

Engineering Trust



Are you looking for high-end analyzing, sampling and testing solutions? 360°KAS is the global system integrator that sets the bar for accuracy, durability and reliability. We always have, we always will.

The logo for 360°KAS, featuring the text "360°" in a large, white, sans-serif font, with a registered trademark symbol (®) to its upper right. Below it, the word "KAS" is written in a smaller, white, sans-serif font. The logo is set against a dark purple circular background.

360°
KAS

Analyser & Sampling Solutions

Do you have difficulties in getting a correct analysis of the process? Are you looking for a solid partner to engineer, construct and integrate the solution into your systems on site?

Let us help you out...

By having extensive knowledge from sample take-off, sample preparation, sample storage up to actual analyzer measurement we are able to provide you with a fit for purpose and trustworthy solution.

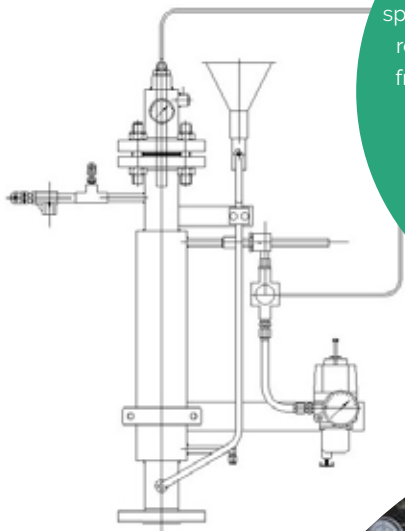
Consult us for:

- Total analyser package solutions:
 - Analysers for all applicable measuring principles
 - Sample (Pre-) Conditioning Systems for gas and liquid
 - Sample Recovery Systems for vapor & gas (VGRS) and liquid (LRS)
 - Analyser Enclosures, Shelters & Houses and (ex-proof) HV/HVAC systems
 - Safeguarding, process safety and process reliability
 - Analyser Management And Data Acquisition Systems (AMADAS)
- Product Sampling of oil, gas or condensate
- Pye Gas Sampling
- Sampling System for Mercury Analysis

We believe trust is the most valuable asset in any relationship. You should be able to rely on our systems; 360°KAS is driven to be the quality leader in our field of expertise. And we are open to share our experience and insights. Our solutions are more than accurate. They are durable, reliable and keep going. That's what we call Engineering Trust.



Total analyser
package solutions



The 360°KAS Pyrolysis Sampler is specially designed to sample a gas and to remove solids, water, and/or heavy oils from a complex, hot hydrocarbon vapor mixture. The clean gas stream can be used for further measurement by a gas chromatograph or a continuous gas analyser.



Our product sampling systems are custom designed to withdraw, prepare and store samples for the following applications:

- Gas Sampling
- Condensate Sampling
- Crude Oil Sampling
- Refined Product Sampling
- LPG Sampling



The 360°KAS Mercury Sampling Systems are specially designed to take samples from High Pressure Gas Lines to obtain a representative sample for measurement of Mercury by amalgamation on gold/platinum alloy in accordance with the ISO 6978-2:2003.



Are you looking for help to find a feasible analyser and/or sampling solution for your plant area? We offer our specialist knowledge to further define your needs and ideas into the relevant RFQ and/or (basic) engineering documents.

SmartLNG® Solutions



Our standalone operating LNG probe and vaporiser system combination uses integrated controls and premium materials. This solution has proven to be one of the most reliable in the market.

Our automated intermittent LNG sampling solution is based on the ISO 8943 (paragraph 4.3, fig. 3) and ISO 10715 requirements and reduces room for human errors to a minimum.

SmartLNG[®] Solutions

Are you involved in LNG custody transfer? Are you interested to learn how to settle this transaction in an accurate, reliable and durable way?


360°KAS is serving the LNG value chain with a number of solutions to sample LNG from the main transfer line:

- Sample Take-Off Assembly
- Probe & Vaporizer System
- Intermittent (CP/FP) Sampling System
- Continuous Waterless (Membrane) Sampling System
- Continuous Water Seal (Dome) Sampling System
- Intelligent Quality Reporting Module (iQRM[®])

360°KAS has a long track record in the development and design of Continuous and Intermittent LNG Sampling Systems since 1994. All systems are in compliance with the ISO 8943, the ISO 10715 and the guidelines stipulated in the GIIGNL.



