



DS.EC.001

FD-30 Diving Equipment

## Environmental Control Unit Mk1

### Description

The Drass Environmental Control Unit (ECU) has been specifically designed and built for use in the professional diving to automatically control the atmosphere of the saturation diving habitats.

The ECU will maintain complete automatic control of temperature and humidity from  $20^{\circ}\text{C}$  to  $40^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , relative humidity (RH) from 40% to 70% RH  $\pm 3\%$ , and remove the  $\text{CO}_2$  produced by divers breathing.

The system can operate up to 300 msw. The ECU is an external type and provides all circulation, heating, cooling and dehumidification of breathing gas outside of the chamber.

No operations are required to be carried out by the divers inside the habitat. Change of soda lime canister and control : all these operations are made by the LST's without any interruption of the operations thanks to the double canister. Chiller and Heater are NOT integrated in the system.



Picture 1. Environmental Control Unit

An external ECU saves space and increases the comfort in the inner area. The only components installed in the chamber are the environmental sensors, the inlet/outlet 2" valves and the diffusers. In case of any electrical or mechanical fault the ECU can be repaired without bringing the system on surface and decompress the divers. The canisters are provided of interlocking system and isolation valves.

### Technical Data:

Panel Dimensions		
Total Power (440V / 60Hz / 3 phases)	kW	22
Required sea water flowrate	lpm	45
Sodalime Canister Capacity	kg	45 x 2
Cooling and Heating capacity can be chosen according to customer requirement.		
Physical Characteristics		
Length	2470 mm	
Width	1370 mm	
Height	2050 mm	
Empty Weight	~ 2500 kg	

### Recommended Parameters:

- 6 Divers.
- 30 m<sup>3</sup> Volume

### Main Features:

- Certification Det Norsk Veritas.
- Easy access twin CO<sub>2</sub> filters for fast and safe recharge.
- 90 kg total sodalime, 45 kg per filter (divided into 3 canisters).
- Open design to guarantee an easy access and maintenance.
- High flow/high pressure internal blower unit. Non-stop even in sodalime recharge operations.
- Variable Speed Blower.
- Automatic first class condensation dischargers provided for draining of condensation without loss of pressure.
- High flexibility and easy use.
- Locking mechanism physically ensures CO<sub>2</sub> filters close in compliance with DNV OS-E402.
- Remote Control Unit; touch screen logical unit for automatic performance. Manually.
- All commands can be repeated on the skid in case of emergency.
- Chiller and Heater units are not supplied with the ECU's, see next page for related ancillary equipment.





Picture. 3



Picture. 4

#### Drass Related Ancillary Equipment:

- Ecu's Chiller DS.EC.002
- Ecu's Heater DS.EC.003
- Ecu's Pump Skid DS.EC.004

Drass reserves the right to modify/improve the present specification without notice prior to the order issue.



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