

# 2018 Product Catalog

The OrigaLys' solutions fit your needs



**OrigaLys ElectroChem SAS**  
More than **30** years' know-How



**Instruments**  
for  
**Electrochemical Analytical Systems**



# The Company

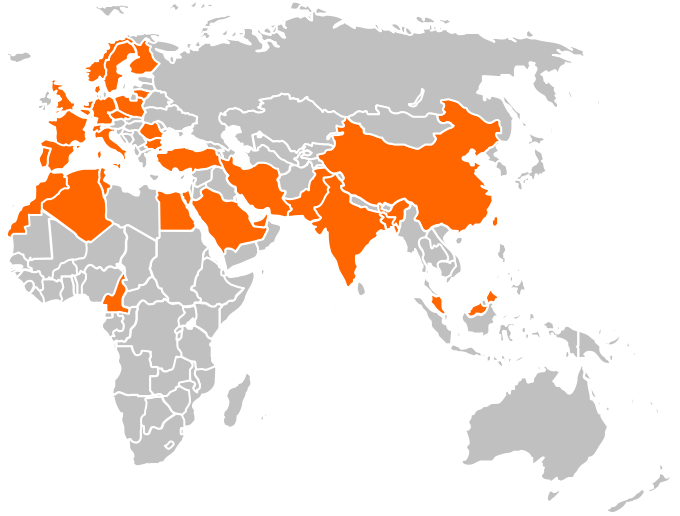


## The OrigaLys' team

**OrigaLys** was founded in 2010, by R&D Engineers coming from Tacussel and Radiometer Analytical based in Lyon, France. Our goal is to propose to the customer "design" products with an affordable price and a high level of quality.

With more than **30** years' background and knowledge in electrochemistry and a worldwide distributor network, the company is able to provide a complete range of Instruments: Potentiostat, Galvanostat, Impedancemeter, Multi-Channels, Rotating Disk Electrode, Software, Electrodes and other Accessories (tips, pellets, corrosion cells and so on). All our products are **MADE IN FRANCE**.

As former designers of VoltaLab devices, such as PGZ301, PGP201 or EDI101, we are able to give you a free repair diagnostic of all your instruments from Radiometer Analytical and Tacussel.



## Contact Information

### Headquarters

Les Verchères 2  
1<sup>er</sup> étage  
62A, avenue de l'Europe  
69140 Rillieux-la-Pape  
FRANCE

**Phone:** +33 9 54 17 56 03

**Fax:** +33 9 59 17 56 03

**Email:** [contact@origalys.com](mailto:contact@origalys.com)

**Web site:** [www.origalys.com](http://www.origalys.com)

## Distributors

**Europe (13):** Czech Republic, Denmark, Finland, Germany, Italy, Lithuania, Norway, Poland, Portugal, Romania, Spain, Sweden and The United Kingdom.

**Africa (5):** Algeria, Cameroon, Egypt, Morocco and Tunisia.

**Asia (9):** Bangladesh, China, India, Iran, Malaysia, Pakistan, the Kingdom of Saudi Arabia, Turkey and the UAE.

**America (8):** Argentina, Bolivia, Brazil, Canada, Colombia, Chile, Mexico and the USA.

If your country is not listed here. **Please contact us directly.**  
**We are looking for distributors**



**WARRANTY:**

**5** years  
on

**Instruments**



# Network in France

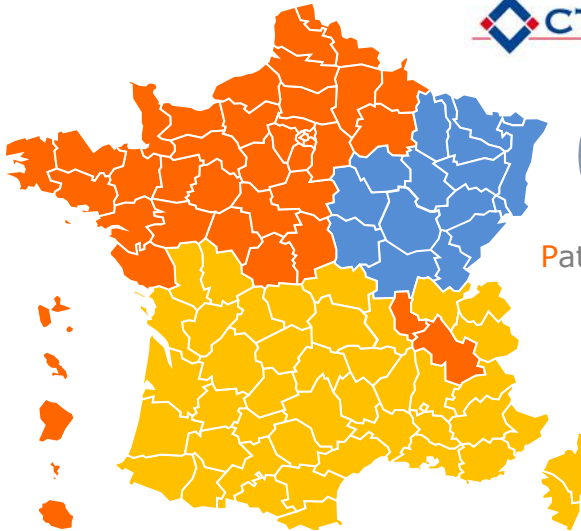
Ector d'hem  
**Orignalys**



Maxime Valay



Alice Chourrier



**CTB CHOFFEL**  
DEXIS



Patrick Balland

Ector d'hem  
**Orignalys**

**Alice Chourrier**

South area  
[alice.chourrier@origalys.com](mailto:alice.chourrier@origalys.com)  
Tel: +33 (0) 7 68 51 63 89

**Maxime Valay**

North area  
[maxime.valay@origalys.com](mailto:maxime.valay@origalys.com)  
Tel: +33 (0) 7 82 88 97 90

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**Email:** [contact@origalys.com](mailto:contact@origalys.com)  
**Web site:** [www.origalys.com](http://www.origalys.com)

**CTB CHOFFEL**  
DEXIS

**Patrick Balland**

Grand Est area  
[ctb-choffel@dexis.eu](mailto:ctb-choffel@dexis.eu)  
Tel: +33 (0) 3 29 62 40 70

**Headquarters:**

29, rang de Veseaux  
Moulin Saint-Nabord  
88200 Remiremont  
FRANCE

**Tel:** +33 3 29 62 40 70  
**Fax:** +33 3 29 23 10 38  
**Email:** [ctb-choffel@dexis.eu](mailto:ctb-choffel@dexis.eu)  
**Web site:** [www.ctb-choffel.fr](http://www.ctb-choffel.fr)

**Check who is your contact  
in France with your Zip  
Code on our web site  
[www.origalys.com](http://www.origalys.com)**

# Full Range of Products

16

## ORIGASTAT



Potentiostat  
Galvanostat  
Impedancemeter  
pH-meter and T°C.  
RDE Speed  
Controller

Ideal for Education and Research

14

## LANDSTAT



Potentiostat  
Galvanostat  
Impedancemeter  
pH-meter and T°C  
RDE Speed  
Controller

Ideal for the field

16

## ORIGABOOST



Current  
Booster  
From  
5A/20V  
to  
20A/20V

17

## ORIGAFLEX



Potentiostat, Galvanostat  
and Impedancemeter (optional)  
Flexible and modular Multi-Channels  
« Built your own system »  
500mA, 1A or 5A

28

## ORIGAM $\mu$



Very Low Current  
Probe  
Down to 1pA  
range with a  
30nA resolution

29

## ORIGATROD



OrigaTrod: Rotating Disk Electrode  
(RDE)  
From 100 to 10,000 rpm  
OrigaBox: RDE Speed Controller



32

## ORIGASOFT



OrigaMaster  
For potentiostat



OrigaViewer  
For multi-Channels

38

## ORIGALINE



Glass Electrodes,  
Static Electrode,  
Tips, Pellets,  
Sample Holder,  
Magnetic Stirrer,  
ElectroChemical Cells



48

## ORIGASER



Services:  
Radiometer's  
maintenance,  
Training,  
Expertise sessions  
And product's  
customization

# The OrigaStat range

The OrigaStat range and its software, OrigaMaster, are a new wave in the Electrochemical instrumentation world.

With this new kind of Potentiostat, Galvanostat and Impedancemeter (10 $\mu$ Hz - 1KHz), the user can achieve highly accurate results with low noise. With a benefit of over 30 years' of experience in the field of Electrochemistry and Electrochemical measurement devices, the OrigaStat line follows the needs of users.

The OrigaStat line is light, compact and easily transportable. The unique attachable cell kit presents an easy and effortless setup for the user.

The OGS series have been designed for Research and Education and they can address any electrochemical measurement, such as corrosion, coatings, sensors, ...

## All Included

Potentiostat

Galvanostat

Impedancemeter

EIS: 10 $\mu$ Hz-1KHz

RDE Speed  
Controller

pH-meter \*

T $^{\circ}$ C Probe \*

## Option

Plastic cover

Magnetic  
stirrer

RDE - Rotating Disk  
Electrode

## All in one product



**OGS080**

$\pm 100$  mA /  $\pm 17.5$  V



**OGS100**

$\pm 100$  mA /  $\pm 17.5$  V



**OGS200**

$\pm 2$  A /  $\pm 35$  V

\* For OGS100 and OGS200 only

## Entry level of the OrigaStat Line

This Potentiostat, Galvanostat, Impedance-meter from **OrigaLys Electrochem SAS** was specially designed for Education and Research.

