

CASE STUDY

A NEW ERA IN WASTEWATER TREATMENT

AERZEN blowers take pre-treatment at the Strass wastewater treatment plant to the next level.

EXPANSION

Without new tank construction

MAXIMUM

Energy efficiency

SUSTAINABLE

Wastewater treatment

THE ISSUE

Inefficient pre-treatment, especially at peak times.

After 30 years in operation, the wastewater treatment plant in Strass (Zillertal), Austria, was due for extensive modernisation and repair work. With a view to future security, one goal had been to increase the plant's capacity by 50 percent to 250,000 population equivalents (PE) - without, however, building new tanks.



Thanks to the Triple A process, the efficiency in pre-cleaning has been improved and productivity significantly increased."

Christian Fimml
Operations Manager Wastewater Association
Achtal-Inntal-Zillertal (AIZ)



Find your local contact.
www.aerzen.com



AERZEN

THE SOLUTION

Turbo blower with maintenance-free air foil bearing.

Especially during the ski season, the comparatively small pre-cleaning tank became a bottleneck with steadily decreasing efficiency. Today, the AAA process (Alternating Activated Adsorption) is used in Strass. Finely injected air fulfils a decisive role in activating the biosorption.

1

Two turbo blowers of the energy-efficient Generation 5^{plus} provide the required air. The compact assemblies ensure the lowest possible energy consumption and can also be used outside the usual base load operation thanks to the long-lasting and maintenance-free air foil bearing.

2

Aeration elements in form of membrane plates are placed in two levels of different depths on the bottom of the round tanks.

3

The innovative triple A process increases efficiency and increases the amount of sludge, which is becoming increasingly important as an energy resource.



Type of technology	Turbo blower
Version	Overpressure
Volumenstrom	360 to 8,400 m ³ /h
Overpressure	1,000 mbar
Conveying media	Air, neutral gases
Conveying	Oil-free

THE RESULT

Modern technology instead of concrete.

With the triple A process and the modernisation of the aeration system, it was possible to double the cleaning efficiency compared to conventional pre-treatment, and this with lower air consumption. In addition, the amount of sludge from the first treatment phase has now increased - a valuable resource for energy production.



50 %

Capacity increase without new tank construction

SUMMARY

The use of state-of-the-art technology and the associated elimination of space-consuming concrete has made the Strass wastewater treatment plant a pioneer in terms of sustainability and future viability. The need for electrical energy increases in the pre-treatment phase, but less is needed in the subsequent activation phase. All in all, there is an enormous gain in efficiency.