



# BU Hydraulic Systems

**DIPLOMATIC**  
MOTION SOLUTIONS  
a member of **DAIKIN** group

**MOVE MODERN**



Conventional Valves



Proportional Valves



IO-Link Solutions



Hydraulic Servo-Cylinders



Electric Cylinders



Hydraulic Pumps

# Diplomatic Motion Solutions

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**Diplomatic Motion Solutions** is one of the world's leading players in motion control.

The group, which is constantly growing, has always maintained its pioneering spirit, focusing not only on the design and production of hydraulic components, but also on electromechanical solutions and smart systems, perfectly aligned with the principles of Industry 4.0.

Thanks to its international presence, Diplomatic Motion Solutions is able to guarantee the same level of efficiency, reliability, product quality and service worldwide. The same values of stability, competence and technological progress are shared across every continent.



# Hydraulic Systems

The BU Hydraulic Systems is dedicated to the development of custom-made projects within the Group, at two modern facilities in Lainate (Milan) and Padua, Italy.

look to the future  
to overcome  
daily challenges



Within the Diplomatic Group, the BU Hydraulic Systems is the premier source for the design and construction of custom-made hydraulic power systems.

The **production site at Lainate** (Milan), Italy features a 3,000 m<sup>2</sup> facility, fitted with modern production equipment, including assembly, welding, coating and testing areas. Here, the Hydraulic Systems team partners with customers to successfully address daily market challenges. Technology and innovation are the tools that curious, experienced, and passionate people use to develop and accomplish each project.

VISION

## Daikin group

Each project promotes highly energy-efficient products aimed at reducing the environmental impact of materials throughout their entire life cycle.



The teams from the two facilities handle:

- design
- production
- approval testing of power units, manifolds and cabinets.



**innovation**  
to reach  
objectives and goals



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In the recently modernized 2,500 m<sup>2</sup> **Padua site**, we have been manufacturing extremely complex systems for over 35 years. These systems require design expertise not only in hydraulics but also in mechanics and pneumatics, and, for specialized projects, in software management as well. These skills, combined with those of the Lainate plant, allow Duplomatic to tackle all possible requests from our customers.

