



## Acid regeneration station for the anodizing process

# ACIDPURE



**Quality parts. Guaranteed.**

Optimal alumine concentration.  
Get consistent quality.



**Increased productivity.**

Avoid production line interruption.  
Autonomous machine.  
Reduced maintenance frequency.

## Recover up to 94% of the sulfuric acid.



**A viable long-term investment.**

Acid sulfuric consumption divided by two.  
Significant savings on maintenance related costs.  
Reduced environmental impact thanks to acid recycling.

SPECIAL  
**ACID RECOVERY**

**MADE IN FRANCE**

## Why ACIDPURE™ ?

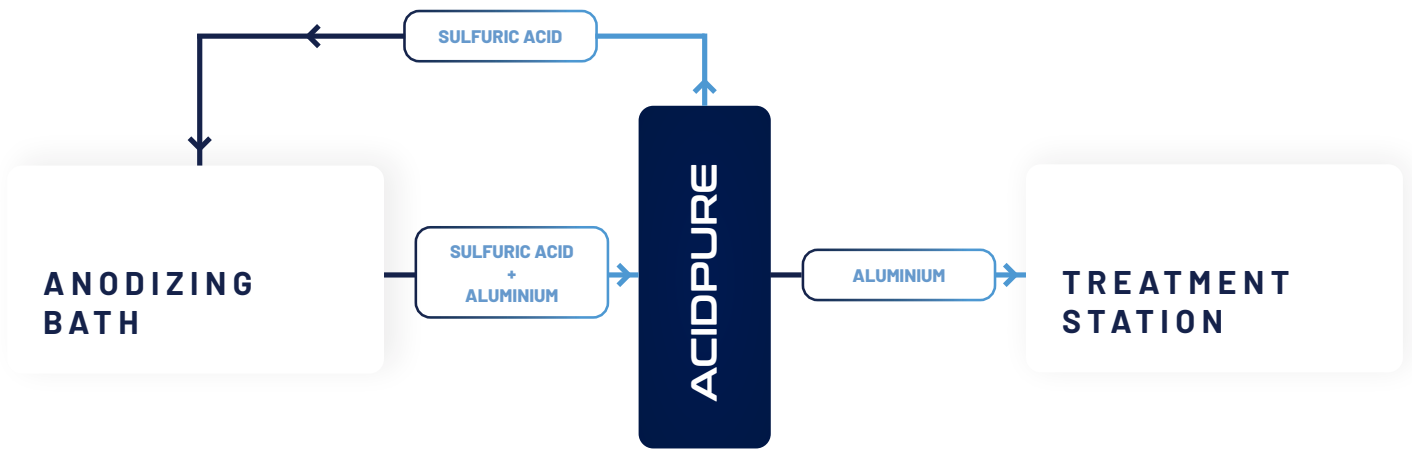
Traditionally, the control of the aluminium concentration of an anodizing bath is done in an approximate way by removing a part of the bath and replacing it with an equivalent volume of demineralized water and sulfuric acid to keep a constant concentration (180 to 240 g/l). This leads to significant costs related to the loss of sulfuric acid and the treatment of effluents with a high acid concentration.

ACIDPURE allows the aluminium concentration in the bath to be controlled and adjusted completely autonomously. The use of ACIDPURE allows to reduce by 70% the quantity of sulfuric acid discharged but also the acid concentration

of the effluents, making them less expensive to treat. The combination of the two results in a significant financial gain.

## How does the ACIDPURE work ?

ACIDPURE uses an ion exchange resin to separate the aluminium from the sulfuric acid. The aluminium is then evacuated to a treatment plant while the sulfuric acid is returned to the anodizing bath.



## Aluminium removal rate depending on anodizing bath concentration

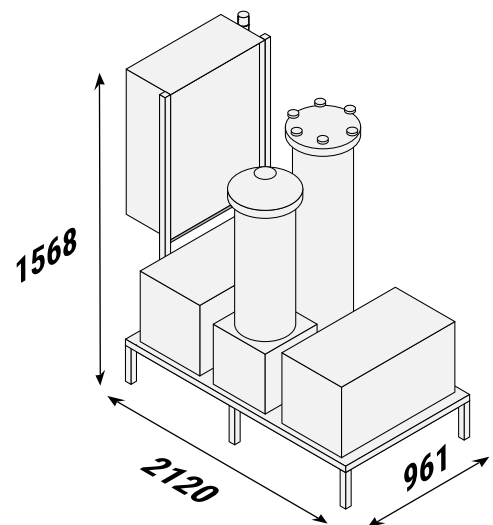
Aluminium concentration (g/l)	8	10	15	20
Removal rate (g/h)	144	180	270	360

## Typical effluents concentration with and without ACIDPURE

	WITH	WITHOUT
Acid	14 g/l	240 g/l
Aluminium	3 g/l	10 g/l

## ACIDPURE working parameters

Acid	180 - 240 g/l
Aluminium	6 - 20 g/l
Temperature	5 - 60°C



Dimensions (mm)

# ACIDPURE



How our client was able to recover 94% of the sulfuric acid from his anodizing baths.

