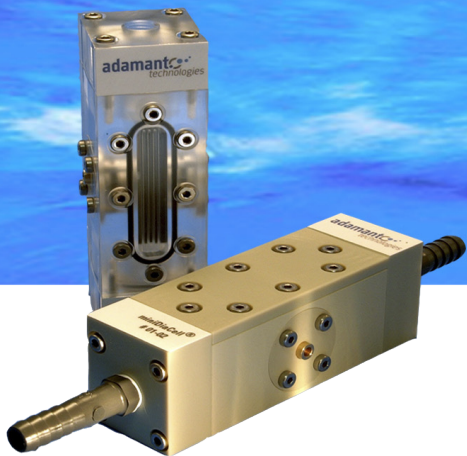


Mini-DiaCell®

description and specifications



Mini-DiaCell® – a compact and modular concept for effective water treatment – to restore and protect domestic and industrial water quality

Adamant Technologies has developed the electrochemical module Mini-DiaCell®, based on Adamant®-Electrodes. The electrodes consist in a boron-doped diamond (BDD) coating deposit on a silicon plate. Depending on their configuration, such devices allow direct electrolysis for different kinds of water treatment applications.

Adamant®-Electrodes

Typical features

- Current density: up to 1 A/cm²
- Monopolar electrodes (single-sided BDD)
- Bipolar electrodes (double-sided BDD)

Electrode materials

Substrate	
Material	p-silicon, 100 mΩcm, 2 and 1 mm thick
External dimension	25 x 50 mm
Electrode surface	12.5 cm ²
Diamond coating	
Thickness	2 to 3 μm
Resistivity	100 to 150 mΩcm
Dopant	Boron

Modular electrochemical cell Mini-DiaCell®

Materials

- A body made of polymer materials, in which anodes and cathodes are installed. This body has a total length of 90 mm equipped with water inlet and outlet
- Two adaptable copper current feeding electrodes allow efficient electrical connections with 4mm diameter connectors.
- The Adamant®-Electrodes are connected with the current feeding electrode using a Adamant®-Silver paste
- Elastomer (FPM or EPDM) gaskets

Innovative technology for compact water treatment without chemistry

Connections

- Two 12mm PVC connectors for flexible tube mounting, or other specific connections to be defined. Specific connectors can be screwed (1/2") on the cell body.
- Two electrical connections: 4 mm diameter plugs

Configuration

- 1 to 4 compartments (max. 3 bipolar Adamant®-Electrodes)
- 1 to 3 mm gap between electrodes, depending on needs

Specifications

Dimensions	90 x 40 x 45 mm	
Materials available	PP, PMMA	
Pressure	up to 2 bar in aqueous solutions	
Flow rate	[min/max]	50/200 L/h per compartment if 1 mm gap 100/400 L/h per compartment if 3 mm gap
Pressure drop at 18°C	[min/max]	0.1 / 0.3 bar
Temperature range	5 / 45°C	
Prefiltration (recommended)	50 μm	

Optional power supply DiaCell-PS150

Main AC voltage	230 V ± 10%, 50 Hz or 120 V ± 10%, 60 Hz
Output DC voltage	up to 48 V
Output DC current	up to 3 A
Polarity reversal frequency	1 min. to 2 hours

Applications

Generation of oxidants for disinfection

- Small pools and spas (up to 10 m³ volume water)
- Legionella inactivation (potable water, hot water)
- Sanitary water
- Rain water

Labscale wastewater treatment (COD/TOC, reduction)

All Mini-DiaCell® systems are delivered with premounted electrodes, ready for connection and use.

Adamant Technologies SA preserves its right of changing some of the technical specifications of this product.