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# 1. About AMPRO

# About AMPRO

- *We are a rapidly growing developer and distributor of automotive parts, focused on complex exhaust system sensors*
- *Founded in 2007, we are a family-run business with a strong passion for the environment, technology and automobiles*
- *Today our company is run by the family's next generation and a committed team of technical experts*
- *We are the German partner of a Joint Venture with industry-leading Chinese manufacturers*
- *We offer the best reliability, accuracy and longevity, surpassing original equipment*



## 2. Products

# Products

## What is a NOx sensor?

- *The NOx sensor measures the proportion of nitrogen oxides in a vehicle's exhaust gas and enables efficient exhaust gas purification in conjunction with a SCR catalyst*
- *The aim is to keep nitrogen oxide emissions within the legal limits, making engine combustion as efficient as possible*
- *Most vehicles use two NOx sensors, installed before and after the SCR catalyst, they are used in most Euro 5 & 6 diesel vehicles*
- *The complex ceramic chip in the sensor head takes measurements directly in the hot exhausts stream, then the electronics continuously communicate the NOx values via bus to the ECU*



NOx Sensor location in Exhaustion System



12V



24V

# 3. Production Process

# Ceramic Chip Technology

- *Production process*

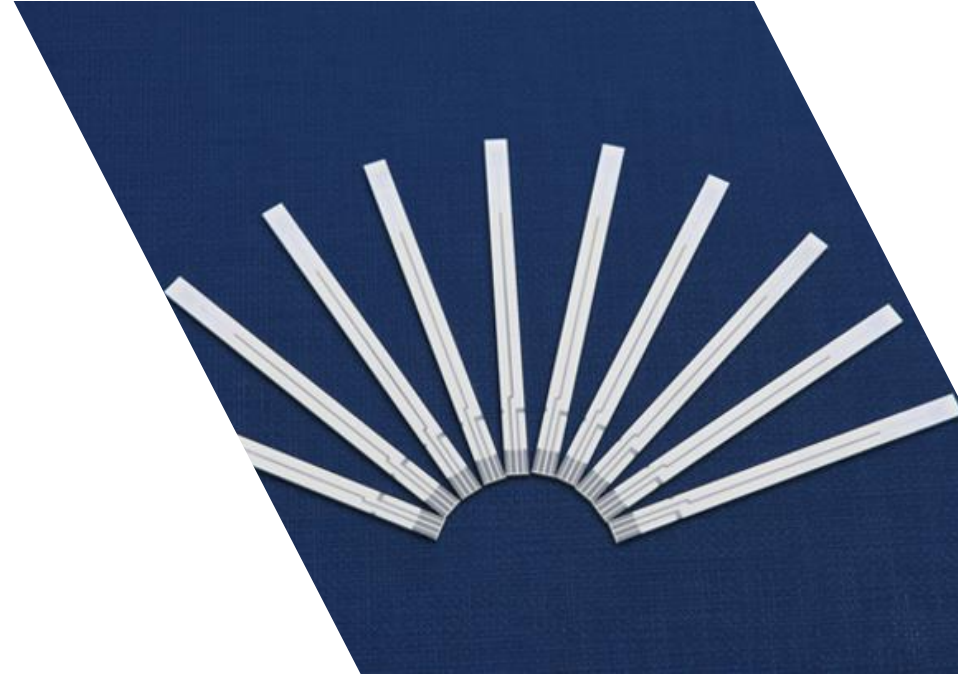
*We have a complete process flow, from powder casting to film, printing, lamination, sintering, and finished product performance testing. Our process has reached the reference level*

- *Basic materials*

*We import German zirconium oxide powder and US electrode materials, which allows us to form an independent and unique formula material system after a lot of experiments*

- *Research*

*Our ceramic chip research and development is supported by the Shanghai Jiaotong University and the Chinese Academy of Sciences, providing valuable experimental data*



Ceramic Chip



# Advanced Equipment

- *We introduced complete HTCC process production equipment, printing equipment, hot knife cutting machines, warm water isostatic presses, etc. from KEKO in Europe.*
- *There are 10 sintering machines at our production site. The annual output of chips can reach more than 1.200.000 pieces and the rate of finished chips is more than 98%.*



Sintering machine

# Testing, Calibration, Certification

- *We ensure a high accuracy and performance testing at each production stage.*
- *Full final testing and calibration of each individual sensor is done on our unique self developed bench, providing a full, real-world simulation.*
- *IATF 16949 certified by nqa*
- *E-Mark certified by NSAI*
- *EMC certified by GTS*



