



OFFSHORE SOLUTIONS



MOVEMENT DRIVEN BY QUALITY

HOLLAND HYDRAULICS IN THE OFFSHORE INDUSTRY

Since 1994, Holland Hydraulics B.V. is specialised in drive engineering and high-quality hydraulic systems for the offshore industry. Over the years, we have built a well-established reputation in various markets, serving customers worldwide as a reliable partner.

With a team of skilled engineers, extensive know-how and experience, we secure the optimal customer-specific hydraulic solution. We work closely together with our customers and suppliers all over the world and we keep our communication lines short.

This enables us to meet the customer-specific requirements excellently.

Although we do offer our customers in the offshore industry separate systems and components, we are specialised in providing the customer with a comprehensive solution for their application based on customer specific criteria. We manage the entire procedure of consultancy, engineering, manufacturing, installation, controls, commissioning, maintenance, and service.

All our hydraulic systems, products, components and service are in compliance with the high quality, health, and safety standards required in the offshore industry. We have certified engineers that are able to consult, install and provide full service, even on location. This way we can ensure an outstanding quality and service, 24 hours a day.

This brochure gives an impression of what Holland Hydraulics offers to companies in the Offshore Industry. For a full comprehension of what we could mean for your company or in case of any questions, please feel free to contact us via info@holland-hydraulics.nl or call +31 (0)74 291 78 48.

COMPREHENSIVE SOLUTIONS

We offer our customers a comprehensive solution to customer specific applications.

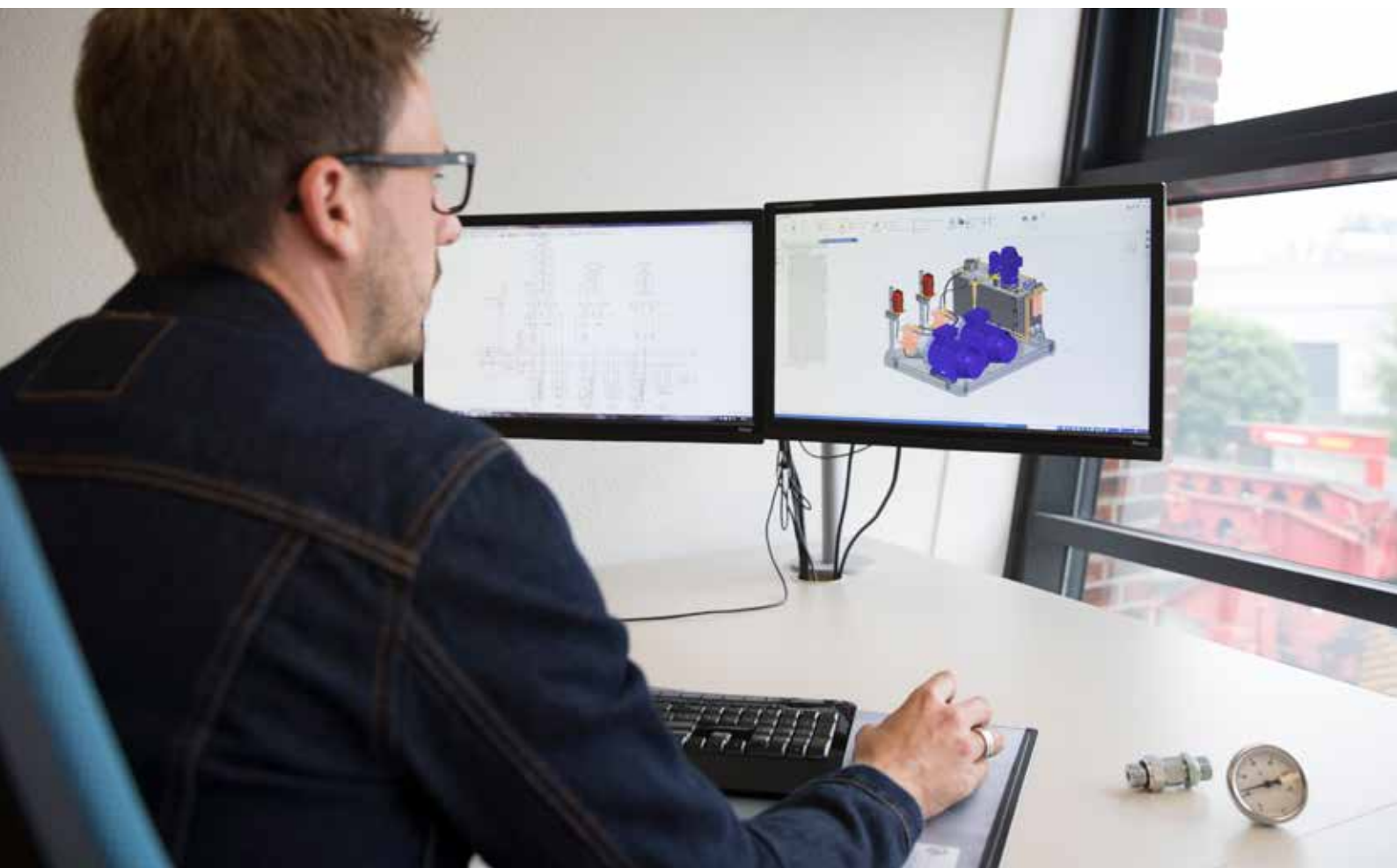
We integrate all phases of the process under in-house, to ensure the optimal hydraulic solution to our customer, without compromising efficiency and quality. Therefore, Holland Hydraulics is a full service partner.

