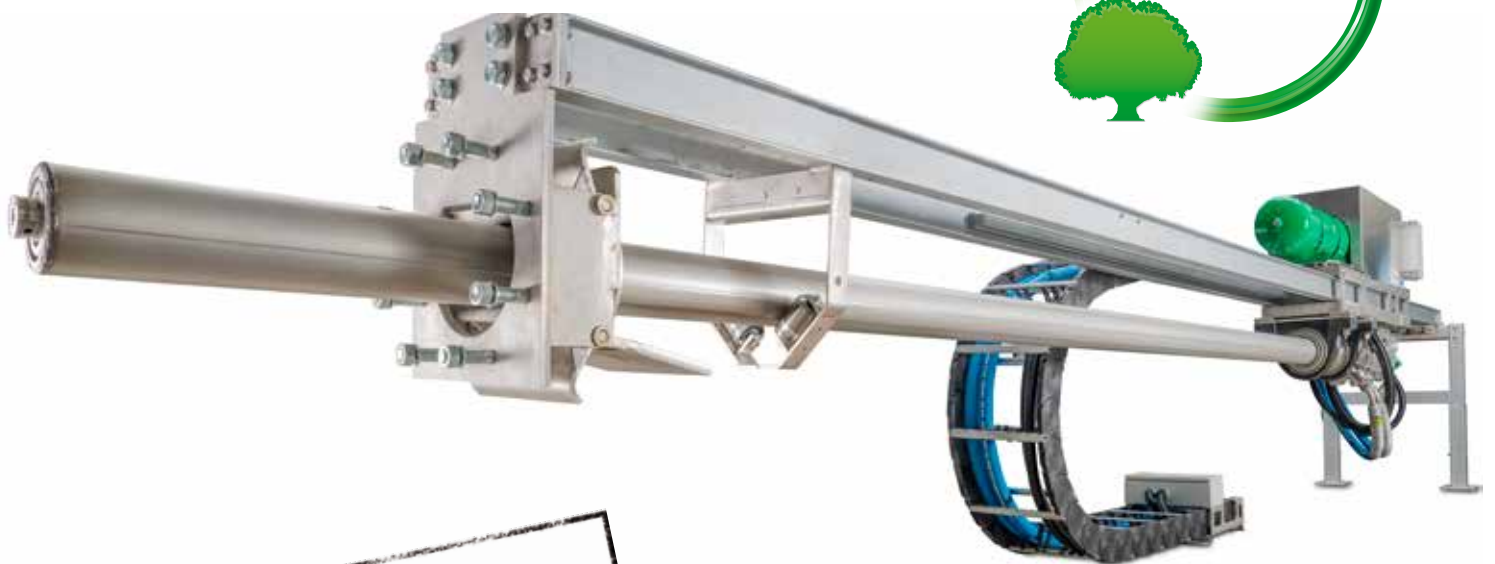


## **CEMTEC<sup>®</sup>**

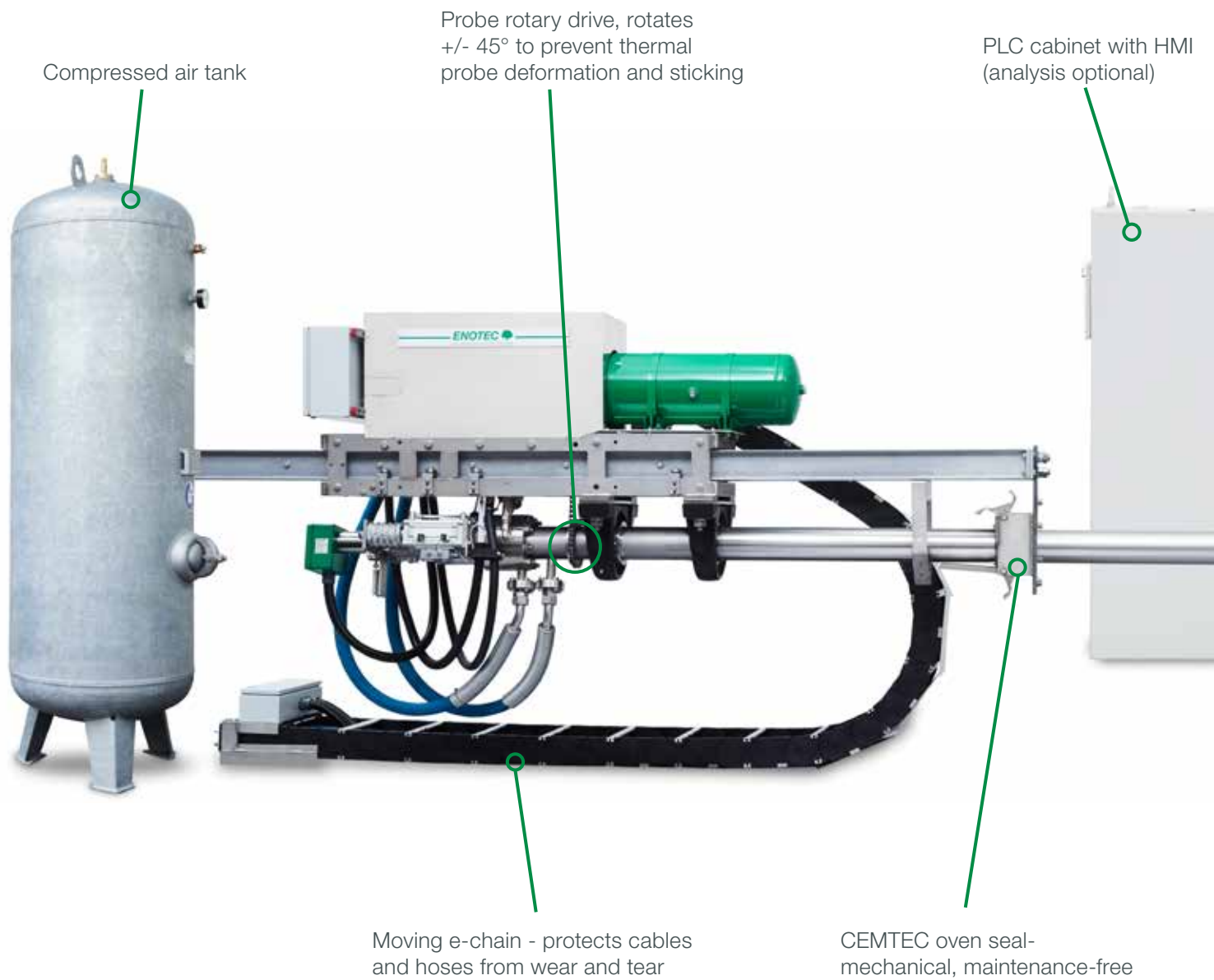
*Patented self cleaning gas sampling probe for continuous measurement in any high dust and high temperature process*

