



WAUSAU

WINDOW AND WALL
SYSTEMS

ADA ACCESSIBILITY FOR WINDOWS

Help ensure that fresh air and a connection with the outdoors are made accessible to people with physical disabilities, by specifying windows and window hardware capable of meeting the operating force and limited motion requirements of ICC/ANSI A117.1.



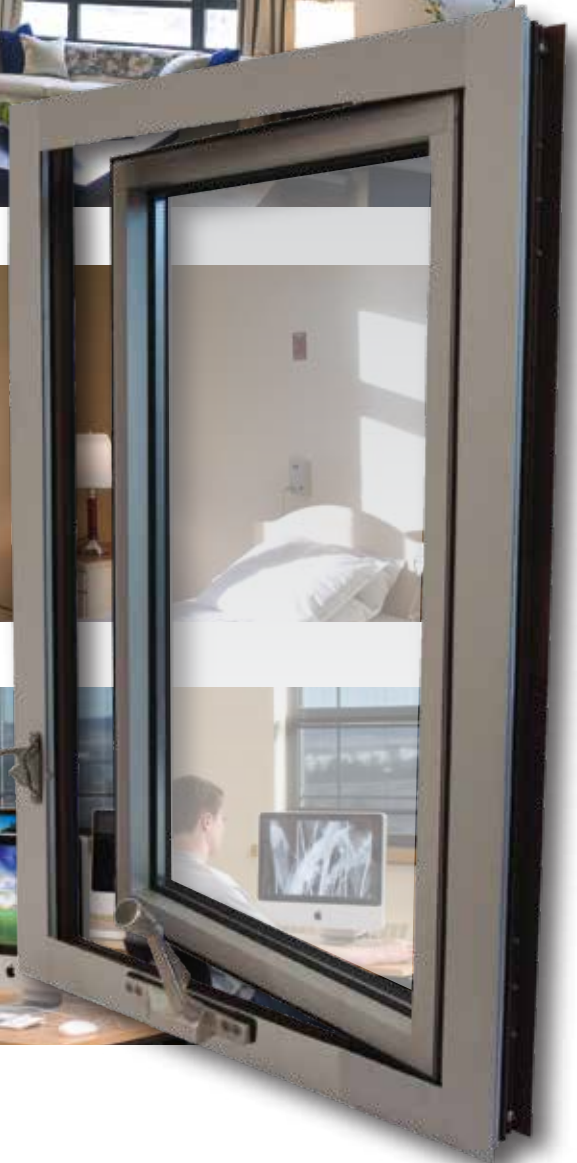
Condominiums, apartments and hotels



Skilled nursing and personal care facilities

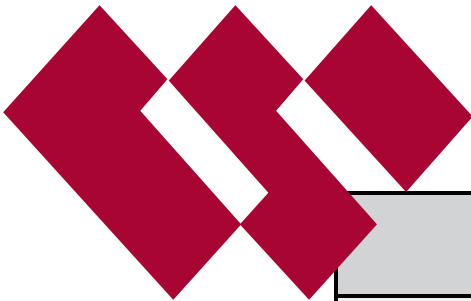


Classrooms and dormitories



ADA ACCESSIBILITY FOR WINDOWS

Wausau's accessible projected windows are **laboratory-proven capable** of operating with one hand using a force of five pounds or less, to unlock, open, close, and lock, without tight grasping, pinching or twisting of the wrist.



