Ultra-Low NOx - future-proof combustion plants

Falling below the emission limit values of the Best Available Techniques (BAT)
**Main industries**

- Energy and heat supply
- Chemical industry
- Food industry
- Steel and metal production
- Building materials industry
- Wood processing

**Product features**

- Lowest emissions <30 mg/m³ that meet or even fall below country-specific emission regulations
- Ready for use on shell and water tube boilers, thermal oil heaters and thermoprocessing plants
- Robust and modular design
- Simple installation, commissioning and maintenance reduce downtime, making it particularly suitable for new construction and retrofitting
- Extended max. burner capacity from 3-28 MW (gas and oil operation)
- Large control range up to 1:10 (in gas operation)

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**TEMINOX - maximum availability and efficiency**

The TEMINOX for industrial heat and steam generation combines all the advantages of a modern combustion plant. Its low-emission combustion falls below the strictest NOx emission regulations with low CO and residual oxygen content in the exhaust gas. Every combustion system can be converted to the most modern version with the more advanced burner head with little effort.

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**BAT-compliant combustion - tailored to your needs**

Our decades of experience and competence for your individual requirements. Whether standard gas burners in plug & play mode or highly complex yet smart combustion systems - thanks to continuous research and development, we are your partner for both basic industrial applications and special fuels, special performance capacities or variable mixed and simultaneous firing. Last but not least, we master the most demanding emission requirements, which also comply with the EU BAT specifications for Large Combustion Plants (LCP) and the 13th BImSchV in Germany, which will take effect from mid 2021.

Don’t risk an outdated plant infrastructure and the loss of your operational licence. **Rely on some of the best technology on the market – the latest generation Ultra-low NOx-burners from SAACKE.**
For flexible use in large combustion plants for steam and hot water generation, this natural gas burner not only sets standards in terms of environmental protection, but also saves hard cash thanks to minimal operating costs and simple installation, even in difficult mounting situations.

ATONOX - modular concept that protects the environment and the budget

Main industries

- Refineries
- Energy and heat supply
- Chemical industry
- Food industry
- Steel and metal production
- Building materials industry
- Wood processing

Product features

- Lowest BAT-compliant NOₓ values without secondary measures such as external flue gas recirculation (therefore future-proof retrofitting possible at any time)
- Ready for use on water tube boilers with different combustion chamber geometries
- 30-50% smaller installation diameter of the burner head compared to the competition - ideal for modernization or new construction
- Quick installation, low maintenance and long service life due to no fragile ceramic components and robust design with gas nozzles without small holes
- Max. single burner capacity from 17-80 MW
- Wide control range up to 1:8
## Our current references

### TEMINOX

<table>
<thead>
<tr>
<th>Client / Project</th>
<th>Country</th>
<th>Number of burners</th>
<th>Burner capacity / total capacity</th>
<th>Measured NOx values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beijing Airport</td>
<td>China</td>
<td>5</td>
<td>5 x 8 MW / 10 t/h</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>Agristo Wielsbeke</td>
<td>Belgium</td>
<td>1</td>
<td>21 MW / 30 t/h</td>
<td>&lt;35 mg/m³</td>
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<tr>
<td>Beijing NO.2 Aviation Institute Project</td>
<td>China</td>
<td>1</td>
<td>Approx. 6.5 MW</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Food Industry</td>
<td>France</td>
<td>4</td>
<td>4 x 14 MW / 2 x 40 t/h</td>
<td>&lt;35 mg/m³</td>
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<tr>
<td>Tianjin Tong Fali Project</td>
<td>China</td>
<td>1</td>
<td>&lt;30 mg at 75 % MCR</td>
<td>&lt;30 mg/m³</td>
</tr>
<tr>
<td>Lanzhou Biopharmaceutical Base Project</td>
<td>China</td>
<td>1</td>
<td>&lt;30 mg at 75 % Last</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Lanzhou Biopharmaceutical Base Project</td>
<td>China</td>
<td>3</td>
<td>&lt;30 mg at 75 % Last</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Kunert Wellpappe</td>
<td>Germany</td>
<td>1</td>
<td>7 MW / 10 t/h</td>
<td>30 mg/m³</td>
</tr>
</tbody>
</table>

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<tr>
<th>Client / Project</th>
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<th>Measured NOx values*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vynova Wilhelmshaven</td>
<td>Germany</td>
<td>4</td>
<td>4 x 24 MW</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Chemes Humenné/OHNÚT spalovací technika s.r.o.</td>
<td>Slovakia</td>
<td>1</td>
<td>42.7 MW</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Nordic Sugar Ortóta</td>
<td>Sweden</td>
<td>8</td>
<td>8 x 15 MW</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Ganz Danubius Hungaro Steel Kft. Veolia Energia Nyíregyháza</td>
<td>Hungary</td>
<td>4</td>
<td>4 x 12.8 MW</td>
<td>&lt;30 mg/m³</td>
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<tr>
<td>Agfa-Gevaert NV Agfa Mortsel</td>
<td>Belgium</td>
<td>1</td>
<td>28.3 MW</td>
<td>&lt;30 mg/m³</td>
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</tbody>
</table>

* SAACKE burners with external flue gas recirculation achieve emission values of <30 mg. However, even without the FGR application, SAACKE’s Ultra-low NOx-burners still achieve excellent values of around 50 mg, whereas for example the TA Luft (Technical Instructions on Air Quality Control) of the German Federal Government currently still specifies 100 mg as the limit.

You can rely on almost 90 years of combustion expertise and over 20,000 installed industrial plants!