



# SHELTER SOLUTIONS

SPACE AND PROTECTION FOR MEASUREMENT AND ANALYSIS TECHNOLOGY

CEMS, PGA, Liquid Analysis Systems

**SICK**  
Sensor Intelligence.



# SHELTER SOLUTIONS FOR HARSH ENVIRONMENTS







In industrial environments, finding the right installation site for a gas analysis system is often no easy task. In addition to the space issue, the ambient conditions also play an important role. Heat, cold, rain and dirt in addition to corrosive or explosive atmospheres and the risk of mechanical damage from vehicles or earthquakes all must be taken into account.

Containers are the perfect solution here. Properly equipped, they ensure high availability and a long service life of the measurement and analysis technology.



## MODULAR MULTI-TALENTS

From power plants and waste incineration plants to the cement and steel industries and process plants in chemicals, petrochemicals, and refineries, both emission measurements and process analytics play an important role for many industries. As diverse as the industries, plants, processes and regionally specific rules are, the requirements for the respective measurement technology and its housing are just as varied.



### The different container types

SICK distinguishes between three types of container: The **shipping container**, in which a standard container is permanently installed and can therefore be transported cost-effectively and safely by ship thanks to its ISO standard dimensions and CSC-certificates, the **analyzer shelter** with standard dimensions of 10 to 40 feet, and the **special shelter**, which can be designed on request with special dimensions or with an explosion-proof, fireproof, earthquake-proof or corrosion-resistant design, or for particularly high wind, dust, or snow loads.

# MANY ADVANTAGES

Each container is unique. Each order is handled individually. The resulting requirements and solutions are as varied as the reasons for choosing a shelter solution from SICK. In addition to protection against environmental influences, shelter solutions from SICK also offer other advantages for the customer and for measurement operations.

## + Extensive knowledge and product expertise

### Customized equipment

When planning a container project, SICK experts provide their extensive industry knowledge and product expertise to find the best individualized solution for the customer. The installation of transformers and UPS, extinguishing, climate and gas warning systems is possible, as is the implementation of sample point switching or complex redundancy and signal concepts.

## + Easy to install and commission

### Pre-installed technology

All components are pre-installed, interconnected and tested at the factory so only the container as a whole needs to be connected on-site. This makes commissioning much easier, especially for systems with extensive sample preparation or complex redundancy and signal concepts. This saves time and money.

## + Safe and convenient transport

### Turnkey solutions

SICK delivers all containers as turnkey solutions as standard. The risk of transport damage is reduced because fewer individual packages have to be shipped and assembled on-site.

## + Consistently ideal work conditions

### Safe environment

Not only the technology, but also the people performing maintenance work or upgrades are protected from environmental influences in the container. This makes their work safer, and in some cases makes maintenance possible in the first place.

## + Maximum availability

### SICK services

As a provider of complete solutions, SICK offers numerous services at the customer site and also remotely to ensure the reliability and operational readiness of SICK systems at all times. Worldwide and for any industry.



# EXPANSION OPTIONS USING THE EXAMPLE OF AN ANALYZER SHELTER

The customer can choose from numerous components and systems that can be integrated into the container according to specific requirements. Whether these are analyzer systems and laboratories, computer workstations or washbasins: The possibilities are nearly endless.

Individualized requirements can also be implemented outside the container. Special paints, windows, a covered access point – SICK enables the highest level of flexibility.

