

## AUTONOMOUS UNDERWATER PROFILING DRIFTER

### BRIEF DESCRIPTION:

The AUPD is common underwater platform which carries CTD (Conductivity, Temperature and Depth) sensor and profile the sea water measurement at pre-determined depth. These floats drift freely at a predetermined depth, then periodically ascend to the sea surface, report to satellite and descend again back to their parking depth for the next cycle, a typical period of 2 days. These floats are powered by Primary Lithium battery and pre-programmed for typical profiling cycles controlled by a micro controller based embedded electronics. It contributes to the global description of the seasonal and inter-annual variability of the upper ocean thermohaline circulation.

### ADVANTAGE:

The main elements of AUPD are high pressure rated hull, buoyancy engine, and controller. The Pressure enclosure (hull, top and bottom cover) protects the subsystems from the external pressure and is pressure rated for 200 bar. Hull is made of Aluminum Alloy (Al 6061) which is light weight and corrosion resistive. Conductivity sensor, pressure and temperature probe are mounted on the top end of the profiler. Change in buoyancy is accomplished by inflating and deflating a rubber bladder using a piston cylinder driven by a geared motor.

**Scale of Development:** Ready for licensing of Technology.