CONSULTANCY

The customer is not always sure about what kind of solution, system or product they need for their application. The first step in the whole process is defining the needs. We work closely together with the customer to analyze and define the specific needs. When the needs are defined, we use our extensive know-how and experience to define the optimal solution that meet the exact requirements.

ENGINEERING

Our skilled engineers develop customised solutions which are adapted to the application-specific requirements: from basic engineering to highly detailed designs with system specifications and 3D drawings. Our engineers have diverse backgrounds, disciplines and skills, giving them the unique level of knowledge and experience to meet the requirements. Close and direct cooperation and short internal communication lines allows quick and efficient project



handling, even when a plan is modified. The appointed project engineer consults, guides and assist our customers throughout the entire duration of the project.

PRODUCTION

A professional production process and extensive testing procedures ensure our equipment and solutions are of the highest quality and safety standards. Most solutions are assembled at our facilities as supplying our customers with high-quality, prefabricated solutions reduces time, effort and costs. A Factory Acceptance Test (FAT) is performed as a last check of requirements, quality and safety standards, before installation of the hydraulic solution at location.

CONTROLS

The design and assembly of control panels and cabinets, and the electrical installation is carried out working closely with our specialised partners to ensure that the controls are in compliance with the required high quality and safety standards. We make certain that the controls meet the customer specific requirements, as controls are also an important aspect of the comprehensive solution we provide to our customers.

INSTALLATION

Our experienced and certified technical engineers install the hydraulic solutions on location with the minimum possible impact to the continuity of the customers' production process. The engineers ensure that the installation process is and remains safe, reliable and efficient at all times.



COMMISSIONING

After installing the hydraulic system, commissioning on site by our engineers give reliability and sustainability on location. Extensive testing procedure ensure our hydraulic systems and solutions are of the highest standards. We use different commissioning procedures depending on the manufacturing process, systems and products used. Our service engineers work closely together with the service engineers and employees on location to make sure of the optimal start up. Following a Site Acceptance Test (SAT) and training the system is handed over to the customer.

SERVICE AND MAINTENANCE

Through a highly skilled and motivated team of service engineers, we offer our customers wide range of services, worldwide. Our engineers are fully trained and certified to operate our own equipment and carry out the necessary work on location, in a time efficient matter, keeping safety in mind and without the loss quality.

We understand that any delay could have a large impact at the customer's facility. Therefore we offer 24/7 service. The short internal communication lines enables us to respond quickly and adequately when a customer requests for service. With our "Workshop on wheels" we are able to provide service on location, quickly and efficiently.