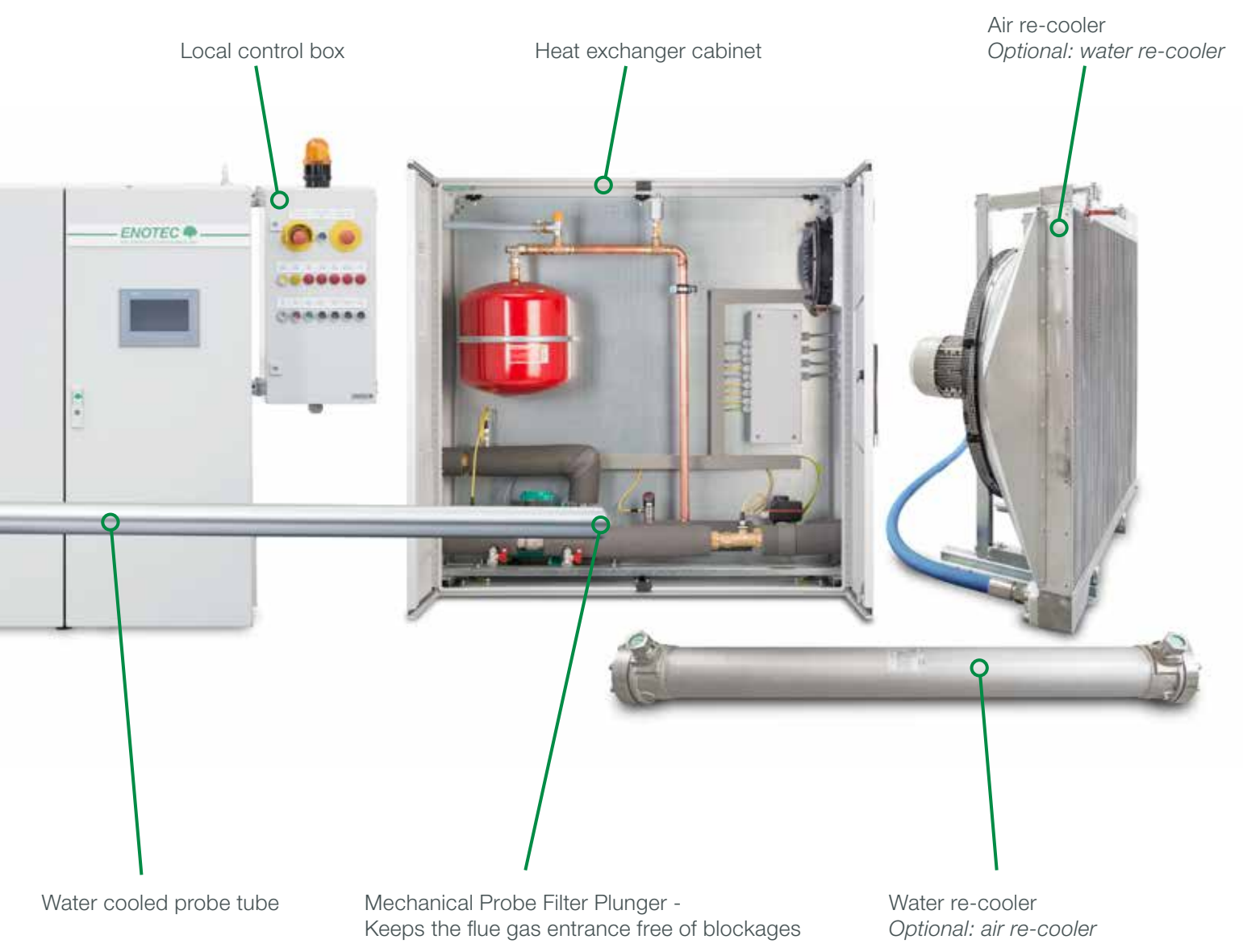
DEVELOPED AND  
MANUFACTURED  
IN GERMANY



**95 % AVAILABILITY  
IN 100 % DUST**

**CEMTEC®**  
OVERVIEW





## **CEMTEC<sup>®</sup>** **SYSTEM CONFIGURATION**

*CEMTEC* provides low maintenance operation in cement kilns or in applications with high temperatures and / or high dust loads. The patented *CEMTEC* consists of a water-cooled gas sampling probe, which is mounted on a pneumatic propulsion device and travels in and out of the combustion process.

The process gas is sucked into the filter unit through the tip of the cooling protection tube, and then into the centrally positioned measuring chamber.

In addition to the optional *COMTEC* for the instantaneous  $O_2$  and  $CO_e$  analysis, a heated gas sampling tube is located in the measuring chamber. The extractive analyzer is supplied with sample gas through this tube for measurement of e.g.  $O_2$ ,  $SO_2$ ,  $NO_x$  or  $CO$ .