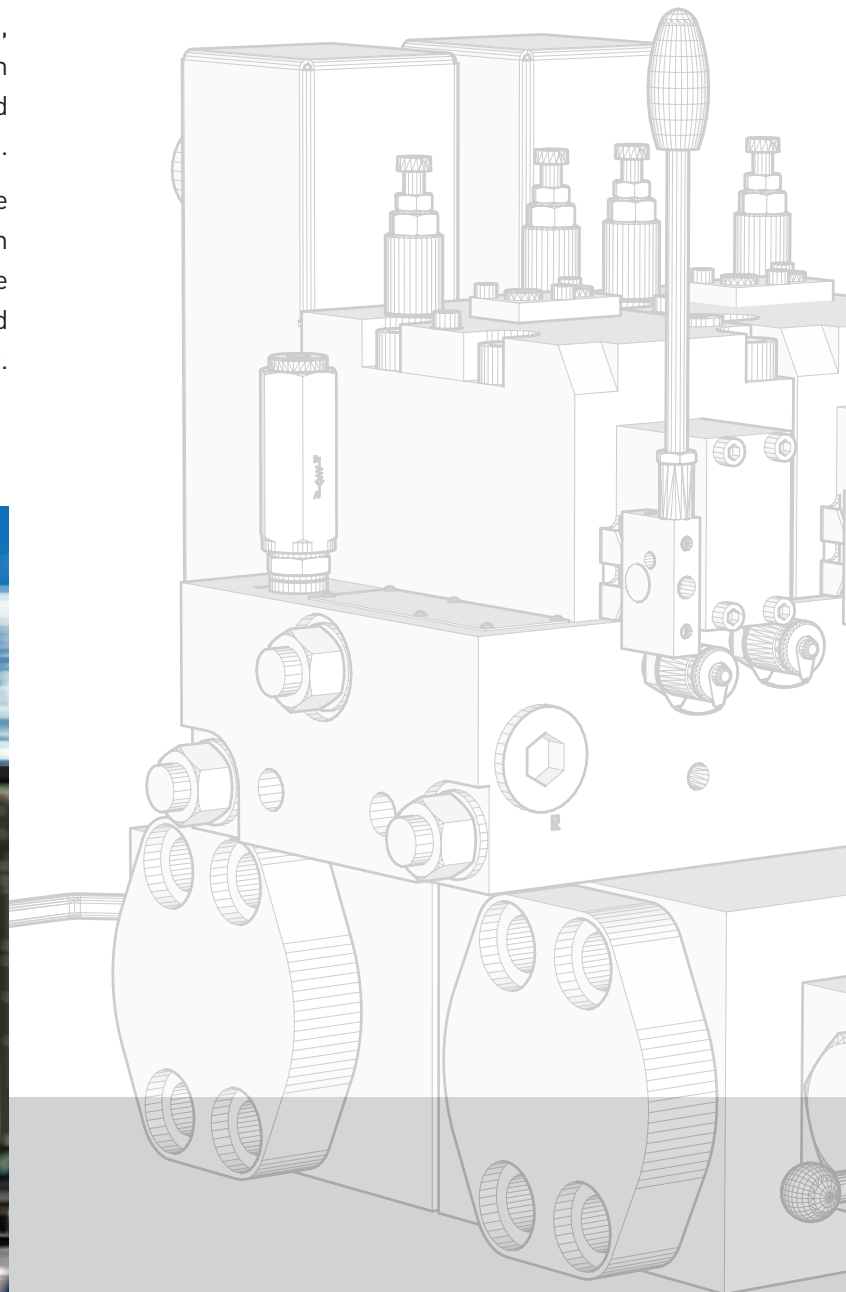
DESIGN

## we shape the future

Thanks to modern 3D design systems, combined with the specific skills of a qualified technical team, each project takes shape and grows in close cooperation with the customer.

Each phase of the design process is planned through a consolidated work method, in order to obtain results that are perfectly in line with customer expectations and optimised for any application.

Thanks to careful analysis of applicable regulations and job order specifications, each project is carried out in accordance to requirements and perfectly sized to its context.



## PRODUCTION

# efficiency and care in every production phase

We strive to bring together the efficiency of a modern industrial organisation with the passion and care expected of craftsmen and their work.

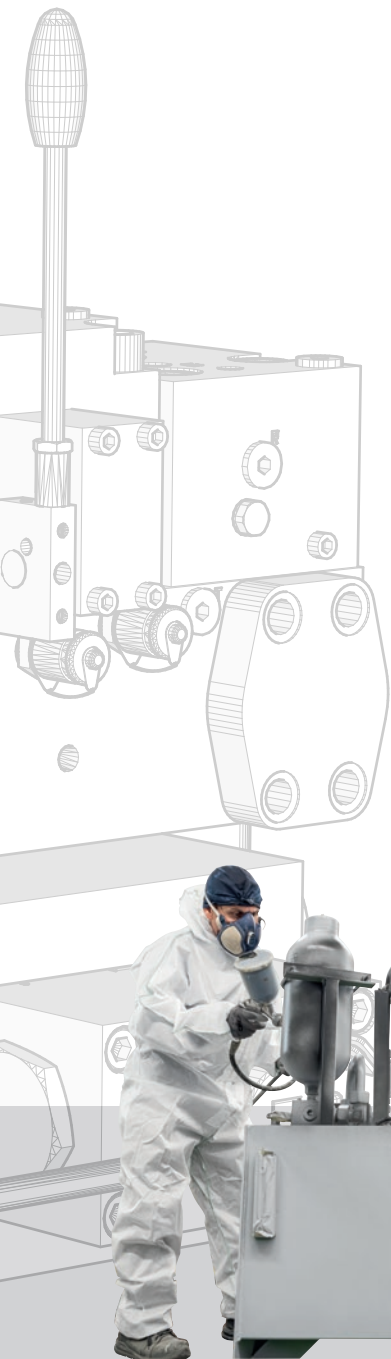
The assembly phases are simplified to facilitate the replacement of any part, should maintenance be required.