## Gas bottle cabinet

- Steel cabinet
- Grid cabinet
- Simple rack
- Release station
- Leak monitoring



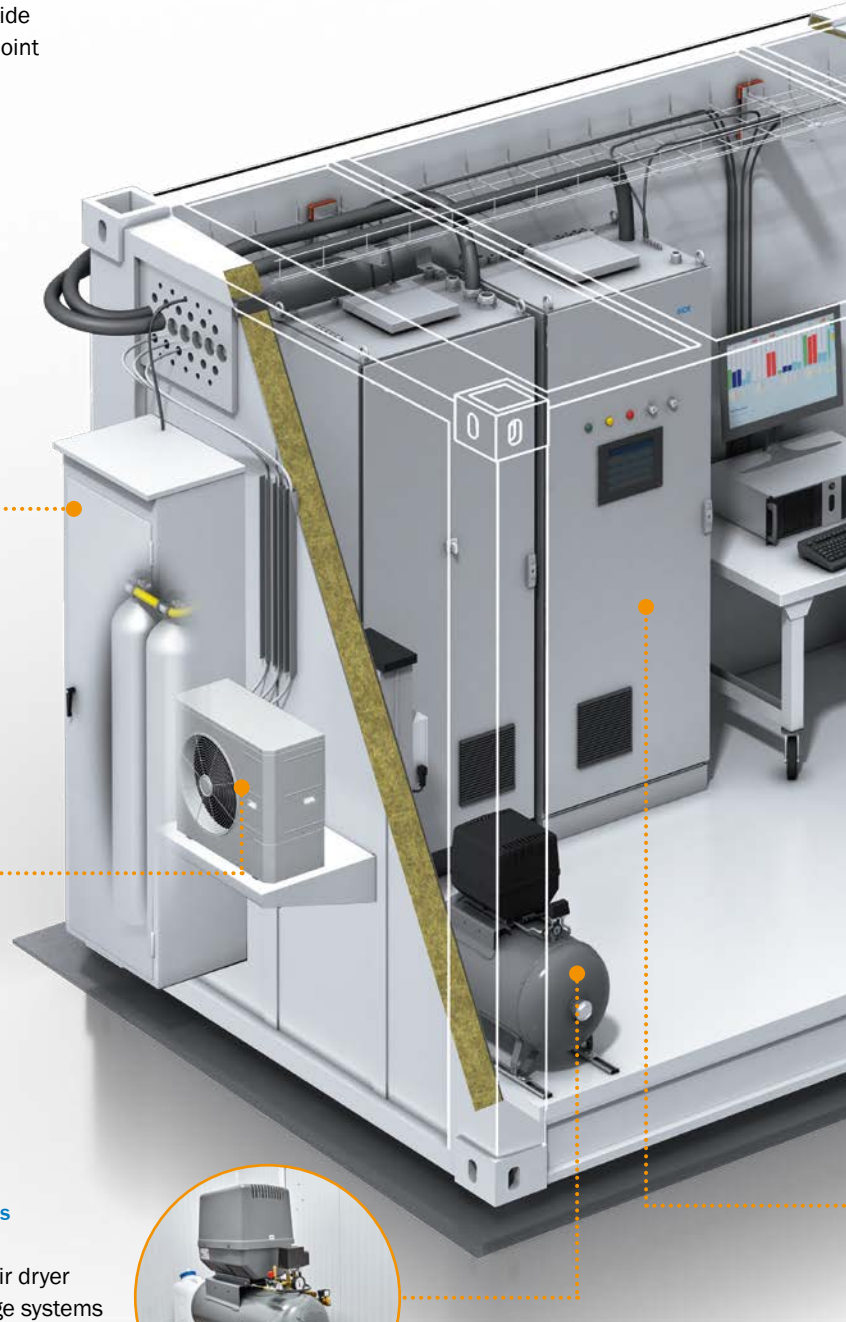
## Heating, air conditioning, ventilation

- Defined air exchange rates
- Cooling and/or heating
- HVACs as well as ex-variants
- Redundant design possible



## Other equipment options

- Transformers
- Compressors with air dryer
- Condensate drainage systems





**Workplace**

- Data acquisition system
- Lab table
- Workbench
- Basin

**Integration of extremal measurement technology**

- Evaluation units and voltage supply for in-situ devices
- For example, for the detection of pressure, temperature, dust and volume flow

**Safety technology with optical and/or acoustic alarm**

- Gas warning system
- Fire alarm system
- Active fire extinguishing equipment

**Protection against ambient conditions**

- Corrosion protection C1–C5
- Insulation to protect from heat and cold
- Fire protection F30–F120
- Earthquake-proof stand
- Reinforced roof construction for protection against snow and dust loads

**Analyzer systems**

- Continuous emission measurement systems (CEMS)
- Process gas analyzer systems (PGA)
- Sample conditioning
- Measuring point switching
- Signal cabinets
- Redundancy concepts

