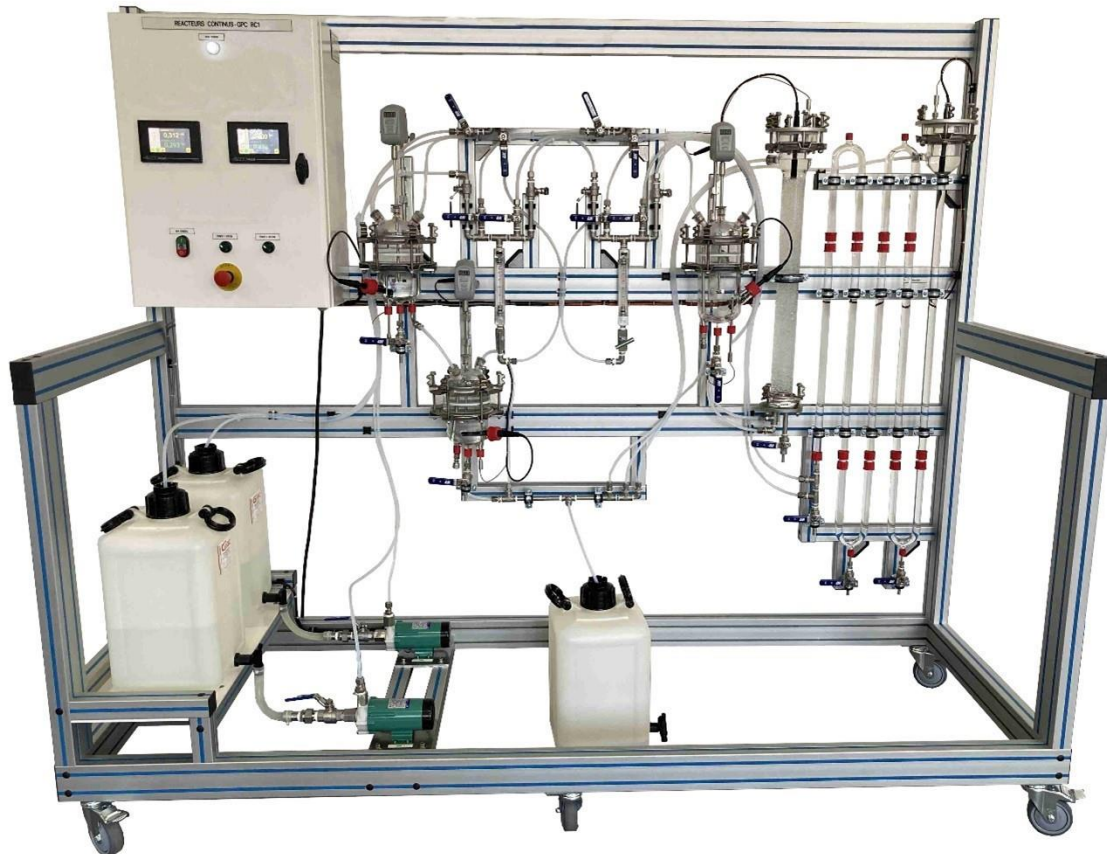


## COMPARISON OF CONTINUOUS REACTORS



### Experimental capabilities

- Identification of the Elements of a Reactor Facility
- Solution Preparation & Commissioning
- Mass balance: transfer of material
- Hydrodynamic study of reactors
- Determination of the conservation rate  $T = C_t / C_0$
- Determination of the residence time
- Effect of stirrer action (comparative study with or without stirrer)

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Dans le cadre de l'amélioration permanente de nos produits, ce descriptif technique est susceptible d'être modifié sans préavis  
As part of the continuous improvement of our products, this technical specification may be modified without previous notifying

## Operating principle

The GPCRC1 bench allows the study and comparison of continuous reactors of the same volume but different technologies.