- AAMA Architectural AW-100 Performance Class
- No reductions in air, water or structural performance for lab testing of accessible vents
- Low U-Factors - Triple glazing available on the INvent family
- Between-glass blinds optional on the INvent family
- 1/8" wall thickness at hardware attachment points
- More than 30,000 finish colors, including two-color option
- Several muntin grid options for historical renovation
- 4250-Z Zero Sightline windows offer unobtrusive ventilation as curtainwall insert vents

Laboratory-Tested Wausau Operable Windows Capable of Accessible Operating Forces and Motions

As of May 2013

Product Series	Vent Mode	Maximum Vent Size		Minimum Vent Size		Hardware Package(s) Tested
		Width (in.)	Height (in.)	Width (in.)	Height (in.)	
INvent™ Family INvent INvent-XLT INvent Retro™ INvent-VX INvent.PLUS™	Project-Out Awning	60	36	25	28	Dual-arm roto with several handle choices Linear operation latches Concealed four-bar hinges
	Out-Swing Casement	36	60	22	32	Single-arm roto with several handle choices Linear operation keeper Exposed butt hinges or concealed four-bar hinges
	In-Swing Casement	36 40	60 80	27	32	Hand-operated Euro-style multi-point locking handle Exposed butt hinges No triple glazing on oversize
4250-Z Zero Sightline Insert Vents	Project-Out Awning	60 48	36 80	25	28	Dual-arm roto with several handle choices Linear operation latches Concealed four-bar hinges AW-50 rating on oversize 4250-Z awning vents
	Out-Swing Casement	36	60	22	32	Single-arm roto with several handle choices Linear operation latches Concealed four-bar hinges

NOTES:

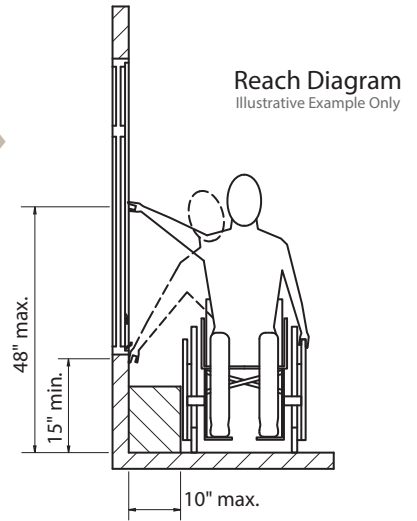
1. Test results can vary. All size limits are sash dimension tip-to-tip. "Oversize" vent limits shown in gold font.
2. All testing based on AAMA 513, **without** air, water and structural allowances or reductions; but including sampling, test equipment and methodology qualifications.
3. Project-out awning vents cannot be hand-operated due to the requirement for hold-open friction. Out-swing casement vents cannot be hand-operated due to the requirement for one-hand operation. Roto operators can be provided for both of these vent types, with several optional accessible handle and knob choices.
4. Refer to "Frequently Asked Questions" for special disclaimers and qualification notes applying to accessibility.
5. Consult Wausau's architectural engineers for technical assistance if sizes required are outside of the ranges specified above.
6. The use of insect screens may limit accessibility options for certain vent modes and hardware packages. Controls for between-glass Venetian blinds may not be accessible in certain conditions.
7. All double and triple insulating glass (IG) units were tested with 6 mm glass lites, for flatness and available coating options.
8. Wausau is committed to continuous improvement, as well as an ever-increasing breadth of accessible product offering. Consult Wausau architectural engineers and www.wausauwindow.com for current information

Make sure operable windows are located and detailed in a way that meets the “reach” limitations of ICC/ANSI A117.1. One typical diagram is shown. Different height requirements apply to “obstructed” and “front” reach. There are also physical limits on clearances and protrusions, as well as approach area and threshold height (for terrace doors and sliding glass doors).

AAMA Guide Specification

“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 lab in accordance with AAMA 513.”

[Specifiers Note: All code-required operable windows in a given occupied space may be required to meet these restrictions.]



Accessible out-swing casement window



ACCESSIBLE WINDOWS AND HARDWARE

(Illustrative examples)

Accessible project-out awning window
(Note limited opening)

Four-bar hinge



Euro-style locking handle



Butt hinge

Linear operation latch



Accessible roto-operator
Oversize knob option shown



Wisconsin Veterans' Home Skilled Nursing Facility - Chippewa Falls, Wisconsin
Photos: Phil Weston - Weston Imaging Group, Inc.



