

# EXHAUST AIR PURIFICATION for the Chemical Industry

Be in the Clear on Exhaust Air since 1965



As from **2021**, stricter legislation will apply with regard to permissible emission limits. The basis for this is the WGC-BREF (Common Waste Gas Treatment in the Chemical Sector - Best Available Technique Reference Document), which defines the best state-of-the-art exhaust air purification for chemical plants.

The implementation of the European legislation is set for a limited period of time (4 years). The pressure to act on the companies concerned is growing.

We are in a position to offer the best available technology from our wide range of products and provide turnkey solutions for a variety of tasks.

## **Emissions Concerned**



"Almost all chemical plants in need of permit in Germany and Europe fall under the WGC-BREF and will have to comply with future emission limits."

# Your Specialist for Exhaust Air Cleaning and Heat Recovery

# Best Available Technology – Our Contribution against Emissions and for Our Environment

With over **50 years** of experience in the field of exhaust air purification technology and more than **800** implemented plants, we have numerous references in various industries.

We guarantee reliable operating systems, which fulfil the official requirements at any time - **tailor-made** and **turnkey**.

Our customers benefit from many years of experience and proven process engineering – from biological and chemical up to thermal exhaust air treatment.

Our plant concepts represent economical and efficient solutions with low investment and operating costs to comply with the clean gas values required by law.

# The Decision Matrix

Parameters Biological Exhaust Air Cleaning Regenerative Thermal Exhaust Air Cleaning

Exhaust Air Characteristics	TVOC biodegradable	TVOC thermally degradable
	small to medium TVOC-concentration	high TVOC-concentration
Separation Efficiency	> 90 %	> 90 %
Operational Safety	high	high
Investment Costs	low	low - medium
Operating Costs	low	medium
Eco-Friendliness	high	medium
Essential Advantages	proven, sustainable technology	proven technology
Essential Disadvantages	space requirements	output of climate-relevant emissions



## Biological Exhaust Air Purification





- 1 BIOCAT-Scrubber WITH CYCLE WATER TREATMENT
- 2 BIOCAT-Filter MODULAR DESIGN

Reduction of biodegradable compounds, such as: TVOC, aldehydes, phenols, organic acids, aerosols, odours

# Physical Exhaust Air Purification



- **3 DUST Filter** DRY OR ELECTROSTATIC
- 4 DLP-Scrubber LOW-PRESSURE SCRUBBER FOR DUST SEPARATION

#### 5 AGGLO-(Control)-Scrubber HIGH-PRESSURE SCRUBBER FOR DUST SEPAR

HIGH-PRESSURE SCRUBBER FOR DUST SEPARATION (without illustration)



Suitable for hot exhaust air and for reduction of: **solid particles** (coarse or fine) and sticky, agglomerating dust



#### 6 RTO

REGENERATIVE THERMAL OXIDATION in cooperation with our affiliated company Airprotech S.r.l.

The treatment of corrosive exhaust air requires the use of high-quality materials.

Reduction of pollutants, such as: **solvents, methane, BTXE, odours** 

#### 7 CS-Scrubber

MATERIAL: HIGH-GRADE STAINLESS STEEL

#### 8 CS-Scrubber MATERIAL: PLASTICS

MATERIAL: PLASTICS

Reduction of inorganic compounds and exhaust air components, such as: **ammonia, acids (e.g. H<sub>2</sub>S) or halogens (e.g. HCI, HF)** 

### Absorptive Exhaust Air Purification





#### 9 Chemical Scrubber and Biofilter

The combination of different exhaust air purification systems (e.g. biological/chemical or biological/physical) is suitable for complex tasks, where different emissions have to be reduced at the same time.

Analogue reduction of: TVOC, pollutants, odours, dust

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# Tailor-made Solutions from a Single Source







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