# LOTUS MINI

## Chlorine Dioxide Generator

Data Sheet

## LOTUS MINI

LOTUS MINI system produces, doses and controls Chlorine Dioxide for water disinfection.

Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO2 7,5%).

Chlorine dioxide produced by LOTUS MINI is set to be proportional to the circulating water flow or based on a set-point – it is then dosed into the water flow. There is no storage of chlorine dioxide hence no chlorine dioxide gas or concentrated solutions exist outside of the process application.

LOTUS MINI is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber.

Multi function valves on the injection points ensure the security of the reaction chamber.

The base chemicals are stored in tanks and fed into the reaction chamber through suction lances. Integrated level switches automatically stop the pumps when the tanks are empty.

LOTUS MINI system has got:
- LOTUS control instrument
- HCl (red) and NaClO2 (blue) metering pumps
- pump for dilution water (grey)
- 3 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- reaction chamber
- injection valves
- 2 suction lances

**GAS SENSOR OPTION**
LOTUS MINI with gas sensor detection.

### ADVANTAGES
- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No ClO2 loss due to closed reaction chamber
- Diluted chemicals

### FUNCTIONS
- Instantaneous ClO2 production
- ClO2 dosing in proportional mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- ERMES communication
- mA output
- Service due date
- USB data log (option)
- Ethernet module (option)
- GSM/GPRS internal modem (option)

### FEATURES
- ClO2 concentration: 2 gr/l
- Flow control input (flow alarms)
- Tank level control (level alarms)
- HCl (red), NaClO2 (blue) and dilution water (grey) metering pumps
- 3 SEFL pump dosing check
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- PVC reaction chamber
- ASA (Acrylonitrile Styrene Acrylate) enclosure
- IP65 protection (NEMA4x) of LOTUS control instrument and pumps
- Wheel control for easy programming
- Working temperature: 0/45°C (32/110°F)

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ISO 9001:2015 No.07728/0
ISO 14001:2015 No.00997/0
ISO 45001:2018 No.01121/0

# LOTUS MINI

Data Sheet

## Chlorine Dioxide Generator

| | LOTUS MINI 8 | LOTUS MINI 20 |
|---|---|---|
| ClO2 max capacity (gr/h) | 8 | 20 |
| ClO2 max capacity (gr/day) | 192 | 480 |
| Max working pressure (bar) | 8 | 8 |
| Max water inlet pressure (bar) | 5 | 5 |
| Max chemicals consumption (l/h) | 0.2<br>0.2 | 0.5<br>0.5 |
| Concentration (gr/l) | 2 | |
| Power supply | 230 VAC (190/265 VAC)<br>115 VAC (90/135 VAC) | |
| Maximum power consumption (W) | 60 | 66 |

* Max capacity (gr/day) is referred to a 100% capacity / 24h.

