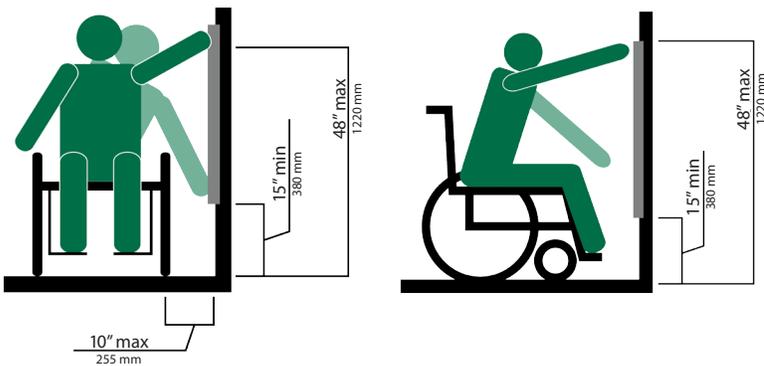


EFCO ACCESSIBLE WINDOWS

EFCO Corporation is excited to announce our projected windows are ADA accessible! Tested in accordance with AAMA 513-14, EFCO's projected windows are capable of single-hand operation without tight-grasping, pinching, or twisting of the wrist.

AAMA has provided the following as a guide specification:

"Accessibility: As indicated on architectural drawings or project specifications, operable windows and doors as required in occupied spaces shall meet the operating force limits and motion restrictions of ICC A117.1, section 309.4, when tested by an AAMA-accredited lab in accordance with AAMA 513-14."



VERSATILITY

EFCO accessible windows are the perfect solution for classrooms, dormitories, condominiums, apartments, hotels, skilled nursing facilities, and anywhere accessible windows are needed.

- Design Flexibility—A variety of depths, profiles, and colors are available to meet a wide spectrum of job requirements.
- Performance—Enjoy the same performance levels. Although reduced performance is allowed per the AAMA 513 standard, EFCO embraced the challenge and succeeded in adding accessibility as a feature while maintaining the stringent performance levels on nearly all previously tested windows.
- Energy Savings—Energy-efficient designs can help reduce energy and provide increased occupant comfort.



EFCO OPERABLE WINDOWS

ICC/ANSI A117.1/AAMA 513-14 Compliant

| PRODUCT SERIES | CONFIGURATION | MAXIMUM VENT SIZE | | HARDWARE PACKAGE TESTED |
|---|-----------------------|-------------------|-------------|---|
| | | WIDTH (IN) | HEIGHT (IN) | |
| 2700 2900 325X / 325G 3903 450X / 450G 510I 550I / 550G 810I / 810G PX32 / PG32 | Casement Out-Swing | 36 | 60 | Contour Roto Operator w/ Extended Handle, Applied Multi-Point Locks w/ Extended Lift Handle, Butt Hinges, Lift Blocks |
| | Casement In-Swing | 36 | 60 | Cam Locks, Butt Hinges, Lift Blocks |
| | Project-Out | 60 | 36 | Contour Dual-Shoe Roto Operator w/ Extended Handle, Cam Locks, 4-Bar Arm Loose Rivet Hinges |
| WV430 | Casement Out-Swing | 36 | 60 | Contour Roto Operator w/ Extended Handle, Applied Multi-Point Locks w/ Extended Lift Handle, Casement 4-Bar Arms, Lift Blocks |
| | Project-Out | 60 | 36 | Standard Dual-Shoe Roto Operator w/ Extended Handle, Lift Locks, 4-Bar Arm Loose Rivet Hinges |

* 1. Contact EFCO's Product Technical Support team for assistance if project requirements exceed the sizes listed above
 2. Testing based on AAMA 513-14



HARDWARE

| | Lift Locks | Roto Operators | Cam Locks | 4-Bar Hinge | Butt Hinge |
|-----------|---|---|---|---|---|
| AAMA 513 |  |  |  |  |  |
| Standard* |  |  | | | |

*Standard sizes shown for comparison purposes

ADA ACCESSIBLE WINDOWS AND INTERIOR SECONDARY DOORS FREQUENTLY ASKED QUESTIONS

1) What is ADA?

ADA (Americans with Disabilities Act) is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all locations that are open to the general public.