The coating processes are managed both internally - where a wide range of colors is available, all compliant and high-performing in terms of finish, durability and safety - and externally through selected suppliers holding the necessary certifications for the most demanding cycles.

Final checks and inspections are an essential phase of the production cycle.

The process includes a detailed and mandatory checklist that ensures that each and every product is fully compliant.

Customers are often invited to attend testing, to personally verify the compliance of the system with all established requirements.



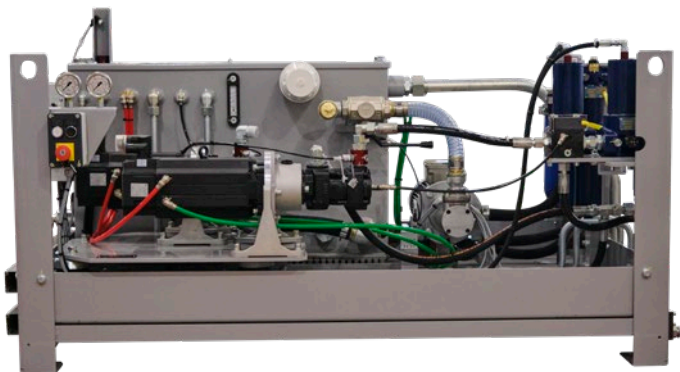
SOLUTIONS FOR INDUSTRY  
**reliability**  
and customisation

Industry has always been one of the primary sectors for hydraulic applications.

Duplomatic's solutions are employed in various fields: from machine tools to presses, from machines for processing rubber and plastic to paper mills.



Energy-saving power unit for transfer machines



Power unit for punching machine with servo pump



Deformation - energy-saving presses



Deformation - CNC machines  
for cutting and material removing on pipes and solid bars



Rubber - mixers and calenders

Our goal is to be a partner for machine manufacturers by offering highly reliable products, constantly improving technological solutions and delivering fast and proactive pre- and post-sales service.



Paper - winding machines



Rubber and plastic - manifolds for presses



SOLUTIONS FOR ENERGY  
**technology**  
and continuity

Hydraulic systems play a crucial role in the energy sector, where continuity of service must be guaranteed at all times.



