



U.S. ARMY
RDECOM

U.S. Army Research, Development
and Engineering Command
3071 Aberdeen Boulevard
Aberdeen Proving Ground, MD 21005
www.army.mil/rdecom

U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND

Armament Research, Development and Engineering Center

Overview

- ARDEC provides the technology for more than 90 percent of the Army's lethality and a significant amount of support for other services' lethality
- The center's civilian engineers, scientists and support personnel leverage the latest technology to design, integrate and support small-, medium- and large-caliber weapons and ammunition systems that arm Soldiers with powerful lethal and non-lethal options.
- ARDEC maintains 90-plus R&D laboratory facilities at Picatinny Arsenal, N.J.; Watervliet Arsenal, N.Y.; Rock Island Arsenal, Ill.; and Aberdeen Proving Ground, Md. More than 30 percent of ARDEC technical staff has a doctorate or master's degree.
- ARDEC has won 34 out of 100 Army's Greatest Inventions awards, as judged by Soldiers, since 2002.
- ARDEC supports learning through Armament University, a unique, doctorate-degree granting institution augmented by teachers from academic and military institutions.
- Core competencies: warhead/lethal mechanisms and fuzing (energetics, guidance/navigation/control), countermine/IED neutralization, directed energy/non-lethal, fire control.
- Major Partners: TACOM, Program Executive Office Ammunition, PEO Soldier, Joint Munitions and Lethality Life Cycle Management Command, PEO Combat Support and Combat Service Support
- People:
 - 3,390 civilians
 - 2,567 scientists and engineers
 - 66 doctorates, 862 master's degrees, 1,639 bachelor's degrees
 - 29 military
 - 547 contractors



2014 Successes

- ARDEC standardized the Mk2 Talon Robot as part of a system life extension and operations and sustainment cost-reduction effort. The standardization allows for integration of new advanced capabilities and eliminates potential obsolescence to support sustainment.
- ARDEC developed and fielded the XM905 Advanced Mortar Protection System, a dismounted 120mm smoothbore recoiling mortar system that provides indirect fire for defensive purposes at forward operating bases, to Special Operations Forces.
- ARDEC, along with Program Manager MRAP and industry, were awarded a U.S. patent on the Universal Tie Down Assembly that allows Soldiers to quickly stow required items in combat vehicles.
- In partnership with the Natick Research, Development and Engineering Center, ARDEC successfully demonstrated the ESB, which allows for the efficient and safe delivery of emergency resupply bundles of ammunition from a hovering helicopter to units on the ground. The system increases the survivability of supplies delivered to dismounted squads from 50 percent with legacy ad-hoc systems to at least 90 percent.
- ARDEC demonstrated an autonomous forklift appliqué kit at Tooele Army Depot, Utah, that successfully navigated through an ammunition storage igloo door, located the correct ammo pallet, exited the igloo and stacked the pallet on a transportation conveyance.