

CONTINUOUS ACID RECOVERY SYSTEM

Continuous process quality/control

Reduction of wastewater volume by 40% - 50%

Return on investment in approximately 6 months

Reduced energy & chemical costs



TYPICAL APPLICATIONS

Pickling or etching
of metal surfaces
Aluminium treatment
such as anodizing

OVIVO[®] pur[™]



HOW DOES THE OVIVO® PUR™ TECHNOLOGY WORK?

Ovivo uses a special anion exchange resin to separate and control the concentration of metal salts in the solution. While treating the anodizing bath, free acids are held back by the resin, while metal salts are allowed to pass through the ion exchanger. During regeneration of the media with water, the acidic electrolytes will be released and returned to the anodizing bath while the metal salts are wasted. This process is repeated continuously until the plant is turned off. The Ovivo Pur has an excellent payback. Contact Ovivo, so that we can calculate the payback based on your operational data.

KEY FEATURES:

- **Wastewater reduction through intelligent water recirculation**
40-50% less wastewater compared to conventional equipment or competitor's plants
- **Ease of maintenance**
Remote network access (optional)
- **Expandability**
Ovivo's design provides for a 100% capacity expansion. The OVIVO Pur 50 model can be expanded to an OVIVO Pur 100 equipment capacity and similarly, an OVIVO Pur 250 equipment can be expanded to an OVIVO Pur 500 model capacity. Expansion require no additional capital investment.
- **Spray and dust proof design**
- **Simple to operate touchscreen**



WHY USE OUR OVIVO® PUR™ SYSTEM?

Delivering consistent quality

Constant Current-Voltage conditions allow for homogeneous aluminum oxide layers.

Lower power consumption during the anodic treatment

From capacities of 100 m²/h onwards, return on investment of the OVIVO Pur equipment will be less than a year.

Reduction of waste water treatment chemicals and fresh acid

Due to our regeneration and purification process, anodizing baths no longer have to be discharged and replenished. Thereby neutralization with sodium hydroxide solution or lime can be eliminated. Furthermore, the investment in new batches of sulphuric acid will become obsolete.

No interruption of the process

There is no longer any need to discharge exhausted anodizing baths for wastewater treatment, hence improving equipment uptime.

No additional chemicals for regeneration needed

As only water is used for the regeneration of the resin, chemicals are no longer required.

A compact and robust plant

Due to its sturdy and compact design, the equipment can be placed adjacent to the process bath. This reduces not only footprint and infrastructure like tanks and pipelines, but also the overall cycle time.

Continuous filtration

OVIVO Pur pre-filter purifies the acid, which further improves the quality.

Reduction of sulphate in the wastewater

Sulphate concentration in the effluent can be reduced significantly as no concentrates have to be treated. This aspect can be especially important for indirect discharge due to the high aggressiveness of sulphate on concrete.

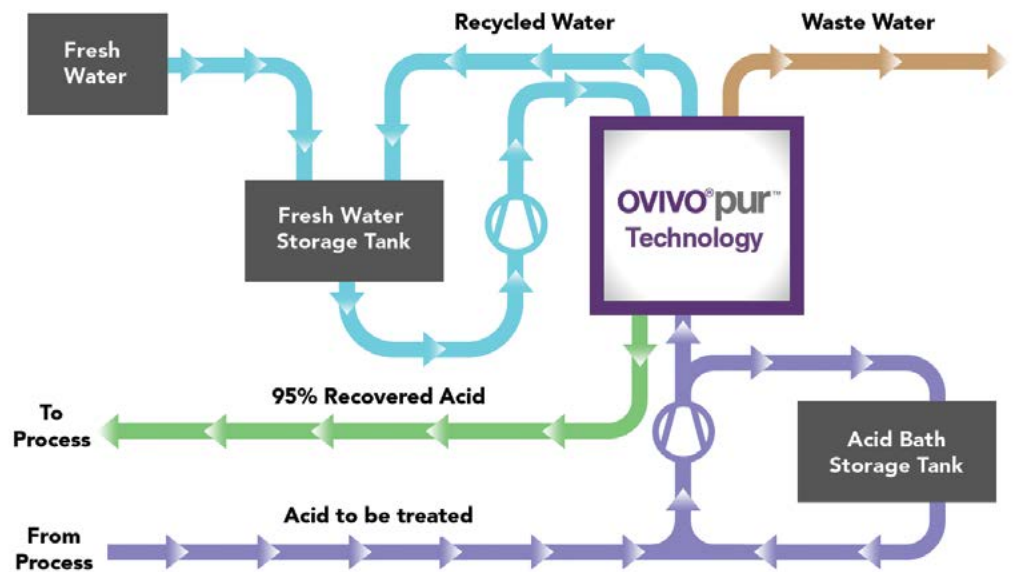
Neutralization of concentrates is not required