- Tutorials can be easily prepared in advance and protected by the plastic cover
- Complete solution: Potentiostat, Galvanostat, Impedance-meter (10  $\mu$ Hz - 1 KHz), RDE Speed Controller, PC Software
- Easily transportable
- Everything is adjustable or removable: the lighted cell and the beaker holder.
- A magnetic stirrer can also be added if needed

## Options

- **OrigaCell Kit**

Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating Disk Electrode (RDE)

- **OrigaLine**

Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell



### Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 5$ V
Compliance voltage	$\pm 17.5$ V
Maximum current	$\pm 100$ mA
Current ranges	$\pm 1$ nA to $\pm 100$ mA in 9 decades
EIS capability	10 $\mu$ Hz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 T $\Omega$ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

## Luc Martel

**Professor of chemistry in PC\*  
Lycée du Parc – Lyon – France**

"This scientific tool allows professors from different fields: MP, PC, PSI, PT and TPC to carry out demonstration projects and creates a better understanding of electro-chemical measurement."

### Compliance with the programs of scientific preparatory classes



### Why did you choose the OrigaStat - OGS080 ?

#### Luc Martel - Lycée du Parc:

"First time I heard about OrigaLys, it was during our collaboration with the Ecole Normale Supérieure (ENS Lyon). OrigaLys has fixed their Radiometer's instrument."

"After analysing the whole product range on the OrigaLys website [www.origalys.com](http://www.origalys.com), the OrigaStat OGS080 seemed the most suitable device for our teaching purposes, especially because of the software intuitive programming (flowchart). Indeed, it was one of the most important criteria to select OrigaLys instruments."

"Its evolutionary capacities, such as battery methods implementation, makes the OrigaStat the perfect instrument for preparatory classes for PC\*. Thus, we would be able to have great and various methods for teaching."



### Study of:

- ✓ **Detection of Slow-Fast system**
- ✓ **Potential and Intensity curves**
  - ✓ **Evans and Tafel curves**
  - ✓ **Chronoamperometry**
- ✓ **Observation of diffusion limited current**
  - ✓ **Ferri-Ferro**



## A Full Application

This Potentiostat, Galvanostat, Impedance-meter from **OrigaLys Electrochem SAS** was specially designed as a real all in one solution:

- Potentiostat, Galvanostat, Impedance-meter (10  $\mu$ Hz - 1 KHz), RDE Speed Controller, pH-meter and temperature measurement.
- Analog I/O and RS232 to control external devices as pump, burette, RDE, current booster and many more.
- Easily transportable
- Everything is adjustable or removable: the lighted cell and the beaker holder.



## Options

- **OrigaCell Kit**

Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating Disk Electrode (RDE)

- **OrigaBookSt**

Current Booster, from 5 A to 20 A

- **OrigaM $\mu$**

Low Current Probe, down to 1 pA range

- **OGFEIS**

External EIS module: up to 5 MHz

- **OrigaLine**

Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell

### Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 5$ V
Compliance voltage	$\pm 17.5$ V
Maximum current	$\pm 100$ mA
Current ranges	$\pm 1$ nA to $\pm 100$ mA in 9 decades (1 pA to 10 nA with OrigaM $\mu$ )
EIS capability	10 $\mu$ Hz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 T $\Omega$ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

## Marie-Laure Doche

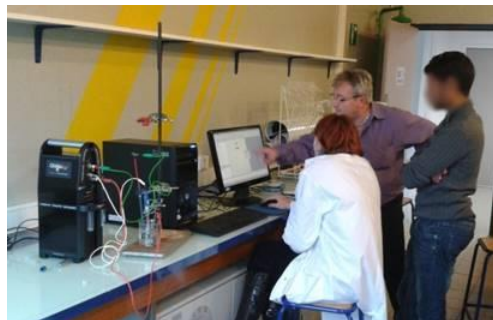
**Internship Manager  
2° Study Director  
IUT de Besançon – Vesoul**

**Compliance with the programs  
of the Chemical department  
(IUT, Institut Universitaire de  
Technologie)**

### **Why did you choose the OrigaLys?**

#### **Marie-Laure Doche:**

"I have selected the OrigaLys instrument because it is designed and manufactured in France. So, I can trust the highly-qualified R&D team and receive an efficient after-sales service. The link with Radiometer Analytical was also a good point, even if the OrigaLys instruments are more modern."



### **Why did you choose the OrigaStat OGS100?**

#### **Marie-Laure Doche:**

"The first criteria was the very competitive price, according to the provided services. Then, its recent design shows a long-term investment but also easy to use. The students really like the nice shape and mainly its high technological performance."

"The OGS100 perfectly fits the teaching of practical work, registered to the program of the IUT Chemical Department. The software is user friendly for the students."

"OrigaLys always listens to its customers' needs. The team is highly competent and reactive. It is shown in the software improvements as well as quick implementation without any hesitation."

"The OGS100 is a complete instrument allowing us to perform our research."

## High power

This Potentiostat, Galvanostat, Impedance-meter from **OrigaLys Electrochem SAS** was specially designed as a real all in one solution:

- Potentiostat, Galvanostat, Impedance-meter (10  $\mu$ Hz - 1 KHz), RDE Speed Controller, pH-meter and temperature measurement.
- Analog I/O and RS232 to control external devices as pump, burette, RDE, current booster and many more.
- Easily transportable
- Everything is adjustable or removable: the lighted cell and the beaker holder.

## Options

- **OrigaCell Kit**

Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**

Magnetic Stirrer

- **OrigaTrod**

Rotating Disk Electrode (RDE)

- **OrigaBookSt**

Current Booster, from 5 A to 20 A

- **OrigaM $\mu$**

Low Current Probe, down to 1 pA range

- **OGFEIS**

External EIS module: up to 5 MHz

- **OrigaLine**

Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**

Dummy cell



### Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 15$ V
Compliance voltage	$\pm 35$ V
Maximum current	$\pm 2$ A
Current ranges	$\pm 20$ nA to $\pm 2$ A in 9 decades (1 pA to 10 nA with OrigaM $\mu$ )
EIS capability	10 $\mu$ Hz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 600 fA)
Input impedance	> 10 G $\Omega$ ( $\parallel$ /20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

## Sylvain Amand

R&D Manager  
Aeroprotec – Pau  
Expert in aeronautic coatings

It has been 3 years that **Aeroprotec** uses an **OrigaStat – OGS200** for its extended features.

## Processing chain



## The OrigaStat OGS200



“It allows us to make an instant analysis and receive accurate results in a short time. As a result, we can know the concentration of species as well as the impact on the metal.”

## Why did you choose the OrigaStat OGS200?

### Sylvain Amand - Aeroprotec:

“We work on the anticorrosion coatings and we need to make measurements on characterizations and on production electrolyte research. By using this potentiostat, we develop the analysis method to anticipate the weak aspect of a process metal deposition.”

“This device can be monitored, thus we can easily control the experiment conditions ; It brings us a huge capacity to realize measurement on research field, and mainly on the process itself. The results are very relevant.”

“The instrument is also useful to analyse metals in aqueous solution. It is a good environment advantage.”

# Detailed specifications

	OrigaStat		
	OGS080	OGS100	OGS200
<b>Potentiostat</b>	yes		
<b>Galvanostat</b>	yes		
<b>Impedancemeter</b>	yes		
<b>Maximum current</b>	±100 mA		±2 A
<b>Compliance voltage</b>	±17.5 V		±35 V
<b>Max applied potential</b>	±5 V		±15 V
<b>Voltage ranges</b>	±1 V, ±2 V and ±5 V		±3 V, ±6 V and ±15 V
<b>Potential accuracy</b>	< 0.1% FSR*		
<b>Potential resolution</b>	30 µV		91 µV
<b>Maximum scan rate</b>	200 V/s		
<b>Current ranges</b>	9	9 (12 with low current option)	9 (14 with low current option)
<b>with standard board</b>	±1 nA to ±100 mA		±20 nA to ±2 A
<b>with low current option</b>	Not available	1 pA to 10 nA	
<b>Current accuracy</b>	< 0.1% FSR		
<b>Current resolution</b>	0.003 % FSR (Best resolution: 30 fA)		0.003 % FSR (600 fA)
<b>Potentiostat rise/fall time</b>	< 2 µs		
<b>Input Impedance</b>	>1 TΩ (//20 pF)		>10GΩ (//20 pF)
<b>Interfaces</b>	USB 2.0		
<b>Acquisition time</b>	≥100 µs		
<b>IR compensation</b>	Manual and automatic feedback Manual and automatic static		
<b>Electrodes connections</b>	2, 3, 4		
<b>A/D converter</b>	16 bits		
<b>EIS capability</b>	10 µHz to 1 KHz. Up to 5 MHz if connected to the OGFEIS		
<b>Analog I/O</b>	Not available	Yes, 1	
<b>External current booster</b>	Not available	From 5 A to 20 A	
<b>Floating option</b>	No, versatile connectivity		
<b>Filters</b>	1 µs to 1 s, analog		
<b>Dimensions (DxWxH)</b>	326 x 135 x 418 mm		400 x 135 x 418 mm
<b>Dimensions (unfolded feet)</b>	326 x 247 x 418 mm		400 x 247 x 418 mm
<b>Power requirements</b>	90-264Vac, 47-63Hz, 30VA		90-264Vac, 47-63Hz, 120VA
<b>Weight</b>	5.5 kg		8 kg
<b>PC Software</b>	OrigaMaster (by USB 2.0)		
<b>Cell cable length</b>	On demand		
<b>Temperature control</b>	Not available	-10°C to 105°C (14°F to 221°F)	

