

Naval Vessel Armor Protection

DEFENDER® composite armor panels provide customized armor protection levels according to mission specific requirements. The add-on modular armor panels are highly resistant to environmental degradation and incidental damage, and include anti-corrosive attachment hardware.

Ceradyne has been a leader in the manufacture of advanced technical ceramics for ballistic applications since 1969. From the earliest application of ceramics in lightweight helicopter armoring, Ceradyne has provided innovative ballistic protection solutions that are the lightest and most durable armor systems available.

Armor materials and designs are tested at the Ceradyne ballistic range against a full spectrum of ball and armor piercing threats from 5.56 to 12.7 mm. Combined with vertically integrated manufacturing, state of the art materials and innovative design, Ceradyne armor systems meet or exceed the most demanding ballistic protection requirements.

Deep Water Vessel Armor

The hijacking of ships on the high seas and the taking of crews as hostages for ransom has highlighted the need for increased protection for crew members. Lightweight DEFENDER® ceramic composite armor applied to the exterior of a ship's bridge allows the Captain and crew to retreat into the bridge of the ship, securing them against the threat of rifle and rocket fire while help is summoned. The armor shield provides the security necessary to hold off the threat and create a safe location for the crew until the situation is resolved.



Significant Features of Ceradyne Advanced Lightweight Armor

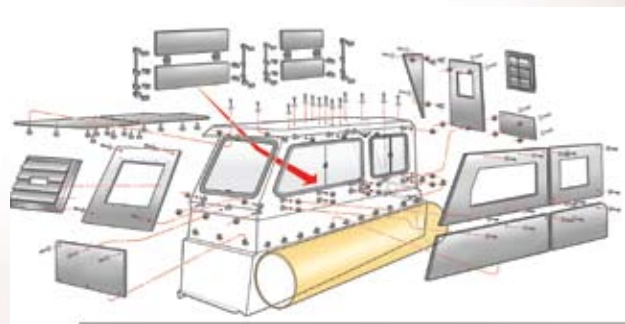
- Stand alone solution designed to defeat up to Armor Piercing 7.62mm bullets.
- Significantly reduces the effects of RPG impacts/penetrations.



- Does not require maintenance after installation (the armor is completely inert and will not react to sea environment).
- Tested by the United States Army Research Laboratory and approved by the United States Army Tank-automotive Command.
- Easy installation - bolts on/off/2-man carry; can be removed and stored when not operating in geographic regions where additional protection is necessary.

Small Boat Armor

While the US Navy deploys small boats to secure harbors during fleet maneuvers, Ceradyne Armor Systems is designing and



integrating advanced, lightweight armor systems to protect sailors and small boats under severe operational conditions. The armor is specifically tailored for small boats, counters any threat currently fielded and does not impact boat performance.



Naval Vessel Armor Protection



Ceradyne small boat composite armor panels provide customized armor protection levels according to mission specific requirements. The add-on DEFENDER® modular armor panels are highly resistant to environmental degradation and incidental damage, and include anti-corrosive attachment hardware and collar area protection. An innovative window protection system that is much lighter than traditional ballistic glass provides protection and visibility to coxswain and crew when under enemy fire.

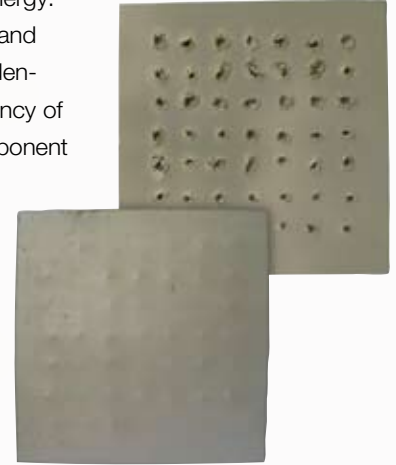
- Specifically tailored for small boats
- Counters any small arms threat currently fielded
- Configured in modular kit designs

Advanced Armor Technology

Ceradyne's hot pressing process is ideal for high volume production of the highest quality armor ceramics. Our large furnace capacity and in-house tooling facilities allow production of large plates (up to 20"x20"). For many panel armor applications, the standard 12"x17" plate provides the necessary coverage of large areas without the expense and time associated with production of small tile mosaics.

Ballistics Testing

The ceramic strike-face of a lightweight armor system shatters the bullet on impact. The effectiveness of ceramic is enhanced by a metallic or composite backing layer that provides structural support and absorbs residual energy. Properties of high hardness and strength, together with low density, impart the unique efficiency of ceramics as a principal component of advanced armors.



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Lifesaving Materials and Technology

Ceradyne, Inc. (NASDAQ:CRDN) is a publicly traded corporation specializing in the development and production of advanced ceramic materials. Worldwide vertically integrated manufacturing facilities produce advanced ceramic solutions for the most demanding applications in automotive/engine, industrial wear, medical, electronic, and defense industries. Since the earliest use of ceramic armor on combat helicopters, Ceradyne has supplied government and industrial armor developers with the materials and technology for advanced ballistic protection. Ceradyne is a worldwide leader in the development and integration of light armor technology.