



EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS)





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System Originally
designed for Military
and Paramilitary use

Currently there are 41
systems





EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS)

Proven very
effective during
operations in
Kuwait and Iraq

Entire system fits
in one assault
boat





EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS)

Currently used by

- U.S. Army
- Corps of Engineers
- U.S. Coast Guard
- FBI
- EPA
- Border Patrol
- Sheriff & Police departments
- Florida State University



EXTREME LIGHTWEIGHT DIVING SYSTEM (XLDS)

XLDS is a combination of assemblies and components designed and engineered as a complete surface supplied diving system allowing for rapid deployment and set-up



ADVANTAGES

Modular system allows the use of various:



U.S. Army configuration

High & Low Pressure
Supply Sources

Mixed Gas Systems

Umbilicals

Helmets, Full-face
Masks

Com Systems

ADVANTAGES

Comes with storage/shipping containers

Can be commercially shipped (UPS, FEDEX, DHL)

U.S. Coast Guard Configuration



ADVANTAGES

- Entire system will fit in a Blackhawk



ADVANTAGES

- Lightweight
- Rapid set-up and deployment
- Ease of Operation



ADVANTAGES

Redundant Air System

Low Maintenance

Durable/Reliable

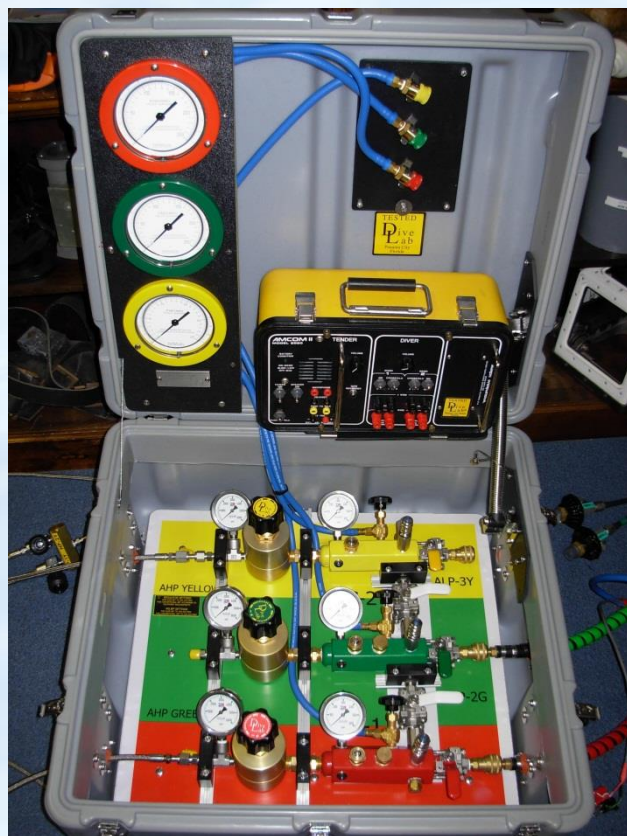
Certified performance capabilities



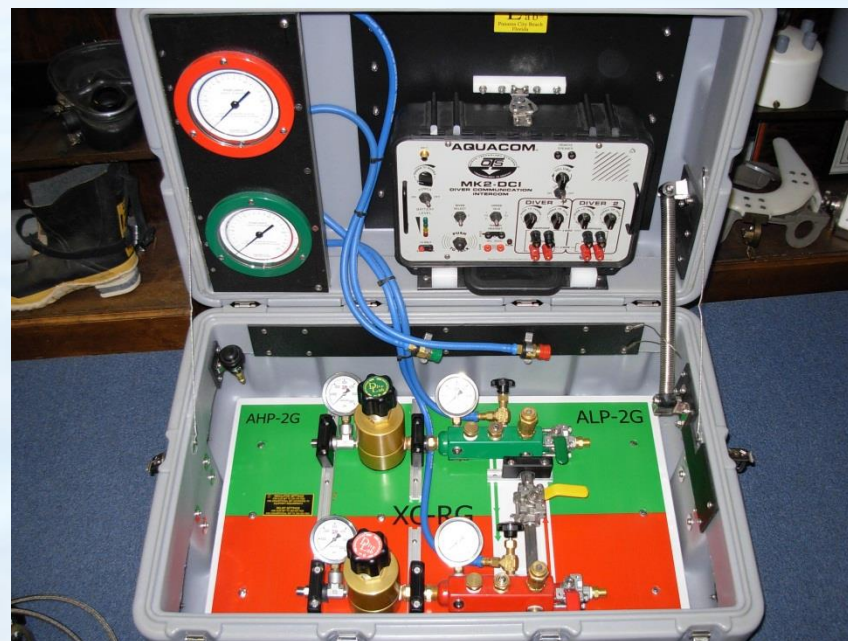
XLDS

2 Models Available

3 Diver System



2 Diver System



XLDS Major Subsystems

High Pressure Air Storage
System (HPASS)
U.S. Army

6 sets of Twin 130 CU. FT.
(3680.3 liter) cylinders

Other cylinders can be used

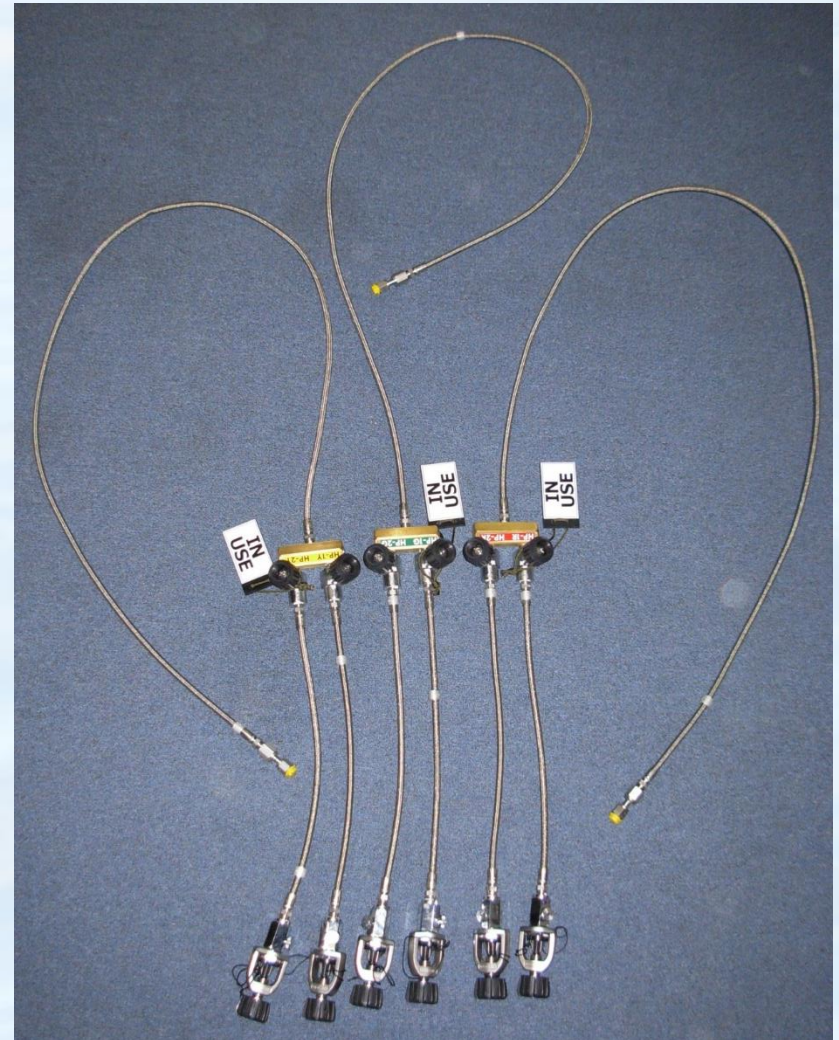


XLDS Major Subsystems

High Pressure Supply
System

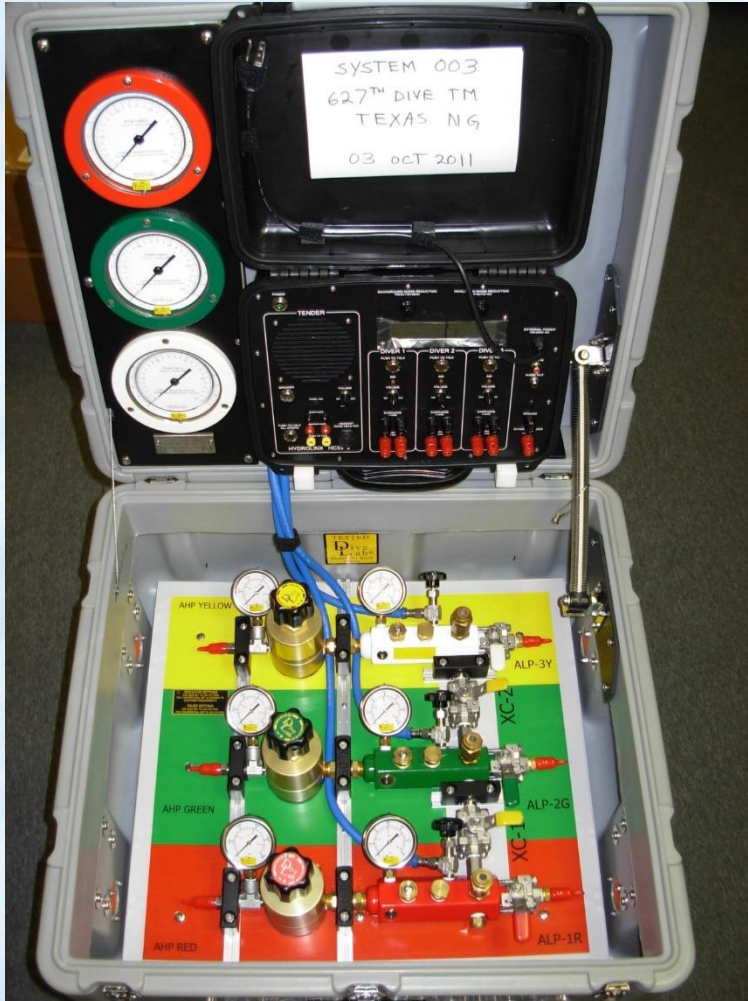
One assembly per diver
circuit

Standard scuba A-Yoke
and DIN connections



XLDS Major Subsystems

Rapid Deployment Control Console (RDC)



- Diver Circuits 3, Red, Green, Yellow
- Maximum HP Supply 5000 PSIG (344 Bar)
- Maximum Low Pressure Outlet Pressure: 400 PSIG (27.5 Bar)
- Pneumofathometer Gauges: 0-250 FSW (76 MSW)

XLDS Major Subsystems



1/4" (7mm) Ultra-Light Umbilicals

System uses a specially designed 1/4" (7mm) main gas Umbilical that reduces the weight and bulk

Umbilical is used at a higher pressure than standard 3/8 (9.5MM) Umbilical

