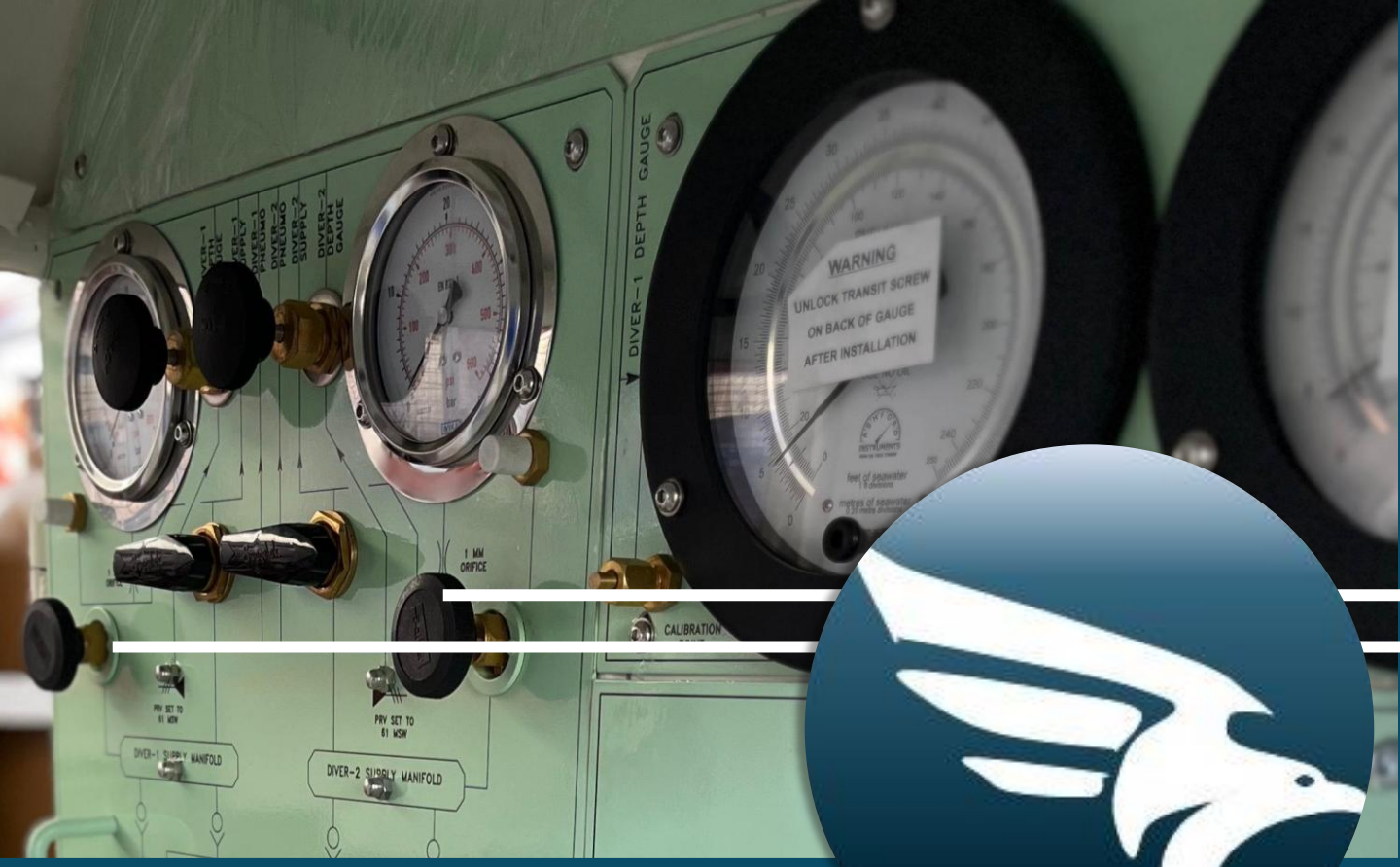


FALCON SUBSEA

DIVING EQUIPMENT, SUBSEA TOOLS, HYPERBARIC EQUIPMENT, HBOT MEDICAL EQUIPMENT

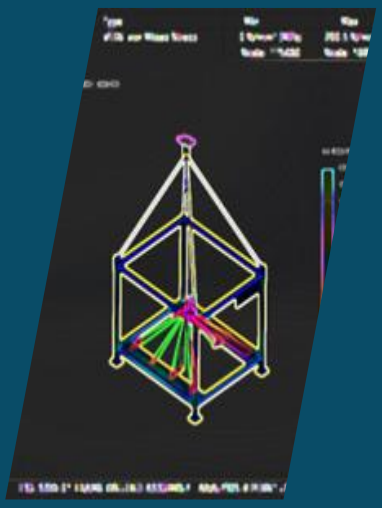
ABUDHABI , SHARJAH

MANUFACTURING CENTRE- AL SAJAA INDUSTRIAL AREA, SHARJAH

Introduction



Falcon Subsea, Company based in the UAE, boasts a skilled team of 25 professionals, including project managers, quality and safety engineers, designers, and mechanical and electrical technicians. Fully equipped for Saturation Diving System services, the team specializes in certification, installation, and commissioning. We are well-versed in ABS, DNV, and Lloyd's Register classification requirements and stay updated on the latest IMCA guidelines, including D023, D024, D051, and D063. Falcon also has an in-house IMCA Accredited Diving System Inspector (ADSI). Partnered with Spokes Energy, a facility with advanced fabrication and painting capabilities, Falcon delivers comprehensive solutions for diving system manufacturing and servicing.



Objectives

The company “Falcon Subsea” is formed to adapt and contribute best market technology and providing best of its service to the customer, user, Society , Employees and management. The company aims to obtain continuous development by value addition in terms of quality assurance and consistency. Spokes identifies the opportunity in the market where the quality is maintained with profitability assured by process orientation. The theme behind spoke formation is to derive new methodology and contribute back to the industry whereby industry and spoke will be equally benefited.

Quality Policy

We will continuously strive to satisfy our customers with outstanding Quality of our products & services. In our endeavor to achieve this objective, we will;