\*FSR = Full Scale Range

Subject to change without notice

## Potentiostat for the field

This Potentiostat, Galvanostat, Impedancemeter from OrigaLys Electrochem SAS was specially designed for **outside measurements**:

- Complete solution: Potentiostat, Galvanostat, Impedancemeter (10  $\mu\text{Hz}$  - 5 MHz), RDE Speed Controller and PC Software (OrigaMaster)
- A laptop can be integrated into the box.
- Easily transportable due to its luggage cabin size and its wheels



- Safe thanks to the key lock system



## Options

- **OrigaMix**  
Magnetic Stirrer
- **OrigaTrod**  
Rotating disk Electrode (RDE)
- **OrigaBookSt**  
Current Booster, from 5 A to 20 A
- **OrigaM $\mu$**   
Low Current Probe, down to 1 pA range
- **OrigaLine**  
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **OrigaTest**  
Dummy cell



## Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 5$ V
Compliance voltage	$\pm 17.5$ V
Maximum current	$\pm 100$ mA
Current ranges	$\pm 1$ nA to $\pm 100$ mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	30 $\mu\text{V}$
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 T $\Omega$ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

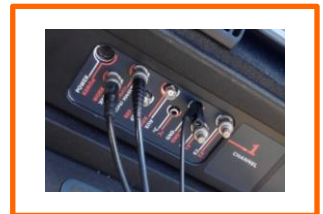


- Corrosion & Cathodic Protection Survey
- Pipes & Tank: Gas, Oil and Water
- Navy Industry: Reinforced Concrete Structure
- Coating & Plating
- And many more

## Connection from the car



## Connection from the instrument



## Connection to the field



## Powerful

If you need higher current ranges you easily can add our booster, OrigaBoost. The **OrigaBoost** increases the maximum current of the following instruments:

- **OrigaStat**: **OGS100** and **OGS200**
- **LandStat**

The maximum current can be increased easily by adding a module of 5 A. Thus, 4 ranges are available:

**5 A, 10 A, 15 A and 20 A.**

## How it works?

The Booster consists in connecting **1 Drive Unit** and **Power Units of 5 A** to an **OrigaLys' potentiostat**



The **Drive Unit** replaces the front panel of the **OrigaLys' Potentiostat**. Thus, you connect the electrodes to the **Drive Unit** and not anymore to the potentiostat.



## Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±5 A / ±10 A ±15 A / ±20 A
Resolution	0.003%
Accuracy	< 0.1 % FSR (Full Scale Range)
Operation mode	Potentiostat/ Galvanostat
Bandwidth	
- Potentiostatic	50 KHz
- Galvanostatic	
Software	OrigaMaster
Instrument compatibility	OGS100 OGS200 LandStat OGFEIS



# The Origaflex range

The **Origaflex** is a Multi-Channel system. Three different modules are available: 500 mA, 1 A and 5 A.

Each module is a real **Potentiostat** and **Galvanostat**, allowing simultaneous and independent measurements (including temperature control).

Up to 10 channels can be connected to a **Drive Unit** (or a sum of 20 A). The Drive allows a big reliability since it includes a **Dummy Cell** facilitating tests before experiments. It is also an excellent way to check the cords and the instrument.

An impedance module can be added to each module, without limitation with the Drive Unit.

**For instance, you can build this system:**



**This Origaflex system includes:**

- 1 x Drive Unit & Dummy Cell
- 5 x OGF500
- 1 x OGFEIS



**OGF500**  
 $\pm 500$  mA /  $\pm 20$  V



**OGF01A**  
 $\pm 1$  A /  $\pm 20$  V



**OGF05A**  
 $\pm 5$  A /  $\pm 20$  V



**OGFEIS**  
10  $\mu$ Hz – 5 MHz

# The concept

From a single to a multi and flexible configuration...

## 1 Single Potentiostat for low budget



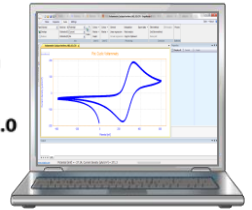
or



Thanks to the Power Supply



OrigaMaster



with or without EIS

## 2 Multi-Potentiostats



Thanks to the Drive Unit



OrigaViewer



## 3 Split multi-Potentiostats



And/or



Thanks to the Power Supply



# The concept

Thanks to a networking system, the possibilities are without limits...

## 4 No limit multi-Potentiostats



Thanks to an Ethernet Switch.

You can connect all the Drive Units to your Switch



## OrigaViewer



By multiplying the Drive Units, you connect as many Channels as you need.



Either 1 Drive Unit, 2, 3 or more



Example: 9 channels and 2 EIS

OrigaFlex, from 1 to 999 channels

# How it works

## Supplying the system...

### Multi-Channel mode



Use the **Drive Unit**, if you need more than one Channel

### Mono-channel mode

Use the **Power Supply**, if you need just one Channel to begin



### Drive Unit & Dummy Cell

#### 3 main functions:

1. It **supplies current to the channels**, as the sum of each amps channel connected to a Drive Unit shall not exceed **20A** or **10 Channels**.
2. It allows **connection to a computer via Ethernet**. Thus, the PC software included, called **OrigaViewer** (without charge or licence) can control every channel of the system. Individually, each channel can be controlled by the PC software **OrigaMaster** via USB.
3. Finally, thanks to its **dummy cell**, functional tests can be performed on cords and on the different Channels. Thus, it is ensured that each method will be perfectly performed.



#### For example:

Five 500 mA Channels  
+  
One EIS Channel

### Power Supply - OGFPOWER

#### 2 main functions:

1. It **supplies current to only one channel (500 mA, 1 A or 5 A)**.
2. It **also supplies current to an EIS module**.

It is **not connected to a PC**. The connection has to be made **from the Channel (via USB from the rear panel)**. Here, the channel is controlled by **OrigaMaster**.

**No Dummy Cell inside**

#### Technical specifications:

Power: 100-240Vac - 50-60Hz - 1KVA  
Weight: 3.10 kg  
Dimensions (Length x Width x Height) :  
28.5 x 8.3 x 24.15 cm



or



#### For example:

One 500 mA Channel + One EIS Channel  
or  
One 500 mA Channel

This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 10 Channels **OGF500** with 1 **Drive Unit & Dummy Cell**

## Options

- **OGFEIS**  
External EIS module: 10 $\mu$ Hz-5MHz
- **OrigaTroD Kit**  
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- **OrigaM $\mu$**   
Low Current Probe, down to 1 pA range
- **OrigaMix**  
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- **OrigaLine**  
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **Battery Cell Holder**  
See picture below



## Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 15$ V
Compliance voltage	$\pm 20$ V
Maximum current	$\pm 500$ mA
Current ranges	$\pm 5$ nA to $\pm 500$ mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 $\mu$ V on $\pm 15$ V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 150 fA)
Input impedance	10 G $\Omega$ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster



This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 10 Channels **OGF01A** with 1 **Drive Unit & Dummy Cell**

## Options

- **OGFEIS**  
External EIS module: 10 $\mu$ Hz-5MHz
- **OrigaTroD Kit**  
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- **OrigaM $\mu$**   
Low Current Probe, down to 1 pA range
- **OrigaMix**  
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- **OrigaLine**  
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **Battery Cell Holder**  
See picture below



## Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 15$ V
Compliance voltage	$\pm 20$ V
Maximum current	$\pm 1$ A
Current ranges	$\pm 10$ nA to $\pm 1$ A in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 $\mu$ V on $\pm 15$ V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 300 fA)
Input impedance	10 G $\Omega$ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster



## Philippe Marx

**Manager of AMF Company**  
**Lury sur Arnon – France**

Expert in the manufacture of components based on Nickel-Titanium (Nitinol) shape memory alloys for the medical device business and high technology applications.