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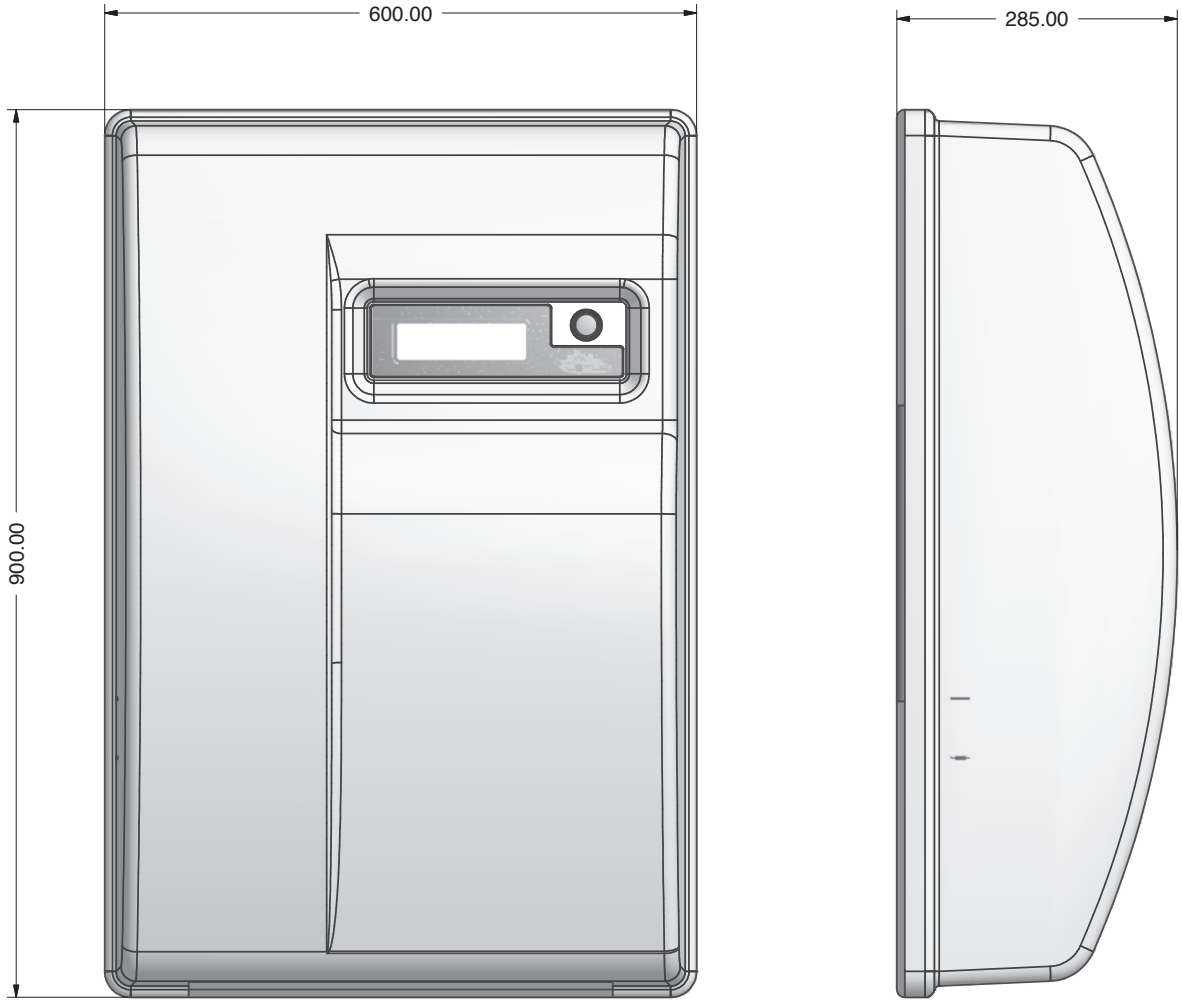
## LOTUS MINI Dimensions

[mm].

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# LOTUS MINI

## Chlorine Dioxide Generator

Data Sheet

## LOTUS MINI WITH PROBE MEASURE

LOTUS MINI system produces, doses and controls Chlorine Dioxide for water disinfection.

Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO2 7,5%).
It is provided with a $ClO_2$ probe (SCL17 o SCL2) or a ORP probe (ERH), probe holder and filter.

Chlorine dioxide produced by LOTUS MINI is set to be proportional to the circulating water flow or based on a set-point – it is then dosed into the water flow. There is no storage of chlorine dioxide hence no chlorine dioxide gas or concentrated solutions exist outside of the process application.

LOTUS MINI is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber.

Multi function valves on the injection points ensure the security of the reaction chamber.

The base chemicals are stored in tanks and fed into the reaction chamber through suction lances. Integrated level switches automatically stop the pumps when the tanks are empty.

LOTUS MINI system has got:

- LOTUS control instrument
- HCl (red) and NaClO2 (blue) metering pumps
- pump for dilution water (grey)
- 3 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- reaction chamber
- injection valves
- $ClO_2$ probe (LOTUS MINI SCL2 - LOTUS MINI SCL17) or ORP probe (LOTUS MINI ERH)
- probe holder
- filter
- 2 suction lances

**GAS SENSOR OPTION**
LOTUS MINI with gas sensor detection.

### ADVANTAGES

> Reaction at controlled pressure
> High degree of stability of the chlorine dioxide solution
> No $ClO_2$ loss due to closed reaction chamber
> Diluted chemicals

