



700 Series Surface Diving System



The 700 Series Surface Diving System is a complete range of equipment which provides the widest solution for air and gas mix diving.

The trolley and A-Frame recovery systems are designed to cover a 10" and 20" feet footprint.

All the components are available in the stand alone or containerized version, fully certified with DNV and ABS and compliant with IMCA regulations.

System Description



The System

The 700 Series Surface Diving System is rated 60 MSW and offers a complete range of solutions in terms of LARS, DDC's, Diver Panels and ancillary equipment.

The modular configuration grants the maximum optimization of the space available on the deck, it can be installed on both sides of the system, and is fully transportable thanks to the standard 20" containers dimensions.



Container

All containers comply with DNV regulations 2.7-1, 2.7-2 & 2.7-3, the guidelines in IMO's circular MSC/Circ. 860 and also with EN 12079 points 1 and 2 respectively.

All Modules defined as "Units for Transportation Offshore" are portable units with a maximum gross mass not exceeding 9500 kg. The modules can all be used together or separately with a primary service function, handled in open seas, to, from or between fixed and/or floating offshore installations and ships.



Control Panels

The Air/Gas Mix Dive Control Console and Video Module provides monitoring, communication and data recording, and supplied gas analysis of the Divers and Stand-by Diver:

The Air/Gas Mix Dive Control Console and Video Module is supplied with two independent air/gas sources and has an UPS in order to ensure both supply in emergency conditions and filtration of electrical distortion from the ship supply.



Launch and Recovery System

The Launch and Recovery System is available in two configurations; Both the Trolley LARS and A-Frame are suitable for installation on deck or on top of a standard 20" container such as the DDC module.

The A-Frame can be delivered on a stand alone or twin version.

Both LARS are equipped with man riding hydraulic winches for main wire and guide wires, plus double hydraulic power pack.



Global Service

The 700 Series is ready for connection with the Global Service Program: Automatic Monitoring System of the Diving System, remote reporting for the management team onshore, graphs of performance, e-procurement of spares and components. For more information info@drass.it, Object: Global Service.



Software

The Drass 700 Series Saturation System together with the Drass 100 and 900 Series Saturation System are the only Diving Systems provided with specialized technical software.

The software is available as optional and manages the configuration, maintenance, documentation, logistics and the training of the system.

Control Panels



SS.CP.705 (S;T) 2 Diver Air Dive Control Console Video Module

The Air/Gas Mix Dive Control Console and Video Module provides monitoring, communication and data recording, and supplies gas analysis of the Divers and Stand-by Diver. The Air/Gas Mix Dive Control Console and Video Module is supplied with two independent air/gas sources and has an UPS in order to ensure both supply in emergency conditions and filtration of electrical distortion from the ship supply.