### Compliance with the standard ASTM F2129



#### Helpful to:

- ✓ **Specify all the conditions of the test to show without ambiguity the respect of the standard.**
- ✓ **Explain the performances obtained in the relations with the states of surface of the material and the quality of the passivation layer.**



### Why did you choose the OrigaFlex - OGF01A ?

#### Philippe Marx - AMF Company:

“A corrosion test is very delicate to realize for several reasons. It is necessary to know how to interpret the curves of corrosion and understand the phenomena.”

“It is necessary to give to the laboratory series of implants with several qualities of state of surface and several thicknesses of passivation layer. It is only with such a level of trial report that we can hope to win the trust of an auditor of CE or FDA marking.”



**“Those who want to integrate ways of in-house test can contact OrigaFlex.”**

This Potentiostat, Galvanostat, from **OrigaLys Electrochem SAS** was specially designed as independent module:

- In case Channels are added, simultaneous measurements on different Channels can be synchronized.
- EIS measurement is optional. To proceed, an EIS module (**OGFEIS**) has to be connected.
- This individual Channel can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.
- 2 LED Displays available: one to see the Status or the potential and one to see the Channel numbering.
- Up to 4 Channels **OGF05A** with 1 **Drive Unit & Dummy Cell**

## Options

- **OGFEIS**

External EIS module: 10 $\mu$ Hz-5MHz

- **OrigaTroD Kit**

Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)

- **OrigaM $\mu$**

Low Current Probe, down to 1 pA range

- **OrigaMix**

Magnetic Stirrer and its Speed Controller (**OrigaBox**)

- **OrigaLine**

Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **Battery Cell Holder**

See picture below



## Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	$\pm 15$ V
Compliance voltage	$\pm 20$ V
Maximum current	$\pm 5$ A
Current ranges	$\pm 50$ $\mu$ A to $\pm 5$ A in 6 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	450 $\mu$ V on $\pm 15$ V
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 1,5 nA)
Input impedance	10 G $\Omega$ ( $\parallel$ /20 pF)
Potential bandwidth	100 KHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster



## High Electrochemical Impedance Spectroscopy (EIS)

Performing EIS measurements becomes easier with this additional module dedicated to Impedance.

- Once the module is added to any kind of Channel, the **OrigaMaster** software allows a potentiostatic and galvanostatic control, over a frequency of:
  - 10  $\mu$ Hz to 5 MHz**
- Included into OrigaMaster and OrigaViewer, you can find all the EIS methods:
  - Potential Dynamic EIS
  - Potential Fixed Frequency (Capacitance)
  - Galvanic Dynamic EIS



## Compatibility

- **OGF500**
- **OGF01A**
- **OGF05A**
- **OGS100**
- **OGS200**
- **LandStat**



**OGFEIS**  
connected to an  
**OGS200**

**OGFEIS**  
connected to an  
**OGS100**



### Main Technical Specifications

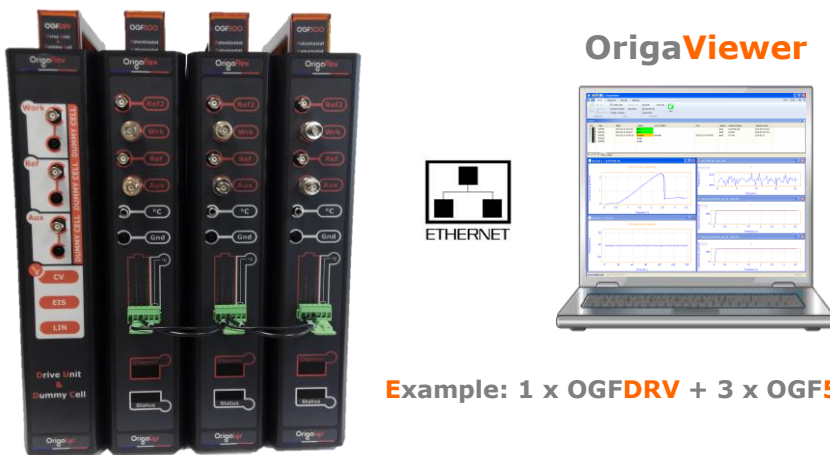
Frequency range	10 $\mu$ Hz – 5 MHz
Frequency resolution	5 ppm
Input range	$\pm 15$ V
Signal types	Sine with delay and Average on 1 to 10 determinations
Input Channels	E and I from the Potentiostat/galvanostat or X and Y external signals
Potential AC Amplitude	6 $\mu$ V to 7,5V maximum
Current AC Amplitude	100% of range I, best resolution 6ppm
Data	Nyquist, Bode, Admittance, Mott-Schottky
Analysis	Fit and simulation, Find circle, Element subtraction, Export Data
Software	OrigaMaster and OrigaViewer

## 1 Configuration = 1 Drive Unit + 3 Channels (to really monitor 3 Power Electrodes)

In addition to acting as a bi-potentiostat you also have **three** fully independent potentiostats that can be separated when needed.



## 2 OrigaFlex bi-potentiostat configuration



Recommendation for an optimal configuration:

Current Work 1 + Current Work 2 < Current Aux

**Please consult us for more information**

# Detailed specifications

	OrigaFlex		
	OGF500	OGF01A	OGF05A
<b>Potentiostat</b>	yes		
<b>Galvanostat</b>	yes		
<b>Maximum current</b>	±500 mA	±1 A	±5 A
<b>Compliance voltage</b>	±20 V		
<b>Max applied potential</b>	±15 V		
<b>Voltage range</b>	±15 V		
<b>Potential accuracy</b>	< 0.1% FSR (full scale range)		
<b>Potential resolution</b>	450 µV		
<b>Maximum scan rate</b>	200 V/s		
<b>Current ranges</b>	9 (14 with low current option)	9 (13 with low current option)	6 (11 with low current option)
<b>with standard board</b>	±5 nA to ±500 mA	±10 nA to ±1 A	±50 µA to ±5 A
<b>with low current option</b>	1 pA to 10 nA		
<b>Current accuracy</b>	< 0.1% FSR		
<b>Current resolution</b>	0.003 % FSR (Best: 150 fA)	0.003 % FSR (Best: 300 fA)	0.003 % FSR (Best: 1,5 nA)
<b>Potentiostat rise/fall time</b>	< 4 µs		
<b>Input impedance</b>	10 GΩ (//20 pF)		
<b>Interfaces</b>	Ethernet, USB 2.0		
<b>Acquisition time</b>	≥100 µs		
<b>IR Compensation</b>	Yes, manual and automatic Static		
<b>Electrode connections</b>	2, 3, 4		
<b>A/D converter</b>	16 bits		
<b>EIS Capability</b>	10 µHz to 5 MHz		
<b>Analog I/O</b>	Yes, 1		
<b>External Booster of current</b>	No		
<b>Floating option</b>	No versatile connection		
<b>Filters</b>	1 µs to 1 s, analog		
<b>Dimensions (DxWxH)</b>	300 x 85 x 450 mm		300 x 120 x 450 mm
<b>Power requirements</b>	88-264 Vac, 47-63 Hz, 30 VA	88-264 Vac, 47-63 Hz, 40 VA	115/230 Vac, 47-63 Hz, 150 VA
<b>Weight</b>	4.55 kg	4.55 kg	8 kg
<b>PC Software</b>	OrigaMaster (by USB 2.0) and OrigaViewer (by Ethernet)		
<b>Cable length</b>	On demand		
<b>Temperature control</b>	-10°C to 105°C (14°F to 221°F)		

Subject to change without notice

## The most sensitive Low Current Potentiostat

The **OrigamMu** allows to perform very low current measurement of the following instruments:

- **OrigaStat: OGS100** and **OGS200**
- **OrigaFlex: OGF500, OGF01A** and **OGF05A**
- **LandStat**

The current range can be decreased to: **1 pA, 10 pA, 100 pA, 1 nA** and **10 nA**.



### How it works?

This low current potentiostatic probe can be used alone (manual mode) or connected (remote mode) to an **OrigaLys'** instrument.