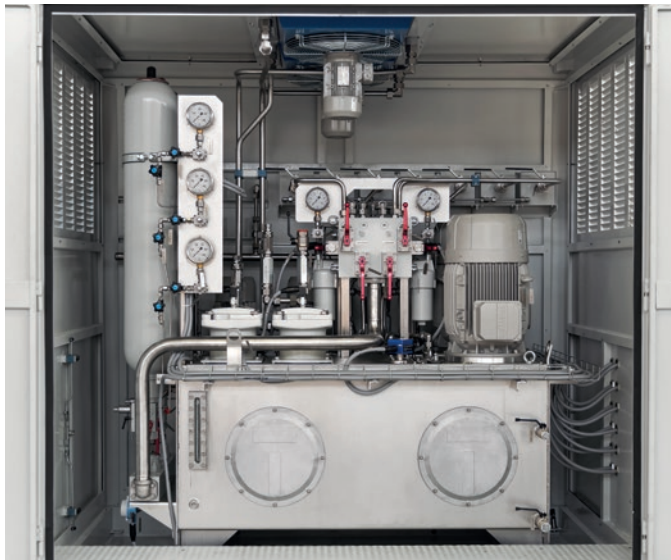
Steam turbines - lubrication

Gas turbines - power unit



Steam turbines for nuclear energy - power unit



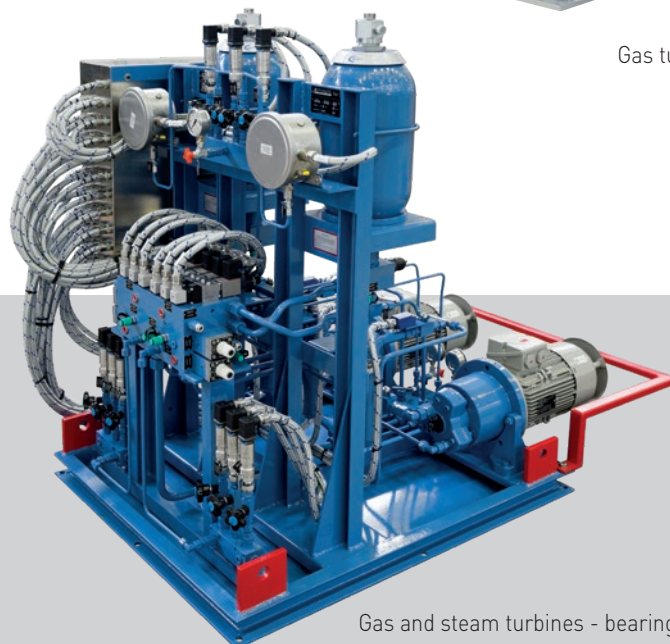


Steam turbines - HPU with cabinet

Since the early 1980s, the gas and steam turbine sector has been of strategic importance to Duplomatic BU Hydraulic Systems, which continues to invest in research and development to improve the performance and reliability of its systems.



Gas turbines - starter unit



Gas and steam turbines - bearing jacking oil systems

Gas and steam turbines - trip block SIL3

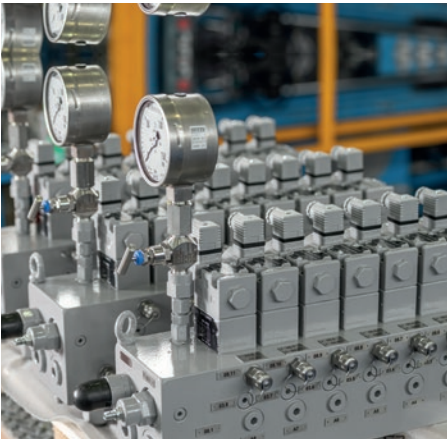


## SOLUTIONS FOR OFFSHORE AND OIL & GAS

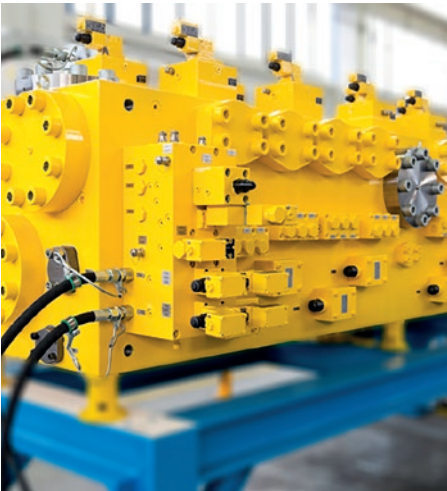
# precision and safety

In the naval, marine and offshore sector, Duplomatic solutions are employed in all motion systems, such as mechanical arms on cranes, winches and mobile bulkheads and in auxiliary power generation systems.

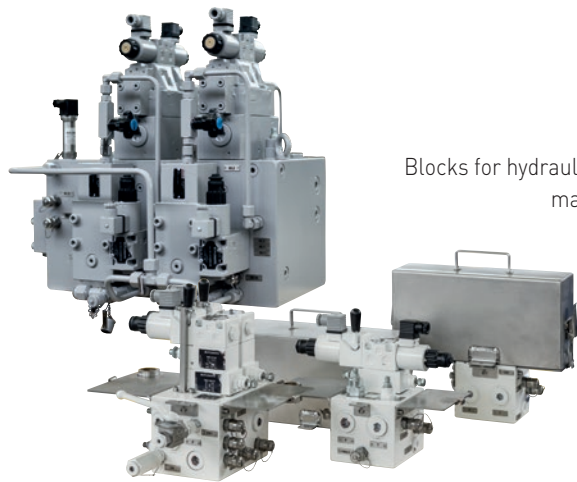
High reliability and precision must be pursued with incessant perseverance to meet the requirements imposed by extreme conditions such as those offshore, where particular attention to human safety and environmental protection needs to be paid.



