

**PERFORMANCE  
BEYOND EXPECTATIONS**



# Kosan Crisplant®

'A uniquely  
recognizable  
identity, and a  
name we are  
proud of'



**Everything for your LPG business  
– anywhere in the world!**

*The Kosan Crisplant name  
is renowned throughout  
the world of LPG – famous  
for integrity, reliability,  
technological excellence  
and our ability to meet  
even the most demanding  
client requirements.*

We are the best-known designers, specialist manufacturers and suppliers of high-quality systems for processing LPG cylinders in the world. This also means we have unparalleled experience in making our solutions just right for each and every client.

#### **The backbone of your business**

Kosan Crisplant has the know-how needed to supply you with the full range of products and services for your LPG business – from single gas components and machines, to complete filling and reconditioning systems for LPG cylinders, including turnkey engineering services and complete service and after-sales packages. We also operate state-of-the-art R&D, design and test facilities that enable us to achieve results and standards that quite simply are beyond the reach of others.

And we have the professionalism to make sure we get it right – every time – as we have with the 3000 plants supplied to clients in more than 140 countries around the world since 1951, covering large international corporations, state-owned enterprises, national oil and gas companies and small and large private businesses.



#### **Dedicated to our vision**

We always work strategically to fulfil and live by our vision,

*'To be the world's most innovative  
and outstanding provider of  
benefits, solutions and services to  
the LPG business'.*



# Rock-solid product areas



## Norm setting product areas shed light on new standards

### Our past is part of our strength in the future

Founded in Denmark as an independent company Kosan Crisplant was one of the main players in establishing the LPG cylinder filling business worldwide. Over the years we have been trend setting by launching new products, improving safety, extending services and setting new standards.

### Filling systems

The LPG filling process is a serious business of high quality demands. Quality of equipment. Quality of control. Quality of operational safety. It is all covered by the Kosan Crisplant way of thinking.

Kosan Crisplant delivers flexible solutions ranging from simple manual (KCFill1 and UFM) to highly advanced, fully automatic electronic filling systems (UFM and FLEXSPEED). Existing mechanical filling systems can easily be

upgraded to electronic systems at an individual speed. Electronic filling systems ensure improved filling accuracy, which has always been an essential factor within the industry. The electronic filling systems can be equipped with data collection for various purposes.

We can deliver any required capacity and strive to give our clients value for money – regardless of the solution.

### Reconditioning systems

LPG cylinders are subject to rough treatment every day of their life. A reconditioning plant from Kosan Crisplant is an efficient means of prolonging the life and maintaining the appearance of your cylinders – and to ensure that they are tested according to locally present safety standards.

Just as a filling system can be tailor-made for your needs, so can a reconditioning system.



### A total supplier

We have committed ourselves to become your preferred supplier of quality products and services for your LPG business. Single machines, pumps, compressors, mass flow meters, wireless monitoring systems, ex-proof mobile phones, spare parts – we cover the entire spectrum. All you need is just one supplier!

### KC ProSupply

KC ProSupply is our gas equipment division, dedicated to worldwide sales of high-quality gas components and equipment. We offer a wide range of equipment for LPG as well as ammonia (NH<sub>3</sub>), cryogenic gases such as LNG, nitrogen (N<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>) and other industrial gases. In addition, we also offer a wide range of products for N-gas and Bio-gas.



**PROJECT SOLUTIONS**

**GAS COMPONENTS**

**SERVICE & SPARE PARTS**





**Your safe road  
to the next level**



**Tailored service packages  
to ensure success**

**Facility management  
supports your core business**

Facility management has developed into a highly regarded concept and is used within many businesses to help companies focus on their core business.

We have succeeded in tailoring this concept to the LPG business by focusing on the operation and maintenance processes at LPG filling plants.

**KC Service**

Our clients very much depend on the reliable operation of their plants, and consequently the availability of professional service. Maintenance and monitoring on a high level are key words for operating a plant efficiently.

