
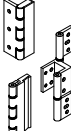
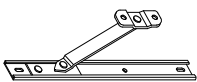
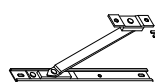




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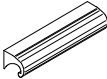
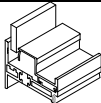
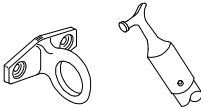
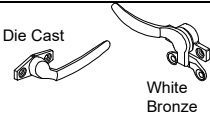
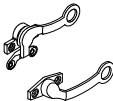
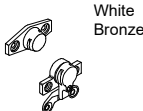
Projected and Casement

COMPONENT	MATERIAL	FINISH	WINDOW SERIES																FEATURES
			2-3-4250i INvent™	All -XLT INvent™	2250 Insert Vents	2-3-4250 Series	2250-E Epic™	4250i Sim. Dbl. Hung	2250i-BHM Blast	3250-H Heritage™	3-4250i-V Visuline™	3250-HP Hurricane	3250i-HP Hurricane	4000i-DT Psych	3250-Z ZSL	4250-OS Offset	4250-Z Multi-Lock	TD-4250i Terrace	
HINGES																			
Four-Bar Hinges 10" 16" 24" 	Stainless Steel	Uncoated	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●	●	Our most popular hinge selection. High performance concealed hinges with friction adjustment. Recommended casement vent weight limit is 115 lbs. Projected weight limits vary, please consult with Wausau on projected vents over 15 sq ft.
Butt Hinges Half-Mortise Concealed Surface Mounted 	Aluminum	Exposed Surfaces Match Window	○	○	○	○	○	○	○	○	●	●	●	○	○	○	○	●	High strength extruded aluminum hinges with coated stainless steel pins, nylon separators and end caps. Recommended for egress or large vent size. Always used in conjunction with friction adjusters.
VENT CONTROL DEVICES																			
Friction Adjuster 	Stainless Steel	Uncoated	○	○	○	○	○	○	○	○	●	●	●	○	○	○	○	*	Limits casement swing to 85°. Adjusting set screw applies friction for smooth operation. Always use with butt hinges. <small>* Terrace doors are fitted with LCN 4040 closers.</small>
Limited Opening Device 			○	○	○	○	○	○	○	○	●	●	●	○	○	○	○	*	Limits opening for low sills, child safety, buffeting wind, limited projection or emergency ventilation. Keyed release to extend opening. <small>* Terrace doors are fitted with LCN 4040 closers.</small>
Keyed Support Arm 			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Limited Opening Stop Block 	Aluminum	Mill	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Installed in track of four-bar hinge to limit opening, as an alternate to a separate limited opening devices.

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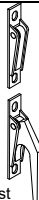

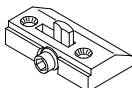
Projected and Casement (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES																FEATURES	
			2-3-4250i iNvent™	All -XLT iNvent™	2250 Insert Vents	2-3-4250 Series	2250-E Epic™	4250i Sim. Dbl. Hung	2250i-BHM Blast	3250-H Heritage™	3-4250i-V Visuline™	3250-HP Hurricane	3250i-HP Hurricane	4000i-DT Psych	3250-Z ZSL	4250-OS Offset	4250-Z Multi-Lock	TD-4250i Terrace		2200 iWeb only
PULL HANDLES																				
Waterfall Pull 	Aluminum	To Match Window	●	●	●	●	●	●		●			●		●	●	●		●	Applied to hand-operated project-out casement and awning vents when keeper locks are employed.
Pull Bead 	Aluminum	To Match Window	●	●	●	●		●											●	Pull handle extruded into profile of glazing beads.
Pole Ring 	White Bronze	Clear E-Coat	●	●	●	●	●	●		●									●	Used when vents are out of reach. Most common on hopper vents. Available for awnings. Extruded aluminum pole operator and eye hook provided.
LOCKS																				
Cam Handles LH or RH Project-in or Project-out 	Zinc Die Cast	Brushed Copper Nickel, Standard Painted Colors	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Die cast handles are a contemporary economical alternative to the rich, smooth, retro appearance of white bronze.
Ring Cams 	or	or	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Used when vents are out of reach. Most common on hopper vents. Available for awnings. Extruded aluminum pole operator and eye hook provided.
Handle-less Cam with Removable Key 	White Bronze	Clear E-Coat	●	●	●	●	●	●	●	●	●					●	●	●	●	Used for custodial operation of casements, hoppers and awnings.

