# MARINE LOADING ARMS

### ENGINEERED FOR GENERATIONS







## REALISED IN PARTNERSHIP

**CONTRACT** 

4



### TOGETHER WE ARE KANON

As a family business specialising in the design, manufacture and installation of loading and unloading systems for marine, road and rail tankers, we employ our passion for loading systems to build relationships and add value to our customers operation. You can count on us for reliability, transparency and a long-term and sincere partnership.

Based in the Netherlands, we are a true Dutch company at heart. The no-nonsense culture suits us. You will see this reflected in our approach. Together, we work hard to achieve the most effective loading result for your situation. Your goals are ours, we reach them together.

We operate on a worldwide basis via a well-trained network of carefully selected agents and associate companies, so there is always a contact near you that understands local requirements. Providing you with the best, durable solution for your application takes precedent. Our loading systems are in use for the widest range of liquids and gases, from cryogenic to high temperature applications, including the most hazardous or corrosive fluids.

Wondering whether we have a solution for your application? We supply equipment directly to customers and through EPC contractors in all areas of the processing industry including chemical, petrochemical, storage terminals, pharmaceutical, healthcare, food and beverage.

### COMMITTED TO EXCEL

### MAKING EFFECTIVE LOADING A PRIORITY

#### Looking for a partner with an excellent reputation for developing a comprehensive standard and custom made loading systems?

Through years of experience and knowhow we are well placed to give you the very best advice in liquid transfer systems. Ease of handling and safety for the operator and environment, as well as a reliable and durable performance, are the basics for the design of KANON equipment.

Your loading systems are developed by the KANON team of dedicated and experienced engineers, so you can be sure that the latest technology and guidelines are incorporated. A highly skilled service department provides you with excellent worldwide service. Experienced VCA qualified service engineers are at your disposal to service, maintain and overhaul your loading equipment. You can benefit from their cross-discipline skills in hydraulics, pneumatics, mechanics and electronics, basically your one-stop shop. We uphold the highest quality standards and strongly believe in taking ownership when it comes to your loading results. Providing you with the best and most effective loading solutions is our priority.



### ROBUST, SAFE & STRAIGHT-FORWARD

#### **SWIVEL JOINTS**

The use of swivel joints in loading arms is critical because of the extraordinarily high bending and axial load combination, due to the reach of the loading arm and wind forces. Our swivel joints are developed to withstand all these loads providing the best performance with virtually zero leakage and maintenance.

- MACHINED BALL RACES, WHICH LAST FOR THE LOADING ARMS LIFETIME
- DUPLEX STAINLESS STEEL FOR THE **INNER BODY IS APPLIED**
- LONG LIFE LUBRICATION
- IN-SITU SEAL REPLACEMENT
- NO SNAP-IN BALL RACES

### A CLOSER LOOK AT SOME KANON **LOADING ARM FEATURES**

#### COUNTERWEIGHT

Double rotating counterweight, in order to keep both inboard & outboard sections aligned and in perfect balance.

#### PARALLEL

The parallel is the rigid link between the outboard section and the counterweights, a big advantage of the rigid structure is that the balance is set once in the factory and does not need to be adjusted in its entire lifetime.

### STATE OF THE ART LOADING ARM ACCESSORIES

Explore some of the accessories we offer to complement your Kanon Marine Loading Arm. Our offers are accompanied by comprehensive advice on all our accessory options, catered to your particular situation.

#### **HYDRAULIC QC/DC**

Hydraulic quick couplers offer the possibility of connecting the marine loading arm to the ship's manifold by means of a single push button, from a remote distance. They are known in the market as very robust and straight forward connectors.

- CENTRING GUIDE IN ORDER TO EASE ACTUAL MANIFOLD CONNECTION
- MANUAL RELEASE AT ALL TIMES





#### EMERGENCY RELEASE COUPLER

The ERC is part of our range of Emergency Safety Systems (ESS). Designed to provide best possible safety in fluid loading/unloading when using Marine Loading Arms. An ERC provides a fully automatic, safe and spillage free disconnection of the Loading Arm from the ship should the limits of the safe working envelope of the Arm be exceeded.

## **CONTROL SYSTEMS**

A straightforward, safe and effective operation of your loading arms takes precedent in our control system design. We make sure you are in full control, with systems that suit your particular situation.



#### ELECTRIC - HYDRAULIC CONTROL SYSTEM

Our loading arms are typically operated hydraulically and controlled by means of a control cabinet provided with a P(rogrammable) L(ogic) C(ontroller).

Together with our partners (for 30 over years) Stahl / Electromach & Vydraulics we keep things simple, up to date and in accordance with the latest standards.

#### **Important features**

- In-house manufacturing Exd, Exe and Exp cabinets.
- Complete product portfolio of Stahl
- In-house engineering/CAD/software/ Production/FAT.
- Certified Functional Safety Engineers (TUV)
- Control systems are certified in accordance with local laws; ATEC, IECEx, ETL, Kosha/ KGS, PESO, INMETRO, CCC
- Project specific design specifications
- Optimised solutions for the specific situation
- Combined Exde housings for easy installation field cables
- PLC based control systems such as Allen-Bradley, Siemens, HIMA etc.
- Easy communication to DCS trough; Ethernet TCP/IP, Modbus RTU, Profinet, Fibre Optic, etc
- Automatic start/stop of the pumps in the hydraulic power pack
- Multiple operating possibilities; Local control panel, Pendant and Radio
- Customised I/O
- Safety Integrated Loops

No big hydraulic powerpack is required due to customised cylinders that prevent oil displacement.