### FUNCTIONS

> Instantaneous $ClO_2$ production
> $ClO_2$ dosing in proportional mode
> Flow control input (flow alarm)
> Tank level controls (level alarms)
> Water meter input
> Stand-by input
> $ClO_2$ probe reading (LOTUS MINI SCL2 - LOTUS MINI SCL17)
> Temperature probe reading (probe and accessories not included)
> mV probe reading (LOTUS MINI ERH)
> Real time production data
> Pumps and SEFL flow sensors monitoring
> Permanent data storage with system
> ERMES communication
> mA output
> Service due date
> USB data log (option)
> Ethernet module (option)
> GSM/GPRS internal modem (option)

### FEATURES

> ClO2 concentration: 2 gr/l
> Flow control input (flow alarms)
> Tank level control (level alarms)
> HCl (red), NaClO2 (blue) and dilution water (grey) metering pumps
> 3 SEFL pump dosing check
> MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
> PVC reaction chamber
> ASA (Acrylonitrile Styrene Acrylate) enclosure
> IP65 protection (NEMA4x) of LOTUS control instrument and pumps
> Wheel control for easy programming
> Working temperature: 0/45°C

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# LOTUS MINI

Data Sheet

## Chlorine Dioxide Generator

**Lotus AIR ERH**
Version with ERH for ORP measurement.

**Lotus AIR SCL2**
Version with SCL2 (cold water) for $CLO_2$ measurement.

**Lotus AIR SCL17**
Version with SCL17 (hot water) for $CLO_2$ measurement.

| Features / Models | LOTUS MINI 8 ERH<br>LOTUS MINI 8 SCL2<br>LOTUS MINI 8 SCL17 | LOTUS MINI 20 ERH<br>LOTUS MINI 20 SCL2<br>LOTUS MINI 20 SCL17 |
|---|---|---|
| ClO2 max capacity (gr/h) | 8 g/h | 20 g/h |
| ClO2 max capacity (gr/day) | 192 | 480 |
| Max chemicals consumption (l/h) | 0.2 l/h (HCl)<br>0.2 l/h (NaClO2) | 0.5 l/h (HCl)<br>0.5 l/h (NaClO2) |
| Max working pressure (bar) | 8 bar | |
| Max water inlet pressure (bar) | 5 bar | |
| Concentration (gr/l) | 2 g/l | |
| Power supply | 230 VAC (190÷265 VAC)<br>115 VAC (90÷135 VAC) | |
| Maximum power consumption (W) | 60 | 66 |

* Max capacity (gr/day) is referred to a 100% capacity / 24h.

# Option

- Gas sensor

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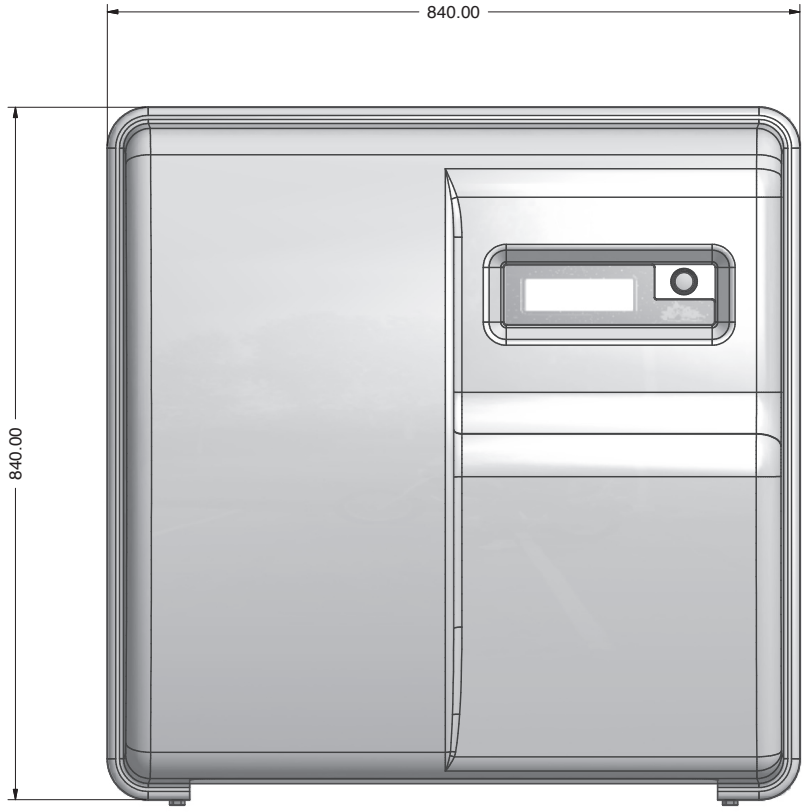
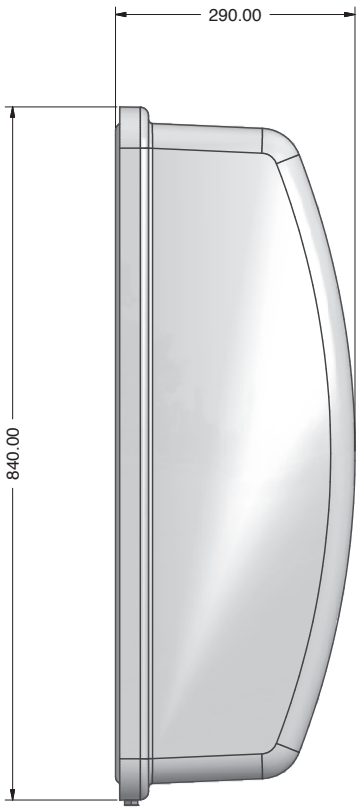
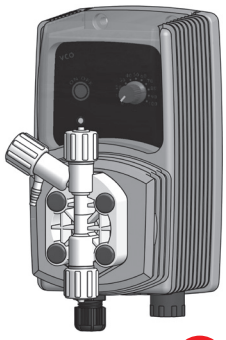
# LOTUS MINI WITH PROBE MEASURE Dimensions