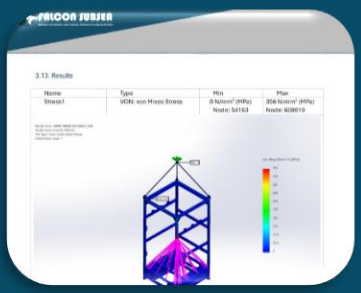


- Create & nurture people of quality by continuous education & training.
- Maintain & improve standards of manufacturing.
- Establish a “Total Quality” framework.
- Record & control the change points at each stage
- Prevent defect outflow to next process
- Strengthen supply chain system and its vendor

We believe that our future lies in the hands of our satisfied customers.

OUR ACTIVITIES

STRUCTURAL DESIGN



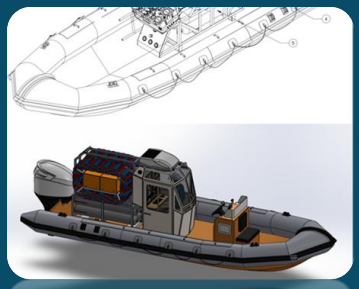
Flacon Subsea offers detailed structural design, fabrication drawings and precise analysis of the structure as per the functional requirement. Structural design analysis as per DNV Lifting standards 2.7-1, 2.7-3, other lifting standards like BS7072, BS14492, ISO3730 and other class rules such as ABS, DNV, BV and Lloyds Register rules .



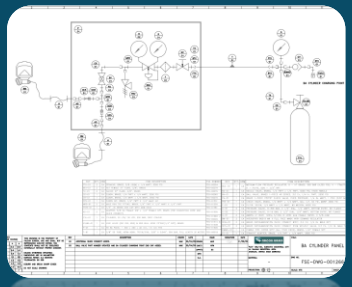
PRESSURE VESSEL (PVHO) ENGINEERING:

Flacon Subsea has certified & experienced Engineering team who can support, in Pressure vessels / accumulator design and conceptual drawings, The team is capable of designing and developing the Pressure vessel for Human occupancy for the hyperbaric environment consideration as per the ASME Section VIII & ASME PVHO-1

FUNCTIONAL ENGINEERING.



Falcon Subsea offers detailed design services for a component as well as a full system by ensuring the compliance of the different international standards & rule requirements. We can also assist client in developing new conceptual designs of a functional system by ensuring the full functional characteristics & FMEA of the system. Our service includes the following



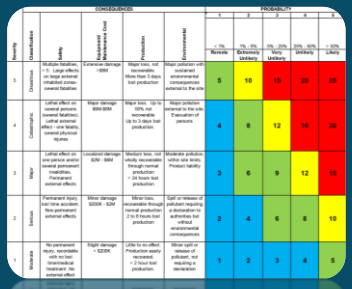
PIPING AND INSTRUMENTATION.