#### Remote Mode

Connecting the **OrigamMu** to an **OrigaLys'** potentiostat allows to fully operate the excellent response time of the **OrigamMu**.

Driven by purely analog signal and supplied on battery during measurements (no risk of interference), you can implement using **OrigaMaster** all standard electrochemical methods including impedance up to 1 KHz (for **OGS** and **LandStat** only).

#### Manual Mode

The **OrigamMu** can be used alone, thus it applies a constant potential (from  $\pm 1$  V).

Here, the current ranges are:

**$\pm 100$  pA,  $\pm 1$  nA and  $\pm 10$  nA.**

#### Main Technical Specifications

Electrode connections	2 or 3
Max applied potential	$\pm 2$ V (Remote mode) $\pm 1$ V (Manual mode)
Compliance voltage	$\pm 7$ V
Current ranges	$\pm 1$ pA, $\pm 10$ pA, $\pm 100$ pA , $\pm 1$ nA and $\pm 10$ nA
Remote mode: 5	
Manual mode: 3	
Best resolution	30 nA
Accuracy	< 0.1 % FSR (Full Scale Range)
Operation mode	Connected or alone
Software	OrigaMaster if connected None if alone
Instrument compatibility	OGS100 OGS200 LandStat OGF500 OGF01A OGF05A

## Rotating Disk Electrode (RDE)

Radiometer's  
EDI101 and  
CTV101 Legacy  
(same designer)



### The Kit is composed by

#### OrigaTroD

**Rotating Disk Electrode (RDE)**  
From **100 to 10,000 rpm**

**OrigaTroD** fits on most glass cells, with an NS 14/23 ground joints. Manufactured with noble plastics PETP, PTFE, PEEK and the best stainless steel.

A metallic and removable barbed fitting allows a neutral gas to flow through the electrode when it is used in a corrosive atmosphere.

The electrical signal is ensured thanks to graphite contact doped with silver.

With an optical digital encoder, **OrigaTroD** guarantees a rotation speed accuracy of 0.35%.

**It's fully compatible with the tips from Radiometer.**

#### OrigaBox

**Rotating disk Electrode Speed Controller**

**OrigaBox** is really a tiny piece of high technology using an ARM9 processor. Thus, we are able to obtain a 0.35 % digital regulation of the Rotating Electrode Speed (and without risk of runaway).

**OrigaBox** offers a unique flexibility. Delivered with its PC Software and connected by USB, it drives the **OrigaTroD**. But, it is also adapted to the environment. With a specific cord, **OrigaBox** can receive an analog signal from any kind of Potentiostats.

### Product compatibility

OrigaTroD (without OrigaBox)	OGS080, OGS100, OGS200 and LandStat
OrigaTroD and OrigaBox	OGF500, OGF01A, OGF05A and other brands

## A complete solution



### RDE Stand

- This stand for RDE is composed by:
- A standard stand  
With a robust base  
The height is easily adjustable
  - A glass cell  
The volume can vary, on demand.  
This cell can also be thermostated.  
With its 5 holes, the cell can fit RDE, counter electrodes, working electrodes and reference electrodes.



It's fully compatible with the tips from Radiometer.

### OrigaTrod Kit

When the OrigaTrod is used together with the OrigaBox, it is provided with a box. Thus, everything is safely transported.

This kit contains:

- OrigaTrod
- OrigaBox
- USB Key, containing the software (PC Control Panel)
- User's manual
- The convenient cords
- The box

Not delivered with tips, pellets or sample holders. But, it has been designed to carry it, easily.

An easy solution

NEW



## Rotating Disk Electrode with a Built-in Speed Controller

Suitable to any kind of brands: Metrohm-Autolab, Bio-Logic, CH Instruments, and so on

Compatible with tips from Radiometer-Hach

From 100 to 5,000 rpm



### Potentiometer

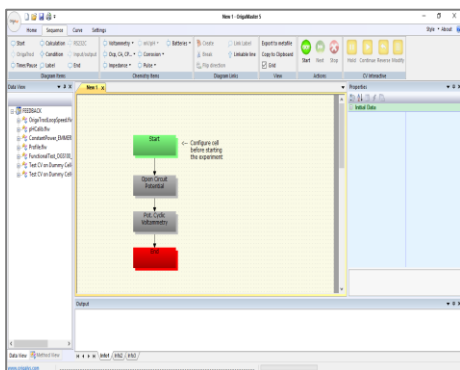
Monitoring manually the rotation speed of the OrigaTrod and directly on the device.



### External Power Supply

The system needs to be directly supplied by a standard AC / DC switching adaptor 12V output.

## OrigaLys provides 3 different software, depending on the use



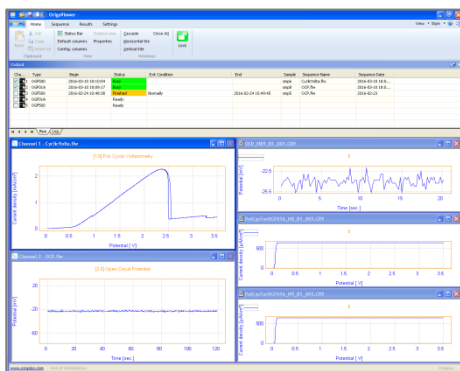
### OrigaMaster

Dedicated to mono-potentiostat.

Windows interface. Compatible with Windows XP, Vista, 7, 8 and 10.

#### Products' compatibility

- OrigasStat: OGS080, OGS100 and OGS200
- OrigasFlex: OGF500, OGF01A and OGF05A
- LandStat



### Origaviewer

Dedicated to multi-potentiostat.

Windows interface. Compatible with Windows Vista, 7, 8 and 10.

#### Products' compatibility

- OrigasFlex: OGF500, OGF01A and OGF05A



### Origabox Interface

Allows to control the Speed Controller of the RDE and the Magnetic Stirrer.

Windows interface. Compatible with Windows XP, Vista, 7, 8 and 10.

#### Products' compatibility

- Origabox: RDE (Origatrod)
- Magnetic Stirrer (Origamix)



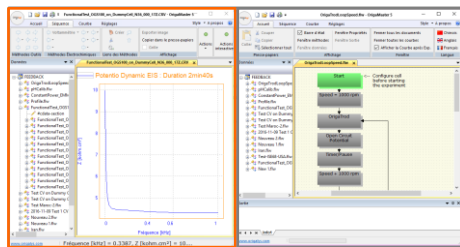
Easy to use and licence free



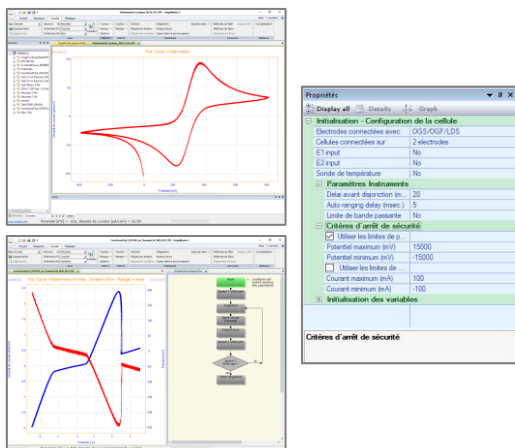
**Multi-Windowing**  
**Changing scales in real time**  
**Overlaying without limit**

- ✓ Windows Interface
- ✓ Easy graphic programming
- ✓ Up to 10,000 cycles
- ✓ Zooming in real time
- ✓ Export data to Excel, Open Office, Regressi ...

Opening two OrigaMaster or more at the same time



1st OrigaMaster    2nd OrigaMaster



- ✓ Expert mode
- ✓ No point or time limitation
- ✓ Safety criteria
- ✓ Customization
- ✓ Multi-languages: English, French and Chinese

## 4 languages are available

1

 **English - Anglais\*** 



\*Language by default

2

 **Français - French** 



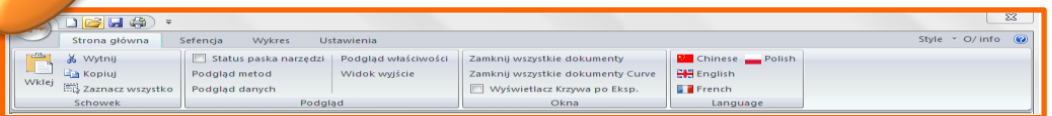
3

 **中文 - Chinese** 



4

 **Polski - Polish** 



5

 **Español - Spanish** 

**Soon**

**For other languages, contact us:**

Deutsch, Português, Română, Türkçe, Čeština, العربية, فارسی, 日本語, 한국어, Dansk, हिंदी, Italiano, Русский, etc.