We provide our customer with scheduled maintenance, in- house or on location. On request the customer can obtain a maintenance contract. This to ensure that the installed systems will operate at an optimum level.

We can offer:

- Preventative maintenance checks and controls
- Emergency service (24/7)
- Testing, monitoring and verification
- Overhaul and repairs
- Remote and on location support
- Documentation and training



OFFSHORE SOLUTIONS, THREE CASES

HYDRAULIC MANIFOLDS AND E-CONTROLS

Holland Hydraulics has supplied all hydraulic systems and the electronic control systems for the handling modules of a Noise Mitigation System (NMS). The systems were all custom made and are part of a major project for offshore wind turbine foundations. All systems work with the greatest precision to prevent damage to tubing and NMS, with pressures up to 420 bar. Several systems were entirely prefabricated, including the piping system.

Our certified service engineers have installed and commissioned the hydraulic manifolds and electric controls on site. We have provided a hydraulic comprehensive solution to the customer, from consultancy to aftercare.







3 winches

HAULING AND LIFTING SOUND REDUCTION CURTAINS SYNCHRONOUSLY

For a project concerning the sound reduction in the offshore wind turbine foundation, we have developed a hydraulic system with three winches. These three winches haul and lift sound reduction curtains synchronously by means of a perfectly regulated flow divider. The winches are remote controlled wirelessly.



Hydraulic cylinder used in the Flintstone

HYDRAULIC SYSTEM FOR THE PIPE BURYING VESSEL "FLINTSTONE"

Holland Hydraulics has provided a hydraulic system for a stone metering slide in the pipe burying vessel "Flintstone". The "Flintstone" deposits the stones on the bottom of the sea, this way, for example, offshore windmills stay firmly in the seabed. The hydraulic system ensures that the stone flow can be determined more accurately than before.

The unique feature of this system is that a robust displacement measurement system, suitable for underwater applications, is used. The displacement measuring system with cylinder is fully equipped in stainless steel AISI 316, allowing it to be used in underwater applications up to a depth of 30 metres.

The control box and Walform pipe connections are also completely made of stainless steel AISI 316. The system has a pressure of 350 bar and can be operated locally and remotely. Holland Hydraulics has carried out the complete installation and commissioning of the system in Poland.

HH 21 CYLINDER SERIES

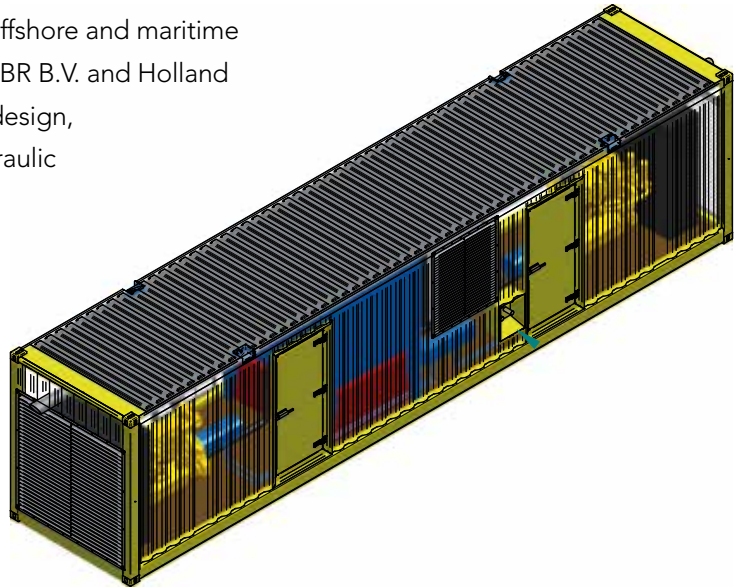


PRODUCTS

DIESEL HYDRAULIC POWER UNIT

Diesel Hydraulic Power Units are delivered to our offshore and maritime customers through a close cooperation between DBR B.V. and Holland Hydraulics B.V. Whereas DBR B.V. is specialised in design, assembly and delivery of custom made Diesel Hydraulic Power Solutions for the shipbuilding and offshore industry, Holland Hydraulics B.V. is specialised in design, assembly and commissioning of hydraulic systems in the maritime and offshore industry.