Piping and Instrumentation Diagram (P&ID) design capabilities encompass detailed schematic representation of process piping systems, ensuring compliance with BS 31.3 and various classification society standards for shipbuilding and underwater vehicles, supporting safety, reliability, regulatory compliance, and efficient system integration.

ELECTRICAL AND INSTRUMENTATION DIAGRAM



Electrical and Instrumentation design capabilities include developing detailed schematics, layouts, and integration plans in compliance with international standards (IEC, IEEE) and classification society rules (ABS, DNV, Lloyd's), ensuring system safety, reliability, performance, and regulatory compliance across marine and industrial applications.



FMEA & DESIGN AUDITS:

FMEA and Design Audit capabilities involve systematic evaluation of potential failure modes and design integrity, identifying risks early in development. These processes ensure compliance with industry standards, enhance reliability, support continuous improvement, and align with client, classification, and regulatory requirements.

OUR SPECIALIZATION- PRDUCTS

CONTAINERIZED DIVE CONTROL /LIFE SUPPORT CONTROL / LSP SYSTEM (FEDDIVE / FEDLSP SERIES)



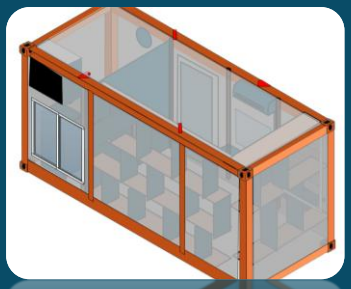
Our Containerized Dive Control System is a self-contained unit engineered to support air, Mixed gas and saturation diving operations. Designed for ease of deployment and rapid mobilization, it houses all the necessary components for safe diver monitoring and communication, built into a durable and compact ISO /DNV-certified container. We offer the ABS , DNV, BV Class approved components complied to IMCA requirements.



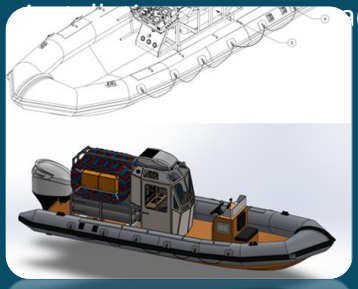
DECOMPRESSION CHAMBER (TACHO SERIES)

Twin Lock Air Chambers For Human Occupancy (TACHO) are engineered to provide a controlled and secure environment for divers to undergo surface decompression following underwater activities. Built to meet IMCA, PVHO-1, and relevant class requirements, our DDCs ensure safety, reliability, and ease of operation in offshore and onshore diving operations.

CONTAINERIZED MACHINERY SYSTEM FOR DIVING (FEDDIME SERIES)



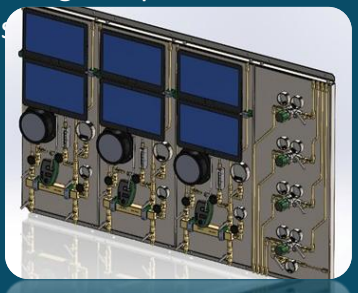
Our Containerized Machinery Systems are purpose-built to deliver integrated mechanical and process solutions in a robust, transportable format. Housed in ISO-compliant /DNV2.7-1 containers, these systems are ideal for offshore, remote, or temporary [illegible]nce, mobility, and reliability.



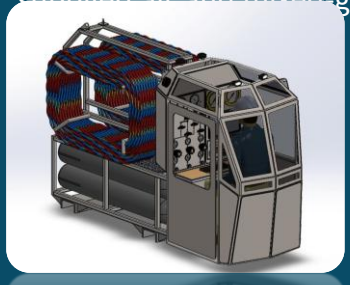
DIVER LAUNCH & RECOVERY SYSTEM (MAC SERIES)

Falcon's MAC Series of Diver Launch and Recovery Systems (LARS) is designed to provide safe, efficient, and compliant deployment and retrieval of divers in surface-supplied and saturation diving operations. Built with operational safety and durability in mind, the MAC series is ideal for offshore, inshore, and vessel-based diving setups. Available in multiple configurations to suit 1- or 2-diver ba[illegible]

DIVER PANELS (FED DAP SERIES)



Falcon offers a wide range of Diver Control Panels under the FEDDAP (Air Panels) and FEDDMP (Mixed Gas Panels) series, engineered to meet the demanding needs of professional diving operations. Available in multiple configurations, these panels ensure safe, accurate, and efficient control of diving parameters in both surface-supplied air and mixed gas diving systems.



