

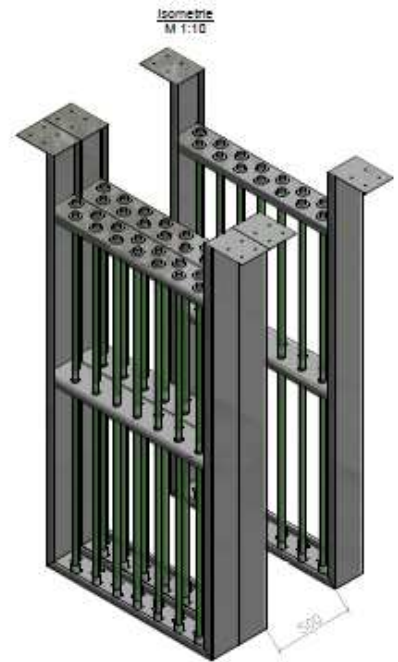
## ABOX<sup>®</sup> MC

UV systems for water treatment in the channel or basin

Simple and reliable solutions  
for the chemical-free water treatment

### Applications

- ✓ industrial wastewater
- ✓ Industrial Gray Water Applications
  
- ✓ Wastewater in sewage treatment plants
- ✓ Waste water reuse applications
- ✓ Combined sewer overflow and rainwater disinfection
- ✓ Agricultural irrigation
- ✓ Circulatory systems of aquaculture
- ✓ Aquaculture / fish farming



### Functionality and benefits

- ✓ Chemical-free and environmentally friendly water treatment
- ✓ Dose calculation according to certified basis
- ✓ No by-products
- ✓ Modular system concept and frame system
- ✓ Systems made of stainless steel, PP or PE-HD
- ✓ Easy installation, operation and maintenance
- ✓ Optionally with flow and UV intensity monitoring
- ✓ Customized systems can be modified

## Module

Disinfection module for various applications for chemical-free disinfection

### 10 – 530 m<sup>3</sup>/h pro module - to 12.700 m<sup>3</sup>/d

|                           |  |
|---------------------------|--|
| Design:                   | Frame module based on the ABOX® M modules, for vertical installation in channels or basins with splash guard, for installation without tools |
| Material:                 | stainless steel 316, PP or PE HD black   |
| Channel width:            | 500, 1000 und 1500 mm  |
| Water level:              | ±10%, 520, 920, 1200, 1600 und 2200 mm   |
| Operating water pressure: | max. 1 bar   |
| Optional:                 | To the conditions and flow rate adapted module frames  |
| UV lamp:                  | Low-pressure lamps HG 25/4,<br>Low-pressure amalgam lamps HGA 120/4, 200/4 und 300 Watt  |
| Immersion tube:           | PN glass   |
| Brackets:                 | Stainless steel head, incl. Seals IP 68  |
| Counter brackets:         | Pipe sleeve with spring for balancing the dynamics in the water flow   |

## Switch cabinet

Compliant with IEC 61439-1 / 2, VDE guidelines, fully wired and labeled.

|                   |  |
|-------------------|--|
| Material:         | RITTAL stainless steel                     |
| Supply voltage:   | 1 Ph, 230 V, 50/60 Hz, 3 Ph 400V, 50/60 Hz |
| Power:            | 200 W ..... 6,4 KW pro Modul               |
| Protection Class: | IP 54                                      |

### Includes:

- 1 pc. Main switch
- 1 pc. Hand / Auto switch
- 1 pc. operating hours counter
- 1 pc. emergency stop switch (mushroom pushbutton)
- 2 pc. operating LED green, red
- 1 pc. Filterfan
- 1 pc. Outlet filter

..... fuse 6.3 A ... 32 A

..... Electronic ballasts with soft start for supplying the lamps

..... Lamps supply cable 6 meters

... .. Lamps cover IP 68 execution

X1 terminal block includes:

Input supply voltage L, N, PE

Remote control 8 .... 230V, VAC / DC

Output time relay 230V / 6A, potential-free contact

Collective fault 230V / 6A, potential-free contact

## **Optional**

### **UV monitoring**

For the continuous selective measurement and monitoring of UV radiation between the UV lamps

Includes:

- 1 pc UV monitor (integrated into the system control)
- 3 pc light emitting diodes for signaling the operating status, (operation, pre-warning point / cleaning and switching point), at the same time display of the UV intensity, two-line display
- 1 pc photo sensor in material 1.4404 - stainless steel housing, incl. Sensor cable for recording the UV irradiance, quartz glass lens for extending the detection range photoelement for 254 nm with high accuracy and long life

### **temperature monitoring**

For continuous temperature monitoring of the water

Includes:

- 1 pc. temperature monitor (integrated into the system control)
  - 1 pc. PT 100
- Potential-free contact, 230VAC / 6A

### **Flow monitor**

For the protection of UV systems for continuous monitoring of water flow

Includes:

- 1 pc sensor (integrated into the system control)
- Potential-free contact, 230VAC / 6A

### **Flow Mixing**

Special installations for optimal water flow through the system

## Technical data

| Typ   | ABOX® MC   | ABOX® MC   | ABOX® MC   | ABOX® MC   |
|---|--|------------|------------|------------|
|   | 200  | 500        | 800        | 1200       |
| Q <sub>max</sub> at T <sub>1cm</sub> 98 ..... 65% | 10 m³/h  | 20 m³/h    | 35 m³/h    | 80 m³/h    |
| Height of water level mm                          | 520  | 920        | 1200       | 1600/2200  |
| Channel width                                     | 500 mm   |            |            |            |
| Modul material                                    | stainless steel 1.4571/1.4404 (316), PP, PE HD 100                                   |            |            |            |
| Seals   | FPM, FKM, PTFE   |            |            |            |
| Water pressure                                    | max. 1 bar   |            |            |            |
| Max. Water temperature                            | 35°C   | 55°C       |            |            |
| Protection Class                                  | IP 68  |            |            |            |
| Diameters   | See table type series  |            |            |            |
| Cable length                                      | UV lamp cable, UV sensor cable, PE cable, 6 meters                                   |            |            |            |
| UV-lamp   | HG 50/4W   | HGA 120/4W | HGA 200/4W | HGA 320/4W |
| Number of lamps                                   | 4  | 4          | 4          | 4          |
| Lamp life timer h                                 | 8.000-10.000 h in continuous operation   |            |            |            |
| Switching frequency                               | Emitter life is guaranteed at max. 2 ON and Off operations per 24 hours of operation |            |            |            |
| Switch cabinet<br>for wall or rack mounting       | RITTAL stainless steel in mm LxBxT   |            |            |            |
|   | 600x380x210 mm   |            |            |            |
| weight kg ca.                                     | 28   |            |            |            |
| Cabinet protection                                | IP 54  |            |            |            |
| Supply voltage                                    | 1L/N/PE, 230V AC ± 10%, 50/60 Hz (TN-S, TN-C Netz**)                                 |            |            |            |
| Ambient temperature                               | 2-40° C with maximum air humidity of 70% at 40° C                                    |            |            |            |
| Power Consumption ca.                             | 200 W  | 500 W      | 800 W      | 1200W      |
| Optionen (Additional charge)                      |  |            |            |            |
| UV intensity monitoring                           | UV monitor + UV sensor   |            |            |            |
| Flow monitor                                      | Potential-free contact   |            |            |            |
| Temperature monitoring                            | PT 100 + monitoring, Variably adjustable,<br>Signal: 230 VAC / 6A                    |            |            |            |
| Lamp cable  | 6-12 meters  |            |            |            |