HPU in container



The combining of extensive know-how and experience of both companies, results into a synergy that provides the customer with a high-quality Diesel Hydraulic Power Unit that meets all customer specific requirements.

DBR B.V. provides the container, the diesel engine, and the electrical controls, and Holland Hydraulics B.V. designs, assembles and commissions the hydraulic components and piping.

ELECTRIC HYDRAULIC POWER UNIT

Electric hydraulic power units are delivered to our offshore customers on customer specific requirements. An example of one of two electric hydraulic power units built on a pontoon at sea for an application to shred clay for easier transportation to shore.

SPECS

Flow: 3 x 430 L/Min

Power: 3 x 132 kW

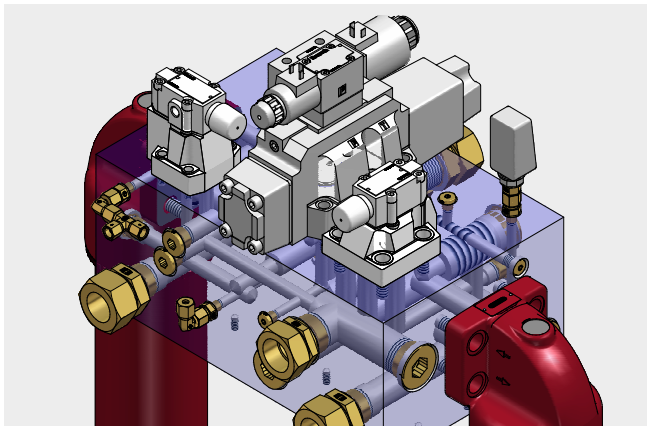
For more information on electric hydraulic power units, please contact us.

HPU



HPU in the container





MANIFOLDS

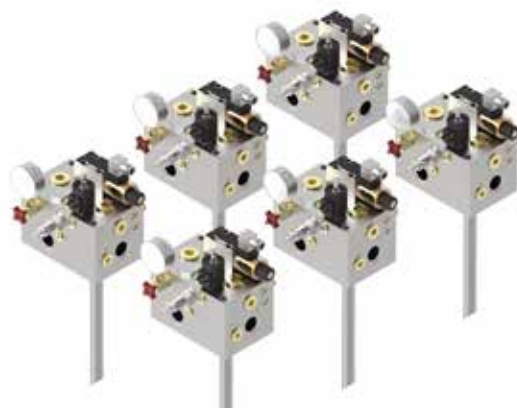
Hydraulic manifolds are used in hydraulic systems to regulate fluid flow between pumps and actuators and other components. Hydraulic manifolds are delivered to our offshore customers on customer specific requirements. We offer single, large hydraulic manifolds and series of multiple hydraulic manifolds. Below an example of a manifold used in a butt removal press.

SPECS

Flow: 2 x 360 L/Min

Power: 2 x 55kW

For more information on hydraulic manifolds, please contact us.



HYDRAULIC CYLINDERS

High-quality hydraulic cylinders in many types and sizes are offered to fit the customers' specific hydraulic application. An extensive range of standard, round, block, stainless steel cylinders and rotary actuators are available.

HH21 CYLINDER SERIES

Our own series of standard hydraulic cylinders, HH21, are produced at our facilities and is added to the portfolio to respond to the demand of fast, reliable delivery, without loss of quality.

SPECS

Piston rod:	Customer specific
Temperature range:	-20°C - 80°C
Ports:	DIN 2353

ADVANTAGES

- Small installation dimensions
- Various mounting types
- Suitable for a wide range of applications



For more information on the HH21 Cylinder Series, please contact us.

STAINLESS STEEL CYLINDERS

Stainless steel cylinders (SSH) are manufactured for stainless materials throughout. These cylinders resist wind, wear and aggressive fluids from the outside and coping with both water and oil on the inside and are typically used in the offshore industry.