ADA ACCESSIBILITY FOR WINDOWS FREQUENTLY-ASKED QUESTIONS

Is the Americans with Disabilities Act (ADA) a building code?

The Americans with Disabilities Act is a law, not a building code, specification or test method. As such, it is missing many of the necessary technical requirements for compliance testing. Some of the government agencies that have promulgated regulations to help ensure compliance include; the U.S. Department of Justice's "ADA Standards for Accessible Design," the U.S. Access Board's "ADA and Architectural Barriers Act Accessibility Guidelines," and the U.S. Department of Housing and Urban Development's "U.S. Fair Housing Act." Other authorities also are requiring or recommending accessibility, including the Chicago Public Schools and Mayor's Office for People with Disabilities, university housing offices and the New York City Building Code. While detailed requirements vary, all reference ICC/ANSI A117.1, "Accessible and Usable Buildings and Facilities," in defining window operating forces and motions.

The AAMA 513 "Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of Operable Windows and Doors in Accessible Spaces" addresses the necessary window-specific provisions.

Remember, building codes represent only minimum requirements. Even if not required, accessible operating windows may be a very desirable feature of the occupied spaces being designed.

What is considered an accessible window by AAMA, ADA and ICC/ANSI A117.1?

AAMA 513 defines "Accessible Window Units" as operable window assemblies, 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."* (Portion in italics from ICC/ANSI A117.1.)



Do window manufacturers represent their products as "ADA" windows?

As noted in AAMA 513, "No test method provides sufficient basis for a manufacturer to represent an individual component, product or product line, as 'ADA-certified,' 'ADA-approved,' or 'ADA-compliant,' as the Americans with Disabilities Act makes no provisions for, nor outlines any requirements for, such certification, approval, or compliance verification." Wausau is careful to represent laboratory-tested products as capable of achieving accessible operating forces and motions, when properly installed and adjusted, without making any non-verifiable claims.

Can accessible windows be expected to perform the same as standard operable windows?

Gaining the leverage for easy operation may require special location of roto-operators, which then offer a limited opening for ventilation. Also, as noted in AAMA 513, "For accessible units, certain 'reductions' in air infiltration, and water resistance performance requirements shall be permitted, when compared to conventional requirements, given the desirability of minimizing operating forces." Air infiltration 1.5 times the maximum air infiltration specified in AAMA/WDMA/CSA 101/I.S.2/A440, for the type and class tested is allowed but can be no greater than 1.0 l/s/m² (0.2 cfm/ft²) at 75 Pa (1.57 psf). Water Resistance is conducted at 20% of inward acting design pressure for the project for AW Class, but not less than 390 Pa (8 psf). Design Wind Pressure is based on project requirements, or a minimum of 1920 Pa (40 psf) for AW products (whichever is greater). In lab testing of Wausau products, **no reductions** were necessary.

Is special care required in the installation and adjustment of accessible window units?

Yes - These products will require additional care in installation, final adjustment, and maintenance, to achieve and maintain compliance. Plumb, square, and level installation is critical. Building settlement can affect operating forces, and necessitate post-installation adjustment.

Can standard operable windows be "adapted" to achieve accessibility at a later date?

Not always - The fieldwork necessary will vary widely with application and window type. Adaptation may be as simple as hardware adjustment - or may require complete reconfiguration of window openings and surrounding conditions. If adaptability is desired, Wausau strongly encourages the design team to develop a window accessibility plan early in the design process, then detail and specify products accordingly.

What special disclaimers and qualifications apply to accessible windows?

In addition to standard disclaimers, qualifications, and terms and condition of sale, Wausau Window and Wall Systems makes no claim, and takes no responsibility for, ADA compliance of the total window or door installation on site, including but not limited to, hardware, approach area, reach, force(s), motion, etc., nor for acceptance by authorities having jurisdiction.

Other questions?

Contact Wausau's architectural engineers at info@wausauwindow.com.



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