- > *CEMTEC* gas sampling probe
- > Local control box
- > PLC cabinet with / without analysis
- > Heat exchanger cabinet
- > *COMTEC* InSitu analyzer (optional)
- > Re-cooler (air or water)
- > Compressed air tank



Fig. Pneumatic drives of the CEMTEC probe

# CEMTEC®

## HOW IT FUNCTIONS

Process temperature up to 1400°C, dust concentrations of up to 2000 g/m<sup>3</sup>, high mechanical stress due to falling material and high ambient temperatures make extremely high demands on any technology in use.

Thanks to the mechanical cleaning, the continuous extraction and analysis of process gas is possible over a long period of time. The dust filter with its impact plate at the tip is coaxially mounted within the cooling protection tube and moves in programmable intervals out of the tip of the cooling protection tube to remove any dust deposits.

The patented CEMTEC rotary drive prevents deformation of the cooling protection tube from falling debris and the cementing of the gas sampling probe by rotating in programmable intervals within the combustion chamber.

**AUTOMATIC  
SELF CLEANING**



Fig. Automated plunger keeps the flue gas entrance free of blockages.

## **CEMTEC<sup>®</sup>** **PERMANENT PROCESS CONTROL**

*CEMTEC* was developed for continuous analysis of flue gas in rotary kilns and other pyro processes with extremely dusty high-temperature processes with the goal of increasing product quality with a reduced fuel use while simultaneously reducing harmful emissions.

Particularly in view of the increasing usage of alternative fuels in rotary kilns and large combustion chambers, the on-site gas analysis has become ever more important. With its exclusive technical highlights, *CEMTEC* provides an optimal solution for permanent measurement under these challenging conditions.

- > 95 % availability in 100 % dust
- > Continuous fast and reliable measurements in the cement kiln
- > Fully automatic probe operation and cleaning
- > Achieve emission abatement targets
- > Efficient control of SNCR
- > optional *COMTEC* InSitu analyzer
- > Reduce costs with lower maintenance and longer plant life
- > Yearly inspection cycle



Fig. The powerful probe rotation device prevents thermal bending and sticking

# CEMTEC®

## TECHNICAL DETAILS

MAX. FLUE GAS TEMPERATURE	≤ 1400 °C	SWIVEL DRIVE	+/- 45 °
MAX . DUST LOAD	up to 2000 g/m3	GAS ANALYSIS	InSitu: O <sub>2</sub> / CO <sub>e</sub> extractive: O <sub>2</sub> , SO <sub>2</sub> ; NO <sub>x</sub> ; CO <sub>2</sub> etc.
IP CODE	IP 54	MEASURING ACCURACY O <sub>2</sub>	± 0.2 % of measured value min. 1 ppm O <sub>2</sub>
PROBE INSERTION DEPTH	up to 3350 mm	MEASURING RANGES	0 - 2 % O <sub>2</sub> to 0 - 25 % O <sub>2</sub> 0 - 500 ppm CO <sub>e</sub> to 0 - 10 000 ppm CO <sub>e</sub>
PROBE DIAMETER	114 mm		
PROBE COOLANT	water or air	AIR PRESSURE	7 - 9.5 bar, dry and free of oil dew point < -20 °C
PROBE PROPULSION	Pneumatic	EMERGENCY RETRACTION	Pneumatic