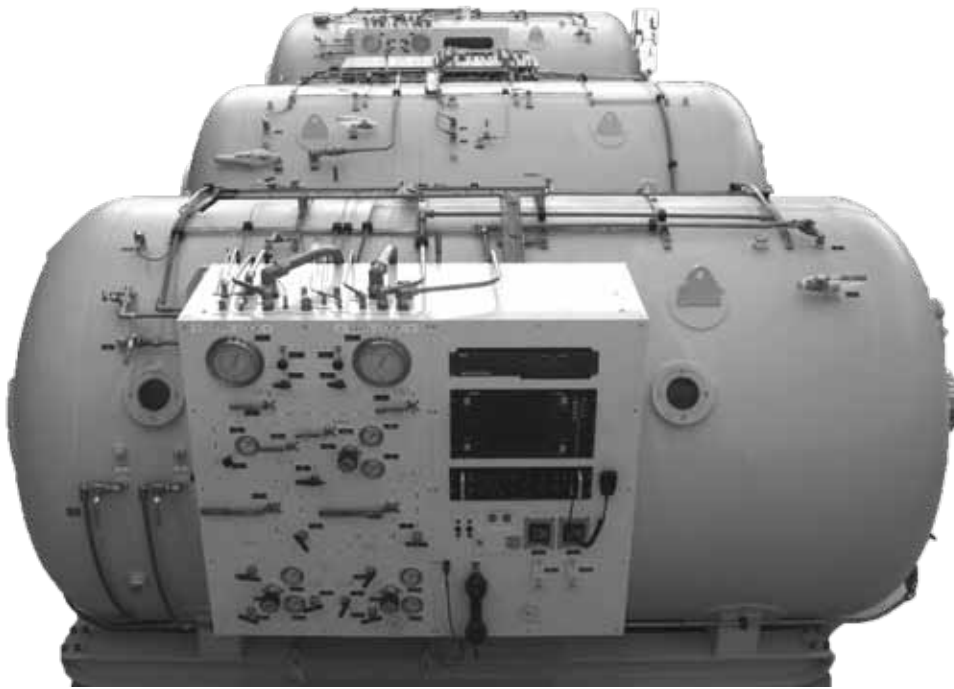


• SS.CP.704 3 Diver Mixed Gas Control Console

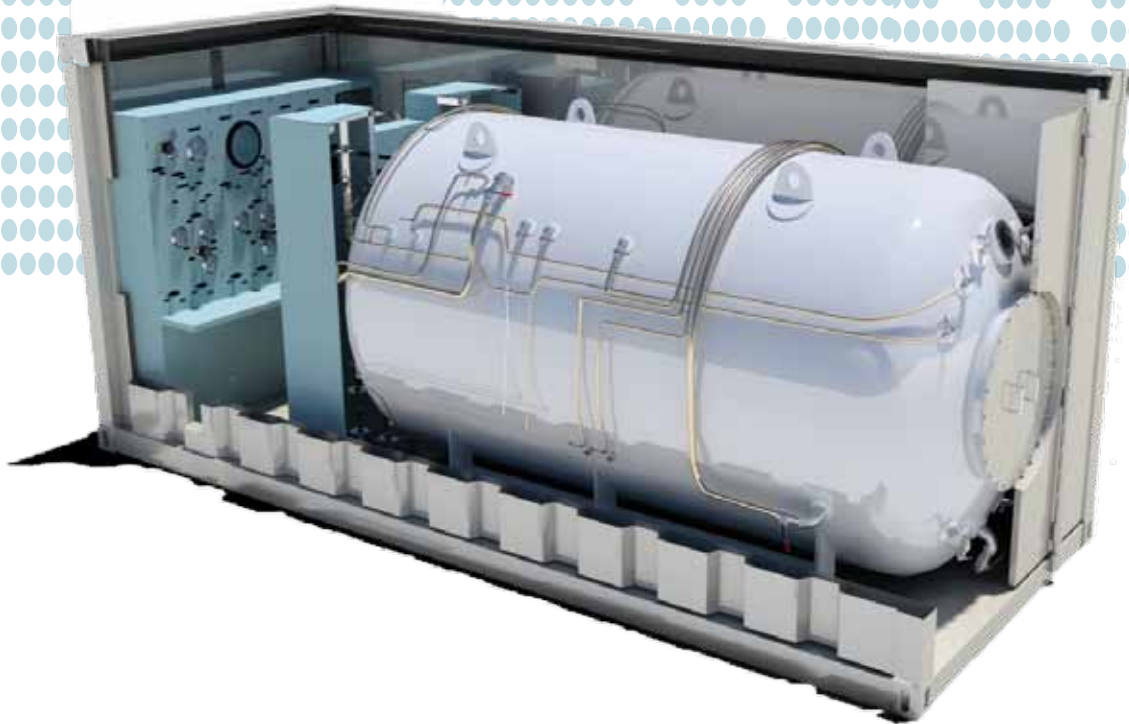
Panel gauge & analysis	For each diver
Sampling and calibration points	available
Pressurization lines	two fully independent
Pressurization Fluid	gas mix; air

The consol is available in the following configurations:

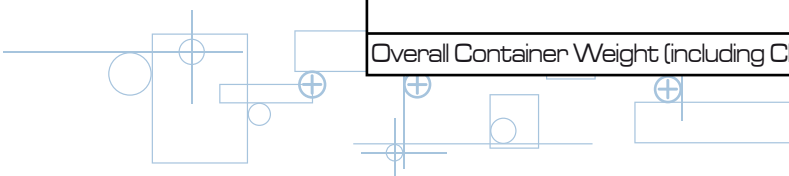
- SS.CP.701 2 Diver Air Dive Control Console
- SS.CP.702 3 Diver Air Dive Control Console
- SS.CP.703 2 Diver Mixed Gas Control Console
- SS.CP.704 3 Diver Mixed Gas Control Console
- SS.CP.705 (S;T) 2 Diver Air Dive Control Console Video Module
- SS.CP.706 (S;T) 3 Diver Air Dive Control Console Video Module
- SS.CP.707 (S;T) 2 Diver Mixed Gas Control Console Video Module
- SS.CP.708 (S;T) 3 Diver Mixed Gas Control Console Video Module



STAND ALONE VERSION	2000 mm Chamber	1700 mm Chamber	1500mm Chamber
Total External Length	4360 mm	4280 mm	4160 mm
Total External Width	2400 mm	2100 mm	2000 mm
Total External Height (chamber+base+eyebolt)	2050 mm	1800 mm	1700 mm



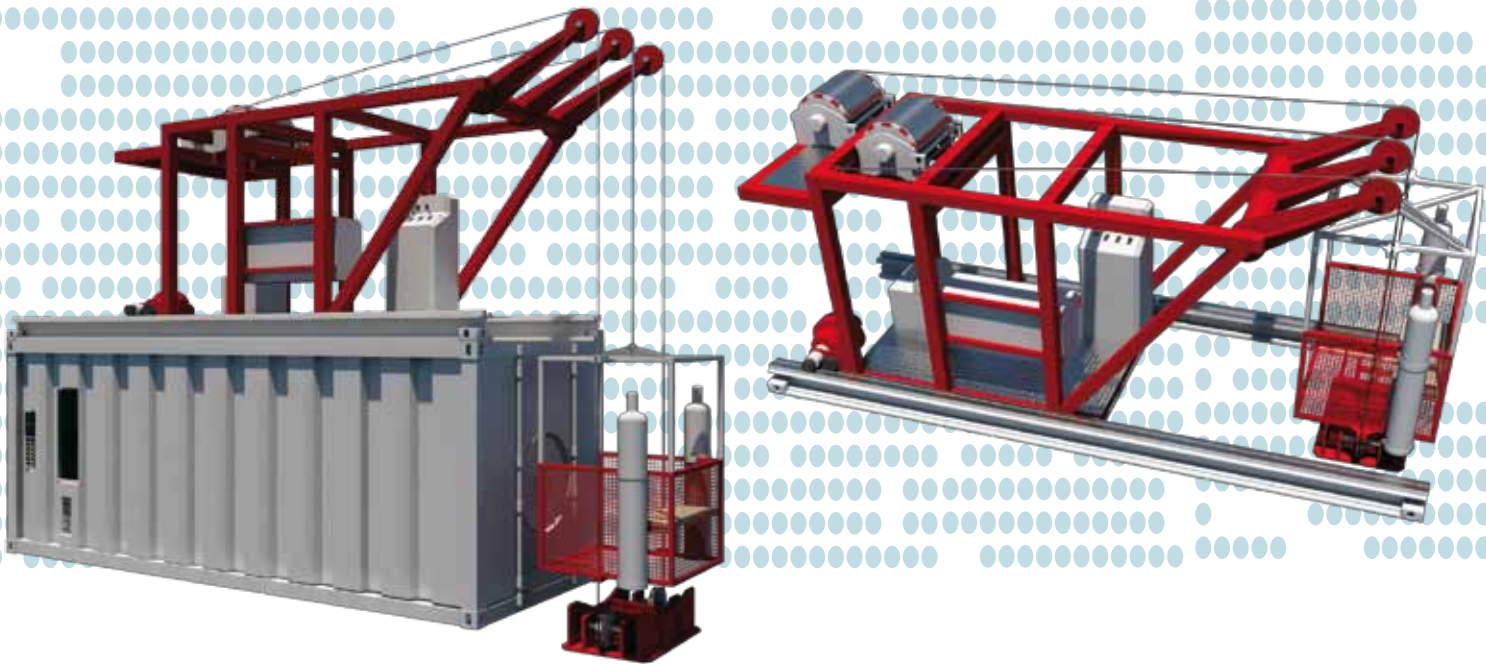
CONTAINERIZED VERSION	
Container Dimensions	20" standard container
Overall Container Weight (including Chamber)	9500 kg