SCUBA REPLACEMENT PACKAGE (OPTIMUS SERIES)

Falcon's Optimus Series is a modern, fully compliant SCUBA Replacement Package, purpose-built to enhance diver safety, control, and communication in commercial diving environments. Developed as a compact surface-supplied air diving system, the Optimus Series eliminates the limitations of traditional scuba setups and provides a superior alternative in line with IMCA and class guidelines.

OUR SPECIALIZATION- PRDUCTS

SUPERVISORY CONTROL SYSTEM



Falcon's Dive Supervisory Control System is an advanced solution designed to centralize and streamline the monitoring and control of diving operations. Built for integration with surface-supplied air and mixed gas systems, it ensures real-time visibility, data logging, and enhanced decision-making for dive supervisors, supporting full compliance with IMCA and classification society requirements.



DIGITALIZED DIVER CCTV SYSTEM (DIGITV SERIES)

Falcon's Digitalized Diver CCTV System is engineered to deliver high-resolution underwater visuals and real-time video streaming for safe, efficient, and documented dive operations. Designed specifically for integration with surface-supplied diving systems, this solution gives supervisors full situational awareness and video documentation from the surface. Also this features a software controlled easy operation.

ALARM SYSTEMS (DP ALARM REPEATERS, FIRE ALARM ETC)

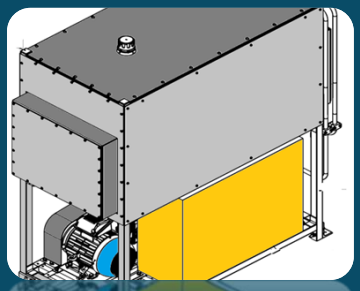


Falcon's Newly developed Alarms system is specifically designed to ensure a customer easiness and reliability for the usage. We have developed the system that can be connected to the Alert control system which will give the indication.



DNV CYLINDER QUADS (DNV2.7-1 & IMCA COMPLIED)

Falcon offers robust and fully certified 16 & 64 Series DNV Cylinder Quads, engineered for safe and efficient storage and transport of high-pressure breathing gases. Designed in accordance with DNV 2.7-1 standards and IMCA guidelines, these quads are ideal for use in offshore diving systems and industrial environments where mobility, durability, and compliance are critical.



FALCON DIVER HEATING / ENVIRONMENTAL CONTROL SYSTEM

Falcon Diver Heating system is engineered for to IMCAD023 / IMCA D037, by considering the extreme ambient conditions with extreme cold climates. The diver heating system will provide optimum heat with proper pressure so that the divers can comfortably work in the climate.



HP COMPRESSORS

FA HP Compressor is offered to fill breathing air bank .This compressor is set to 200bar MAWP and fitted with high efficiency filtration package complying to EN12021.

OUR SPECIALIZATION- PRDUCTS



CONFISGURATED DIVE SYTEM INCLUDING SURFACE SUPPLIED OR SATURATION DIVING SYSTEM

Falcon offers fully configured Surface-Supplied Air, Mixed Gas, and Saturation Diving Systems designed for safe, efficient, and class-compliant subsea operations. Whether containerized, skid-mounted, or vessel-integrated, each system is custom-built to meet client requirements, operational profiles, and international diving standards.

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A FRAME AND TROLLEY SYSTEM

Falcon specializes in the design and fabrication of A-Frame and Trolley Systems for vessels, offering safe, reliable, and class-compliant solutions for handling diving equipment, subsea tools, and heavy loads in dynamic offshore environments. Each system is custom-built to meet operational needs, vessel constraints, and lifting



ROV SYSTEM SIDE SCAN WINCH

Falcon offers a range of high-performance ROV and Side Scan Sonar Winch Systems designed for accurate and controlled deployment of subsea equipment. Built to withstand harsh offshore conditions, these winches are tailored for ROV tethers, side scan sonar towfish, and other critical subsea tools. Available in both electric and hydraulic configurations with variable speed control for smooth deployment and retrieval.



TOOL WINCHES

Falcon offers a range of Tool Winch Configurations specifically engineered for the safe handling and deployment of various subsea tools, intervention packages, and support equipment. The configuration includes Electric winches, Hydraulic winches, manual winch trolley systems, etc. The winches are provided with all the safety features including Line out meters, over hoist protection, Over load protection etc,



STRUCTURAL SKID OR PROTECTION FRAMES

Falcon offers custom-engineered Structural Frames and Process Skids, delivering high-strength, modular solutions for equipment integration, process piping, and offshore utility systems. Designed for mobility, strength, and long-term durability, these units are ideal for demanding environments such as oil & gas, marine, and energy sectors.