# OrigaMaster's Methods

LandStat	OrigaStat	OrigaFlex
----------	-----------	-----------

## VOLTAMMETRY

Pot. Cyclic Voltammetry (CV)		✓	
Pot. Advanced Cyclic Voltammetry		✓	
Gal. Cyclic Voltammetry		✓	
Pot. Linear Voltammetry		✓	
Pot. CV 4 limits		✓	
Pot. Interactive CV		✓	
Staircase Voltammetry (SCV)		✓	

## CHRONO

Open Circuit Potential (OCP)		✓	
Chrono Amperometry (CA)		✓	
Chrono Amperometry Expert		✓	
Chrono Coulometry (CC)		✓	
Chrono Potentiometry (CP)		✓	
Chrono Potentiometry Expert		✓	
Interactive Potentiometry		✓	
Single Chrono Amperometry		✓	

## IMPEDANCE

Pot. Dynamic EIS		✓	
Pot. Fixed Frequency EIS (Capacitance)		✓	
Gal. Dynamic EIS		✓	

## CORROSION

Pitting corrosion		✓	
General corrosion (Rp)		✓	
Coupled corrosion (Evans)		✓	
Polarization for corrosion (Tafel)		✓	
Zero Resistance Ammeter (ZRA)	✓	✓*	×

## PULSE

Pot. Differential Pulse (DPV)		✓	
Gal. Recurrent Differential Pulse		✓	
Pot. SW Voltammetry (SWV)		✓	
Potentiometric Stripping Analysis (PSA)	✓	✓*	×

## BATTERIES and SUPER CAPACITORS

Single Charge or DisCharge		✓	
Gal. Charge and DisCharge Cycle		✓	
Expert Charge and DisCharge Cycle		✓	
PITT		✓	
GITT		✓	
Constant Power		✓	
Profile Generator		✓	
Internal Resistance		✓	

## pH AND mV MEASUREMENT

pH fixed Calibration	✓	✓*	×
pH auto Calibration	✓	✓*	×
pH measurement	✓	✓*	×
mV measurement	✓	✓*	×

\* Not available with OrigaStat - OGS080

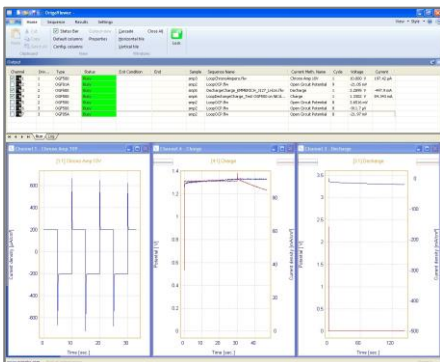
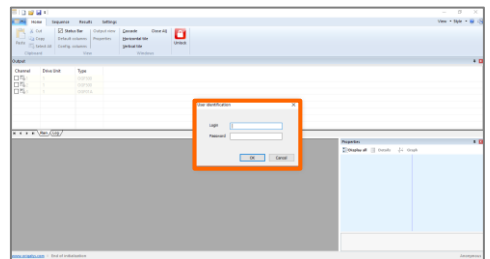
Secure and licence free



**Powerful Database**  
**Temperature control and safety criteria**  
**Independent and simultaneous measurements**

- ✓ Windows Interface
- ✓ Save and store all the experiment conditions
- ✓ 3 levels of users:  
**Administrator, Supervisor and Operator**

The software is protected with ID and Password



- ✓ Recoverable Data thanks to a Buffer inside the instrument
- ✓ No point or time limitation
  - ✓ Expert mode
  - ✓ Customization

# OrigaViewer's Methods

	OrigaViewer		
	OrigaFlex		
	OGF500	OGF01A	OGF05A
<b>VOLTAMMETRY</b>			
Pot. Cyclic Voltammetry (CV)		✓	
Pot. Advanced Cyclic Voltammetry		✓	
Gal. Cyclic Voltammetry		✓	
Pot. Linear Voltammetry		✓	
Pot. CV 4 limits		✓	
Pot. Interactive CV		✗	
Staircase Voltammetry (SCV)		✓	
<b>CHRONO</b>			
Open Circuit Potential (OCP)		✓	
Chrono Amperometry (CA)		✓	
Chrono Amperometry expert		✓	
Chrono Coulometry (CC)		✓	
Chrono Potentiometry (CP)		✓	
Chrono Potentiometry expert		✓	
Interactive Potentiometry		✗	
Single Chrono Amperometry		✓	
<b>IMPEDANCE (with the OGFEIS module)</b>			
Pot. Dynamic EIS		✓	
Pot. Fixed Frequency EIS (Capacitance)		✓	
Gal. Dynamic EIS		✓	
<b>CORROSION</b>			
Pitting corrosion		✓	
General corrosion (Rp)		✓	
Coupled corrosion (Evans)		✓	
Polarization for corrosion (Tafel)		✓	
Zero Resistance Ammeter (ZRA)		✗	
<b>PULSE</b>			
Pot. Differential Pulse (DPV)		✓	
Gal. Recurrent Differential Pulse		✓	
Pot. SW Voltammetry (SWV)		✓	
Potentiometric Stripping Analysis (PSA)		✗	
<b>BATTERIES and SUPER CAPACITORS</b>			
Single Charge or DisCharge		✓	
Gal. Charge and DisCharge Cycle		✓	
Expert Charge and DisCharge Cycle		✓	
PITT		✓	
GITT		✓	
Constant Power		✓	
Profile Generator		✓	
Internal Resistance		✓	

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## ORIGASENS



OrigaLys provides any kind of Reference, Working, Selective and Auxiliary/Counter Electrodes: Calomel, Ag/AgCl, Platinum, Silver, Glassy Carbon, Combined, Fluor, Calcium and Nitrate.

Many more on demand

39

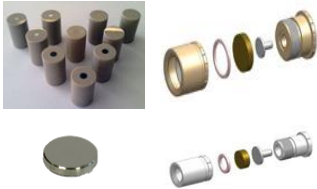
## ORIGACCESS



With the electrodes, we offer any kind of connectors (BNC, UHF and so on), length and shielded cords.

40

## ORIGATIP



Tips:

- Platinum, Glassy Carbon...

Pellets:

- Aluminum, BDD, Nickel...

Sample Holders:

- Active area:  $\phi 6$  or  $13\text{mm}$

- Pellets:  $\phi 8$  or  $15\text{mm}$

41

## STATROD



Static Electrode  
Banana  
connector  
PEEK material

For Tips

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## ORIGACELL



OrigaLys supplies cells with:

- Potentiostats: OrigaCell Kit for OrigaStat
- Electrodes: any kind of Glass or Plastic beakers
- Specific applications: Corrosion Cells, thermostated Cells

45

## STAND



The cell stand was specially designed to support cell & a Rotating disk Electrode (OrigaTrod)

45

## ORIGAMIX



Magnetic Stirrer  
Exchangeable  
From 100  
to  
1,500 rpm

46

## BATTERY HOLDERS



Different holders,  
With  $T^{\circ}\text{C}$   
measurement

For:

- Coin Cells
- Flat Cells
- Cylindrical Cells

47

## ORIGATEST



External  
Dummy  
Cell

- CV
- LIN
- EIS

## OrigaSens - Electrodes

### Electrode Overview

Reference	Hg/HgO, Ag/AgCl, ECS, Cu/CuSO <sub>4</sub> ,...
Auxiliary and Working	Silver rod ø3mm, Platinum disc ø10mm, Platinum wire ø1mm, Platinum plate 5x5mm
Combined	Platinum ring ø8x1,5 + Ag/AgCl
Selective	Fluor, Nitrate, Calcium, Cadmium, Lead, ...
pH	Annular Junction, ø12x103mm
Other	Liquid Junction Protection Tube ø12: 140 mm, porous pin, NS14/23 sleeve joint

## Origaccess - Cords

### Cord Overview

Connectors	BNC, UHF, Banana ø2 or 4mm, DIN, Pin DIN and other on demand
Adaptors	BNC/BNC, BNC/Banana, Banana/double banana, UHF/BNC and so on
Shielded?	Standard cords are shielded Not shielded on demand
Length	Standard: 0,16cm, 0,25cm, 1m or 2m Any kind of length on demand
Power Cord	Fr, UK, US, CH and more on demand
Other	- Isolated Alligator clamp - Standard Alligator clamp - Temperature probe - Crystal tube



**2017 Electrode Catalog**

The OrigaLys' solutions fit your needs



**OrigaLys ElectroChem SAS**  
More than 30 years' know-How



Accessories for Electrochemical Analytical Systems




Ask for the  
**ELECTRODE CATALOG**

on

[www.origalys.com](http://www.origalys.com)



# OrigaTip Tips – Pellets

**Tips** from **OrigaLys** can be used with our **RDE** (OrigaTrod) and with the **Static Electrode** (StaTrod) but also with most of other RDE on the market. All the tips are in PEEK (PolyEther Ether Ketone) material.

