Department of Defense Confirms Certified Energy Savings from ASSA ABLOY Openings

Sustainability

ASSA ABLOY
Opening Solutions

Experience a safer and more open world

High performance openings from ASSA ABLOY deliver certified energy savings to Department of Defense (DoD) facilities, giving the government agency a trusted sustainable building component to comply with energy efficiency requirements for federal facilities.

The DoD and third-party agency GreenCircle Certified LLC examined several standard exterior openings at Joint Base San Antonio (JBSA), Fort Liberty, NC, Redstone Arsenal, and Marine Corps Base Quantico. They compared the performance of these doorways against energy efficient openings from ASSA ABLOY. In all cases, the updated openings greatly outperformed the existing doorways, **producing annual certified energy savings that average $100.00 per year per single opening!**

The DoD commissioned these tests in response to requirements for government agencies to increase the environmental performance and reduce the energy use and costs incurred by federal buildings.



The goal is to save taxpayer dollars through avoided energy costs and increased efficiency, while also making federal facilities more resilient.

Before the Military Departments and the DoD utilize sustainable products, their performance must be proven to meet DoD requirements. To be considered for installation into a DoD facility, the building component in question is subjected to pilot demonstrations in DoD operational environments.

The demonstration allows DoD end-users to determine, through firsthand experience, if the products meet their requirements for use.

The ASSA ABLOY openings used for the demonstration were installed by ASSA ABLOY installers in coordination with facilities personnel. Performance data was collected throughout the demonstration by GreenCircle Certified and compared against non-energy efficient equivalents. Key energy efficiency performance data were measured in heat transmission (determined by U-Factor) and air drafts and seepage (determined by air infiltration rate).

Methodology and Results

U-Factor is the overall coefficient of heat transmittance measured in BTUs per hour per square foot of area per degree Fahrenheit temperature difference between the air on the two sides of the door (BTUs/hr-ft2-°F) The lower the U-factor, the better the insulation.



The U-Factor was achieved in an operable condition (SDI-113 and ASTM C1363, C1199, E1423) and tested per NFRC 102 using a Thermal Break Frame and Pemko Thermal Barrier Threshold.

Air infiltration is a measurement of the air leakage around the perimeter of a door opening. Air infiltration is measured in Cubic Feet per Minute (CFM). Trio-E openings reduce air infiltration to a rate of 0.1 CFM per square foot (per ASTM E283 and NFRC 400).

The Trio-E openings produced significant energy savings throughout the facility. The following chart details the results.

CURRIES 777E Series Trio-E Door

Ceco Door Trio-E Door

The DoD provides additional information regarding the Sustainable Door Openings Demonstration online at their Sustainable Products Center site:
https://www.denix.osd.mil/spc/demonstrations/completed/sustainable-door-systems/

All in

The ASSA ABLOY Group is the global leader in access solutions. Every day we help people feel safe, secure and experience a more open world.

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Door Location	Before - Equivalent Existing Door	After - New Energy Efficient Door Opening	Energy Savings (kWh/year)	Energy Savings %	Est Financial Savings: Gov Rate of Electricity (USD per Year)
Ft Liberty, NC $0.07/kWh					
Bldg C8129 & C8030 Brigade Motor Pool 82d Airborne Div	Existing 18 gauge hollow metal door with honeycomb core in a standard frame with threshold, without door seal.	Ceco / Curries 18 gauge Trio-E Energy Efficient Steel Stiffened flush door installed in a 16 gauge kerfed frame	1,612	70.00%	$110.59 per Year per Door Opening
Bldg 5624 Stairwell Door	Existing 18 gauge hollow metal door with honeycomb core in a standard frame with threshold, without door seal	Ceco / Curries 18 gauge Trio-E Energy Efficient Steel Stiffened flush door installed in existing frame	1,571	68.00%	$107.75 per Year per Door Opening
Joint Base San Antonio (JBSA) $.09141/kWh					
CES HQ Building Employee Side Entrance Door #104	Existing hollow metal door with polystyrene core with glazing and hollow metal masonry frame	Ceco / Curries 18 gauge Trio-E Energy Efficient Steel Stiffened Door (8" x 30" glass), installed in a 16 gauge Mercury Thermal Break Frame with a Pemko threshold	1,589	66.00%	$159.72 per Year per Door Opening
CES HQ Building Employee Side Entrance Door #205	Existing hollow metal door with polystyrene core with glazing and standard hollow metal frame	Ceco / Curries Trio-E Energy Efficient Steel Stiffened door (24" x 30" glass), installed in a 16 gauge Mercury Thermal Break Frame with Pemko threshold	1,567	65.00%	$157.52 per Year per Door Opening
MCB Quantico $0.078/kWh					
Quantico Exterior Single Door	Existing hollow metal door with honeycomb core with glazing and standard 16 gauge masonry hollow metal frame	Ceco / Curries 18 gauge Trio-E Energy Efficient Steel Stiffened door (4" x 32" glass), installed in a 16 gauge Mercury Thermal Break Frame	1,481	67.00%	$94.24 per Year per Door Opening
Redstone Arsenal $0.046/kWh					
Redstone Arsenal Huntsville, AL	Existing flush hollow metal pair of doors and standard hollow metal frame with no seals, threshold and gaps at meeting edges of doors and floor	Pair of Ceco / Curries 18 gauge Trio-E Energy Efficient Steel Stiffened flush doors with Pemko continuous hinge, automatic door bottom, weather seals and applied astragal to completely seal door perimeter and at door centers and floor	171,385	99.00%	$7,883.71 per Year per Door Opening

NOTE: *Several factors must be considered: Energy savings are contingent on the building regional location, utility costs, door opening location (interior, exterior, west facing etc.), environment, overall physical condition of the existing opening, door design, core type/thermal efficiency, frame type, use of thresholds or auto-door bottoms, weather seals etc.)

Sustainability Takes Commitment and Collaboration
Our practices and values guide us to reduce our environmental footprint and increase our positive impact. We're all in. With bold investments and measurable actions. With an influential position and leadership role in helping others meet their own sustainability goals. To learn more about ASSA ABLOY sustainability efforts, please visit: assaabloydss.com/sustainability

All in

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GreenCircle CERTIFIED

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