Winch negative brakes management



Innovative system to quickly pull off the oil pipeline from the FPSO



Blocks for hydraulic winches management



Container with HPU, electric panel and PLC for FPSO marine vessel



AISI 316 panel for gas pipeline



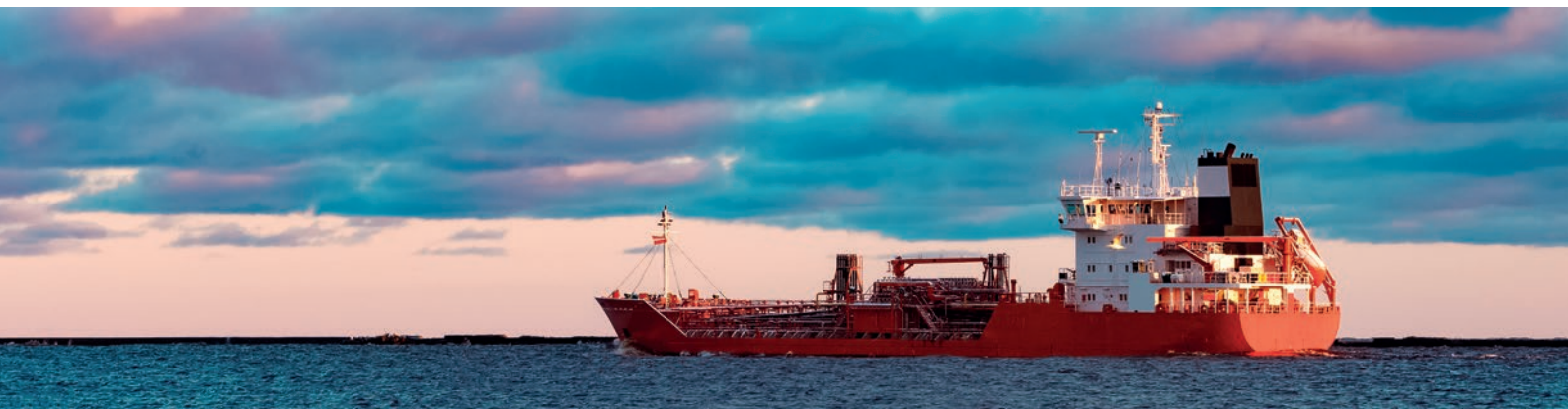
Container housing hydraulic power units for drilling in environments with large temperature variations

High reliability and maximum attention to safety are essential requirements in design and manufacturing of Duplomatic solutions for the Oil & Gas sector.

Control units and test benches feature a compact design; they are also suitable for explosive-risk environments.



Hydraulic power station for operating the actuator and isolation valves of the oil pipeline



## SOLUTIONS FOR THE STEEL INDUSTRY

# responsibility and innovation

Diplomatic solutions are also employed in the steel industry, which, due to extreme working conditions, requires products with specific characteristics. Even in this field, we supply products that are technologically advanced and reliable.



Iron and steel industry -  
EAF furnace electrode control bench

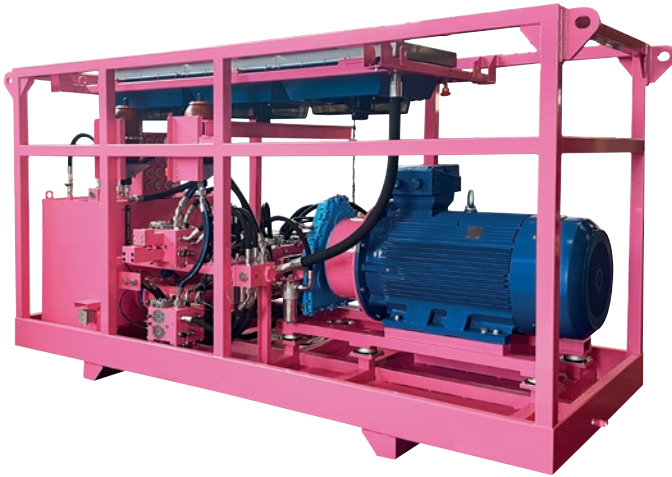
Steel industry - service unit



Steel industry - control benches for CCM segments

## SOLUTIONS FOR RECYCLING

# sustainability and environment



Power unit working in a closed-loop system  
for a shredder (hydraulic power 250KW)

BU Hydraulic Systems is a well-established supplier to manufacturers of shredders, shears and compactors operating under special conditions and requiring continuous service.