KC Service is a comprehensive service programme to ensure the full benefit from your plants. The programme is divided into custo-

mised levels, where options can be added individually to each level.

**First class worldwide service**

To accommodate our clients, in recent years we have strengthened our service organisation through an extensive – and growing – global service network. This network is handled directly by our service centres and service partners around the world. All staff have been trained by Kosan Crisplant to offer our clients the best service in accordance with local requirements and conditions.

**Local service centres**

Our unique service concept gives our clients the advantages of face-to-face consultancy, when needed, visit on site and availability of spare parts and single machines in stock – in a Kosan Crisplant service centre near you!



**KC Facility Management**

KC Facility Management is a unique modular-based service concept with which your production processes are outsourced to Kosan Crisplant, in whole or in part with or without maintenance of your cylinder park. We can take over your present personnel or supply our own or a combination with experienced Kosan Crisplant supervisors to manage your operators.

Each filling plant is unique and requires its own tailored solution. As trend setter and market leader we know the LPG business better than anyone. Our KC Facility Management concept guarantees the operation and economy at your filling plant.





**A total partner  
– we get the job done**



**Contracting and engineering  
– pure inspiration**

**Technology and know-how  
delivering exclusive  
advantages**

Kosan Crisplant is known for solutions based on innovative approach and design supported by first-rate technical skills and more than half a century of practical experience.

Our highly trained teams of experienced professionals are dedicated to making your project a success meeting the highest quality requirements and the most rigid standards of the LPG industry.

We provide you with competence based on hands-on experience and supported by thorough and constantly updated research and development.

**KC Engineering**

Kosan Crisplant offers you a comprehensive resource base of highly qualified LPG specialists supported by an efficient staff experienced in providing the full package of services required to ensure the success of your project.

One call, and we are ready to be your engineering partner all the way through your project – from the initial concept and feasibility studies to engineering, economy, authorizations, safety considerations and regulations, logistics, construction, commissioning, and operation and maintenance services.



**Your engineering expert**

Over the years, Kosan Crisplant has acted as the key engineering partner in several international LPG projects. In turn, we have built up our expertise and achieved valuable experience and know-how of theoretical as well as practical challenges that face the LPG industry all over the world.

We have probably been there before – this is why we can guarantee you a perfect solution.



# Safely engineered solutions



**Designed to work perfectly,  
to be future-compatible – and to be safe**

## Safety is a top priority

We consider safety the number one priority in the LPG industry and regard safety in wider terms than merely the prevention of accidents. The health and working conditions of the employees are also taken into careful consideration, not to mention environmental and consumer safety.

All our products are manufactured according to international standards, certifications and safety regulations and are currently inspected and approved in order to ensure the best safety.



## International standards

In Europe all products have a type-approval certificate in accordance with EU directives just to be allowed to be marketed. All Kosan Crisplant products meet the demands of the ATEX Directive if they are to be used in hazardous areas with danger of explosion. In other parts of the world it is expected or required that our products are certified and registered with the OIML (International Organization of Legal Metrology).

## Good is not good enough for us

High quality and safety standards have been the hallmark of Kosan Crisplant throughout our long history. We have always worked closely together with leading manufacturers of equipment and components for the LPG business in order to ensure this. As a result you can always feel completely safe when you choose a product, system or service from Kosan Crisplant.

## Quality assured in Denmark

All our products and systems are designed and engineered in our European design centres by our highly skilled experts and manufactured at Kosan Crisplant production facilities around the world – naturally according to all existing standards, certifications and safety regulations. And, of course, the well-known Kosan Crisplant quality standard – a benchmark by which you can measure others.

It only takes a split second to appreciate a fine Kosan Crisplant product – but it has taken years to create it and to perfect it.