# "VIS" series Metering Pumps

Data Sheet



LISTED
(on request)

## Configuration Code

- Wall mounted
- Microprocessor technology
- Stroke speed adjustment
- Manual venting PVDF pump head
- All liquid ends (pump head, injection valve, foot filter) ....PVDF
- Enclosure .....PPO
- Environment temperature.....0-45°C( 32-113°F)
- Chemical temperature.....0-50°C (32-122°F)
- Transportation and storage temperature.....-10-50°C (14-122°F)
- Installation class .....II
- Pollution level.....2
- Audible noise.....70.4db(A)
- .....67.4db(A) silenced mod.
  .....66.4db(A) ultra-silenced mod.
- Protection degree .....IP65 (% working RU: 85% T<=40°C; 70% T=50°C - without condensing water)

## Technical features

| INFORMATION | | | | | |
|---|---|---|---|---|---|
| MODEL | Strokes speed | | Power consumption at max flow (230 VAC) | Power consumption at max flow (115 VAC) | Weight |
| | min | max | | | |
| 1001 | 18 | 180 | 16 | 11 | 2,2 KG (4.85 LBS) |
| 1005 | 18 | 180 | 16 | 13 | |
| 1010 | 18 | 180 | 22 | 15 | |

| CAPACITY | | | | | | |
|---|---|---|---|---|---|---|
| MODEL | FLOW | | | cc per STROKE | Maximum pressure | |
| | min cc/h | max l/h | Max GPH | | bar | PSI |
| 1001 | 399,6 | 1 | 0,2 | 0,17 | 10 | 145 |
| 1005 | 496,8 | 5 | 1,3 | 0,46 | 10 | 145 |
| 1010 | 1004,4 | 10 | 2,6 | 0,93 | 10 | 145 |

| FUSE | | |
|---|---|---|
| MODEL | 230 VAC | 115 VAC |
| 1001 | 800 | 400 |
| 1005 | 1 | 500 |
| 1010 | 1.25 | 630 |

| QUANTITY | PACKAGE CONTENT |
|---|---|
| n. 1 | Assembly kit |
| n. 1 | 5 X 20 delayed fuse |
| n. 1 | Level probe with axial foot filter (PVDF) (level probe not in CO model) |
| n. 1 | 0,3 Bar injection valve (PVDF) |
| m 2 | Delivery hose |
| m 2 | Suction hose |
| m 2 | Discharge hose |
| n.1 | Operating manual |

