Performance³ - The AERZEN Concept
1. AERZEN General information
2. Performance³ - The AERZEN Concept
3. Sample project: WWTP Rheda-Wiedenbrück
4. AQUACONSULT aeration system / Aerostrip® diffusors
Performance³
The whole product program from one hand!

- Each technology with unique selling propositions
- Worldwide references
- Independent and objective advice

*Delta Blower*  *Delta Hybrid*  *Aerzen Turbo*
Serving load changes precisely. Combining technologies.

For a new efficiency in aeration basins

Technical and constructional features and the changing air consumption in the aeration basins are a challenge for the aeration technology of every sewage plant. Consequence: extreme energy consumptions. They can amount to up to 80 % of the total costs.

The solution: A combination of Blower, Hybrid and Turbo technology - they serve the base loads extremely energy-saving and compensate supply peaks precisely.
Serving load changes precisely. Combining technologies.

Blower + Hybrid + Turbo

Integrated approach:
- efficiency
- turn down
- efficiency at partial load
- investment and service costs

![Graph showing specific electrical power consumption](image)
Conclusion:

The selection of the suitable machine depends on many influences:

- Load cycles
- Volume flow ranges
- Temperatures
- Pressure variations
- Kind of operation

There are no general rules!
Serving load changes precisely. Combining technologies.

**Convincing benefits**

Adaptation of the ventilation onto the special requirement of the wastewater treatment plant leads to:

- better efficiency
- better turndown
- better price
Project Rheda-Wiedenbrück
Project overview

- Municipal sewage plant
- 326,000 EGW (incl. industrial waste water)
- 2 x GM80L (since 1998)
- Energy-autonomous sewage plant (investments for biogas + aeration)
- Installation of 1 x D62S + 1 x AT150-0,8S (commissioning in July 2014)
24 hours load cycle

WWTP Rheda-Wiedenbrück
Use 2 x Delta Blower GM 80 L

- Nm³/h
- Load curve
- 2 x Blower

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Combination Aerzen Turbo AT 150 0,8S + Delta Hybrid D62 S

- 30 kW
- 40 kW
- 50 kW
- 60 kW
- 70 kW
- 80 kW
- 90 kW
- 100 kW
- 110 kW
- 120 kW
- 130 kW
- 140 kW
- 150 kW
- 160 kW

Nm³/h

- Hybrid
- Turbo
- Hybrid
- Turbo
- Turbo + Hybrid

WWTP Rheda-Wiedenbrück
Saving in the individual load ranges

Low-load operation

W2P performance
Blower = 40.81 kW
Hybrid = 29.30 kW

Effective saving 11.51 kW

-28%
Saving in the individual load ranges

Medium load operation

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W2P performance
- Blower = 120.1 kW
- Turbo = 98.9 kW

Effective saving 21.2 KW
-17%
Saving in the individual load ranges

High-load operation

- W2P Performance
  - 2 x Blower = 183.67 kW
  - Turbo + Hybrid = 149.92 kW
- Effective saving: 33.75 kW (-18%)

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Saving in the individual load ranges

Allocation of the load requirements per year

Saving (Year):
- Low Load: 11,091 € (11,51 KW)
- Medium Load: 8,511 € (21,2 KW)
- High Load: 18,942 € (33,75 KW)
- Total: 38,544 €
EXPECT PERFORMANCE.
TOGETHER FOR A MORE EFFICIENT WORLD