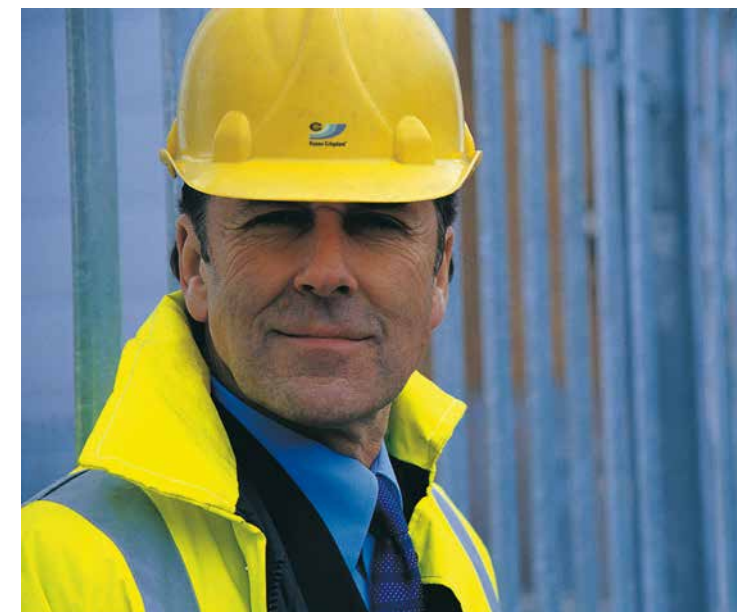
**Comprehensive skills  
create the right balance**



**Knowledge taking you further**

**We employ the most professional staff**

Kosan Crisplant is renowned for our dedicated staff with long experience and a solid technical background within the LPG field. However, our know-how involves more than just engineering skills. Kosan Crisplant solutions aim at fulfilling human needs, and our entire organisation is tailored accordingly.



**A project-oriented organisation**

Kosan Crisplant's employees work in a project-oriented organisation with an emphasis on personal responsibility and initiative. This leads to the setting up of independent project groups, and as experience shows, this helps to develop competent and responsible employees who provide only the very best for our clients. All our supervisors, for instance, are highly competent and authorised to make any decision that has to be made – on the spot. Besides, all our employees receive intensive training on a regular basis.

**Each client is unique**

We always embark on a new project with open eyes and know that each client is unique. Each and every solution is based on a thorough analysis of the task and a detailed examination of the involved requirements. Our half-a-century-long worldwide know-how ensures that our clients always receive the best solutions.

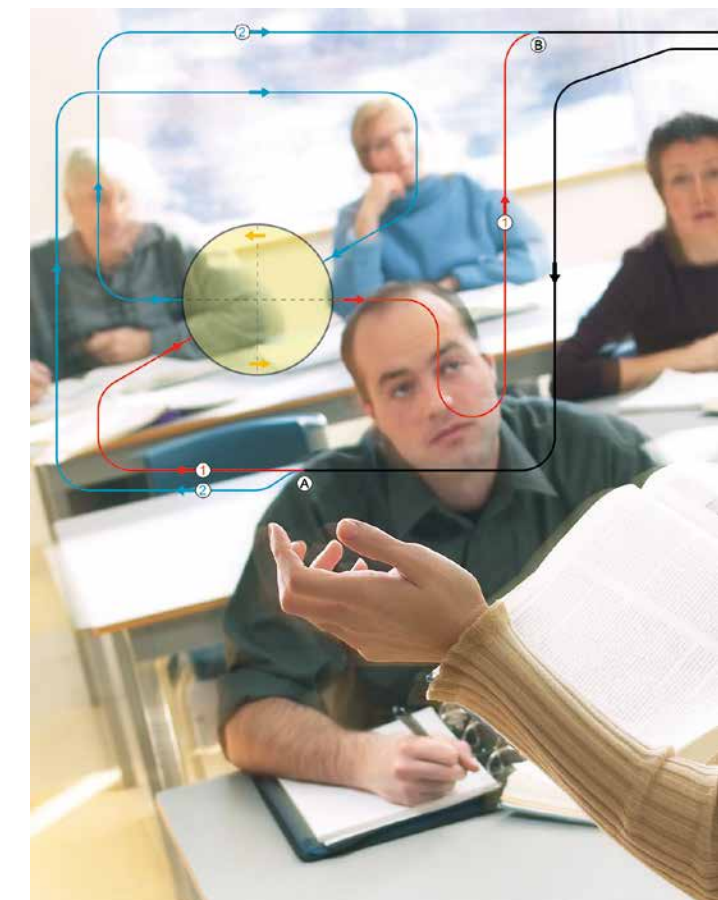
**Global training programmes**

To ensure planned productivity, maximum efficiency and safety at an LPG cylinder filling facility, it is essential that all staff who work