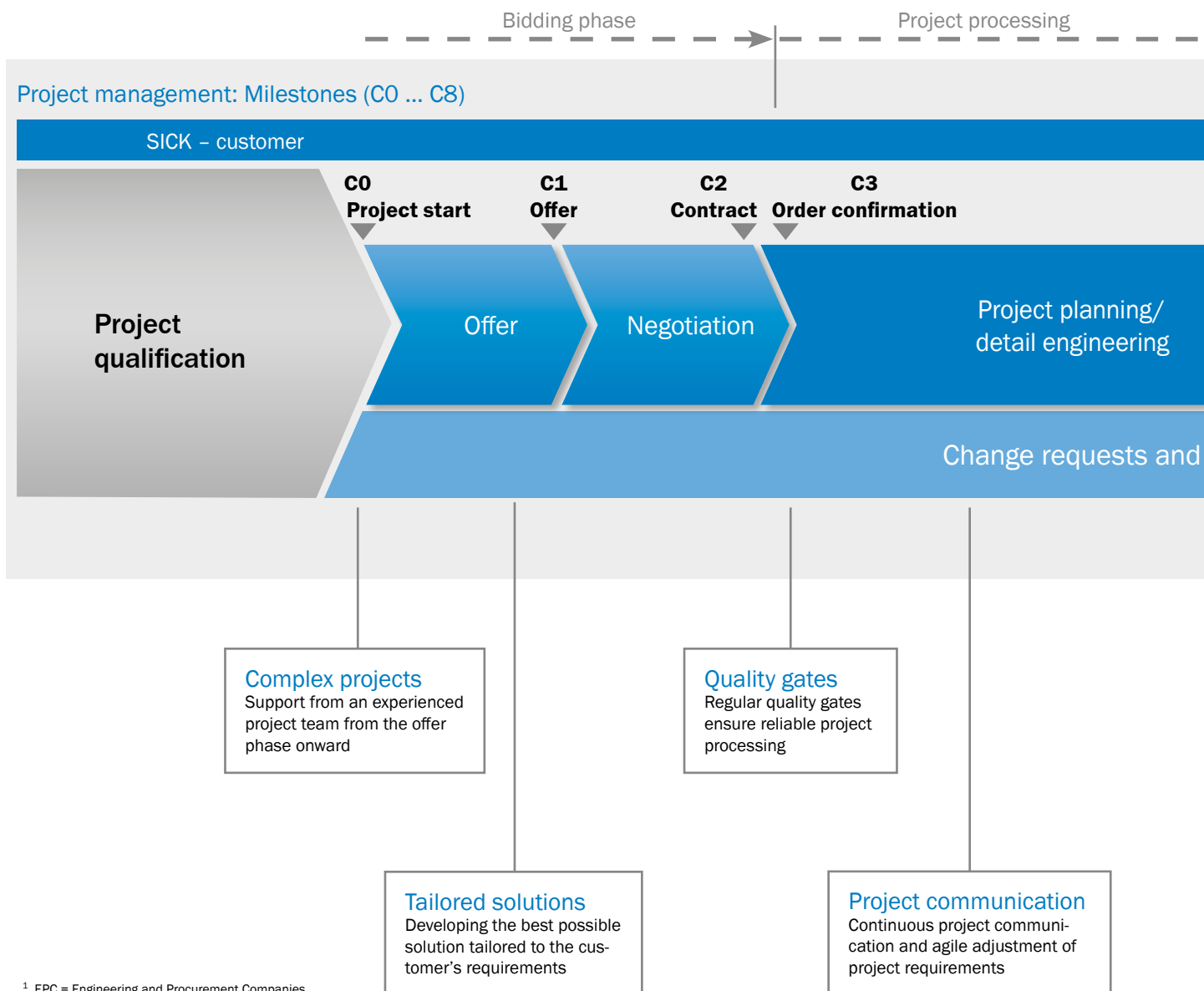


## CUSTOMER PROJECT MANAGEMENT

The SICK international project teams supply customized solutions around the world.

In order to ensure that the best possible solution is provided for complex customer requirements, SICK focuses on project management activities. Based on internationally recognized management methods and years of expert experience, SICK offers a standardized procedure (Customer Project Management, CPM) for processing customer projects, even on an international level.

SICK provides experienced project managers to ensure a successful and efficient project process. They ensure a better understanding and implementation of the customer requirements. From evaluating the requirements to realizing and completing the project: Our project managers use their extensive expertise to support the respective measures and customers throughout the entire project process.