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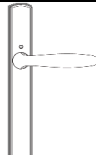

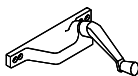
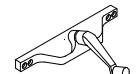
Projected and Casement (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES																	FEATURES	
			2-3-4250i INvent™	All -XLT INvent™	2250 Insert Vents	2-3-4250 Series	2250-E Epic™	4250i Sim. Dbl. Hung	2250i-BHM Blast	3250-H Heritage™	3-4250i-V Visuline™	3250-HP Hurricane	3250i-HP Hurricane	4000i-DT Psych	3250-Z ZSL	4250-OS Offset	4250-Z Multi-Lock	TD-4250i Terrace	2200 (Web only)		
LOCKS (continued)																					
Single Point Keeper		Zinc Die Cast	Brushed Copper Nickel, Standard Painted Colors	○	○	○	○		○		○	○				○	○		○	Keepers can help avoid the need for wicket screens. Die cast handles are a contemporary and economical alternative to the rich, smooth, retro appearance of white bronze.	
		White Bronze	Clear E-Coat	●	●	●	●	●	●	●	○					○	●		●	Keepers are most commonly frame-mounted on project-out casements and awnings. Can also be vent-mounted on inswing casements and hoppers. White bronze is Wausau's standard hardware finish.	
Two Point Keeper (Three Point Keeper also available)	 Die Cast	Zinc Die Cast	Brushed Copper Nickel, Standard Painted Colors	○	○	○	○		○		○	○				○	○		○	Die cast handles are a economical alternative to the rich, smooth appearance of white bronze. Also available handle-less for custodial operation.	
	 White Bronze	White Bronze	Clear E-Coat	●	●	●	●	●	●	●	○		●			○	●		●	Two- and three-point keepers allow single handle operation of taller vents, while avoiding the need for wicket screens.	
Concealed Lock		Zinc Die Cast Lock with Nylon Housing	Uncoated			○	○					○				○	○		○	Concealed flush-mount hex-keyed lock for custodial operation.	
Tamper Resistant Concealed Lock						○	○					○		●	○	○			○	Tamper resistant hex keys require a special pin feature for lock release.	

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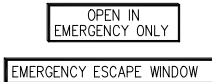
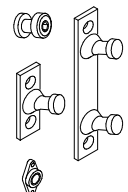
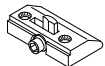
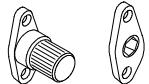
Projected and Casement (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES																FEATURES	
			2-3-4250i iNvent™	All -XLT iNvent™	2250 Insert Vents	2-3-4250 Series	2250-E Epic™	4250i Slim. Dbl. Hung	2250i-BHM Blast	3250-H Heritage™	3-4250i-V Visuline™	3250-HP Hurricane	3250i-HP Hurricane	4000i-DT Psych	3250-Z ZSL	4250-OS Offset	4250-Z Multi-Lock	TD-4250i Terrace		2200 (Web only)
LOCKS (continued)																				
Security Lock 	Zinc Die Cast	Brushed Copper Nickel, Standard Painted Colors																	Used for additional security on inswing casement and hopper windows. Key is non-removable in the unlocked position.	
Multi-Lock Set 	Aluminum	Clear or Bronze Anodized, Standard Painted Colors																	A popular modern option for selected project-in and project-out casements, awnings and hoppers. Single-handle operation, with concealed locking points and optional corner drive units for large vents. Removable handle available.	
Terrace Door Lock Set 																				Verona-style terrace door handle with manual compression lock feature. Interior and exterior operation. <small>* Terrace doors are fitted with LCN 4040 closers.</small>
Terrace Door Thumb Turn 																				Supplemental interior lock for added security on terrace doors.
OPERATORS																				
Roto Operator (Single Arm) 	Zinc Die Cast	Brushed Copper Nickel, Standard Painted Colors																	Single arm rotos used with outswing casement vents can avoid the need for wicket screens. Always use friction adjusters if rotos are used in conjunction with butt hinges.	
Roto Operator (Dual Arm) 																				Dual arm rotos used with awning vents can avoid the need for wicket screens. Always use friction adjusters if rotos are used in conjunction with butt hinges.