there, receive the proper training in the correct use and maintenance of all equipment and systems. Kosan Crisplant's training programmes are designed to ensure this.

We offer comprehensive training programmes by local Kosan Crisplant staff – both theoretical and practical – covering the whole spectrum from basic training in e.g. electronics, pneumatics and hydraulics, to advanced training in our own equipment: single machines, systems, and our unique CUC control system, including PC hardware and software.

The training is performed by locally appointed and certified Kosan Crisplant staff, and it can take place at the facility, at any of our worldwide service centres, or at our headquarters in Denmark. Client's choice!





# Project-oriented organisation aimed at genuine client benefits

## The Kosan Crisplant Project Management Plan

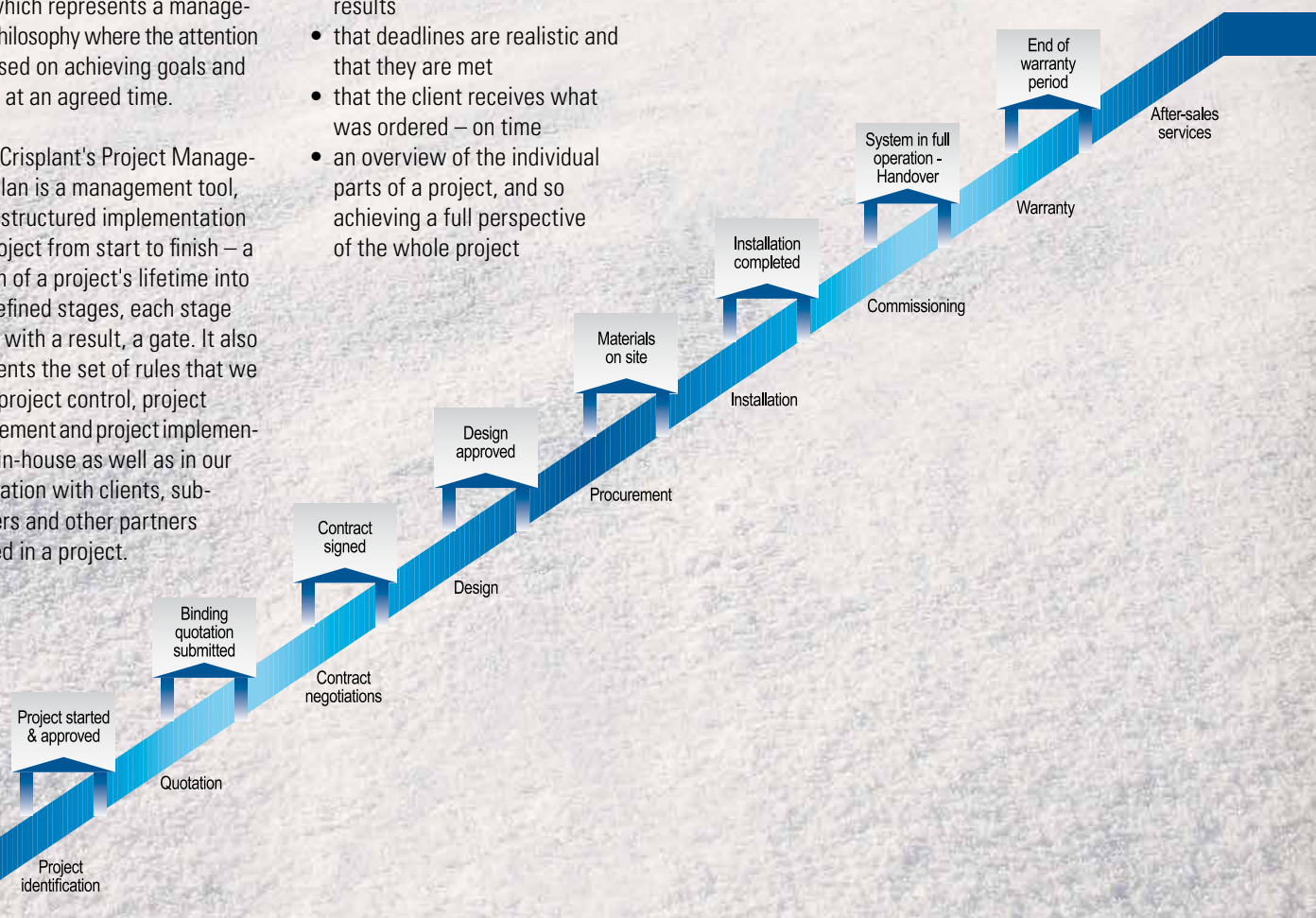
Our entire organisation is geared to carry out any project – large or small – with the purpose of generating added value in our clients' businesses. Therefore we have always managed our projects according to our own project management plan, which represents a management philosophy where the attention is focused on achieving goals and results at an agreed time.