DNV 2.7-1 / EN 12079 Certified: Engineered lifting frames for offshore handling and transport.

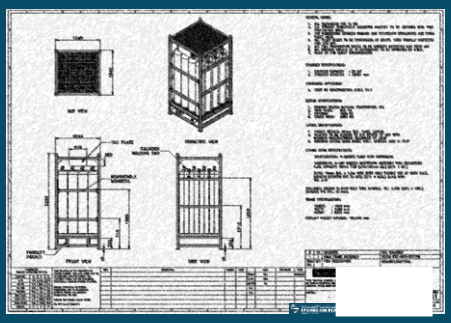


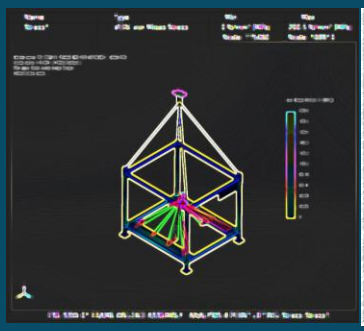
PROCESS SKIDS

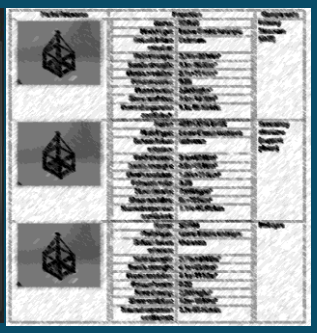
Falcon designs and fabricates high-performance Process Skids tailored for a wide range of offshore, onshore, and industrial applications. These modular units integrate piping, valves, instrumentation, and equipment into a single, transportable frame, offering efficiency, safety, and ease of installation at site.

DESIGN SPECIALIZATION

- GENERAL ARRNGEMENT
- 3D MIDELING OF THE SYSTEM.
- STRUCTURAL DRAWINGS.
- DETAILED FABRICATION AND WELDING JOINTS,



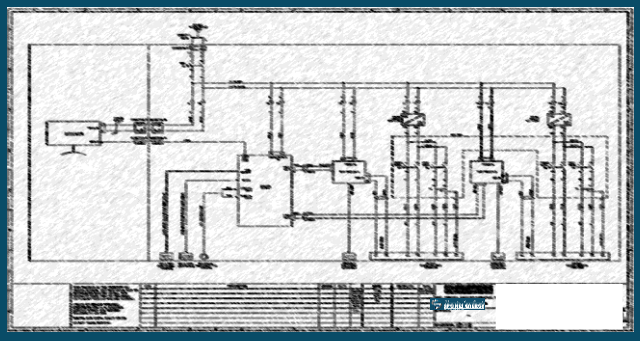




- MECHANICAL CALCULATION
- STRUCTURAL CALCULATION.
- FIRST PHASE FEA ANALYSIS.
- LOAD ANALYSIS.
- MECHANICAL FUNCTIONAL DEMONSTRATION.
- MECHANICAL LINK ANALYSIS.

- PIPING AND INSTRUMENTATION DIAGRAM (P&ID)
- PIPING DRAWINGS.
- FLOW ANALYSIS.
- PRESSURE CALCULATION.
- PIPING ISOMETRIC DRAWINGS.
- FITTING AND BOM SELECTION





- ELECTRICAL DRAWINGS.
- ELECTRICAL ANALYSIS
- LOAD CALCULATION.
- ELECTRICAL CO_ORDINATIO STUDY.
- EQUIPMENT DESIGN

OUR SPECIALIZATION

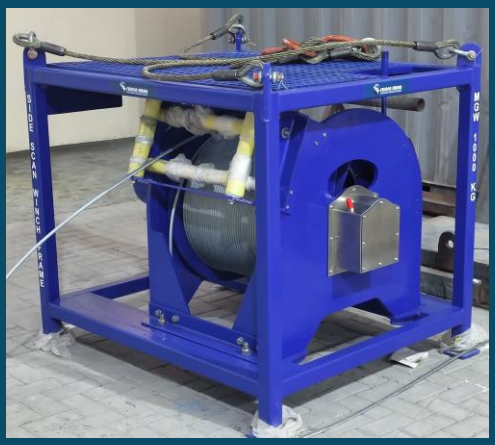


MECHANICAL ASSEMBLY
Instrumentation and Hydraulic piping.





ELECTRICAL ASSEMBLY
Control DB and panel assemblies.















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