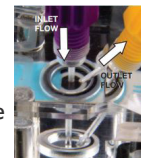


Electrochemical cells

01

FLOW CELLS

Flow cells designed for screen-printed electrodes (SPE) and interdigitated electrodes (IDE). They are designed to obtain an **inlet flow** perpendicular to the electrode surface and an **outlet flow** at an angle of 45°. Also, they have an opening and closing system with magnets or screws, depending on the model. Thanks to an **o-ring**, the **volume of the electrochemical cell is delimited**.



These cells are made of methacrylate and thanks to their transparency, bubbles are easily detected. Some models are available in other materials that have a higher stability to work with organic solvents.

*Custom designs and materials are available upon request.

FLWCL

Flow cell for screen-printed electrodes (SPEs)

- Materials available: methacrylate (ref. FLWCL), PEEK (ref. FLWCL-PEEK) or polypropylene (ref. FLWCL-P)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF.)
- Open-close system: magnets
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)



FLWCL-IDE

Flow cell for interdigitated electrodes (IDEs)

- Materials available: methacrylate (ref. FLWCL-IDE) or teflon (ref. FLWCL-IDE-TEF)
- Suitable electrodes: glass G-IDE electrodes without AUX. and REF.
- O-ring type: enclosing a limited area of the G-IDE
- Open-close system: magnets
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)



FLWCL-SC

Flow cell for SPEs with screws

- Materials available: methacrylate (ref. FLWCL-SC)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF)
- Open-close system: screws
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)
- Additional information: bottom part made in aluminum



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DropSens

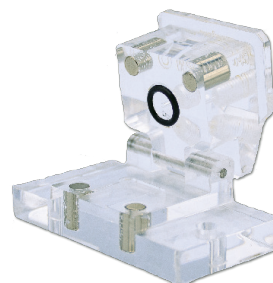
Electrochemical cells

02

FLWCL-WS

Flow cell for work in solution SPEs

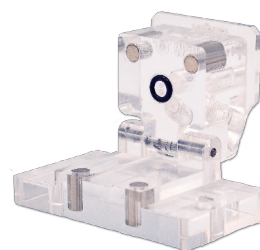
- Materials available: methacrylate (ref. FLWCL-WS)
- Suitable electrodes: work in solution SPEs with the sensing part near the end of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF.)
- Open-close system: magnets
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)



CFLWCL-WE

Flow cell for SPEs- Only working electrode

- Materials available: methacrylate (ref. CFLWCL-WE) or PEEK (ref. CFLWCL-WE-PEEK)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing only the working electrode (WE.)
- Open-close system: magnets
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)



CFLWCL-MAGN

Flow cell for magnetic assays with screen-printed electrodes

- Materials available: methacrylate (ref. CFLWCL-MAGN)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF.)
- Open-close system: mechanical
- Product includes: pack of flow fittings (two nuts for grippers, two grippers and 80 cm of tubing 1/6)
- Additional information: this flow-cell is associated with a powered switchable magnet suitable to perform FIA experiments with magnetic beads



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Electrochemical cells

03

FLWCL8X

Flow-Cell for 8X format screen-printed electrodes

- Materials available: methacrylate (ref. FLWCL8X)
- Suitable electrodes: 8X format SPEs
- O-ring type: enclosing each individual 8X electrochemical cell (WE., AUX. and REF.)
- Open-close system: screws
- Product includes: pack of flow fittings (16 nuts for grippers, 16 grippers, four m of tubing 1/6 and Allen key)
- Additional information: bottom part made in aluminum



FLWCL8X1C

One channel flow-cell for 8X format screen-printed electrodes

- Materials available: methacrylate (ref. FLWCL8X1)
- Suitable electrodes: 8X format SPEs
- O-ring type: thin-layer enclosing all 8X electrochemical cells (8x WE., AUX. and REF.)
- Open-close system: screws
- Product includes: pack of flow fittings (16 nuts for grippers, 16 grippers, four m of tubing 1/6 and Allen key)
- Additional information: bottom part made in aluminum



HPLCELL

HPLC cell for screen-printed electrodes

- Materials available: PEEK (ref. HPLCELL)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF.)
- Open-close system: wedge for adjusting the intermediate piece



TLFCELL

Thin-layer flow electrochemical cell

- Materials available: PMMA
- Suitable electrodes: standard format ceramic SPEs with the sensing part in the middle of the strip
- Open-close system: screws
- Connection: via 2 mm banana cables
- Additional information: this cell allows the study of kinetic parameters, adsorption reactions, but also the determination of diffusion coefficients or stoichiometry of electrochemical reactions under flow conditions.



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Electrochemical cells

04

CELLS

Batch cells for screen-printed electrodes (SPE) and interdigitated electrodes (IDE). Suitable for working with volumes up to 5-8 mL depending on the model. Made of methacrylate or other materials with higher stability to work with organic solvents.