Duplomatic solutions are available both in closed-loop and in open-loop systems.



Power unit working in a closed-loop system  
for a shredder (hydraulic power 315KW)



Closed-loop application  
(hydraulic power 220KW)

POST-SALES DIAGNOSIS  
**service  
that makes  
the difference**

The Diplomatic team supports all of its customers worldwide from design and manufacturing, to the commissioning and after-sales service phases.

We are with you when you conceive your product, when you see it come to life and, above all, when it starts being used and requires assistance.

At times, the most suitable solutions are found by visiting the customer and assessing the situation on-site. This often leads to proposing improvements to the customer's existing machines or to providing useful suggestions to replace machinery with more modern and efficient technologies.



Contact us for a post-sales  
diagnosis of your current system

**Tel +39 02 93792 640**  
**[service@diplomatic.com](mailto:service@diplomatic.com)**

## Quality standards

- ISO 9001:2015 quality management systems
- ISO 14001:2015 environmental management systems
- ISO 45001 occupational health and safety management systems
- PED 2014/68/EU for hydraulic systems (module H)
- ATEX 2014/34/EU upon request, for hydraulic systems
- IECEx according to IEC 60079 upon request, for hydraulic systems

## Quality standards for welding processes of components used in hydraulic systems

- ASME IX ; ISO 9606-1:2017 ; AWS D1.1 o D1.6

## Marine certifications (upon request, for hydraulic systems)

- ABS Certification of conformity to ABS rules for facilities on offshore Installation
- DNV
- LLOYD's Register
- BUREAU VERITAS
- RINA

## European or international certifications for hydraulic systems components or complete systems

- ALGERIA DPEM Passport for pressure vessel
- Australian MEPS for electrical motors
- Australian pressure vessel standard according to AS4343 e AS1210
- GOST U Certification of conformity to Uzbekistan National Standards
- TUNISIA Passport for pressure vessel
- UL-CSA Certification
- NFPA 70
- 2006/42/EC Machinery safety

## quality culture

At Diplomatic, all company departments are involved in a challenging quality process for the continuous improvement of our products, services and people.

This critical attitude towards each process and the constant drive for advancement regard the following aspects:

- Product and service quality (UNI EN ISO 9001) strives for the "zero defects" goal. Through continuous analysis and implementation of corrective actions, it facilitates information transfer, supports appropriate training, and monitors customer satisfaction;
- Protection of the environment (ISO 14001) is pursued through a culture of respect and by means of intelligent management of environmental resources;
- Safety management (OHSAS 18001) guarantees the safety of individuals through organisation and risk reduction models that enable risk analysis and the identification of the necessary risk avoidance measures.



## Turnkey projects

These are engineering solutions completely developed and realized by Duplomatic. These projects are distinctive for size, complexity and level of service offered to the customer. In the turnkey projects Duplomatic supplies both the mechanical and hydraulic parts and the control system. The supply includes installation, commissioning and, where required, maintenance and operational support.

The most significant project to date is the UAE Pavilion at Expo 2020 Dubai, for which the company created the roof motion system, designed by architect Santiago Calatrava in the form of falcon wings.

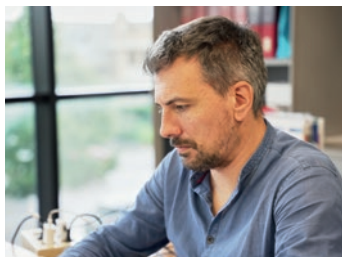


EXPO 2020 Dubai, UAE  
Hydraulic motion system for controlling  
the opening and closing of the roof of the UAE Pavilion



Archimede project, Syracuse, Italy  
A hydraulic motion system moves  
and controls the huge parabolic  
mirrors to capture the sun's rays at  
the solar field

**WE,  
adventurers  
together**





**Diplomatic MS Spa**  
**BU Hydraulic Systems**

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