XLDS Major Subsystems

Intermediate Manifold Compensating System (ICS)



Diver worn Intermediate Manifold is a manifold/Regulator System integrated with a .8 liter (6cu)

Accumulator that reduces medium pressure breathing air 350 PSIG (24 Bar) to between 155 -165 PSIG (10.6-11.3 Bar) and supplies it to the Helmet or Mask

Diver Worn Harness and Manifold Compensating System



The diver worn Intermediate Compensating System (ICS) was designed to allow ¼" (7mm) I.D. air supply Umbilicals to be used with standard demand mode Helmets and Masks

Diver Worn Harness and Manifold Compensating System



System allows divers the ability to dive to depths previously only attainable when using heavy 3/8" (9.5mm) Umbilicals and large support systems

Emergency Gas System (EGS)



System comes
with complete
Emergency Gas
System (EGS)
and harness

Emergency Gas System (EGS)

Several harness configurations are available



Optional buoyance
wing available

XLDS-Specifications

Max depth using ¼" (7mm) I.D. umbilical (XLDS)



132 FSW (40 MSW) using KM 37, 17B,
SL 27, KMB 18

190FSW (58 MSW) using KM 97

Max depth using 3/8" (9.5 MSW) I.D.
umbilical, air 220 FSW (76 MSW)