| POWER SUPPLY |
|---|
| 230 VAC (190-265 VAC) |
| 115 VAC (90-135 VAC) |
| 24 VAC (20-32 VAC) |
| 12 VDC (10-16 VDC) |

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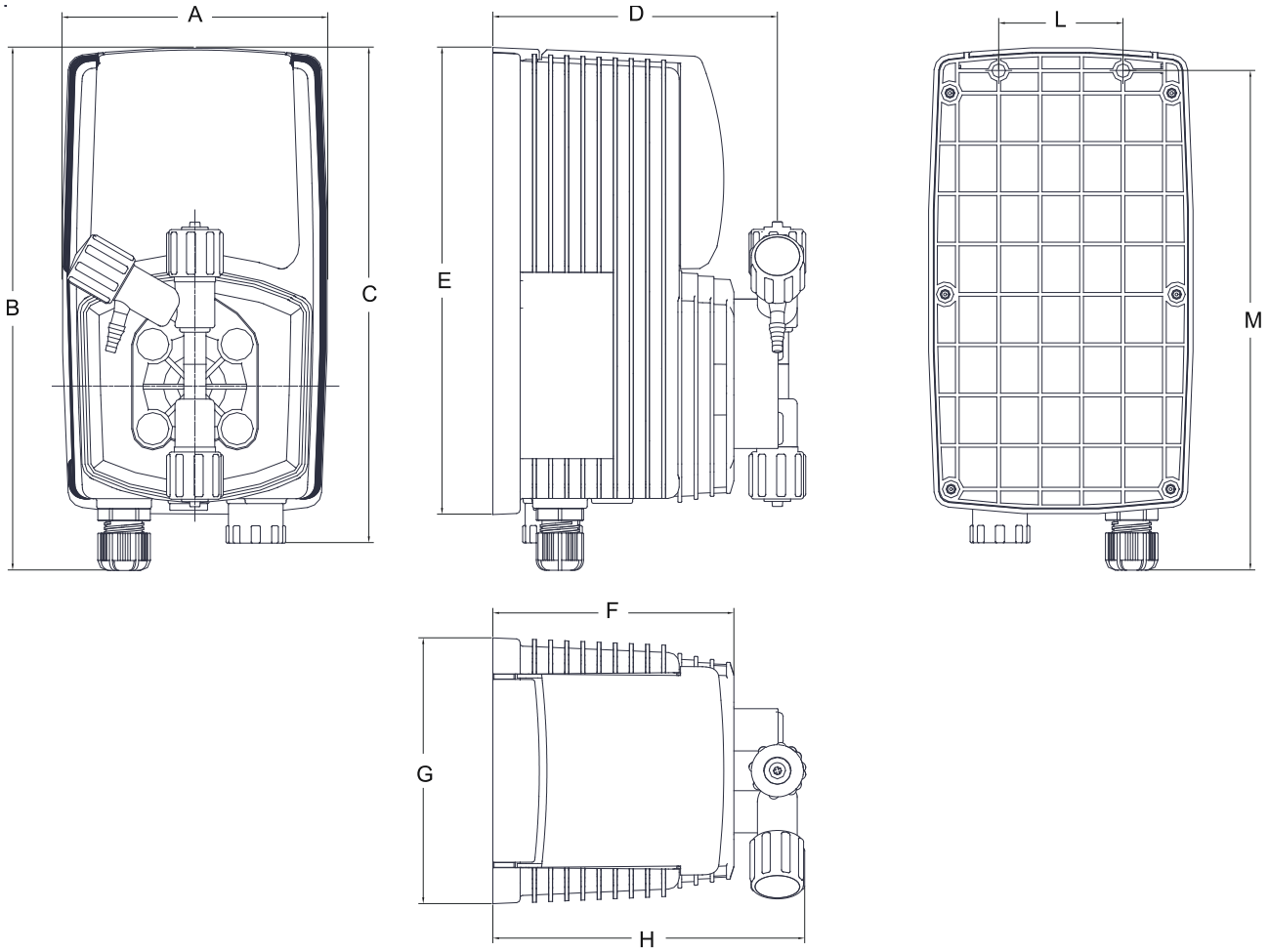
# Dimension

mm [inches]

| DIMENSIONS | | |
|---|---|---|
| | *mm* | *inches* |
| *A* | 106.96 | 4.21 |
| *B* | 210.44 | 8.28 |
| *C* | 199.44 | 7.85 |
| *D* | 114.50 | 4.50 |
| *E* | 187.96 | 7.40 |
| *F* | 97.00 | 3.81 |
| *G* | 106.96 | 4.21 |
| *H* | 125.47 | 4.93 |
| *L* | 50.00 | 1.96 |
| *M* | 201.00 | 7.91 |

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