Neutralization of large quantities of anodizing bath solutions will no longer be required. The effluent of OVIVO Pur equipment will only be a small and continuous flow of weak acid aluminum sulphate solution.

HOW DOES OVIVO® PUR™ EQUIPMENT WORK?

1. The anodizing bath solution is pre-filtered and collected in the buffer tank for volume control.
2. The filtered acid solution is then pumped upwards through the OVIVO Pur ion exchange column filled with a special acid retaining resin. In this process, the acid will be retained by the resin and the metal salt solution will pass through and be discharged to the sewer.
3. Fresh water previously stored in the fresh water tank for volume control will be pumped counter flow through the OVIVO Pur ion exchange column to remove the acid from the resin. In this process, the acid which was retained by the resin will be freed and returned to the anodizing bath.

This process will be repeated when a low level signal is received from the buffer tank.



| | | OVIVOpur50 | OVIVOpur100 | OVIVOpur250 | OVIVOpur500 | |
|------------------------------------|---------------|------------|-------------|-------------|-------------|------|
| Waste water flow rate | l/h | 83 | 165 | 309 | 619 | |
| Anodizing bath flow rate | l/h | 150 | 300 | 560 | 1125 | |
| Aluminum Removal* (approx.) | g/h | | | | | |
| | 8 g/l | 420 | 840 | 1575 | 3150 | |
| | 10 g/l | 525 | 1050 | 1969 | 3938 | |
| | 12 g/l | 630 | 1260 | 2363 | 4725 | |
| | 15 g/l | 788 | 1575 | 2953 | 5906 | |
| Utility Requirements | V | 120 - 230 | 120 - 230 | 120 - 230 | 120 - 230 | |
| | Hz | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | |
| Dimensions | Length | mm | 1300 | 1350 | 2160 | 2160 |
| | Width | mm | 800 | 800 | 1600 | 1600 |
| | Height | mm | 1930 | 1930 | 2200 | 2250 |
| Weight (approx.) | kg | 350 | 350 | 850 | 850 | |
| Max operating temp. | | 35°C | | | | |

*OVIVO® Pur™ model capacity depends on the aluminum concentration used in the anodizing bath solution.



THE OVIVO DIFFERENCE

OVER ONE HUNDRED REFERENCES ON THREE CONTINENTS,
FOR VARIOUS APPLICATIONS AND MARKETS.

OVIVO DEUTSCHLAND GMBH

Holderäcker Straße 10
70499 Stuttgart

+49 711/76102-0
+49 711/76102-150

Info.de@ovivowater.com

SERVICECENTER DRESDEN

Heidestr. 34 B
01127 Dresden

+49 351/8474526-0
+49 351/8474526-29

service.de@ovivowater.com

TECHNOLOGY AND DEVELOPMENT

Panoramastraße 65
75217 Birkenfeld

+49 7231/94 98-11
+49 7231/94 98-20

lab.de@ovivowater.com

REGENERIERBETRIEB BIRKENFELD

Panoramastraße 65
75217 Birkenfeld

+49 7231/9498-0
+49 7231/4712-33

Regenerbetrieb.de@ovivowater.com



LEARN MORE!
Scan to view online.



+49 711/76102-0

info.de@ovivowater.com
ovivowater.com