

For our environment
Saving energy - reducing emissions

LAMTEC is the leader in commissioning analytical measurement engineering for the optimisation and supervision of combustion facilities of all kinds.

Today, O₂ trim is the standard in industrial combustion and has been helping to save energy for decades. However for this, an auxiliary quantity has to be used which is not always secure (infiltrated air).

The Combi Probe KS1 measures the unburnt proportion of carbon monoxide (CO) and hydrogen (H₂) remaining in the flue gases. The CO controller integrated in the LAMTEC fuel/air ratio control system reduces the fuel/air ratio in

small steps until the "CO edge", the crossover from complete to incomplete combustion, and creates an optimisation curve.

Thus, for the first time a self-optimising fuel/air ratio control has been created. The advantages are better and more precise regulation control, greater safety and significantly shorter adjustment times.

This new form of control technology can lower the oxygen content of the flue gases in comparison with traditional O₂ trim and thus contributes to energy saving and reduction of CO₂ emissions.



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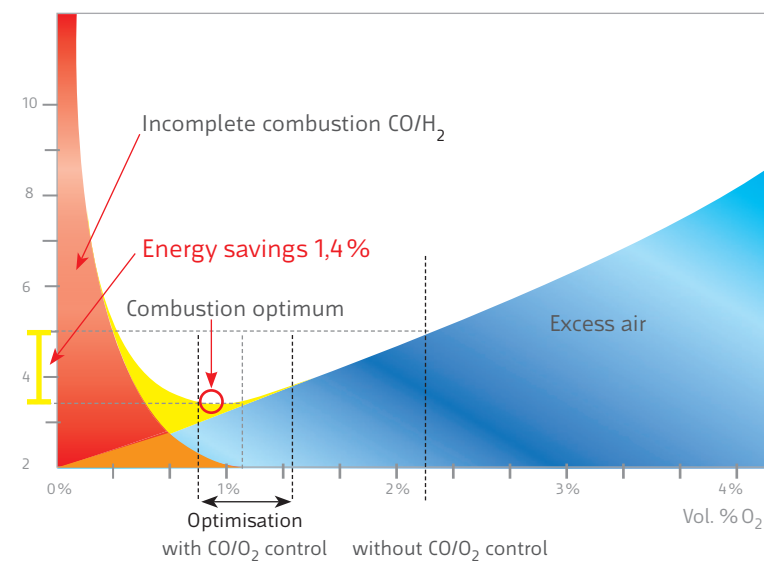
**SENSORS AND SYSTEMS
 FOR COMBUSTION ENGINEERING**



Development - Production - Distribution - Service



Heat loss of gas combustion



Example

Savings by using O ₂ , respectively CO control			
Function	Partial Load	Middle Load	High Load
O ₂ control	1.19 %	1.47 %	1.20 %
CO control	1.96 %	1.85 %	159 %
Operating hours	1600	5600	800
Fuel costs/h 0.35/Nm ³			
Savings/year at 0.35 €/Nm ³			
O ₂ control			11 537 €
CO control	additionally		3 291 €
Total			14 828 €

Source: Savings Friesisches Brauhaus Jever



Sales Partners Worldwide.