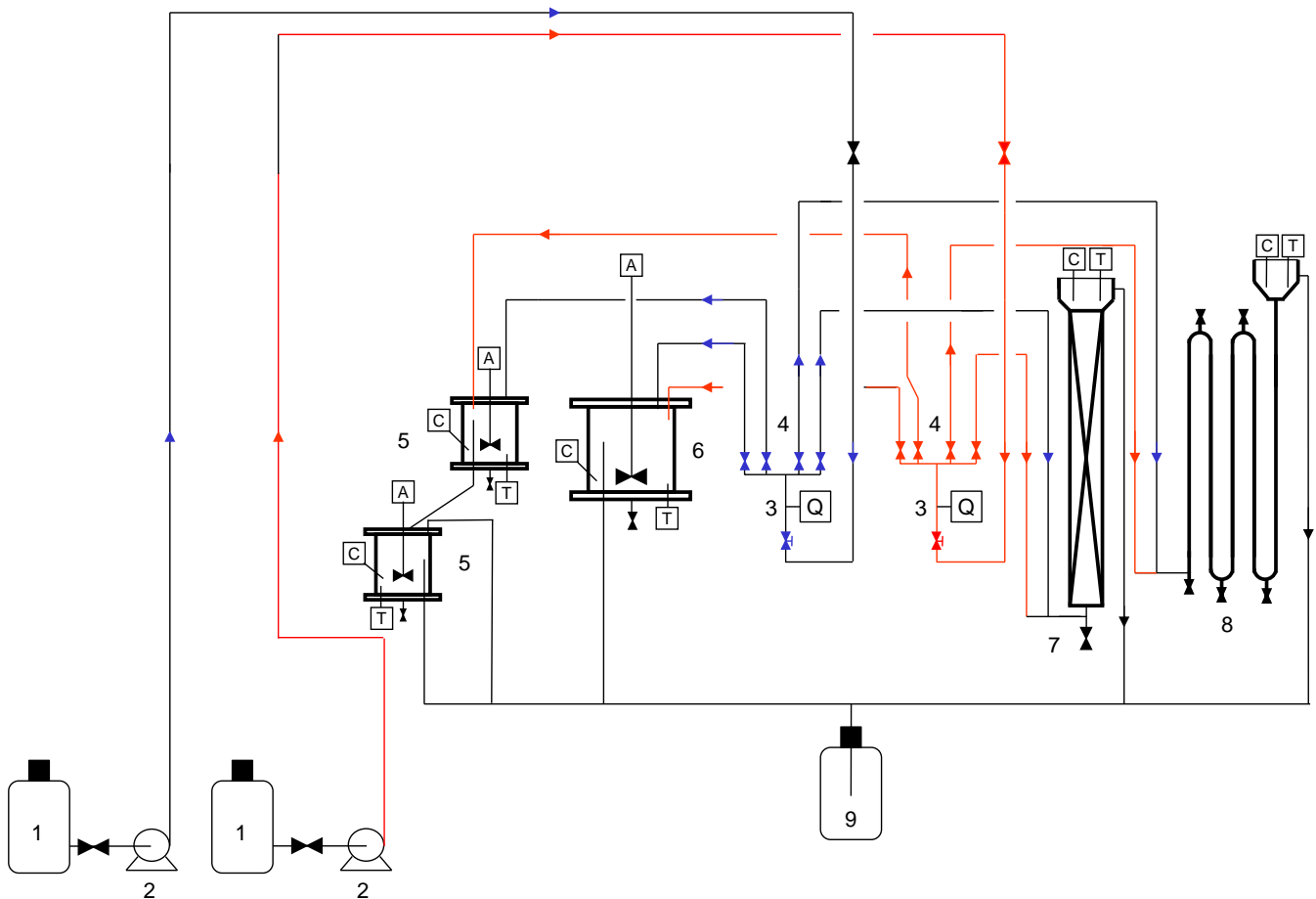
It is equipped with two mixing product tanks. Each product is sucked up by a pump and sent to the reactor under study. It is possible to send two products to each reactor or to send a single product (e.g. water) and to inject a tracer (e.g. salt water) to monitor the evolution of conductivity.

A set of valves is used to direct the products to the various reactors. Each type of reactor is equipped with a conductivity measuring point and a temperature measuring point. The probes can be moved between the reactors.

The resulting products are sent to a storage tank.

The rugged design of this equipment makes it perfectly suited for use in a school setting. Its anodized aluminum structure on wheels gives it great robustness as well as great flexibility of integration into your premises. The manufacture of this equipment complies with the European Machinery Directive.

## Diagram



## Technical details

The trainer is installed on an aluminum profile structure equipped with four directional castors with brakes.

It includes an electrical box with a general power disconnect and a 30mA GFCI.

### 1. Reagent Feed Trays

- Material: Polyethylene
- Volume 20 L

### 2. Reagent Feed Pumps

- Polypropylene body
- Qmaxi = 900 L/h

### 3. Float Flow Meters

- Stainless steel float
- With stainless steel control valve

### 4. Manifolds

- Equipped with 4 1/4 turn valves for dispensing reagents in each reactor

### 5. Reactor 1: Perfectly Shaked

- Material: borosilicate glass
- 2 x 0.5 L cascade reactors
- Equipped with a variable speed agitator

### 6. Reactor 2: Perfectly Shaked

- Material: borosilicate glass
- 1 x 1 L reactor

### 7. Reactor 3: High Dispersion Piston

- Material: borosilicate glass
- ND column 50 mm
- Length: 550 mm
- Filling: Rashig rings

### 8. Reactor 4: Low Dispersion Piston

- Material: borosilicate glass
- Coil DN 15 mm
- Length: 6000 mm
- With 4 drain taps and drain valves

### 9. Recipe Tray

- Material: Polyethylene
- Volume: 20 L

### 10. Electrical box

- Protection by 30mA GFCI, emergency stop button, power button and element start-up buttons
- 2 indicators for measurements connected to 2 conductivity cells with temperature probe

## Services required

## Documentation

- Electrical supply: 230 Vac – 50 Hz – 10 A
- Electrical network: 1 live(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 2300 x 800 x 1935
- weight (Kg): 220

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Electrical diagram
- Fluidic diagram
- Certificate of conformity CE

## Options

- Software-based data acquisition system with data recording in Excel file and real-time curve plotting
- Ref : GPCRC2