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Projected and Casement (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES																FEATURES
			2-3-4250i Invent™	All -XLT Invent™	2250 Insert Vents	2-3-4250 Series	2250-E Epic™	4250i Sim. Dbl. Hung	2250i-BHM Blast	3250-H Heritage™	3-4250i-V Visuline™	3250-HP Hurricane	3250i-HP Hurricane	4000i-DT Psych	3250-Z ZSL	4250-OS Offset	4250-Z Multi-lock	TD-4250i Terrace	
SPECIALTY																			
Egress Tags 	Aluminum	Painted (Red on White)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Applied to egress windows as required. Check local codes for specific requirements.
Window Washing Restraint and Tieback 	Cast Stainless Steel	Brushed or Painted to Match Window	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Standard stabilizer, single post, double post or flush-mounted spring loaded. Check local codes for specific requirements, and consult with a window washing equipment specialist.
INTEGRAL BETWEEN-GLASS VENETIAN BLIND CONTROLS																			
Access Door Lock 	Zinc Die Cast in Nylon Housing	Uncoated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Provides custodial access to concealed raise-lower cords, and for periodic cleaning. Access doors are also equipped with pin hinges as a standard, lift-out optional.
Venetian Blind Tilt Control 	Nylon	Black	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Occupant tilt, concealed custodial raise-lower. Available keyed, or with removable control knob.
GENERAL NOTE: Hardware Selection Guides are intended to provide an overview of Wausau's most popular hardware options. Vent size and desired functionality can play major roles in determining appropriate hardware selection, as can local code requirements. Certain hardware types can affect the Wausau Standard Limited Warranty. Please contact Wausau for more options and detailed information.																			

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Projected and Casement (continued)

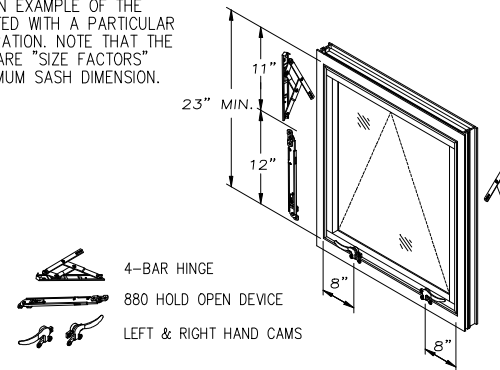
MINIMUM VENT DIMENSIONS

SIZE FACTOR TABLE

COMPONENT	MINIMUM SIZE FACTOR	NOTES
10" Four-Bar Hinge	11"	
Keeper (Single Point)	8"	
Keeper (Two Point)	Inquire	
Butt Hinge	14"	
Cam Lock	8"	
Limit Stop	Inquire	Dimension Varies with Degree of Opening
Support Arm	12"	Dimension Varies with Degree of Opening
Friction Adjuster	20"	
Dual Arm Roto	30"	For 10" Clear Opening
Roto/Single Arm	15"	Increases to 22" when used with Four-Bar Hinge

DIAGRAM

THE FOLLOWING IS AN EXAMPLE OF THE LIMITATIONS PRESENTED WITH A PARTICULAR HARDWARE CONFIGURATION. NOTE THAT THE SUM OF THE HARDWARE "SIZE FACTORS" DETERMINE THE MINIMUM SASH DIMENSION.



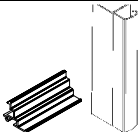
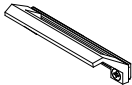


PHOTOGRAPH



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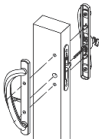
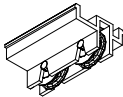
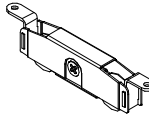
Hung and Rolling

COMPONENT	MATERIAL	FINISH	WINDOW SERIES								FEATURES	
			310i-SH Single Hung	410i-HS Single Slide	4100i-HS Dbl. Slide	D-5100 Sl. Gl. Door	2700-HSD(Web only)	3100-DH (Web Only)	3150-DHT(Web only)	3151-SHT(Web only)		4100-HS (Web only)
BALANCES												
Block and Tackle 	Steel Housing		○					○	○	○		Provides approximately 30% lifting and closing assistance, while helping to hold sash stationary. Sash weight limit 60 pounds. Sized to fit individual sash width and height. Requires periodic replacement in heavy use applications.
Ultralift™ Balance 	Spring-assisted Spiral Balance		●					●	●	●		Provides approximately 70% lifting and closing assistance, much more than block and tackle balances, while helping to hold sash stationary. Sash weight limit 115 pounds for side-load, 80 pounds for tilt. Sized to fit individual sash width and height. Requires periodic replacement in heavy use applications.
HANDLES												
Pull Bead 	Aluminum	To Match Window	●	●	●	●	●	●	●	●	○	Handles can be extruded as part of glazing beads and meeting rail members. Some continuous pull beads can be fitted with spring-loaded sash latches.
Sash Lift 	Zinc Die Cast	Black						○	○	○	●	Easy-to-grip contemporary lift handle. Location is adjustable on windows without between-glass blinds.
	White Bronze	Clear Coat						○	○	○	○	Easy-to-grip retro lift handle. Location is adjustable on windows without between-glass blinds.

