



Redeem Photo-Flow Reactor

Unleash the Power of Photochemistry



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Your Benefits



1 Fit For Every Type of Catalyst

The only plate type reactor that enables solid catalyst fixation.

2 Optimized Light Utilization

Illuminated depth variation for maximum catalyst activity.

3 Simple Multi-Phase Reactions

Optional membrane for integrated gas/liquid or liquid/liquid separations.

4 Customized Chemical Compatibility

Flexible material of construction prevents leaching and corrosion.



5 Easy Cleaning and Maintenance

Smart design and construction ensure an economical use.

6 Reaction Monitoring

Glass window for visual inspections and non-invasive PAT methods.

7 Customization

Tailor made mixing units for maximized mass transfer.

8 Scalability

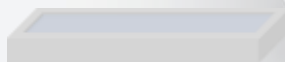
Scalable photochemistry made easy with different reactor sizes for mg/h to t/y production.



The Photoreactor in a Nutshell



Basic Model

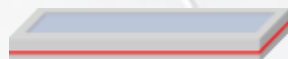


- For solid photocatalyst
- Wide glass window
- Easy cleaning and maintenance

Illumination Area	Illuminated Depth	Dimensions LxWxH	Maximum Pressure	Temperature Range	Material
6×5 cm	700 μm	8.5×7×4 cm	5 bars	-20 to +205°C	Stainless steel, glass

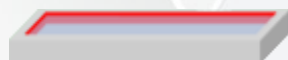
Options

Membrane



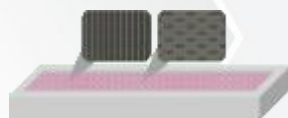
- Gas/liquid or liquid/liquid separation

Channel Depth Variation



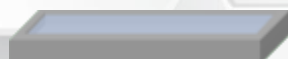
- Optimized light utilization
- Highest possible catalyst activity

Mixing Patterns

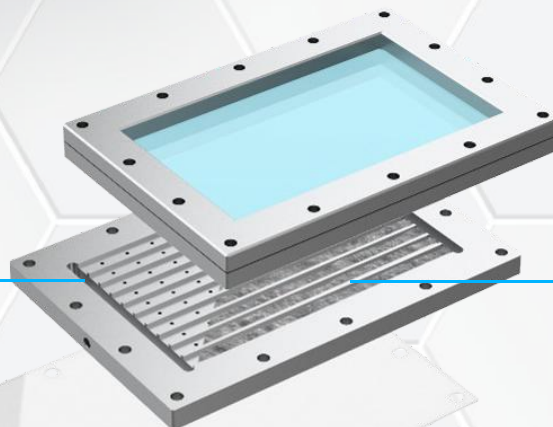


- Optimized heat and mass transfer
- Customizable patterns

Material of Construction



- Customized chemical compatibility
- No leaching or corrosion



Flow Distributor

- Uniform flow distribution
- Enables highest possible mixing for rapid kinetics
- Ensures high and steady quality

Solid Photocatalyst

- Trapped inside the reactor
- Prolonged catalyst lifetime
- Easy recycling without catalyst separation step

Separation Membrane

- Increased selectivity and product purity
- Steady performance due to no gas buildup
- Manipulation of reaction equilibrium

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About Redeem Solar Technologies



Contribute to a sustainable future by providing the world with green energy, chemicals, and active pharmaceutical ingredients through innovative technologies that leverage the power of light.

Supported by:

austria
wirtschafts
service



Federal Ministry
Republic of Austria
Climate Action, Environment,
Energy, Mobility,
Innovation and Technology



FFG

Promoting Innovation.



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