 400 mm	500 x 500 x 210 mm	800 Watt
ABOX® ML 10	5.000	1500 x 800 x 600 mm	600 x 600 x 210 mm	950 Watt



ABOX® WAS series

For removal of chemicals, odours and other organic components from drinking and service water

- ✓ Private water supply
- ✓ Mobile water preparation
- ✓ Mountain huts, maritime applications
- ✓ Final sterilisation

Übersicht UV-Anlagenserie ABOX® - WAS
 Overview UV plant series ABOX® - WAS
 Aperçu UV série d'installation ABOX® - WAS

Bezeichnung Description Désignation produit	Q _{max} l/h	Anschluss Flanges Connection	UV-Strahler UV emitter Émetteur UV	Filter Filter Filtre	Kerzenfilter / Beutelfilter Filter cartridge/ Bag filter Filtre de bougie / Filtre de sac	Nennleistung Total power plant Puissance nominale
ABOX® WAS 500	500	1/2"	11 Watt	10"	Kerzenfilter/filter cartridge/filtre de bougie	15 Watt
ABOX® WAS 1000	1.200	3/4"	16 Watt	20"	Kerzenfilter/filter cartridge/filtre de bougie	20 Watt
ABOX® WAS 3000	2.500	1 1/2"	80 Watt	20"	Kerzenfilter/filter cartridge/filtre de bougie	80 Watt
ABOX® WAS 5000	5.000	2"	120 Watt	20"	Beutelfilter/bag filter/filtre de Sac	135 Watt



ABOX® MS series

Public and private swimming pools

- ✓ Efficient breakdown of bound chlorine in swimming pool water
- ✓ Inactivation of parasites and legionella prophylaxis
- ✓ Inactivate of bacteria resistant to chlorine

Übersicht UV-Anlagenserie ABOX® - MS
 Overview UV plant series ABOX® - MS
 Aperçu UV série d'installation ABOX® - MS

Bezeichnung Description Désignation produit	Q _{max} m ³ /h T _{1cm} 96%	Anschluss Flanges Type de connection	Reaktor Maße L x B Reactor dimensions L x W Dimensions réacteur Lo x La	Schaltkasten Control unit Coffret de commande	Nennleistung Total power plant Puissance nominale
ABOX® MS 0,5	14	DN 65	560 x 245 mm	500 x 500 x 300 mm	0,65 KW
ABOX® MS 1	24	DN 65/80	600 x 300 mm	500 x 500 x 300 mm	1,2 KW
ABOX® MS 2	42	DN 65/80	600 x 300 mm	500 x 500 x 300 mm	2 KW
ABOX® MS 3	131	DN 150	750 x 380 mm	600 x 380 x 350 mm	3 KW
ABOX® MS 5	247	DN 200	850 x 400 mm	600 x 380 x 350 mm	5 KW
ABOX® MS 8	481	DN 250...	1.100 x 480 mm	760 x 600 x 350 mm	8 KW
ABOX® MS 10	742	DN 250...	1.300 x 480 mm	760 x 600 x 350 mm	10 KW



ABOX® M/TRM modules

UV modules for use in water containers, air ducts and for surface disinfection

- ✓ Prevention of bacterial growth in water containers
- ✓ Disinfection of surfaces in the food and packaging industry
- ✓ Air disinfection in air conditioning, e.g. in airlocks
- ✓ Exhaust air cleaning and air washers
- ✓ Air room modules

Übersicht ABOX® - M

Overview ABOX® - M

Aperçu ABOX® - M

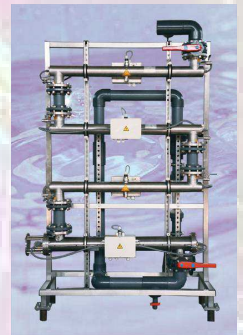
Bezeichnung Description Désignation produit	UV-Strahler UV emitter Émetteur UV	Maße L x B dimensions L x W Dimensions Lo x La	Nennleistung Total power plant Puissance nominale
ABOX® M 6	6 Watt	340 x 60 mm	10 Watt
ABOX® M 8	8 Watt	410 x 60 mm	10 Watt
ABOX® M 11	11 Watt	340 x 60 mm	15 Watt
ABOX® M 16	16 Watt	410 x 60 mm	22 Watt
ABOX® M 25	25 Watt	565 x 60 mm	40 Watt
ABOX® M 36	36 Watt	945 x 60 mm	55 Watt
ABOX® M 64	60 Watt	945 x 60 mm	75 Watt
ABOX® M 80	80 Watt	945 x 60 mm	95 Watt
ABOX® M 120	120 Watt	945 x 60 mm	135 Watt



Modified UV systems

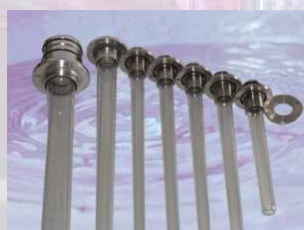
Building-specific and project-specific adaptation of ABOX® UV systems

- ✓ Reactor geometry
- ✓ Flange connections
- ✓ Equipment variants
- ✓ Functional monitoring



ABOX® components

- ✓ Switch cabinets
- ✓ UV monitors
- ✓ UV lamps
- ✓ Immersion tubes and fastening components
- ✓ UV sensors
- ✓ Electronic ballasts



Engineering

Engineering and special system production

Development, design and construction of
turnkey testing, pilot and special systems

Key technologies:

- ✓ Adsorption and desorption processes
- ✓ Physical separation processes (sedimentation, filtration, microfiltration)
- ✓ UV photo oxidation
- ✓ UV disinfection
- ✓ UV air treatment
- ✓ Vacuum technology

Services

- ✓ Training
- ✓ Laboratory testing
- ✓ UV transmission measurement
- ✓ Installation and maintenance



Application examples



UV sterilisation of waste water



UV treatment for TOC reduction



UV disinfection of process water



UV treatment of large volume flows



UV disinfection of process water



UV treatment of swimming pool water



UV sterilisation of swimming pool water

Environmentally-friendly solutions

- ✓ For public and private swimming pools
- ✓ Swimming ponds
- ✓ Natural pools
- ✓ Garden ponds



Highlights



UV treatment for water preparation for CSB reduction at the Hamburg Dock



UV treatment for a public swimming pool on the 37th floor overlooking the Singapore skyline and harbour



UV treatment for water preparation in Antwerp for $Q_{\max.} 2 \times 500 \text{ m}^3/\text{h}$

Communication

Contact information



UMEX GmbH
Alkersleber Weg 151 a
D- 99334 KIRCHHEIM

Tel.: +49 36200 641 0
Fax: +49 36200 641 20
info@umex-gmbh.de

www.umex-gmbh.de
www.abox-uv.de
www.cwvs.de

Amtsgericht Jena HRB 100920
Ust.- ID-Nr.: DE 150 114 194





Notes

Contact

www.umex-gmbh.de/kontakt.

ABOX® UV technology for water, air and surfaces