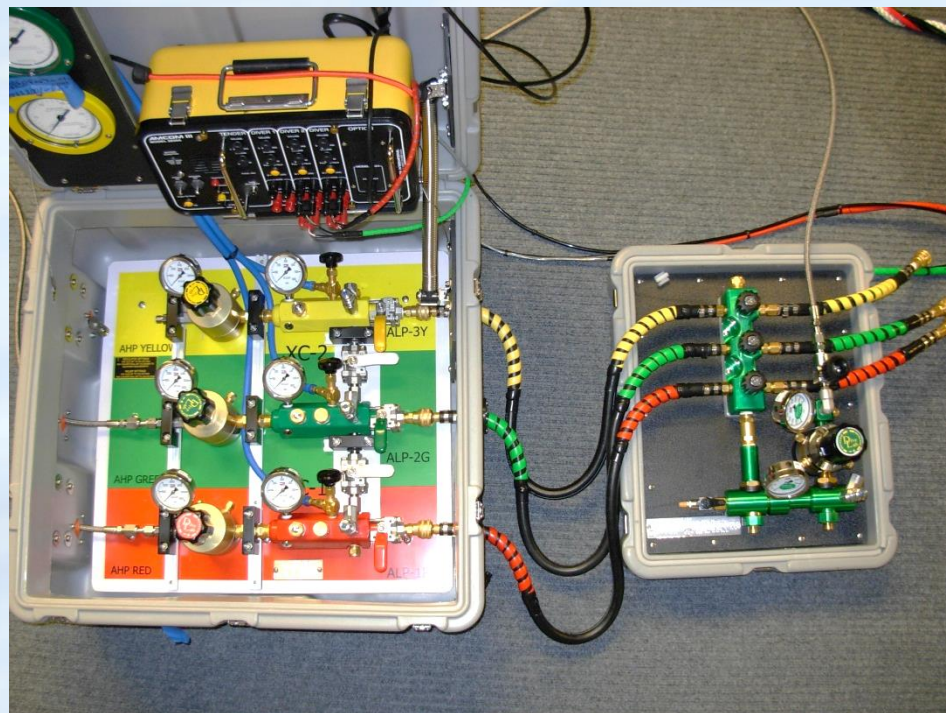


CONCEPT & USE

Conventional Surface Supplied Diving

- Control Console can also be used as conventional air control console (3/8"/ 9.5mm umbilical) for demand mode surface supplied diving Helmets and Masks
- Consoles used with standard Umbilicals (3/8"/ 9.5mm) must use over-bottom tracking of supply pressures, usually, no more than 200-250 PSIG (13.7-17.2 Bar) OB

IN-WATER O₂ DECOMPRESSION



System has provisions for integration of pure oxygen for in water decompression using a separate oxygen regulated System (optional)

The Oxygen System is intended for use to a maximum depth of 50 FSW/15MSW for decompression purposes only

Diver Communications

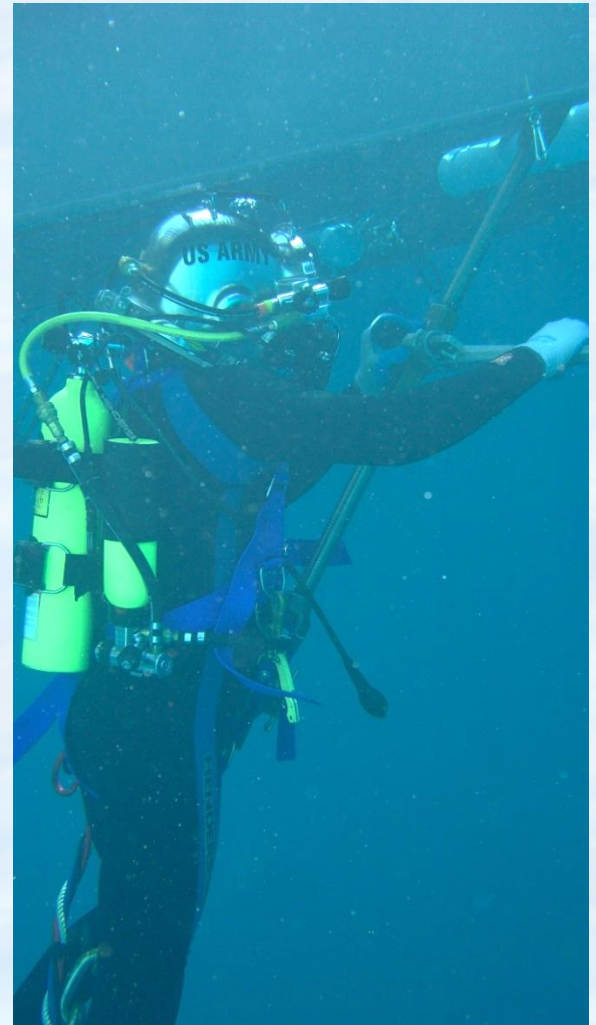
Comes with 3 diver communications system

Has provisions for several different types of com systems



XLDS System Restrictions

The XLDS with ¼" (7mm) umbilicals and diver worn intermediate compensating system, umbilical length is restricted to a maximum length of 330' (100 meters)



XLDS System Restrictions



When RDC is used as a Standard Control Console with 3/8"/9.5mm Umbilicals, Umbilical length should be restricted to 600' (200 meters) or less and a maximum diving depth of 220 fsw (58 MSW) on air

Standard XLDS Configuration



3-Diver Console
3-Umbilicals
3-EGS/Harness Sets
3-HP Assemblies
Com box
Shipping Cases

Total Weight: 615 lbs. (279.5 kg)

U.S. Army XLDS Configuration



3-Diver Console
3-Umbilicals
3-EGS/Harness Sets
3-HP Assemblies
Com box
6 Sets Twin 130cu's
Shipping cases

Total Weight: 1454 lbs (660.9 kg)

Conclusion

Modular system
allows for any
number of
upgrades without
re-engineering the
system



XLDS is capable of
meeting most if not
all mission
requirements



Questions?

Contact divelab@divelab.com

