



**GLOBAL**  
Diving & Salvage, Inc.

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# **SATURATION SYSTEM IV**

ABS CLASSED & IMCA COMPLIANT  
6 MAN - 1,000 fsw  
Technical Specifications



**Global Diving & Salvage, Inc.**

# SATURATION SYSTEM IV COMPONENTS

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Global Diving & Salvage's SAT IV is a 6-man saturation diving system designed with a two man top mate – side launch bell. The system, first deployed in 2008, is certified to 1,000 fsw and is equipped with an 8-man Self-Launch Hyperbaric Rescue Chamber (HRC) for offshore applications, Bell Launch and Recovery System (LARS) with redundant recovery capabilities for safety and gas reclaim system for efficient operation. The American Bureau of Shipping (ABS) and United States Coast Guard (USCG) Classed and International Marine Contractor's Association (IMCA) compliant system is of a modular design providing for multiple footprints to suite the required placement of components.

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## Primary Living Chamber (6 Man/Single Lock)

- Bunk beds w/ fire retardant mattresses
- Medical lock w/ pressure interlock
- Equipment lock w/ pressure interlock
- Scott BIBs w/ overboard dumps (x 7)
- HCU with two carbon dioxide scrubbers
- Auxiliary carbon dioxide scrubbers (x 2)
- Lung powered scrubbers (x 7)
- Wired communications
- Sound powered phone

## Transfer Lock

- Overhead hatch for transfer into the bell
- Shower, toilet, washbasin
- Scott BIBs w/ overboard dumps (x 2)
- HCU with two carbon dioxide scrubbers
- Auxiliary carbon dioxide scrubber
- Wired communications
- Sound powered phone

## Hyperbaric Rescue Chamber (8 Man Rescue)

- Automatic tilt over board launch system
- 72 hours autonomous support for 8 men
- HeO<sub>2</sub> & O<sub>2</sub> reserve cylinders
- Sound powered communications
- AODC emergency signage
- Battery power reserves
- EPIRB, strobe, radar reflector
- Tow bridle and lifting slings

## Living Compartment

- Medical lock w/ pressure interlock
- Bunk beds w/ fire retardant mattresses
- Jump seats & harnesses (x 8)
- O<sub>2</sub> make-up injector system
- Scott BIBs w/ overboard dumps (x 9)
- HCU with two carbon dioxide scrubbers
- Auxiliary carbon dioxide scrubbers (x 2)
- Lung powered scrubbers (x 9)

## Hyperbaric Rescue Chamber con't.

### Bathroom Facilities / Entrance Lock

- Shower, toilet, washbasin
- HCU with carbon dioxide scrubber
- Auxiliary carbon dioxide scrubber
- Wired communications

## Dive Bell System (2 Man)

### Launch System

- Primary bell hydraulic winch
- Bell clump weight hydraulic winch
- Hydraulic powered umbilical sheave
- Fibron bell umbilical (1200ft) w/ basket
- Primary HPU (150HP / 64GPM)
- Reserve HPU (150HP / 64GPM)

### Bell

- 12 hours autonomous support
- Transponder & re-location device
- Primary diver umbilical (165ft)
- Stand-by diver umbilical (175ft)
- Gas & O<sub>2</sub> reserve cylinders
- Divex gas reclaim
- Divex reclaim hats (x 2)
- Bell gas control panel
- O<sub>2</sub> make-up injector system
- Scott BIBs (x 3)
- Carbon dioxide scrubbers (x 2)
- Lung powered scrubbers (x 2)
- Thru-water communications
- Wired communications
- Sound powered phone
- Battery power reserves
- Bell heater
- KMB 18B band masks (x 2)
- Helmet mounted color video and light

## Dive/Saturation Control Van

### Dive Control Station

- Bell gas control panel
- Divex reclaim booster panel
- O<sub>2</sub> analyzers (x 2) & CO<sub>2</sub> analyzer
- Diver communication panel
- Clear Comm communications
- Diver depth monitoring panels (x 2)
- 24 volt bell power systems (x 2)
- Video monitor systems
- DVD & DVR video recording (x 3)
- VHF & UHF Radios
- Loud hailer (150 watt)
- DP light system

### Saturation Control

- Gas distribution panel
- Chamber control panels (x 4)
- Treatment gas panel
- Analyzation panel
- O<sub>2</sub> analyzers (x 3) & CO<sub>2</sub> analyzers (x 3)
- Chamber communication systems (x 2)
- Chamber video monitoring system
- Electrical control switching panel
- 24 volt chamber power systems (x 2)

## HRC Intervention Van

- Gas & O<sub>2</sub> reserve cylinders
- Gas distribution system
- O<sub>2</sub> make-up system
- O<sub>2</sub> and CO<sub>2</sub> analyzation system
- Depth monitoring system
- Environmental system
- Emergency umbilical for HRC
- Soda Sorb capable for diver desat

## Environmental Control Van

- External environmental control units (x 2)
- Potable hot / cold water systems
- SAT tech workshop with spares locker

## Divers Reclaim Van

- Divex electric gasmizer reclaim system
- Haskell booster pumps (x 2)

## Supporting Equipment

- Dive Locker
- Spares Van
- Electric immersion hot water unit (90kVA)
- Auxiliary diesel hot water unit
- Electric 5120 diving compressor
- Surface diving station
- LARS with dedicated HPU
- SL 37 surface diving hats (x 2)
- Deck leads for electrical and gas
- Rigging equipment
- Optional SLS re-breather hats & backpacks