Our automated Continuous Water seal (Dome) LNG sampling solution, based on the ISO 8943 (paragraph 4.2, fig. 1) and ISO 10715 requirements, eliminates sample contamination by ambient air via a closed tank construction.



The Intelligent Quality Reporting Module (iQRM) is the solution to automatically generate indisputable Certificates of Quality during LNG custody transfer



With our sample take-off assembly (bypass loop) the LNG Sampling System can be isolated from process ensuring safety and making maintenance easier and more cost effective.



Our automated continuous waterless (Membrane) LNG sampling solution is based on the ISO 8943 (paragraph 4.2, fig. 2) and ISO 10715 requirements and collects high integrity samples for laboratory analysis.

FCC Pilot Plants

Are you deactivating FCC catalyst at laboratory or pilot scale for consequent catalyst performance testing? Are you in need of better mimicking E-cat samples for these tests? Let us help you out.

360°KAS has the method to obtain a resembling equilibrium catalyst (E-cat) at laboratory or pilot scale. We call it our Cyclic Deactivation (CD) unit. This is the way to reproduce all the fundamental phenomena that simulate the aging process in commercial Fluid Catalytic Cracking (FCC) operation.

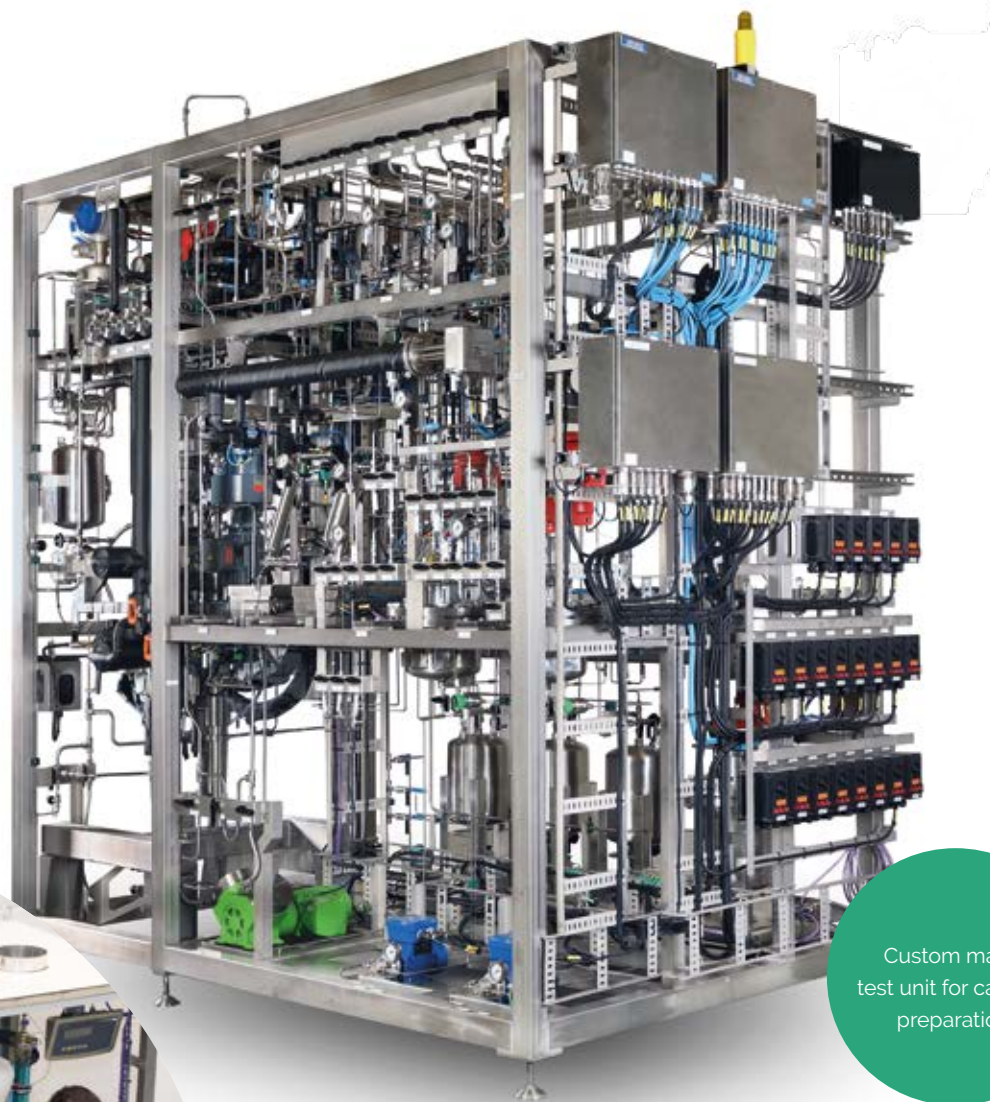
With the obtained deactivated FCC samples, you must have the wish to evaluate these in a unit that perfectly resembles the commercial cracking process.