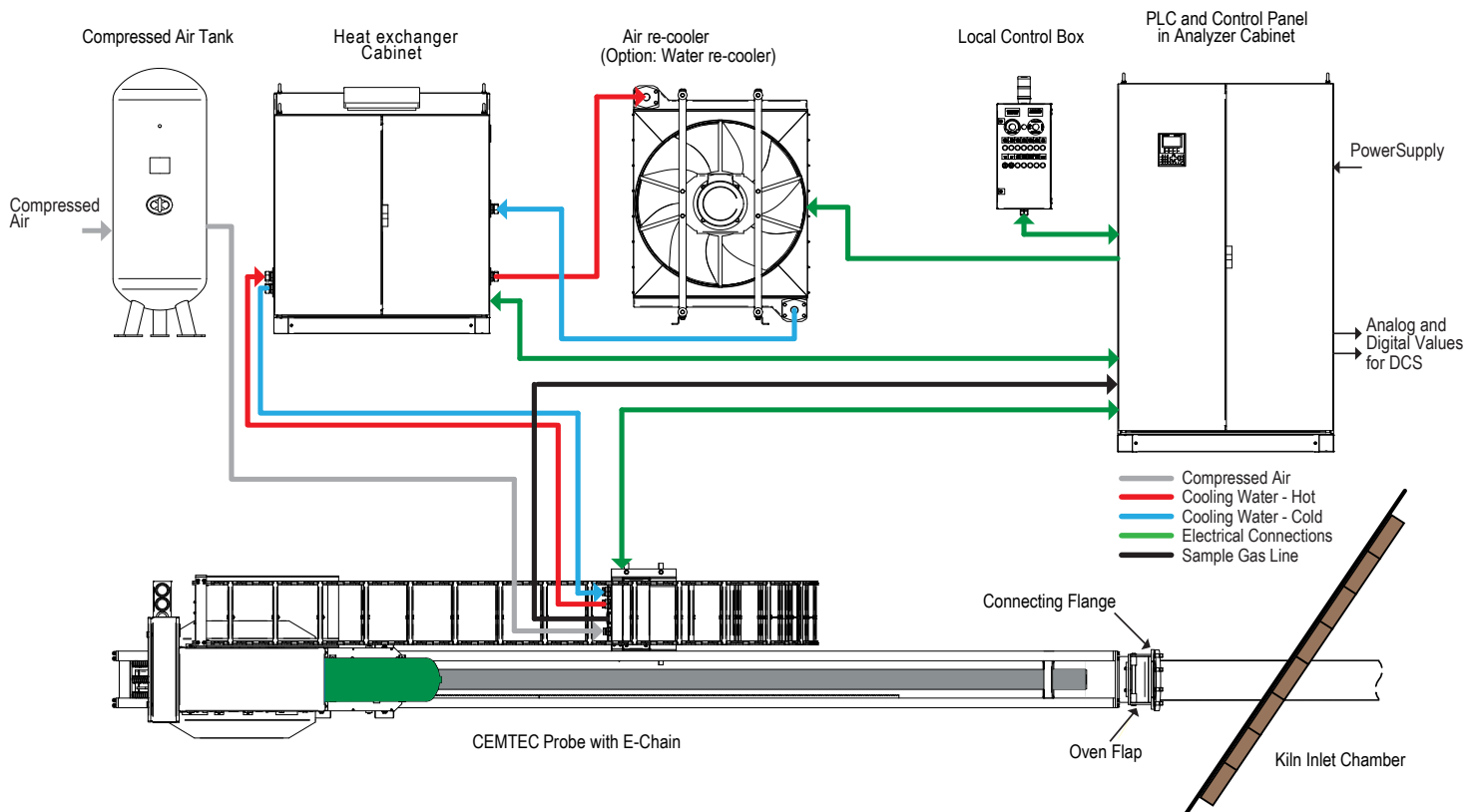


Fig. CEMTEC overview

# CEMTEC®

## SAFE AND CLEAN COMBUSTION

### COMPANY

ENOTEC has provided gas sensing solutions since 1980, producing products with a high degree of accuracy, quality and durability - Made in Germany.

Our flexibility allows us to quickly develop solutions individually designed to meet your requirements.

On request, we also offer after delivery service concepts - the world over.

### SYSTEM FEATURES

- > Rotary drive
- > Automated self cleaning
- > Mechanical cleaning
- > Emergency retraction
- > Integrated O<sub>2</sub> / CO<sub>e</sub> InSitu analysis
- > Air or water heat exchanger
- > High quality workmanship

### CONTACT

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