

## Cell



Plate and frame configuration



Customized electrodes



Adjustable active area

## The equipment

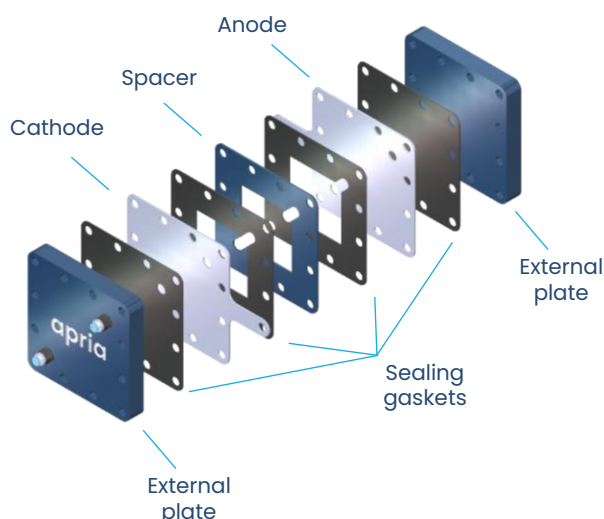
Apria Systems has designed a series of flexible customized electrochemical cells, being possible to select their **configuration** (gap between electrodes, number of compartments, etc.), **the active area and the geometry of the electrodes**.

We have a wide variety of **electrodes materials** (BDD, carbon felt, IrO<sub>2</sub>, Ni, PtO<sub>x</sub>, RuO<sub>2</sub>, stainless steel, Ti, etc.), allowing you to take your cell customization to the next level.

We also offer you maximum flexibility through our **interchangeable electrodes and cells**, allowing you to test different electrode materials in the same cell or different cells in the same equipment.



## Elements of the system



## Operation

1. Hydraulically connect the cell to the external circuit in which it is integrated
2. Electrically connect the electrodes' pins to an AC/DC power supply
3. Pump the fluid to be treated to the cell
4. Turn on the AC/DC power supply and select the desired working amperage and voltage
5. Perform the electrochemical treatment

We offer a wide range of alternatives to adjust our equipment to your needs

## Reactor characteristics

Operation mode	Continuous / recirculation
Configuration	Plate and frame
Operation conditions	$P_{\max}$ : 1 bar; $T_{\max}$ : 50 °C, $J_{\max}$ : 1.000 A/m <sup>2</sup>
Volume (mL)	Selectable
Flowrate (m <sup>3</sup> /h)	Selectable
Number of compartments	1 – 3
Connection type	Barb fitting / quick plug
Case material	Polypropylene (PP) / stainless steel
Sealing gaskets material	Ethylene propylene diene monomer (EPDM) / thermoplastic polyurethane (TPU) / Viton*
Optional items	Automatization / feeding tank / magnetic stirring / online measurements (O <sub>2</sub> , pH, etc.) / power supply / pumping / temperature control

## Electrodes

Type	Frame / mesh / perforated / solid
Geometry	Circular / rectangular / square
Material	Al / BDD / carbon felt / IrO <sub>2</sub> / Ni / PbO <sub>2</sub> / Pt / PtO <sub>x</sub> / RuO <sub>2</sub> / SnO <sub>2</sub> / stainless steel / Ti
Active area (cm <sup>2</sup> )	1 – 300
Gap between the electrodes (cm)	0.1 – 2