Lars A-Frame System



Lars Trolley System



Main Dimensions

Base	ISO Container 20'		
Basket Winch	Double Brake	Man Riding	Wire Length
		1500 kg	up to 180m
Anchor Winch	Double Brake	1500 kg	up to 180m
Wire Rope (non rotating type)	Diameter		16 mm
Diver Basket	External Dimensions		1200x1200x2000
	Material		AISI 316 L
	No.2 Gas Cylinder for Emergency use		
	Volume	50 L	
No.2 Basket Set	Working Pressure		300 bar
	Cylinder Volume		7 L
	Working Pressure		200 bar
	Full face mask with regulator		
Communication Mic and Speakers with Amron interface			

Divers Gas Reclaim System

The Drass Galeazzi Divers Gas Reclaim System allows the reclaim of gas mix breathed by 2 divers up to 300 msw at a flow rate of 35 l/min per diver:

The Reclaim System controls the correct level of pressure in the various lines with a redundant check of O₂ and CO₂ level, before the last downstream check on the Bell Control Console. It is possible to adjust the different pipelines to the correct level of pressure in order to set up the system at various depths.

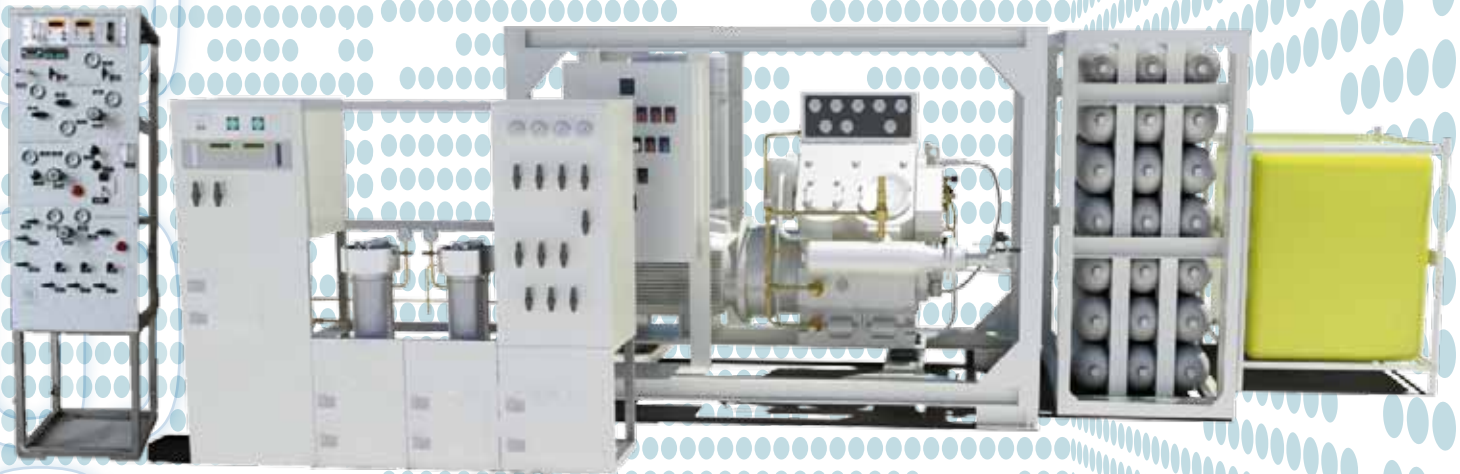
The Recompressing Unit, Gas Compressor or Gas Booster can be used in order to optimize the system and use the equipment already present on board at the maximum rate, for example the Gas Compressor for Gas Mix Transfer:

The Divers Reclaim System is equipped with all the safety devices that exceed the necessary requirements.

The Divers Reclaim System can work with all the Underwater Breathing Apparatus (UBA), compliant with EN, DNV, NORSOK Standards.

The whole system is modular and available for partial delivery or integration in already existing systems.