**Saving Energy - Reducing Emissions
 by Improvement of
 Efficiency of Combustion**



Sensors and Systems for Combustion Engineering

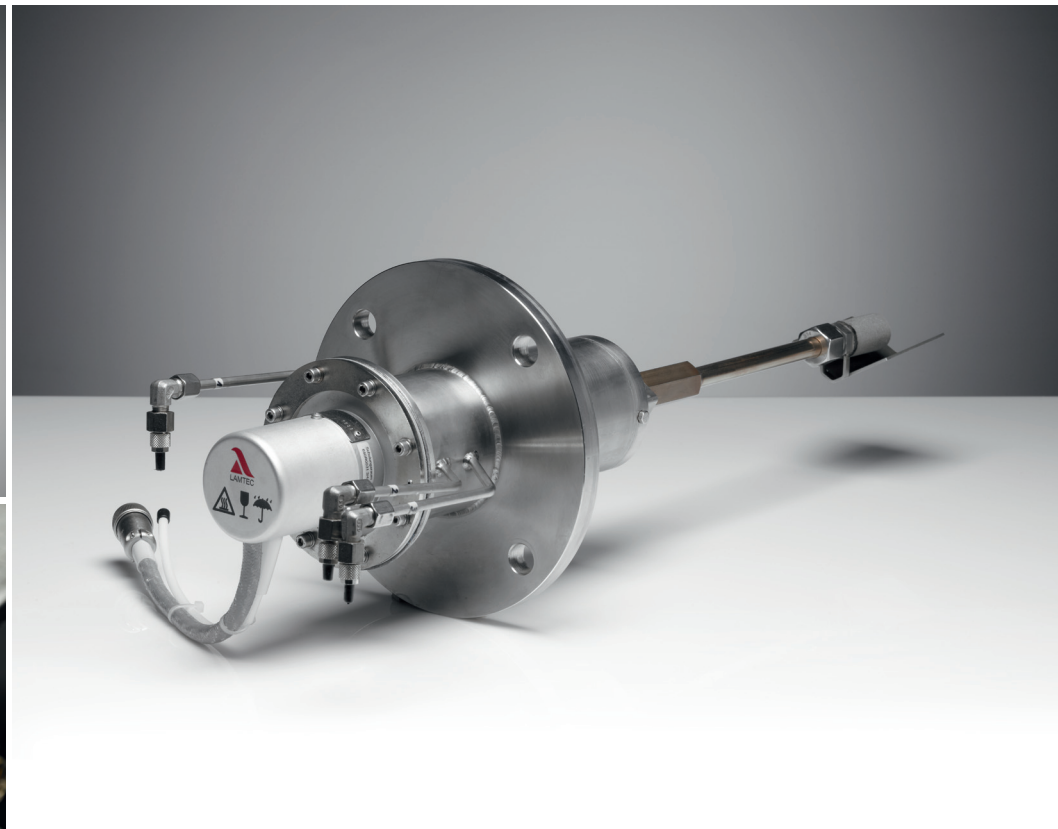
For more than 15 years LAMTEC has been developing and producing sensors and systems for combustion management technology. The LAMTEC team introduced the O₂ trim to the market as early as 1982, and on 1st July 1995 after a management buy-out from ABB-Deutschland commenced trading as "LAMTEC Meß-und

Regeltechnik für Feuerungen" in Walldorf. Through the takeover of Hartmann & Braun in 1998, more than 20 years experience in flame monitoring were added. As systems supplier with leading know-how in industrial combustion engineering our product spectrum encompasses:




- » Combustion control
- » Electronic adjustment of fuel/air ratio control systems
- » Detection of combustion
- » O₂ measurement and control devices
- » Adaptive CO combustion optimisation
- » Sensors and systems for detection of oxidisable components (CO/H₂).
- » Volume-flow measurement devices
- » Process status and fault status indicator systems

Our systems offer efficient engineering with best functionality and thus universal application with easy installation. All our systems have been developed and produced by ourselves.




LAMTEC systems increase the efficiency of industrial combustion, reduce fuel consumption and above all the emission of climate polluting CO₂.