## Power Distribution Van

### Essential Power

- Primary: 200kw, 480v, 3 phase
- Back-up: 200kw, 480v, 3 phase
- Supports:
  - Dive/SAT Van, ECU Van
  - Main & back-up power for LARS

### Nonessential Power

- 100kw, 480v, 3 phase
- Supports:
  - Tooling, welding, deck lighting

## System Requirements

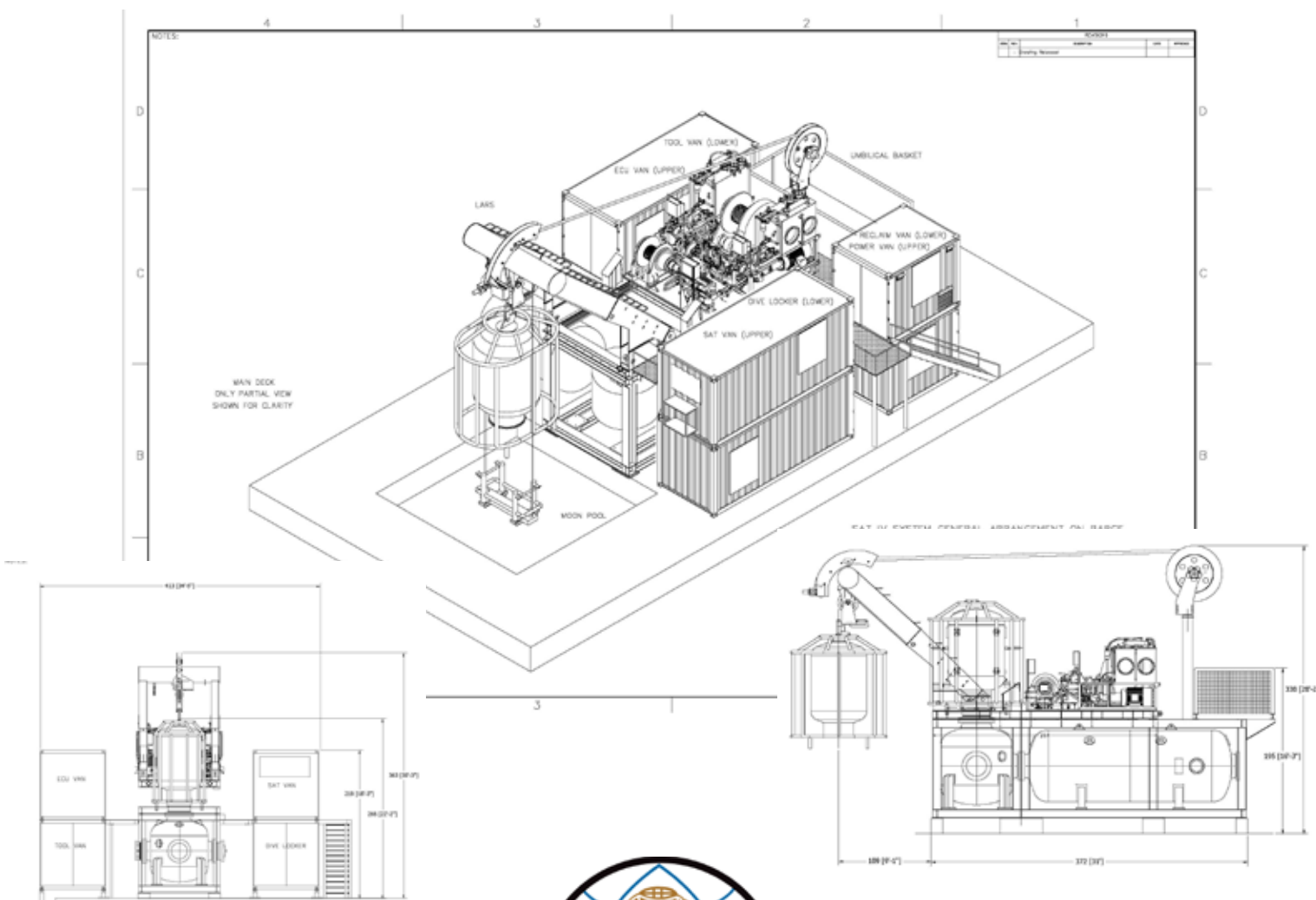
- Electric Power: 350kw, 480v, 60/Hz
- Auxiliary Generator: 200kVA
- Compressed Air: 400CFM, 90psi
- Seawater: 75GPM
- Freshwater: 3GPM



### SATURATION SYSTEM IV DIMENSIONS

Component	Length	Width	Height	Weight
Primary Living Chamber	22 ft 2 in	10 ft 4 in	9 ft 10 in	43,800 lbs
Transfer Lock	10 ft 4 in	8 ft 10 in	9 ft 9 in	21,900 lbs
Hyperbaric Rescue Chamber	18 ft 3 in	9 ft 10 in		19,540 lbs
Dive Bell	9 ft 6 in	6 ft 6 in	11 ft 6 in	18,848 lbs
LARS Winch & Platform	22 ft	10 ft	11 ft	59,000 lbs
Dive/Saturation Control Van	20 ft	8 ft	8 ft	12,500 lbs
Environmental Control Unit	20 ft	8 ft	8 ft	13,500 lbs
Reclaim Van	10 ft	8 ft	8 ft	9,300 lbs
Power Distribution Van	10 ft	8 ft	8 ft	6,000 lbs
Saturation Dive Locker Van	20 ft	8 ft	8 ft	8,000 lbs
Tool / Spares Van	20 ft	8 ft	8 ft	15,000 lbs

\* These dimensions are guidelines for the key components of this system only.



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