Kosan Crisplant's Project Management Plan is a management tool, with a structured implementation of a project from start to finish – a division of a project's lifetime into well-defined stages, each stage ending with a result, a gate. It also represents the set of rules that we use in project control, project management and project implementation in-house as well as in our cooperation with clients, sub-suppliers and other partners involved in a project.

## Benefits ensuring success

Kosan Crisplant's Project Management Plan is the perfect tool to manage agreements and to ensure

- a uniform quality in each project
- that things are carried out in the right order
- a stepwise achievement of results
- that deadlines are realistic and that they are met
- that the client receives what was ordered – on time
- an overview of the individual parts of a project, and so achieving a full perspective of the whole project



## Innovation – a cornerstone in our business

### Ingenuity delivering industry firsts

One of Kosan Crisplant's many capabilities is to be abreast of development and to be innovative. We are always on the lookout for new technologies and new ways of exploiting existing know-how for the benefit of our clients.

To meet the market's demand for increased capacity, efficiency and safety we are constantly developing new products, systems and services – turning our technological know-how into efficient tailor-made solutions. Extensions and modernisations are easily implemented, developed and upgraded in perfect step with our clients' growth, regardless of the system solution.

### With almost 70 years of experience, we set future standards

Even excellent standards may yet be improved, and we take pride in always being a step ahead of progress and being able to offer our clients the most flexible, cost-effective and future-oriented solution for any specific task.



### Long-lasting relations are part of our tradition

A fine partnership is always based on mutual respect, confidence and open dialogue. We have been in this business for more than half a century, so we know it does not ever pay to cut corners. We are professional enough to know that it pays to listen to what the real problem is and what it is you really want – and we have the resources and the know-how to act on what we hear from you.

Your feedback is the key to perfecting our products and services!