Self developed testing and calibration bench

## 4. Our USPs



# Quality



# Products & Range



# Availability



# Support

# Quality



- *We are the only NOx manufacturer to supply Aftermarket and OEMs*
- *We offer true OE quality level. Every sensor is tested for 5 days and individually calibrated*
- *Our sensors are 100% newly produced, with high vertical integration, from base chemicals to finished product in one factory*
- *We use fully independently developed hardware and software*
- *Our products are 1:1 replacements for original parts*



Calibration machine

# Products & Range

- 185 NOx sensor models in current range
- Best market coverage, all European truck brands plus popular passenger cars & light commercial vehicles
- 100 new sensors in development
- Ready for the future, preparing next-gen NOx and Euro 7

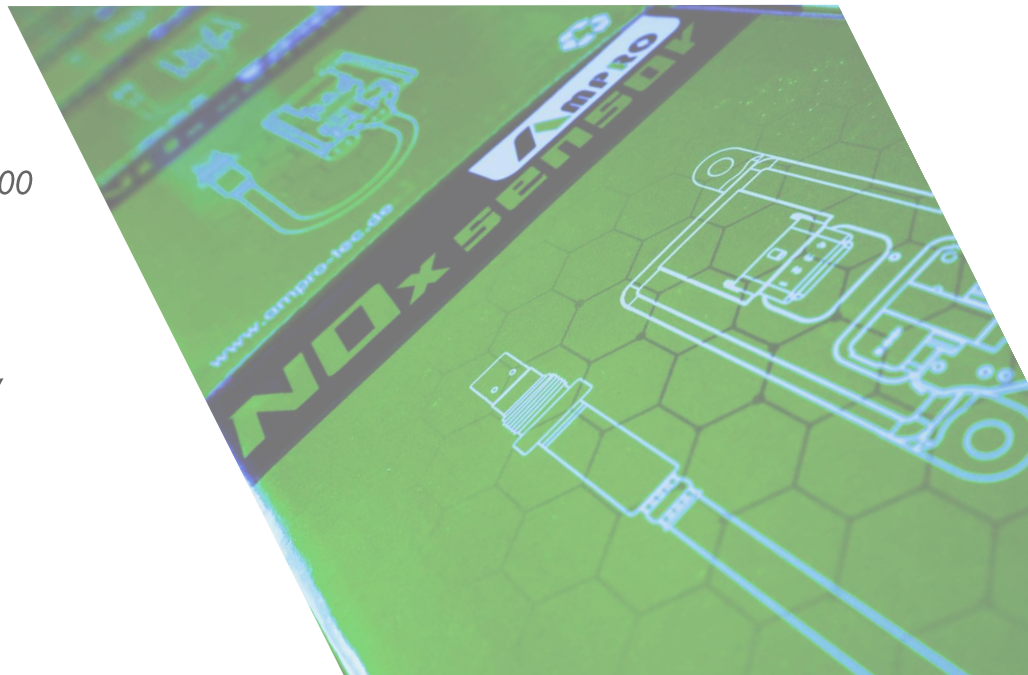
**SCANIA****IVECO**

Mercedes-Benz

**RENAULT****LIEBHERR****PSA**  
GROUPE**WEICHAI**

# Availability

- *Our stock is located in Germany. Currently we have 15.000 pcs in our AMPRO warehouse*
- *Popular models ship within one day*
- *Total production capacity is 1.200.000 pieces per year*
- *Very large orders are possible within 2 - 4 weeks delivery time*



# Support

- *Our own brand is the German AMPRO brand*
- *We offer multilingual sales and technical support*
- *We offer trainings for sales and product management teams*
- *We provide full Marketing support to all our customers*
- *We distribute and support globally*



Our own AMPRO brand



# 5. Goals

# AMPRO's Goals

- *Build AMPRO as a recognized brand for premium products*
- *Keep growing NOx sensor range, always offer best coverage*
- *Keep advantage over competition by better technology, better manufacturing processes, better support*
- *Develop and provide more products to complement NOx sensors, e.g. AdBlue pumps*
- *Use knowledge of BUS systems, protocols and advanced production to develop more sensor types*
- *Create more truly new aftermarket products and help customers be “first to market”*
- *Continue to build trust in AMPRO products, to take more market share from OE spare parts*

# Thank You



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