



## DESTO™

### Direct Electromagnetic STOPper

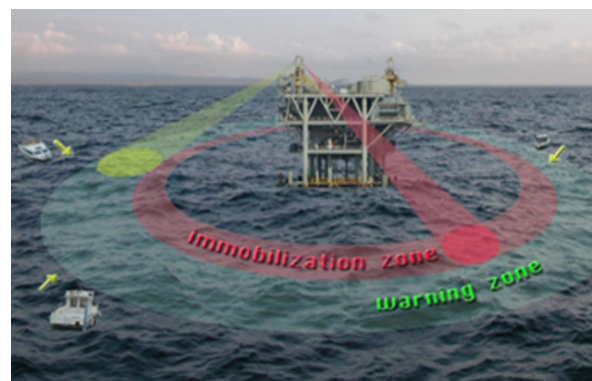
DESTO is an advanced non-lethal device (Active Denial System) realized by SELEX Sistemi Integrati to stop and neutralize advancing adversary from relatively long range by crippling the electrical parts of engines with an electromagnetic wave.

DESTO can contrast the approach of non authorized vehicles to restricted zones like critical infrastructures, military zone entries, oil platforms, and even checkpoints. DESTO operates by destroying or temporarily shutting down the electronic components of on-board engines, nor protected or previously shielded without harming occupants. DESTO is also able to stop UAV (Unmanned Aerial Vehicle), missiles and IED (Improvised Explosive Devices) to protect personnel and in general critical infrastructures from possible threats.

It is expected to save countless lives by providing a way to stop individuals without causing injury, before a deadly confrontation develops.

These features show a very high potential for DESTO in halting pirate vessels, a crucial problem that is worsening and makes commercial navigation less safer and expensive.

In fact piracy statistics point to a significant increase in attacks by pirates in the last two years. In terms of safety, reported acts of piracy committed up to late 2010 have included 219 pirate attacks, 49 vessels seized 115 vessels boarded, 31 vessels hijacked, seeing a total of 1016 crew members taken hostage, and nine killed. The total cost of piracy, including ransoms, insurance, military presence is currently estimated to be more than 10 billion \$.

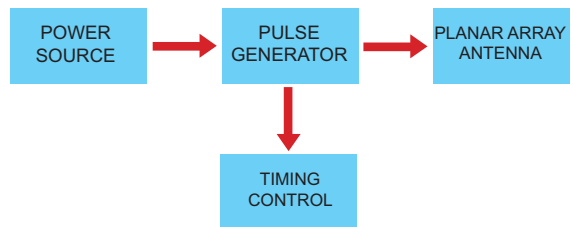


## THE SYSTEM

DESTO development stemmed from demonstrating that, in order to damage electronic parts of engines at a range of few tens meters, it is necessary to use proper electromagnetic pulses with:

- peak power in the range of MegaWatt
- pulse repetition period of milliseconds
- pulse duration of nanoseconds
- frequency in the range of 350-1250 MHz.

DESTO is made up of radiating elements that produce a powerful electromagnetic beam able to overload the voltage of the electronic components of engines. The system consists of a planar array of wide band antennas fed with an innovative power source, able to generate pulses with a very high peak power but with an average power far lower, since energy is emitted in short high pulses, with a repetition frequency of the order of 1kHz, and falls far short of levels harmful to humans. This kind of electromagnetic pulses can directly interact with vehicles electric parts for specific frequencies depending both from specific building features and shapes.



In addition the system is designed to be interfaced with other detection or pointing system, like Naval/Land Multirole and Tracking Radars, Small Radars and I/R optronic sensors.

In an advanced phase of experimentation, the system is now in line for an European patent.

The modular and dual-use approach makes it suitable both for complex scenarios demanding for long range, very high radiating power and for simpler applications with reduced performances and costs.

The system is designed to affect a wide range of circuitry, and it has been built to knock out between 70 and 80% of engines.