**From global experience to closeness and local awareness**

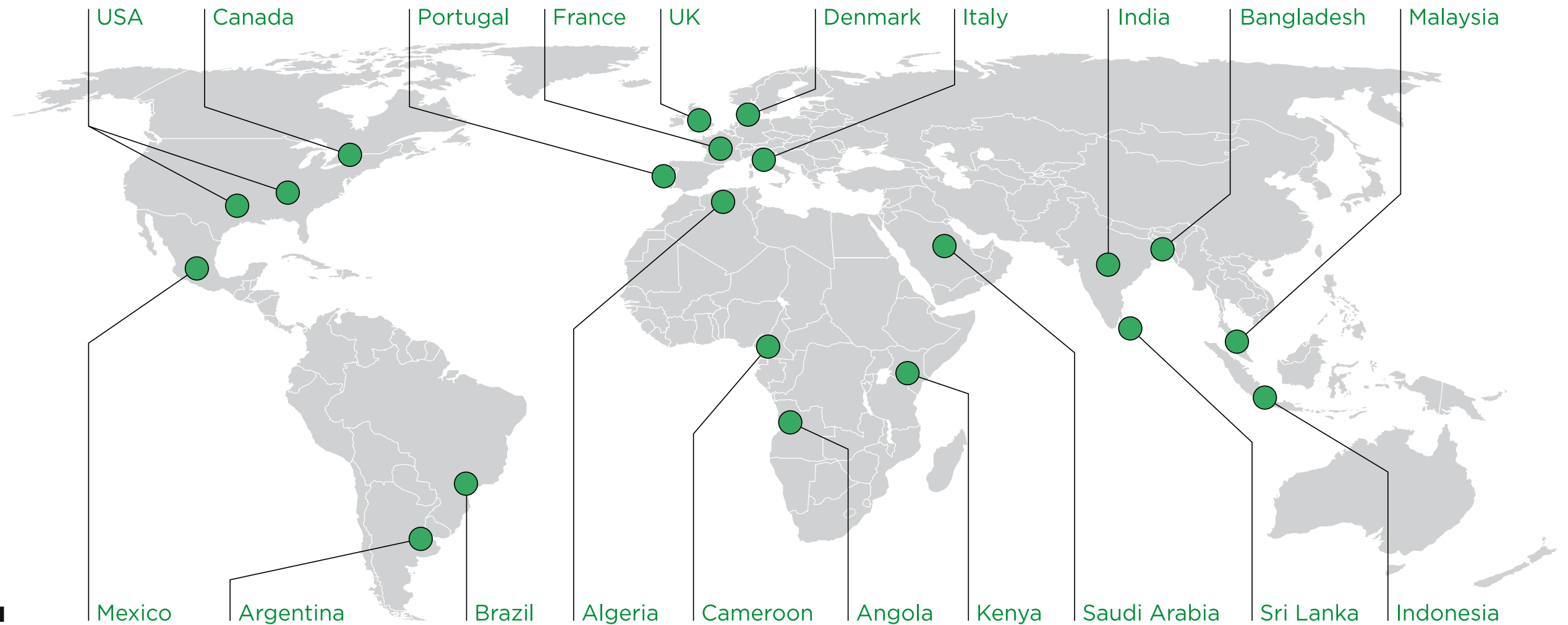
In our efforts to fulfil our vision, maintain a steady growth, get close to our clients and be able to provide the best service in every respect, we have intensified focus on our clients.

In order to do so, we have expanded our number of local representations with several fully owned Kosan Crisplant subsidiaries in key markets.

**Wherever you are, we are ...**

The essence is closeness to the client by presence on the market. This way we are able to respond quickly and efficiently to all our clients' inquiries and so be your first choice business partner.

Kosan Crisplant is part of **MAKEEN ENERGY**





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**Kosan Crisplant** is a project-oriented corporation that supplies equipment, plants and systems for filling and maintenance of LPG cylinders. We offer our customers a full range of products and services from single machines to entire plant constructions as well as engineering, project management, after-sales packages, service contracts and facility management. We continuously develop our systems, products and services to anticipate future demands for increased capacity, efficiency and, above all, safety.

Since 1951, we have delivered close to 3,000 LPG filling facilities to customers in more than 140 countries all over the world. With our extensive experience, we are able to meet even the most demanding client requirements - from a few cylinders every day to several thousand per hour - with integrity, reliability and technological excellence.

**MAKEEN Energy** is a global, market-leading corporation that delivers equipment, solutions and services to the energy industry. We employ approx. 1,300 people across 6 continents and operate in over 140 countries. With our global reach, local presence and decades of experience, we can deliver responsible solutions that make a difference to people and planet.

Kosan Crisplant is part of **MAKEEN**  
ENERGY