***Customized designs and materials are available upon request.**

SPECELL

Disposable well cell for screen-printed electrodes

- Suitable electrodes: SPEs with the sensing part in the middle of the strip
- Placement system: adhesive
- Additional information: lightweight and fast assembly cells for easy handling of electrodes. Suitable cell for high volume drop assays (up to 150 μL) of aqueous solutions. This reference is commercialized in 75 units packs



SPECELL4W

Disposable well cell for 4W format screen-printed electrodes

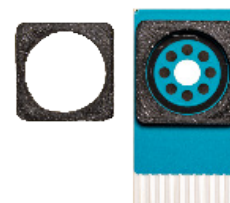
- Suitable electrodes: SPEs consisting of 4W format working electrodes that share the auxiliary and reference electrodes
- Placement system: adhesive
- Additional information: lightweight and fast assembly cells for easy handling of electrodes. Suitable cell for high volume drop assays (up to 500 μL) of aqueous solutions. This reference is commercialized in 20 units packs



SPECELL8W

Disposable well cell for 8W format screen-printed electrodes

- Suitable electrodes: SPEs consisting of 8W format working electrodes that share the auxiliary and reference electrodes
- Placement system: adhesive
- Additional information: lightweight and fast assembly cells for easy handling of electrodes. Suitable cell for high volume drop assays (up to 1000 μL) of aqueous solutions. This reference is commercialized in 20 units packs



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Electrochemical cells

05

SPECELL8X

Disposable well cell for 8X format screen-printed electrodes

- Suitable electrodes: SPEs consisting of 8X format (each electrochemical cell contains the three electrodes: working, auxiliary and reference)
- Placement system: adhesive
- Additional information: lightweight and fast assembly cells for easy handling of electrodes. Suitable cell for high volume drop assays (up to 100 μL) of aqueous solutions. This reference is commercialized in 20 units packs



CELL

Cell for screen-printed electrodes

- Materials available: methacrylate (ref. CELL) or PEEK (ref. CELL-PEEK)
- Suitable electrodes: work in solution SPEs with the sensing part near the end of the strip
- Open-close system: thread sealing
- Additional information: it allows optional stirring and it is recommended for working with deaerated samples and for standard additions



CELL-IDE

Cell for interdigitated electrodes

- Materials available: methacrylate (ref. CELL-IDE) or PEEK (ref. CELL-IDE-PEEK)
- Suitable electrodes: all catalogue IDE models
- Open-close system: thread sealing
- Additional information: it allows optional stirring and it is recommended for working with deaerated samples and for standard additions



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Electrochemical cells

06

TCELL

Thermostatic cell for screen-printed electrodes

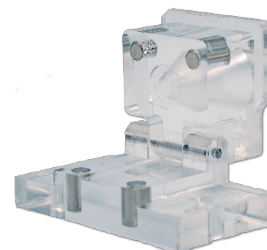
- Materials available: methacrylate (ref. TCELL)
- Suitable electrodes: work in solution SPEs with the sensing part near the end of the strip
- Open-close system: thread sealing
- Additional information: it allows temperature control through the thermostatic jacket. It also allows optional stirring and is suitable for working with deaerated samples and for standard additions.



CFLWCL-CONIC

Cell for screen-printed electrodes - conical well

- Materials available: methacrylate (ref. CFLWCL-CONIC) or PEEK (ref. CFLWCL-CONIC-K)
- Suitable electrodes: standard format SPEs with the sensing part in the middle of the strip
- O-ring type: enclosing the complete electrochemical cell (WE., AUX. and REF.)
- Open-close system: magnets



TLCELL

Thin-layer electrochemical cell for screen-printed electrodes

- Materials available: PMMA
- Suitable electrodes: standard format ceramic SPEs with the sensing part in the middle of the strip
- Open-close system: screws
- Connection: via 2 mm banana cables
- Additional information: this cell allows the study of kinetic parameters, adsorption reactions, but also the determination of diffusion coefficients or stoichiometry of electrochemical reactions.



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Electrochemical cells

07

HCELL

H-cell for hydrogen permeation experiments

- Materials available: glass
- Suitable electrodes: membrane/sheet which acts as the working electrode (WE) and conventional counter (CE) and reference electrode (RE). WE, RE and CE are not included with the cell.
- Open-close system: two compartments are joined by ion exchange membranes (provided by the user), and stainless steel clamps are used for quick membrane replacement (included). The electrochemical cell can be quickly assembled through the white caps which have an O-ring that assures the correct sealing of the cell.
- Additional information: this cell consists of two electrochemical compartments (250 mL) and PTFE caps with holes of different diameters for using a variety of electrodes which makes it usable for the evaluation of hydrogen uptake, permeation and transport in a wide variety of metallic membranes, among other applications.



CELLS ACCESSORIES

CELLHOLDER

Holder for cells

- Materials available: PEEK (ref. CELLHOLDER)
- Suitable for cells: refs. CELL, CELL-PEEK, CELL-IDE and CELL-IDE-PEEK



CUSTOMIZED CELLS

Metrohm DropSens can manufacture customized cells following your specifications to suit your specific application. You can choose from multiple designs and materials for your design.

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