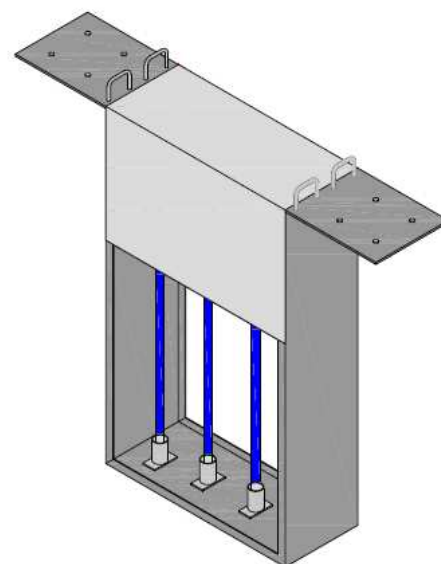
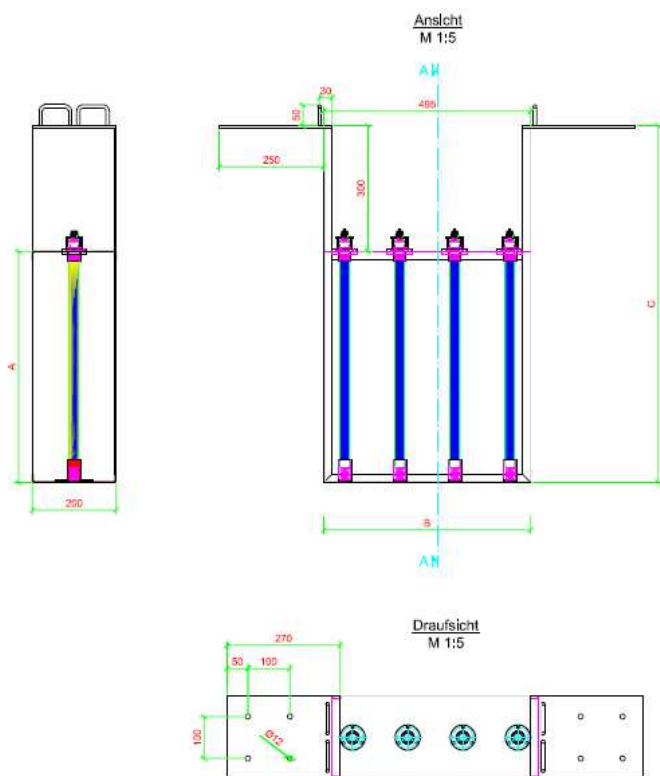
## Technical data

| Typ   | ABOX® MC   | ABOX® MC   | ABOX® MC                          | ABOX® MC   |
|---|--|------------|-----------------------------------|------------|
|   | 400  | 1000       | 1600                              | 2500       |
| Q <sub>max</sub> at T1cm 98 ..... 65%       | 40 m³/h  | 155 m³/h   | 240 m³/h                          | 350 m³/h   |
| Height of water level mm                    | 520  | 920        | 1200                              | 1600/2200  |
| Channel width                               | 1000 mm  |            |                                   |            |
| Modul material                              | stainless steel 1.4571/1.4404 (316), PP, PE HD 100                                   |            |                                   |            |
| Seals                                       | FPM, FKM, PTFE   |            |                                   |            |
| Water pressure                              | max. 1 bar   |            |                                   |            |
| Max. Water temperature                      | 35°C   | 55°C       |                                   |            |
| Protection Class                            | IP 68  |            |                                   |            |
| Diameters                                   | See table type series  |            |                                   |            |
| Cable length                                | UV lamp cable, UV sensor cable, PE cable, 6 meters                                   |            |                                   |            |
| UV-lamp                                     | HG 50/4W   | HGA 120/4W | HGA 200/4W                        | HGA 320/4W |
| Number of lamps                             | 8  | 8          | 8                                 | 8          |
| Lamp life timer h                           | 8.000-10.000 h in continuous operation   |            |                                   |            |
| Switching frequency                         | Emitter life is guaranteed at max. 2 ON and Off operations per 24 hours of operation |            |                                   |            |
| Switch cabinet<br>for wall or rack mounting | RITTAL stainless steel in mm LxBxT   |            |                                   |            |
|   | 600x600x210 mm   |            |                                   |            |
| weight kg ca.                               | 34   |            |                                   |            |
| Cabinet protection                          | IP 54  |            |                                   |            |
| Supply voltage                              | 1L/N/PE230V AC ± 10%,<br>50/60 Hz  |            | 3L/N/PE400V AC ± 10%,<br>50/60 Hz |            |
| Ambient temperature                         | 2-40° C with maximum air humidity of 70% at 40° C                                    |            |                                   |            |
| Power Consumption                           | 400 W  | 1000 W     | 1600 W                            | 2500 W     |
| Optionen (Additional charge)                |  |            |                                   |            |
| UV intensity monitoring                     | UV monitor + UV sensor   |            |                                   |            |
| Flow monitor                                | Potential-free contact   |            |                                   |            |
| Temperature monitoring                      | PT 100 + Monitoring, Variably adjustable,<br>Signal: 230 VAC / 6A                    |            |                                   |            |
| Lamp cable                                  | 6-12 meters  |            |                                   |            |