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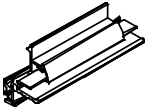
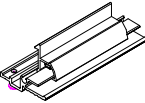
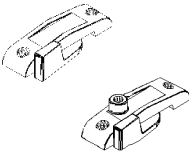
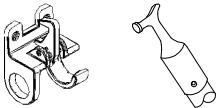
Hung and Rolling (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES									FEATURES	
			310I-SH Single Hung	410I-HS Single Slide	4100I-HS Dbl. Slide	D-5100 Sl. Gl. Door	2700-HSD (Web only)	3100-DH (Web Only)	3150-DHT (Web only)	3151-SHT (Web only)	4100-HS (Web only)		
HANDLES (Continued)													
Surface Applied Pull Handle 	Aluminum	Black				○							Contemporary and economical basic sliding glass door handle with flip latch.
Mortised "Signature" Pull Handle 	White Bronze	Clear Coat				●							Cast profiled handle for smooth, rich, retro appearance. Available with a variety of locking features. Our recommended sliding glass door accessory.
ROLLERS													
Sliding Window Roller Set 	Delrin™ Tires in Nylon Housing, SS Bearings	Natural		●	●		●					●	Ball bearing nylon rollers provide smooth, quiet operation. Rollers are non-adjustable. Shipping blocks prevent premature wear and damage.
Sliding Glass Door Tandem Roller Trucks 	Steel	Zinc Plated				●							Adjustable heavy-duty ball bearing rollers engage in sash bottom rails, and ride on stainless steel tracks. Tandem trucks carry doors up to 500 lbs. Nylon tires are optional for doors up to 250 lbs.
	Stainless Steel	E-Coat				○							Stainless roller assemblies are available for more aggressive environments.

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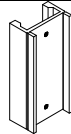

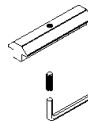

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Hung and Rolling (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES								FEATURES	
			310I-SH Single Hung	410I-HS Single Slide	4100I-HS Dbl. Slide	D-5100 Sl. Gl. Door	2700-HSD(Web only)	3100-DH (Web Only)	3150-DHT(Web only)	3151-SHT(Web only)		4100-HS (Web only)
LATCHES												
Spring-Loaded Bead Latch (Standard Glazing) 	Aluminum	Black	●	●	●			○	○	○	○	Provides an automatic latching feature for inactive sash, both hung and rolling. Adjustable location.
Spring-Loaded Bead Latch (Between-Glass Blinds) 	Aluminum	Black			○			○	○	○	○	Provides an automatic latching feature for inactive sash, both hung and rolling. Location not adjustable when between-glass blinds are used.
Meeting Rail Sweep Latch 	Zinc Die Cast	Black	○	○	○			●	●	●	●	Contemporary and economical basic hung or rolling window latching mechanism. Provides a visual indication of lock status.
	White Bronze	Clear Coat						○	○	○	○	White bronze finish for smooth, rich, retro appearance. Available with tamper-resistant set screw. Provides a visual indication of lock status.
Transom Latch with Pole Ring 	White Bronze	Clear Coat						○	○	○		Spring-loaded latch provide for automatic latching at head of hung windows. Pole operation possible. Located at centerline.

Architectural Windows

Hung and Rolling (continued)

COMPONENT	MATERIAL	FINISH	WINDOW SERIES										FEATURES	
			3101-SH Single Hung	4101-HS Single Slide	41001-HS Dbl. Slide	D-5100 Sl. Gl. Door	2700-HSD(Web only)	3100-DH (Web Only)	3150-DHT(Web only)	3151-SHT(Web only)	4100-HS (Web only)			
LIMIT STOPS														
Side-Load Limit Stop		PVC	Black				○	○		●			○	Placed in track to prevent balance over-extension, or to stop sash at a specified dimension. Can be attached using tamper-resistant fasteners.
Tilt Window Limit Stop		Zinc Die Cast	Uncoated								●	●		Hooked on frame legs, and secured with a set screw, to prevent balance over-extension, or to stop sash at a specified dimension. Can be attached using tamper-resistant fasteners.
Removable Limit Stop		Aluminum	Black	●	○									Placed in track to prevent balance over-extension, or to stop sash at a specified dimension. Can be attached using tamper-resistant fasteners.
Non-Take-Out Block		PVC	Black				○	○	○				○	Prevents sliding sash removal. Can be attached using tamper-resistant fasteners.
GENERAL NOTE: Hardware Selection Guides are intended to provide an overview of Wausau's most popular hardware options. Sash size and desired functionality can play major roles in determining appropriate hardware selection, as can local code requirements. Certain hardware types can affect the Wausau Standard Limited Warranty. Please contact Wausau for more options and detailed information.														