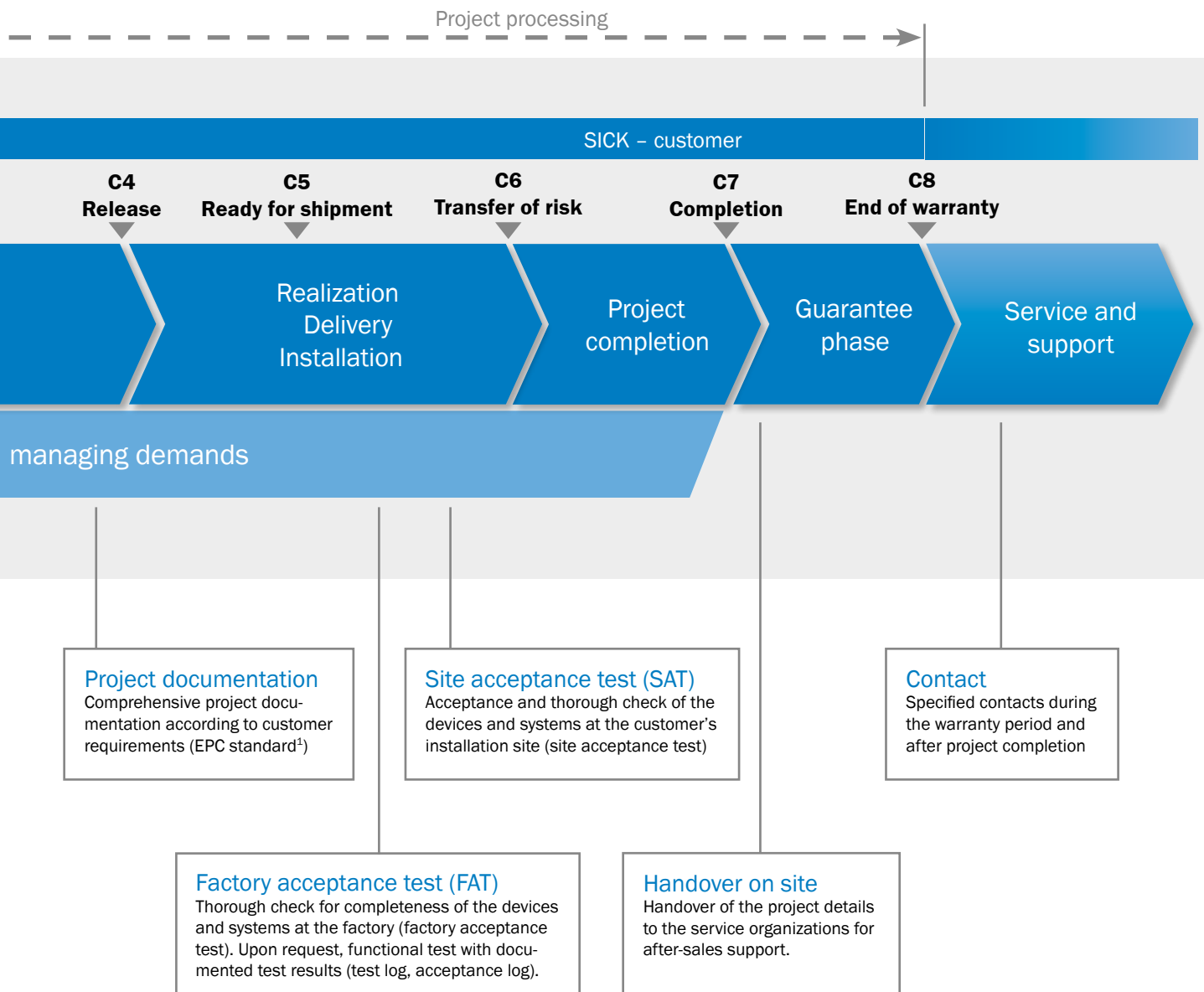
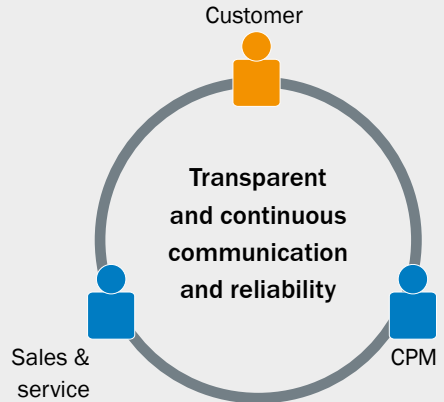