## Context

Aluminium anodizing is carried out in baths containing sulfuric acid (H<sub>2</sub>SO<sub>4</sub>). The process generates aluminium which must be removed to ensure consistent part quality.

## Clients settings

Bath volume

**2000 l**

Sulfuric acid concentration

**240 g/l**

Aluminium concentration

**10 g/l**

## Problem

In order to keep the aluminium concentration around 10 g/l, our customer uses the withdrawal method: every 2 weeks (10 days of production), in order to eliminate 4 kg of aluminium from its bath, the company evacuates 20% of the bath volume to a treatment station. This results in high costs related to the replacement of lost sulfuric acid and the treatment of effluent that is highly concentrated in acid.

### The Siebec solution

ACIDPURE removes aluminium from the anodizing bath while recycling the sulfuric acid and generating an effluent with a low acid concentration.

## Results

After a rigorous follow-up carried out directly in our customer's anodizing workshop, here are the results of our analyses after 10 days of production.



	TRADITIONAL METHOD	ACIDPURE
Lost acid	96 kg	<b>21 kg</b> - 70%
Effluent acid concentration	240 g/l	<b>14 g/l</b> - 94%
Eliminated aluminium	4 kg	<b>4.5 kg</b> + 12.5%

Thanks to ACIDPURE, our customer eliminates 4.5 kg of in-bath aluminium in 10 days of production, completely autonomously.



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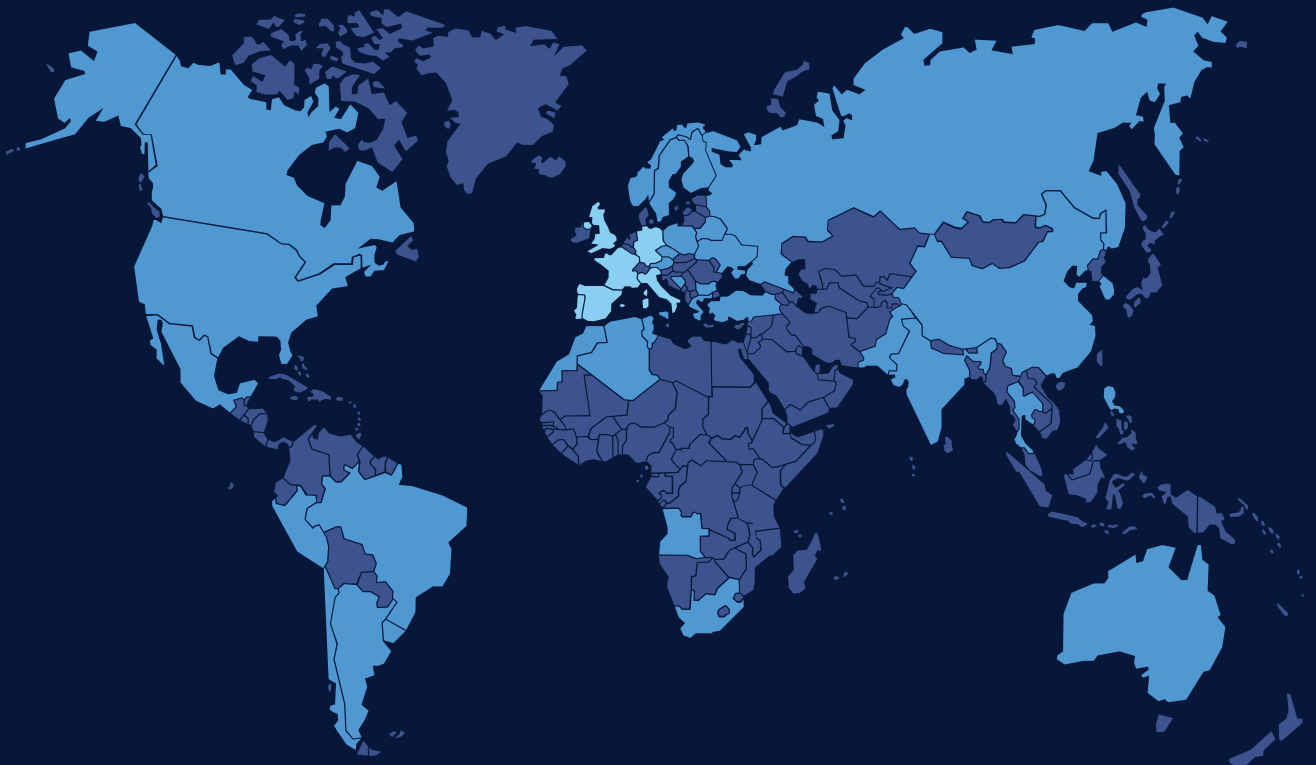
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