SPECS

Piston rod:	25 – 80 mm
Stroke:	50 – 3000 mm
Pressure:	200 bar (oil), 140 bar (water)

ADVANTAGES

- Internal and external positioning sensors
- Various mounting types
- Integrated non-return and restrictor valves

For more information on these or other SSH stainless steel cylinders or other SSH stainless steel components, please contact us.



HYDRAULIC PRESSURE INTENSIFIERS

Hydraulic pressure intensifiers (ScanWill) are offered to the offshore industry and are used to generate a higher pressure from a low-pressure hydraulic power source. The wide range of hydraulic pressure intensifiers (MP-series and SIS-34) cover most fluids and includes solutions for low, medium and high-pressure ranges and variable flows.

The pressure intensifiers are offered in cast iron and steel, with a chrome finish, as well as in stainless steel for the offshore industry.

SPECS

- Multiple intensification ratios available
- All high-pressure valves are integrated
- Reciprocating – continuously delivers flow during pressure build-up



E.g. Low pressure inlet port: 15 - 200 bar / 218 - 2.900 psi
E.g. High pressure outlet port: 20 - 4.000 / 290 - 58.000 psi

ADVANTAGES

- Energy-saving
- Safe
- Cost-efficient

For more information on ScanWill hydraulic pressure intensifiers, please contact us.

HYDRAULIC ROTARY ACTUATORS

Rotary actuators (HKS) are used wherever big loads are tilted or turning movements involving high torque are required. Rotary actuators only need a small mounting space and are easy to control, despite the huge power realised. Therefore, hydraulic rotary actuators are very suitable for the offshore industry.

SA-H

SPECS

Max pressure 210 bar
Max torque 250.000 Nm
Rotation 90°
ISO 5211 flange

ADVANTAGES

- Standard and special flanges numbers possible
- Special angle possible
- Ability to position precisely

DZK

SPECS

Max pressure 250 bar
Max torque 350.000 Nm
Rotation 360° (higher on request)
Flange or Foot

ADVANTAGES

- Maximum torque
- Short axial overall length
- Very short angle play
- Extremely sturdy surfaces

DA-H

SPECS

Max pressure 210 bar
Max torque 250.000 Nm
Rotation 1.080°
Up to 1500° Special angle of rotation

ADVANTAGES

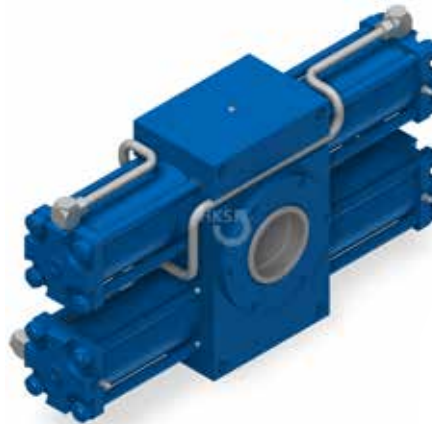
- Rapidload change
- Individual tilting angles
- Wear-resistant sliding
- Adjustable shaft positions

For more information on these or other HKS rotary actuators, please contact us.

SA-H



DZK



DA-H



CERTIFICATIONS, STANDARDS AND REGULATIONS

The certificates and approvals for our integrated management for quality, safety, health and environment are evidence of expertise and guarantee customers consistently high-quality standards. Our systems, products and services are in compliance with the high-quality, health, and safety standards required in the offshore industry and are regularly audited by our dedicated managers as well as professional organisations.

We are NEN-EN-ISO 9001:2008 and VCA** (2008:51) certified and we work in compliance with the following standards and regulations: AQAP, MIL, ATEX, BV, Lloyds, UL/CSA, GL/DNV.





INDUSTRY

Our mobile workshop enables us to offer full service on location.



MARITIME

Our systems are custom-built for most applications.



OFFSHORE

Our solutions are developed based on customer specific criteria.



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