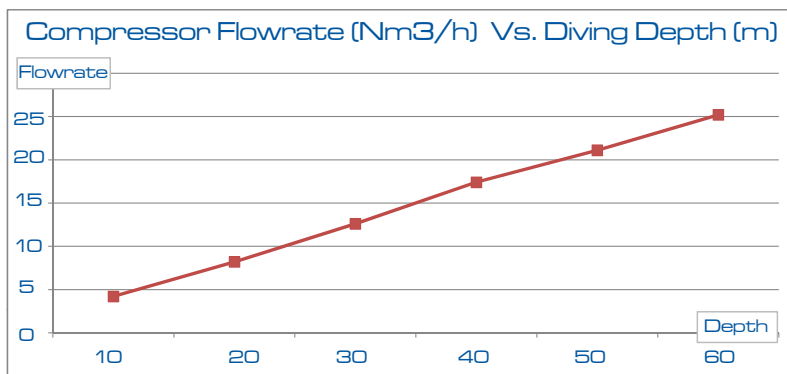
Different from the other equipment existing in the market, Drass gas reclaim is design for surface diving up to 20 MSW.



Main Units

- Bell Equipment
- Reclaim Control Panel
- Regeneration Unit
- Volume Tank
- Recompression Unit

Drass Diver Gas Reclaim System can be used at different diving depths, still covered by the full certification, selecting the proper compressor. Customers can therefore select an available compressor, thus reducing the cost of the reclaim system. See below the requested flow rate to properly operate at various depths in accordance with the certification design.



MAGMA UNIT



The Drass Magma Series Diver Hot Water Units are available in a complete product range covering all the different operational requirements for surface and saturation diving. The Magma Units are specifically designed to comply with the DNV Rules for Diving systems and IMCA recommendations. The units are designed to be installed on board or into a container; the stand alone units are fully enclosed inside a stainless steel box to avoid flooding in case of ship deluge system activation or external presence of water.

The Magma Series are provided with a complete set of alarms and indicators, inclusive of a remote broadcast signal relevant to the value of output temperature, a remote control for setting temperature, a temperature warning in case of out of range temperature output and a generic failure alarm. Diagnostic features are also available on digital monitoring system.

GAS STORAGE

The Gas Storage Skid is a specific modular and transportable installation designed by Drass for use in saturation diving.

Each module is self contained in a transportable and stackable metal skid certified by DNV and specifically designed for offshore operation.

The skid contains 8 jumbo gas tubes, each one is 250 bar filling/working pressure rated, with 520 litres of floodable volume.

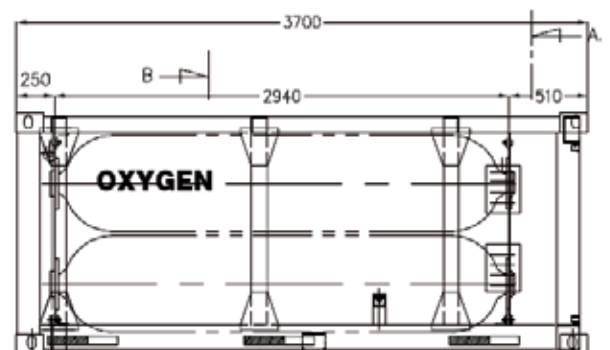
The skid is specially designed to maximize the amount of gas available with minimum deck occupancy .

The equipment is also suitable for fixed installation in lower decks.

The skids are stackable and their width is the standard 10" container width.

The tube cluster is provided with a dedicated manifold interconnection, including needle shut off valve on each tube and certified safety relief valves for each tube on the opposite side.

The number of modules to be installed depends on the diving system configuration.



Drass - Galeazzi Certifications



The Management System of Drass Group of Companies and all Drass Systems, Equipment and Components are fully DNV-certified.



ABS and other certifications available on demand.



Drass is active member of the International Maritime Contractor Association. Drass Systems, Equipment and Components are designed and built in compliance with the IMCA Recommendations.



VIA N. MAGRI, 112 - 57121 - LIVORNO - ITALY

PHONE: +39 0586 421221

FAX: +39 0586 421223

www.drass.it

info@drass.it

