

### **Novel Torpedo Defence Countermeasure**

## A Next-Gen Response to Evolving Torpedo Attacks

Today's submarines are deployed to different arenas, including shallow waters, and face increasingly more sophisticated torpedoes. Previous generation decoys and doctrines may not be sufficient to cope with them.

RAFAEL's TORBUSTER™ – a 4th generation combined soft and hard-kill decoy for submarines – has been proven effective in the new scenarios against evolving threats. TORBUSTER is based on a novel approach. Upon detecting an incoming threat, TORBUSTER is launched from an external launcher, propels itself to a safe distance from the submarine and lures the incoming torpedo by transmitting a tailored response, based on the reactive technology developed for the SCUTTER™ Mk 3. As the torpedo homes in on the decoy, the decoy senses its proximity and, at CPA, detonates its warhead, neutralising the torpedo.

#### **Benefits**

- TRL-9, military-off-the-shelf, SAT-proven, and serially-produced
- One Torbuster needed per torpedo attack
- Effective in shallow as well as deep water scenarios
- Prevents re-attacks
- Fast reaction time, effective against shortrange attacks
- Safety, complies with STANAG 4439





# Protecting Submarines with Today's Most Advanced Technologies

TORBUSTER $^{\text{\tiny M}}$  is a novel torpedo defence countermeasure that ends torpedo attacks after the first one, in all types of environments, including shallow water.

The system uses reactive 3<sup>rd</sup> generation soft-kill technology in order to lure the torpedo during its initial attack. TORBUSTER senses the torpedo's proximity, utilising a sophisticated proximity fuse. Once the torpedo is at CPA, TORBUSTER is detonated, inflicting sufficient damage for neutralisation.

#### Operation

TORBUSTER is operated through the SHADE™ system. It is run by a single operator via a console that presents the scenario, the proposed timing, pre-sets, and inventory, as well as modes of operation and maintenance displays.

#### Launchers

TORBUSTER is launched from external composite launchers which are very lightweight and have low TS characteristics.

#### Versatility

TORBUSTER can be set above or beneath the submarine, depending on the scenario.





### **Main Capabilities**

- State-of-the-art-countermeasure including hard-kill
- Lightweight external launchers
- Fast reaction time
- Advanced defence computer which guides the operator through every step in real time



<b>Technical Specifications</b>	
Countermeasure Type	4 <sup>th</sup> generation combined soft- & hard-kill
Dimensions	Length: 2.3 m, Diameter: 198 mm, Weight: 52 kg
Safety	STANAG 4439
Launcher Weight	200 kg



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