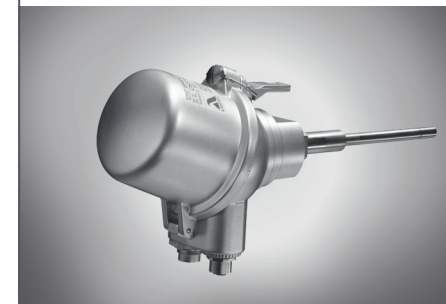
Combustion Management

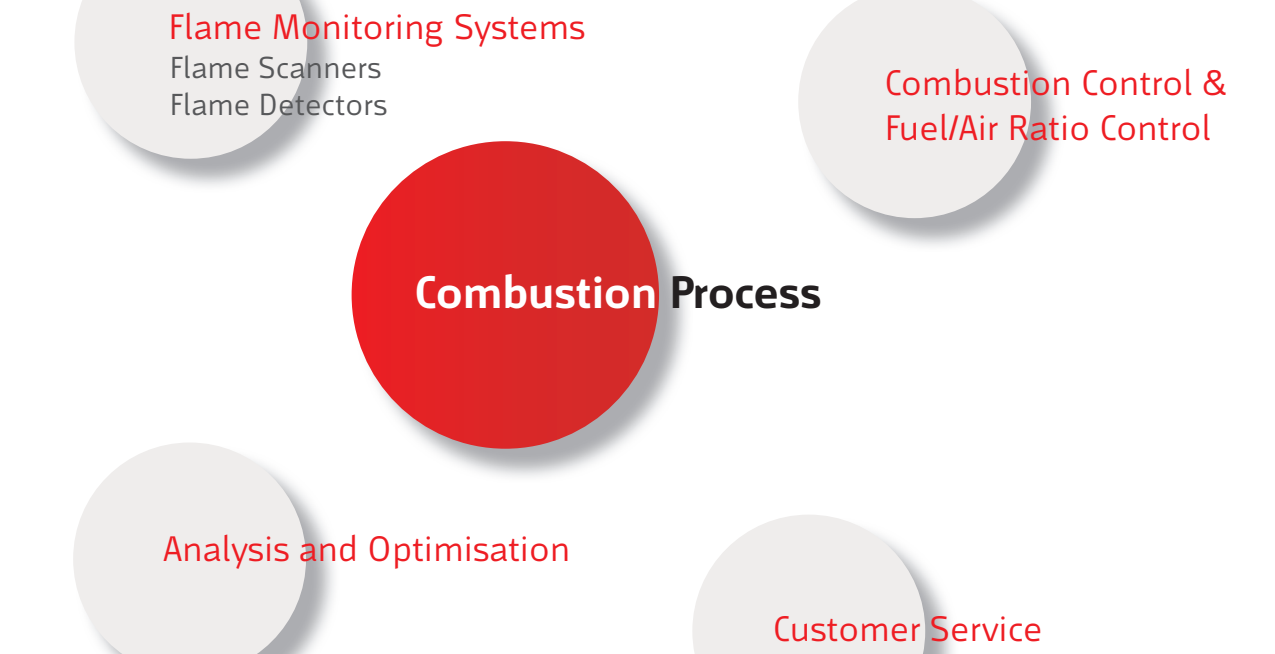
<p>ETAMATIC</p>  <ul style="list-style-type: none"> • Compact burner control • Fuel/air ratio control system • CO/O₂ control 	<p>ETAMATIC OEM</p>  <ul style="list-style-type: none"> • Same functions as ETAMATIC • Mounted on to burner • Remote control unit 	<p>BurnerTronic BT300</p>  <ul style="list-style-type: none"> • Modular combustion control • 3 channel fuel/air ratio control • Optional CO/O₂ control
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Combustion Supervision

<p>Compact Flame Scanner F200K</p>  <ul style="list-style-type: none"> • IR/UV flame detector • Adjustable sensitivity • 2 operating modes 	<p>Compact Flame Scanner F300K</p>  <ul style="list-style-type: none"> • IR/UV flame detector • Innovative flame analysis • 3 operating modes 	<p>Flame Sensor FFS06 with ETAMATIC</p>  <ul style="list-style-type: none"> • IR/UV flame sensor • Integrated flame evaluation • Radial light entry
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Combustion Optimisation

<p>LT2 with PROBE KS1D</p>  <ul style="list-style-type: none"> • O₂ measurement & CO/H₂ detection • Calculation of efficiency factor • Load dependent limiting curve 	<p>LT1 with PROBE LS1</p>  <ul style="list-style-type: none"> • Universal O₂ measurement device • Adjusting for ambient air • Measures up to 1400 °C 	<p>CarboSen</p>  <ul style="list-style-type: none"> • Supervision of combustion • Detection of CO/H₂ • Small size
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Your personal advisor

Because we are a medium-sized and flexible enterprise it is always possible for us to achieve particular solutions to problems by keeping in close contact with our customers.

Projections, training, service on-site, commissioning, support and help for users of products are all part of the complete service.

Our hotline gives you quick and uncomplicated access to personal and competent advisors.