Here is our second helpline: our Short Contact Time Riser Test (SCT-RT) unit. This excellent tool evaluates the short contact performance of real commercial FCC operations.

Please contact us for more information on our:

- Laboratory Cyclic Deactivation (CD) Unit
- Pilot Scale Multi Cyclic (PSMCD) Unit
- Short Contact Time Riser Test (SCT-RT) Unit

A Cyclic Deactivation (CD) unit can be supplied with 1 (CD), 2 (2-MCD) or 4 (4-MCD) reactors, depending on your need for E-cat samples



Custom made test unit for catalyst preparation

Custom Made Pilot Plants

360°KAS is involved in the design and fabrication of custom made pilot plants since 1980. Our turnkey units comply with the highest standards in safety and reliability but are practical and cost-efficient. The full spectrum of applications we cover encompasses:

- Continuous, semi-continuous and batch
- Dedicated and multi-purpose
- Fixed/ fluidized bed
- Liquid, gas and multi-phase reactors



Lifecycle Service Management

After delivery of your system, a new project phase begins where our Customer Service Department will play an important role in various activities. Our dedicated service team offers you our dynamic life-cycle Service Management approach which helps you to realize maximum availability of your system, with minimum downtime at most economical operational cost. Our life-cycle service management program covers all the necessary areas to maintain and operate your system safely and accurate from initial startup till controlled end of life services.

We offer:

- Site Construction & Supervision
- (pre-) Commissioning & Start up
- Site Acceptance Test
- Training
- Service Level Agreements
- Preventative & Corrective Maintenance
- Spare-parts & Consumables
- Life-cycle Assessment
- Upgrades & Retrofits
- End of life services & replacement



Our solutions are more than accurate. They are durable, reliable and keep going. That's what we call Engineering Trust.

Engineering trust

You should be able to rely on your systems. You need facts instead of guesstimates and be confident with the results and processes. We deliver our promise because we act independent and work with highly qualified people.

Smart Solutions

360°KAS is driven to be the quality leader in our field of expertise. We have solutions for the challenges of our customers. For one: We have the experience. Two: We have proven to be resourceful and creative.

Open culture and communication

We have a knowledgeable team that is open to share our experience and insights. Within our team to ensure cross-functional checks and balances. And with our customers who appreciate us to be pro-active and to the point.

Solid Solutions

Our solutions are more than accurate. They are reliable and keep going. If you are looking for solid sustainability and durability, look no further. 360°KAS has a proven track record of performance.

Today, tomorrow, together

We set the bar for accuracy, durability and reliability together with our clients. We share and we care. Intense collaboration provides us with clear understanding and focus on how to meet our clients challenges and expectations, now and in the future.

360°KAS is an independent system integrator serving the global Oil & Gas, Petrochemical, LNG and Food & Feed market with high-end analyzing, sampling and pilot testing solutions. We take care of the whole process from basic and detailed design, through procurement, assembly and final system integration on site.

360°KAS is part of the Industry International Group. Industry International Group currently employs around 300 people across five autonomous businesses, each delivering specific technical engineered products and services in their respective fields and markets from different locations in The Netherlands, France, Africa, Middle East and the Far East.



**360°
KAS**

Marquesweg 4,
4462 HD Goes, The Netherlands
info@360KAS.com
www.360KAS.com

Part of
**INDUSTRY
INTERNATIONAL**