

### Engineering services

### Expert knowledge





## 24/7/365 service

#### **Contact our technical department**



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Our Lifting KnowHow is about safety and our efforts to avoid accidents during lifting operations.

For many years we have delivered innovative solutions to our customers' lifting challenges, and through this we have developed extensive expertise and experience.

We use our Lifting KnowHow to give you the best possible service and technical support:

- Design of lifting equipment
- Advice on selection of products
- Advice on your specific lifting job
- Inspection and certification of your equipment

### PETER HARBO

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### Technical department

Our technical department specializes in designing lifting equipment - anything from small simple lifting beams to large complex lifting equipment with mechanical functions.

We also help customers designing handling and transport equipment - including various machines and cranes.

### We are solution oriented

- Committed problem solvers
- Reliable and trustworthy
- Comprehensive technical know-how
- 24/7/365 service
- Full documentation package

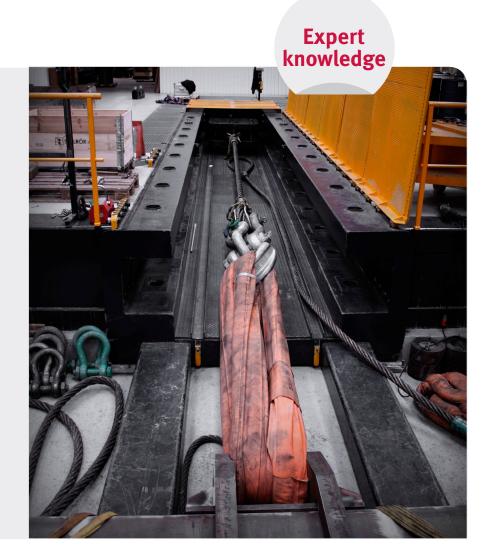




## Our engineering services

### **Our engineering services include:**

- Design of lifting and handling equipment
- Project management
- CE marking of equipment according to the Machinery Directive 2006/42/EF
- Calculations: structural analysis and rigging calculations
- Instruction manuals
- Risk assessment
- 3D and 2D drawings
- Manufacture of equipment
- Load test in our own testcenter
- SAT and FAT: Performance of site acceptance test and factory acceptance test



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### Lifting equipment

Our lifting equipment is designed according to our customers' requirements and standards such as:

### EN13155

Cranes, Safety, Non-fixed load lifting attachments

**DNVGL-ST-0377** Standard for shipboard lifting appliances

**DNVGL-ST-0378** Standard for offshore and platform lifting appliances

**DNVGL-ST-E271** Offshore containers

**DNVGL-ST-E273** Portable offshore units







## **Crane design**

Our technical department designs various types of cranes for the on- and offshore industries. We offer both standard and tailormade solutions. The cranes are designed according to our customers' requirements and standards such as:

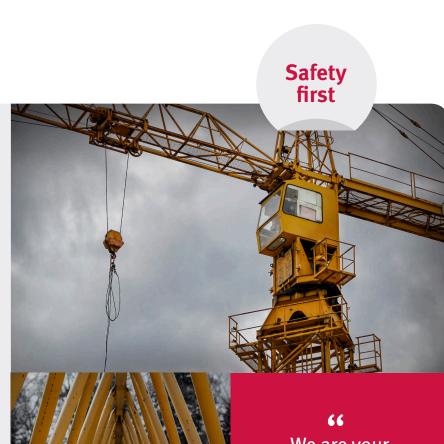
DS/EN 13001-1 and DS/EN 13001-2

General crane design

**DS/EN 15011** Bridge and gantry cranes

**DS/EN 14985** Slewing jib cranes

DS/EN 13852-1 Offshore cranes



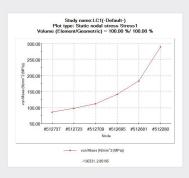


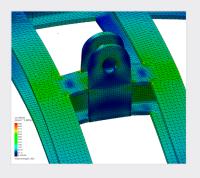


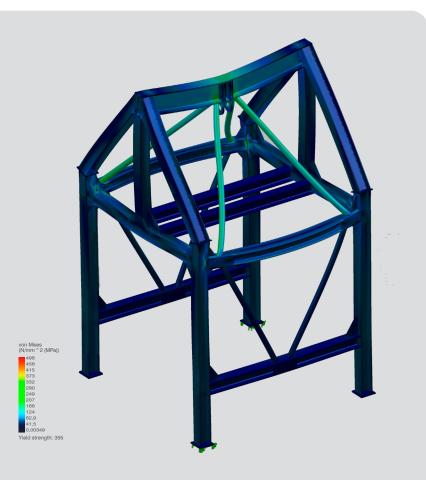
# Structural analysis

Our experienced engineers are experts in calculations and they will bring solutions to your most challenging projects.

• We perform structural analysis (analytical and numerical FEM) and rigging calculations



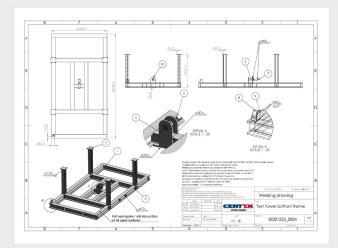






# 3D and 2D drawings

We are experienced in developing complex mechanical systems and steel structures. Using Solid Works, we are able to generate 3D models, which we use to produce 2D drawings for manufacturing.







Certified

### Manufacture of equipment

### User manual and risk assessment

We always do risk assessments and instruction manuals according to the Machinery Directive 2006/42/EF.



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Manufacture of equipment We only work with welding subcontractors certified according to ISO 3834-2 (quality requirements for fusion welding of metallic materials - comprehensive quality requirements).



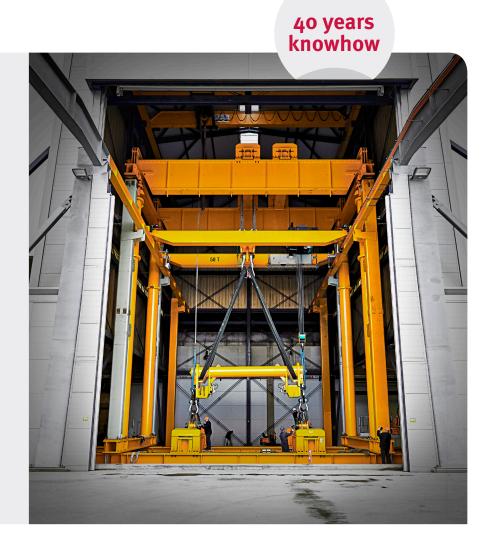
## State of the art testing

We perform all kinds of tests both in our own testcenter and at offshore locations. Our tests are always performed with safety in focus.

We are able to test most equipment such as cranes, MOB / lifeboats, lifting beams, wire-, fiber- and chain-slings, frames, winches etc.

### Your benefits:

- High safety
- Economical solutions
- Time saving
- Low testing costs
- Full documentation package





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### Load tests

## State of the art testing

#### **Test tower**

The first 2,250 ton test tower in the world with 3D laser measurement.

#### UP TO 2,250 TON

### Water Weights

Test of lifting beams, cranes etc. up to thousands of tons.

UNLIMITED

#### **Test tower**

We perform load testing of all kinds of equipment in our vertical test tower.

UP TO 50 TON

#### **Test bench**

Pull tests up to 1,200 ton and breaking tests up to 900 ton.

**UP TO 1,200 TON** 



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Based on 40 years experience and KnowHow within lifting and testing, CERTEX Peter Harbo A/S is your safe and reliable partner in steel wire rope, lifting applications and related services.



Lifting Solutions Group Axel Johnson International

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