In addition to tips, **OrigaLys** provides a whole range of sample pellets.

## Available Tips

Material	Diameter (mm)
316L Stainless	2 and 5
70% Copper and 30% Nickel	5
Aluminium	5
Antimony	5
Cadmium	5
Carbon Steel XC38	5
Cobalt	5
Copper	5
Glassy Carbon	3 and 5
Gold	2 and 5
Iridium	5
Iron	5
Lead	5
Nickel	2 and 5
Palladium	2
Peek	0
Platinum	2 and 5
Rhodium	2
Silver	2 and 5
Tin	5
Titanium	5
Tungsten	1
Zinc	2

## Main Specifications

- ✓ Thickness:
  - For all the pellets: 3 mm
- ✓ Diameter:
  - 8 mm
  - Or 15 mm

## Available Pellets

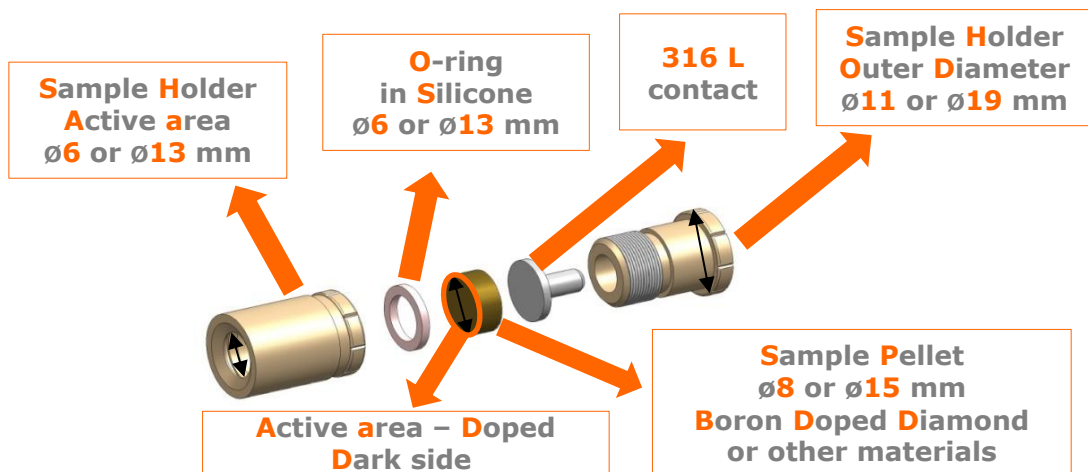
Material	Diameter (mm)
316L Stainless	8 and 15
A37	8
Aluminium	8
Boron Doped Diamond (BDD)	8 and 15
Copper	8 and 15
Glassy Carbon	8 and 15
Gold	8
Graphite	8
Iron	8
Nickel	8 and 15
Platinum	8
Silver	8
Stainless Steel	8
Tungsten	8



## OrigaTip Sample Holder

**Pellets** from OrigaLys can be used with a **Sample Holder**, which can be adapted on the **RDE** (OrigaTrod) and on the **Static Electrode** (StaTrod) but also with most of the RDE on the market, as any kind of tips.

All the Sample Holders are in **PEEK** (PolyEther Ether Ketone) material.  
2 different sample holders with an active area of 6 or 13 mm diameter



## StaTrod Static Electrode



This Static Electrode can fit all the tips and sample holders from OrigaLys. It matches much more tips from other manufacturers.

### Main Specifications

- ✓ Material: PEEK
- ✓ Length: 114 mm
- ✓ Diameter: 11 mm
- ✓ Connector: Banana plug  $\varnothing 4$  mm

## Temperature Sensor



This temperature probe can fit all the glass cells from OrigaLys. It matches much more cells thanks to its sleeve and RCA connector.

### Main Specifications

- ✓ Material: PEEK
- ✓ Length: 103 mm
- ✓ Diameter: 7,5 mm
- ✓ Head: Titanium

## OrigaCell Kit

The OrigaCell Kit is composed by 4 parts



Orange plastic cover



Electrode Holder with LEDs



Beaker Holder  
Glass or plastic beaker  
30 to 125 ml



Base



The complete OrigaCell Kit

The OrigaCell Kit fits exclusively the OrigaStat range:  
Every part is adjustable and removable

## OrigaCell Corrosion Cells



### The right cell for your application:

#### For Disc samples

Thermostated cell for corrosion with sample holder for discs and platinum disc counter electrode.

- Volume = 100 to 200 ml
- Disc diameter = 1,5 cm
- Disc active area = 1,33 cm<sup>2</sup>
- One Pt ø10 mm disc counter electrode
- One Ag/AgCl reference electrode
- Temperature probe

#### For Flat samples

Two different cells:

- Thermostated
  - Non-thermostated
- Ideal for cavernous corrosion  
Ideal for under coating corrosion tests. Corrosion cell for flat samples with a large surface.
- Volume = 100 to 200 ml
  - Sample active Area = 22,9 cm<sup>2</sup>

## OrigaCell – The Cell you need



### OrigaCell – Plastic and Glass Cell

Number	1	2	3	4	5	6
Max volume	150 ml	150 ml	150 ml	130 ml	100 ml	100 ml
Material	Glass	Glass	Glass	Plastic	Glass	Glass
Thermostated	Yes	No	Yes	No	Yes	No
Reference	AR00369	X12.OGL.031	AR00483	-	X10.OGL.003	D10.OGL.075
Compatibility	All	All	All	All	OrigaStat*	OrigaStat*

\* Use only with the Origacell Kit for the Origastat

**Special Request:**  
Please contact us

## OrigaTrod RDE Stand



**This stand for RDE is composed by:**

✓ **A standard stand**

With a robust base  
The height is easily adjustable  
It is also removable

✓ **A glass cell**

The volume can vary, on demand.  
This cell can also be thermostated.  
With its 5 holes, the cell can fit  
RDE, counter electrodes, working  
electrodes and reference electrodes  
made by OrigaLys or not.

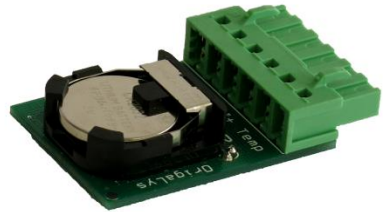
## OrigaMix



## Magnetic Stirrer

- ✓ Exchangeable
- ✓ Swiss made motor
- ✓ Fitting **OrigaStat**
- ✓ 100 to 1,500 rpm

## Battery Holders



CR2032 Coin Cell

### Swagelok Holder:

- ✓ Exchangeable
- ✓ Banana connectors:  $\varnothing 2\text{mm}$

To be used with **Origaflex**

### Dimensions:

- ✓ Length: 8 cm
- ✓ Width: 4,2 cm
- ✓ Height: 6,5 cm
- ✓ Height with the Swagelok: 11,4 cm

### Main Specifications:

- ✓ Empty weight: 44,51 g
- ✓ Full weight: 200 g
- ✓ Operating temperature :  
-30°C à 80°C
- ✓ Receptacle

### Fitting the following batteries:

- ✓ Coin Cells
- ✓ Flat Cells
- ✓ Cylindrical Cells

To be used with **Origaflex**

### Main Specifications for the batteries:

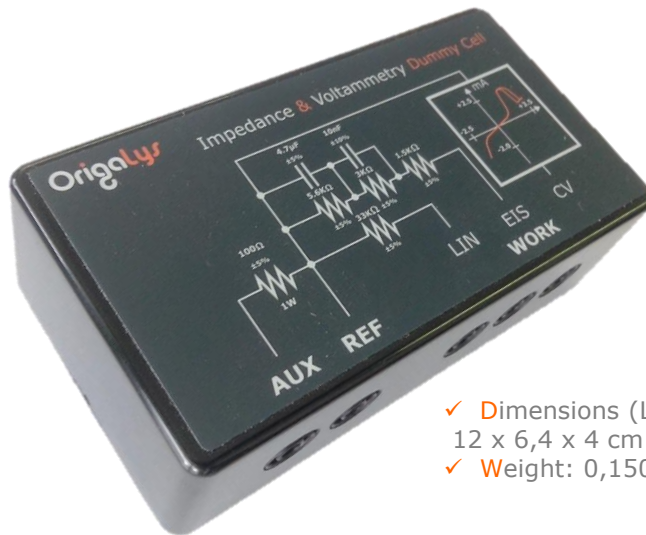
- ✓ Thickness: 3,2 mm maximum
- ✓ Diameter: 20 mm maximum