## Technical data

| Typ                                      | ABOX® MC   | ABOX® MC   | ABOX® MC                           | ABOX® MC   |
|--|--|------------|------------------------------------|------------|
|  | 600  | 1500       | 2400                               | 3800       |
| Qmax at T1cm 98 ..... 65%                | 90 m³/h  | 250 m³/h   | 410 m³/h                           | 530 m³/h   |
| Height of water level mm                 | 520  | 920        | 1200                               | 1600/2200  |
| Channel width                            | 1500 mm  |            |                                    |            |
| Modul material                           | stainless steel 1.4571/1.4404 (316), PP, PE HD 100                                   |            |                                    |            |
| Seals                                    | FPM, FKM, PTFE   |            |                                    |            |
| Water pressure                           | max. 1 bar   |            |                                    |            |
| Max. Water temperature                   | 35°C   | 55°C       |                                    |            |
| Protection Class                         | IP 68  |            |                                    |            |
| Diameters                                | See table type series  |            |                                    |            |
| Cable length                             | UV lamp cable, UV sensor cable, PE cable, 6 meters                                   |            |                                    |            |
| UV-lamp                                  | HG 50/4W   | HGA 120/4W | HGA 200/4W                         | HGA 320/4W |
| Number of lamps                          | 12   | 12         | 12                                 | 12         |
| Lamp life timer h                        | 8.000-10.000 h in continuous operation   |            |                                    |            |
| Switching frequency                      | Emitter life is guaranteed at max. 2 ON and Off operations per 24 hours of operation |            |                                    |            |
| Switch cabinet for wall or rack mounting | RITTAL stainless steel in mm LxBxT   |            |                                    |            |
|  | 760x760x300 mm   |            |                                    |            |
| weight kg ca.                            | 48   |            |                                    |            |
| Cabinet protection                       | IP 54  |            |                                    |            |
| Supply voltage                           | 1L/N/PE 230V AC ± 10%,<br>50/60 Hz   |            | 3L/N/PE 400V AC ± 10%,<br>50/60 Hz |            |
| Ambient temperature                      | 2-40° C with maximum air humidity of 70% at 40° C                                    |            |                                    |            |
| Power Consumption ca.                    | 600 W  | 1500 W     | 2400 W                             | 3800 W     |
| Optionen (Additional charge)             |  |            |                                    |            |
| UV intensity monitoring                  | UV Monitor, UV Sensor  |            |                                    |            |
| Flow monitor                             | Potential-free contact   |            |                                    |            |
| Temperature monitoring                   | PT 100 + Monitoring, Variably adjustable,<br>Signal: 230 VAC / 6A                    |            |                                    |            |
| Lamp cable                               | 6-12 meters  |            |                                    |            |

## Installation dimensions



## Dimension table type series ABOX® MC

| Typ     | A           | B    | C           |
|---------|-------------|------|-------------|
| MC 200  | 520         | 495  | 855         |
| MC 400  | 520         | 995  | 855         |
| MC 600  | 520         | 1495 | 855         |
| MC 500  | 920         | 495  | 1230        |
| MC 1000 | 920         | 995  | 1230        |
| MC 1500 | 920         | 1495 | 1230        |
| MC 800  | 1200        | 495  | 1550        |
| MC 1600 | 1200        | 995  | 1550        |
| MC 2400 | 1200        | 1495 | 1550        |
| MC 1200 | 1600 / 2200 | 495  | 1950 / 2540 |
| MC 2500 | 1600 / 2200 | 995  | 1950 / 2540 |
| MC 3800 | 1600 / 2200 | 1495 | 1950 / 2540 |

Dimension A = max. water level  $\pm$  10%

Dimension B = outside dimension frame width

Dimension C = total height