<sup>1</sup> EPC = Engineering and Procurement Companies

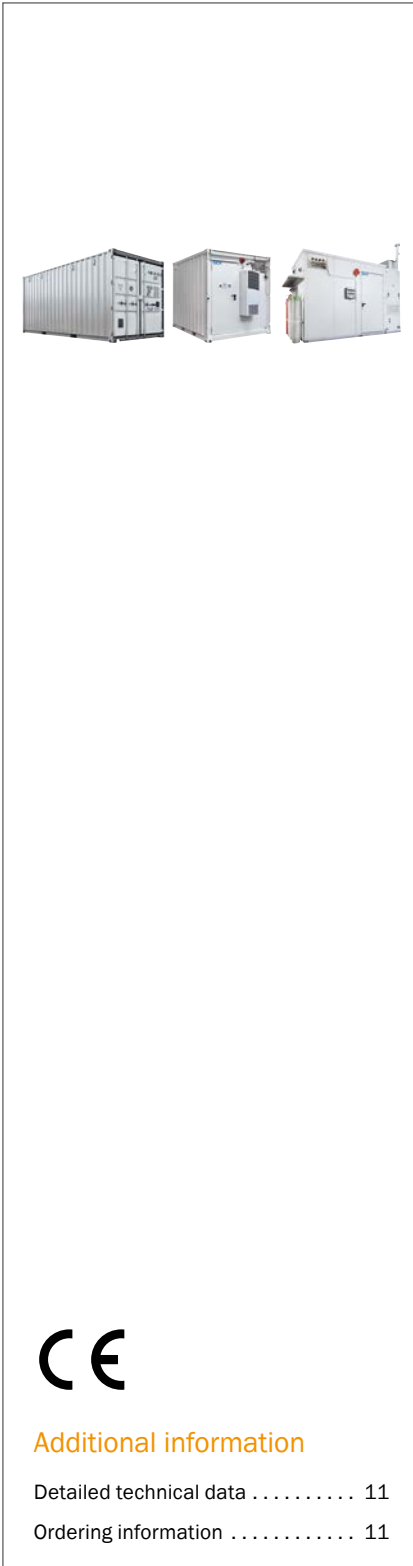


**Our strengths – your benefits**

- **Our strength**  
International project teams with many years of project experience in a global network
- **Our goal**  
Professional advice and responsible processing throughout the entire project
- **Your advantage**  
From the first contact to the fulfillment of all project goals – SICK as a professional end-to-end partner



# SPACE AND PROTECTION FOR MEASUREMENT AND ANALYSIS TECHNOLOGY



### Additional information

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### Product description

Shelter solutions are primarily used to protect the installed analyzer systems from extreme ambient conditions such as heat, cold, dust, wind, earthquakes and corrosive or explosive atmospheres. They also offer advantages for transport as well as on-site installation and maintenance. At the factory, everything is coordinated and pre-installed in the

shelter in a clear manner. Each shelter can be equipped to fit individual customer requirements. The installation of transformers and UPS, extinguishing, climate and gas warning systems is possible, as is the implementation of sample point switching or complex redundancy and signal concepts.

### At a glance

- Heating/Cooling/Ventilation (redundant on req.)
- Standard shelter, 10 to 40 feet
- Insulation and high-quality paint (C5)
- Fire alarm and fire extinguishers available
- CSC certificate for standard dimensions
- Suitable for ATEX zones
- Earthquake-safe and fireproof types available (F30, F60)
- Special constructions

### Your benefits

- High availability, long service life and minimal maintenance requirements of the installed technology thanks to the protection from adverse ambient conditions
- Ex-version shelters also enable the use of non-ex-analyzer systems in explosion-hazardous areas
- CSC certification enables low-cost transport on shelter ships and does away with the need for seaworthy packaging
- Minimized risk of transport damage to the measurement and analysis technology
- Quick installation as only the shelter needs to be connected
- Easy access to mounting plates and racks facilitates maintenance work

→ [www.sick.com/Shelter\\_Solutions](http://www.sick.com/Shelter_Solutions)

For more information, simply enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.





**Detailed technical data**

The exact device specifications and performance data of the product may deviate, and depend on the application.

**General notes**

	Analyzer Shelter	Shipping Container	Special Shelter
<b>Brief description</b>	Analyzer shelters are the ideal solution for making space for measurements in harsh environments without disturbing influences. Due to their standard dimensions, transport by truck is ideal.	The shipping containers feature an internal technical or analyzer shelter. Thanks to their ISO standard dimensions and GIC certification, they can be transported by ship and used worldwide.	Some environments require individual solutions. Whether for earthquake protection, explosion and fire protection or special dimensions: SICK also develops customized individual solutions for special requirements.

**Features**

	Analyzer Shelter	Shipping Container	Special Shelter
<b>Size</b>	Customized	ISO-Container (8' x 10' / 20' / 40')	Customized
<b>Approvals and certificates</b>			
GIC certification	-	✓	-
Ex (ATEX, IEX-Ex, NEC)	-		✓
Earthquake-proof type	✓	-	✓
Fireproof type	-		✓ (F30, F60)

**Ordering information**

Items supplied	Type	Part no.
All Continuous Emission Monitoring Systems (CEMS), Process Gas Analysis Systems (PGA) and Liquid Analysis Systems can be combined	Analyzer Shelter	On request
	Shipping Container	On request
	Special Shelter	On request

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- SICK AppPool → [apppool.cloud.sick.com](http://apppool.cloud.sick.com)



## SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 10,400 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing damage to the environment.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the customers need. In application centers in Europe, Asia, and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes SICK a reliable supplier and development partner.

Comprehensive services round out the offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**That is “Sensor Intelligence.”**

### **Worldwide presence:**

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations → [www.sick.com](http://www.sick.com)