#### **HAZARDOUS AREA**

#### **Important features**

- Galvanised steel frame;
- Compact design;
- IP66;
- Exd housing made of copper free aluminium (special marine grade) or stainless steel;
- Stainless steel 316L control & terminal housing for easy maintenance and installation (field cables);
- Multi certified zone 1 solution for use worldwide (ATEX, IECEx, cETLus, PESO, KOSHA...)

#### **NON-HAZARDOUS AREA**

6

#### **Important features**

- Rittal VX25 based panel;
- Easy access and maintenance due to installation in safe area;
- With front access only or with front and rear access;
- Flexible design with possibility of combining multiple enclosures into one panel.
- Compact design;
- IP66;
- Stainless steel 316L control housing for easy maintenance and installation (field cables);
- Stainless steel station;
- Stainless steel protection cover;
- Multi certified zone 1 solution for use worldwide (ATEX, IECEx, ETL, PESO, KOSHA...)

### 7 REASONS TO BUY KANON

PRACTICALLY ZERO MAINTENANCE

DESIGNED FOR ALL APPLICATIONS

1

3

GUARANTEED LOW COST OF OWNERSHIP

2

RIGID PANTOGRAPH, PROVIDING LIFETIME BALANCE

4

UNIQUE SWIVEL JOINT DESIGN RESULTING IN MAXIMUM UPTIME

V.L.:20T

5

LIGHT AND ERGONOMIC DESIGN

7

6

#### UNPARRALLELED ENGAGEMENT

### **AFTER-SALES**

Our fully equipped after sales department that understand your needs, is ready and standby to service your loading arms at any time, offering the following services:

- Installation
- Commissioning
- Supervision
- Annual Inspection
- Survey
- Maintenance, Repair & Modification
- Training on the job for operators and maintenance personnel
- Overhaul

WE WILL BOOST YOUR LOADING ARM UPTIME AND REDUCE YOUR COST OF OWNERSHIP





#### **Experience**

Highly skilled and experienced service engineers are available to service and maintain customers' equipment. They all have the required knowledge of hydraulics, pneumatics, mechanics, and electronics. These service engineers each have a fully equipped service van at their disposal, including all necessary tools and spare parts.

#### **Annual Inspection**

Kanon's inspection program ensures the performance of your equipment and includes preventive maintenance. Regular inspection will result in a lower cost of ownership and also safeguard the operator, the environment as well as your loading equipment.

Kanon subsequently issues a dedicated inspection report for each individual loading arm.



SCC certified – managing your risk is our priority

YOU ARE WELCOME TO VISIT OUR FACILITIES ANY TIME! A SHORT IMPRESSION OF OUR GLOBAL CAPACITY

## **PRODUCTION FACILITIES**

Our production facilities in The Netherlands and Malaysia provide extensive capacity to uphold our priority to supply you with qualitative, safe and effective loading arms. Experienced and certified personnel make sure your loading arms are manufactured and tested according to the highest quality guidelines.

#### **Head Office**

Our Head Office is the Kanon nerve centre. The dedicated Kanon Team works in partnership with you to provide you with the most effective loading arms in the business.

#### **Biddinghuizen, The Netherlands**

Our facility in The Netherlands has a testing capacity of up to 13 loading arms. The facility houses all necessary top quality welding, testing and other manufacturing equipment and a highly qualified staff.

#### Kuantan, Malaysia

To cater to clients all over the world, a second and large, 30,000 m2 production capacity is situated in Asia. Our Malaysian office is in close proximity to the production facility. They make sure production is up to the highest standards and liaise with our head office on a daily basis.





## **GLOBAL PRESENCE**

#### WITH OVER 2500 MARINE LOADING ARMS INSTALLED WORLDWIDE

**ALGERIA** ARGENTINA **AUSTRALIA BAHAMAS** BAHREIN BELGIUM **BULGARIA CANADA** CHILE CHILLI **CHINA** COLOMBIA **CROATIA CUBA CYPRUS** DANMARK EGYPT

**ESTONIA FINLAND** FRANCE GERMANY **GHANA** GREECE INDIA **INDONESIA IRAQ ITALY JAPAN JORDAN KOREA** LATVIA **LITHUANIA** MALAYSIA **MEXICO** 

MOROCCO MOZAMBIQUE **MYANMAR NEDERLANDSE ANTILLEN NETHERLANDS NEW ZEALAND** NORWAY **OMAN** PAKISTAN PANAMA PERU PHILIPPINES POLAND PORTUGAL **QATAR ROMANIA RUSSIA** 

SAINT LUCIA **SAUDI ARABIA SAUDI ARABIA SOUTH AFRICA SPAIN SRI LANKA ST. EUSTATIUS SWEDEN THAILAND** TURKEY UKRAINE **UNITED ARAB EMIRATES UNITED KINGDOM UNITED STATES VENEZUELA** VIETNAM



### **CONNECT WITH** LOADING EXCELLENCE

# YOU CAN RELY ON OUR LOADING ARMS

LOADING EQU

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