Acknowledgement of ADA is growing with many Architects, partly due to the requirements driven by government agencies and other authorities such as NYC Building code, Chicago Public Schools and Chicago Mayor's office for people with Disabilities. ADA does not include instructions on how to test for compliance and is lacking in how to include it in specifications and building codes, or how to enforce it, thus, leaving large gaps in the ability of contractors and manufacturers to comply with the intent of the Act.

2) What does the ADA say about operation?

Here is the requirement as outlined in section 309.4 Operation. "Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2N) maximum". Note: This requirement applies to windows, sliding glass doors, or swinging terrace doors.



3) What is AAMA 513-14?

It is a document developed by the American Architectural Manufacturers Association (AAMA) providing guidelines and definitions related to meeting the intent of ADA. It is titled "Standard Laboratory Test Method for Determination of forces and Motions Required to Activate Operable Parts of CW and AW class Operable Windows, Sliding Glass Doors and Terrace Doors in Accessible Spaces".

4) What is considered an "accessible window" by ADA, ICC/ANSI A117.1 and AAMA 513-14?

It is an operable window assembly, including frame, infill, hardware and all other appurtenances, required by project specifications and/or applicable codes, to be *"accessible to and usable by people with such physical disabilities as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, in coordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size"*. (Italicized quote taken from ICC/ANSI A117.1)



5) Can a window manufacturer claim or represent their products as 100% ADA compliant?

The AAMA 513-14 test method does not provide sufficient basis for a manufacturer to represent an individual component, product or product line, as 'ADA-certified', 'ADA-compliant', or ADA-approved', as the Americans with Disabilities Act makes no provisions for, nor outlines any requirements for, such certification, compliance or approval. The purpose of this document is to provide clarity that EFCO only represents its products as having been tested for operating forces and motions with AAMA's 513-14 standard.



6) Does AAMA 513-14 provide a suggestion for architects or specification writers to follow when developing a specification?

Yes. Here is the excerpt from the AAMA 513-14 document. "Accessibility: as indicated on architectural drawings, one operable window in each occupied space shall meet the operating force limits and motion restrictions of ICC/ANSI A117.1 Section 309.4, when tested by an AAMA-accredited laboratory in accordance with AAMA 513-14." [Specifiers Note: All code-required operable windows in a given occupied space may be required to meet these restrictions.]

7) Is an "ADA accessible window" capable of performing similarly as a standard window product from the same manufacturer?

It is possible, but not required. AAMA 513-14 states "For accessible units, certain 'reductions' in air infiltration, and water resistance performance requirements shall be permitted, when compared to conventional CW and AW clad testing, given the desirability of minimizing operating forces". Gaining the leverage required for easy operation may require special location of hardware and/or modified hardware or accessories may be required to reduce friction and operating force.

It should also be noted that in order to comply with operating force requirements, certain vent or sash travel limitations could be required, making the "accessible window's" operational characteristics different from other windows on the project.

8) Are there other requirements for “accessible windows” beyond the manufactured window product?

Yes, there are other considerations that must be taken by the architect to assure compliance with ADA. Please refer to ICC/ANSI A117.1, the U.S. Department of Housing and Urban Development’s “U.S. Fair Housing Act” and other guidelines for complete requirements such as reaching, height, obstructions, clearances, protrusions, approach area and threshold height.



9) Are there special installation considerations required for “ADA accessible windows”?

Yes. Manufacture instructions for plumb, level and square installation are critical. Attention to final adjustments by the installer and regular maintenance by the owner are required to achieve and maintain long term compliance.

10) Can an “accessible window” be used for emergency egress?

Typically, the hardware packages required to meet operating force requirements will have limitations that will keep the window from also meeting emergency egress requirements. This should be taken into consideration when specifying windows or the quantity of windows per room that must meet accessibility requirements.



11) Can an existing or “non-accessible” window be converted for accessibility?

Not likely, or not without considerable re-work that could negatively affect the performance or potential life span of the product.

12) What kind of manufacturing disclaimers should be understood when relating to “accessible windows”?

In addition to standard terms & conditions, disclaimers and qualifications of the sale, EFCO Corporation makes no claim, and takes no responsibility for, ADA compliance of windows or secondary door installation on site, including but not limited to hardware, approach area, reach, force or forces, motion or other operational requirements for acceptance by any enforcing authorities having jurisdiction.