### Main Specifications:

- ✓ Temperature sensor
- ✓ Operating temperature:  
-30°C to 80°C
- ✓ Receptacle

**Other Battery Cell Holders:**  
On demand

## OrigaTest External Dummy Cell



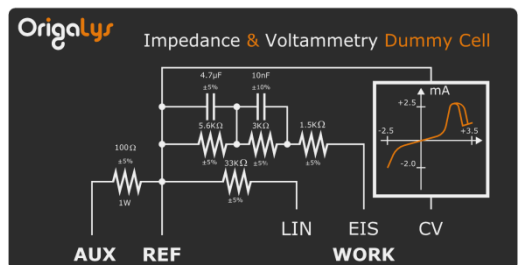
- ✓ Dimensions (L x W x H): 12 x 6,4 x 4 cm
- ✓ Weight: 0,150 kg

The **OrigaTest** is an external dummy cell, easily transportable, allowing to:

- ✓ Verify the **main technical specifications** of the OrigaLys range of products, such as: **OrigaStat**, **LandStat** or **OrigaFlex**.
- ✓ Familiarize with the **OrigaMaster** software, in order to prepare, to run and to examine experiments.
- ✓ Check the cords. Thus, you can determine if the cables are fully operational or if you need to change them.

### Main Dummy Cell functions

- ✓ Linear Voltammetry (LIN)
- ✓ Cyclic Voltammetry (CV)
- ✓ Impedance (EIS), double loop
- ✓ Auxiliary (AUX)
- ✓ Reference (REF)
- ✓ Work (WRK)
- ✓ 2 or 3 electrodes



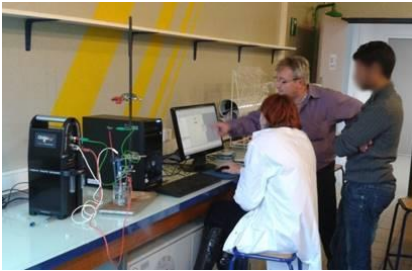
## Radiometer's Maintenance



As former designers of Radiometer and Tacussel, we are able to give you a repair diagnostic of all your instruments from Radiometer Analytical and Tacussel:

- ✓ **VoltaLab range**, such as PST006, PGZ100, PGP201, PST050, PGZ301 or PGZ402.
- ✓ **EDI101 and CTV101.**

## General Services



### Training day

OrigaLys offers its expertise and know-how to enable you to be more competitive and efficient or train you to the use of OrigaLys' devices in your business or research.

Do not hesitate to consult us if you have any needs in the following areas:

- ✓ Electrochemistry
- ✓ Batteries
- ✓ Corrosion
- ✓ Coatings



### Customization

The accessory or the device, you are looking for, does not exist yet? You do not find the device which fits your needs?

- ✓ OrigaLys can design, with you and for you, a special equipment.
- ✓ From the first specifications to the final products, we are by your side.
- ✓ We can create, with you and then implement, a customized method into our software.



# Compatibility

Compatibility table of OrigaLys products	OGS080	OGS100	OGS200	LandSpeed	OGF500	OGF01R	OGF05R
OrigaTroD	✓	✓	✓	✓	✓	✓	✓
OrigaBox	Built-in	Built-in	Built-in	Built-in			
OrigaTroD Lt	✓	✓	✓	✓	✓	✓	✓
OrigaMix	✓	✓	✓	✓	✓*	✓*	✓*
OrigaMμ	✗	✓	✓	✓	✓	✓	✓
OrigaBookKst	✗	✓	✓	✓	✗	✗	✗
OGFEIS	✗	✓	✓	✓	✓	✓	✓
OrigaCell Kit	✓	✓	✓	✗	✗	✗	✗
T°C probe	✗	✓	✓	✓	✓	✓	✓
Battery Holder	✗	✗	✗	✗	✓	✓	✓
OrigaTest	✓	✓	✓	✓	✓	✓	✓

\* To be used with the OrigaBox (Speed Controller)

## For instance:



1  
OGS100  
+  
OGFEIS



2  
OGS200  
+  
OrigaTroD  
+  
OrigaCell Kit

## Coatings

**Are you looking for a « Plug and Play » system?**

**Do you wish for a solution fitting your needs?**

Coating is a topic involving corrosion. As it is electrochemical in nature, it requires electrochemical techniques using sophisticated devices, to perform:

- Characterization measurements
- Research on Electrolyte for production processes
- Study of species concentration
- Impact on the metals

With the OrigaLys instruments, you are able to understand why a treatment does not work and how improve it.

### 5 reasons to choose it

- ✓ Following the bath composition
- ✓ Developing new deposits
- ✓ Monitoring the deposit quality
- ✓ Controlling your waste waters
- ✓ 5 year warranty

## Instruments

- ✓ OrigaStat – OGS200



## Accessories

- ✓ OrigaCell Kit – Built-in electrochemical cell
- ✓ OrigaTrod – Rotating disk Electrode (RDE)
- ✓ Sample Holder -  $\varnothing$  8mm
- ✓ Glassy Carbon tip -  $\varnothing$  3mm
- ✓ Platinum tip -  $\varnothing$  5 mm

## Software methods

- ✓ Open Circuit Potential
- ✓ Cyclic Voltammetry
- ✓ Electrochemical Impedance Spectroscopy
- ✓ Corrosion methods: pitting and general corrosion

## Corrosion Analysis

- ✓ Tafel slope analysis
- ✓ Corrosion rate: automatic calculation of polarization resistance ( $R_p$ )

## Teaching

**Are you looking for a « Plug and Play » potentiostat?**

**Do you wish for a solution fitting your budget?**

Preparing practical works in advance and store it.

The students can easily change the parameters to see their influence on:

- Diffusion limited current
- Detection of Slow-Fast system
- Potential and Intensity curves
- Evans and Tafel curves

With the OrigaLys instruments, the use is totally safe:

- Only plastic, no glass
- No Mercury
- All the connections are secured

### 5 reasons to choose it

- ✓ Easy to use because it's a all in one solution
- ✓ Safe (without Mercury)
- ✓ Good value for money
- ✓ 5 year warranty
- ✓ Compact, only 13 cm width

## Instruments

- ✓ OrigaStat – OGS080



## Accessories

- ✓ OrigaCell Kit – Built-in electrochemical cell
- ✓ OrigaTrod – Rotating disk Electrode (RDE)
- ✓ Platinum tip -  $\varnothing$  2 mm

## Software methods

- ✓ Open Circuit Potential
- ✓ Linear Voltammetry
- ✓ Cyclic Voltammetry
- ✓ Chrono methods
- ✓ Electrochemical Impedance Spectroscopy

## Analysis

- ✓ Tafel slope analysis
- ✓ Peak search
- ✓ Regression Circular
- ✓ Data transfer to Excel and Regressi

## BATTERIES



[www.origalys.com](http://www.origalys.com)

## CORROSION



[www.origalys.com](http://www.origalys.com)

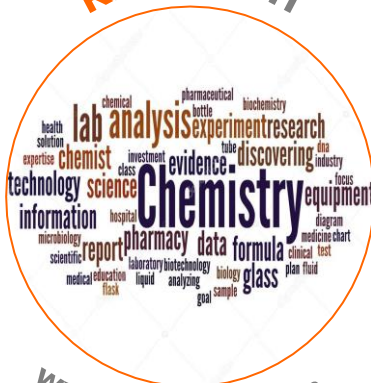


## EDUCATION



[www.origalys.com](http://www.origalys.com)

## RESEARCH



[www.origalys.com](http://www.origalys.com)

Subject to change  
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Country Representative

OrigalyS ElectroChem SAS

Les Verchères 2  
62A, avenue de l'Europe  
69140 RILLIEUX-la-PAPE  
FRANCE

☎ +33 (0)9 54 17 56 03  
☎ +33 (0)9 59 17 56 03

[contact@origalys.com](mailto:contact@origalys.com)