

JELD-WEN®

WINDOWS & DOORS

PREMIUM WOOD DOUBLE-HUNG SASHPACK® SASH REPLACEMENT KIT



RELIABILITY *for real life*®



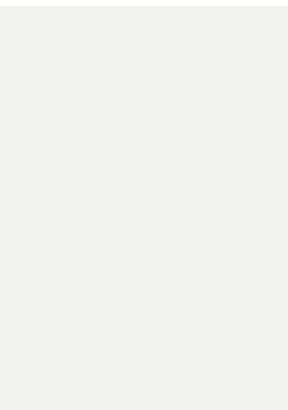


REPLACING THE OLD WITH ALL-NEW RELIABILITY

There are so many ways JELD-WEN can help your home work well for the way you live. Replacing your old windows with new, energy efficient Premium Wood windows is an excellent place to begin. The following pages will show you how easy it is to make the transition from old and drafty to fresh and new.

Easy to install • Energy efficient • Easy to clean

RELIABILITY *for real life*®



Custom and standard sizes • Aesthetic options



Materials and components

All Premium Wood windows and patio doors are crafted from solid pine AuraLast™ wood, which provides protection from wood decay, water absorption and termite infestation and is warranted for 20 years.

We also offer two different exterior options: primed wood and clad-wood. Primed wood can be painted any color you choose, and it's a good choice for moderate climates. Or you may prefer the added protection of low-maintenance metal cladding.

Energy efficiency

This is a collection of windows that offer exceptional levels of radiant efficiency. The glass options made available ensure consistent energy efficiency; Low-E insulating glass succeeds in blocking 84 percent of damaging UV rays and improves performance by 96 percent on cold nights. Premium Wood windows offer insulating Low-E glass with virtually invisible energy coatings that help your home remain cool in summer and warm in winter. Other glass options include Solar Bronze or Grey tinted glass or tempered glass (or a combination of these options).



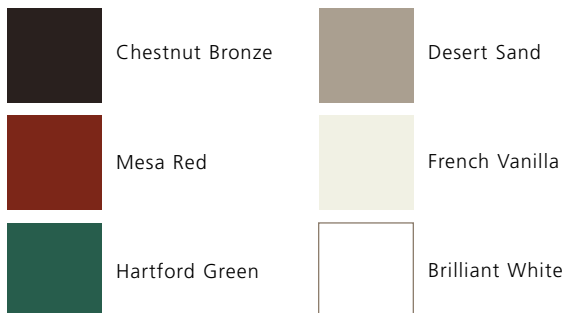
In warm weather, Low-E glass reflects the sun's energy and prevents it from entering the home.



In cold weather, Low-E glass reduces the amount of radiant heat loss by reflecting it back inside.

Clad finishes

Metal clad finishes are available in six standard colors.



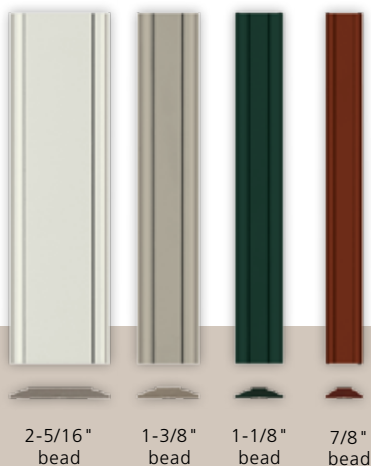
Actual colors may vary from the samples displayed above.

Sizes

Our windows are available in many standard sizes as well as custom sizes to accommodate the classic double-hung windows so commonly found in older homes. *Please see pages 8 and 9 for a complete list of standard sizes.*

Divided lites

Divided lite options include simulated divided lites (SDL) for an authentic look, full-surround grilles (FS) that can be removed for easy cleaning, and maintenance-free grilles between the glass (GBG). Choose from a variety of widths and profile designs.



BEFORE YOU START, MEASURE, READ AND ORGANIZE



Measure existing window

Width

- Measure window width from inside jamb to inside jamb. If necessary, remove jamb liners.

Height

- Measure the opening height of your window. If necessary to achieve head jamb to sill measurement, remove wood head parting stop (a wood trim that runs horizontally across the head jamb) to take measurements. For single-hung windows (upper sash does not move), support upper sash and remove blocks or brackets that hold it in place; this will permit upper sash to be lowered.
- Raise the lower sash a few inches and thread your tape between both sash.
- Carefully measure the window height from the point where the upper sash meets the head jamb to the point where the exterior of the lower sash meets the sill.

Sill angle

- The standard double-hung sill slopes to the exterior at a 14-degree angle.
- Use an angle finder (available in most hardware stores) or the cutout templates on page 17 of this brochure to verify the angle of the sill.
- If sill angle is not 14 degrees, discuss options with your supplier.

To order, contact the JELD-WEN dealer nearest you. To find a dealer, please visit www.jeld-wen.com/findsupplier or call 800.826.6793.

Tools needed for installation



Hammer



Flathead screwdriver



Putty knife or pry bar



Pliers



Nail set

Materials supplied

- One upper sash with weatherstrip
- One lower sash with weatherstrip
- Pine head jamb filler with weatherstrip flange
- Wood head parting stop
- One pair of vinyl jamb liners with balance hardware
- Common and finishing nails
- Metal jamb liner brackets with nails
- Two foam head jamb liner gaskets

Please refer to page 16 for parts identification.



CAUTION: The unsupported single-hung upper sash will fall. Use help if necessary.

SIZING CHART – STANDARD SIZES

2 Lt. Glass Size	Sash Opening W x H
16" x 14"	1'- 8" x 2'- 10"
16"	3'- 2"
18"	3'- 6"
20"	3'- 10"
22"	4'- 2"
24"	4'- 6"
26"	4'- 10"
28"	5'- 2"
30"	5'- 6"
32"	5'- 10"
34"	6'- 2"
36"	6'- 6"
24/36"	5'- 6"
20" x 14"	2'- 0" x 2'- 10"
16"	3'- 2"
18"	3'- 6"
20"	3'- 10"
22"	4'- 2"
24"	4'- 6"
26"	4'- 10"
28"	5'- 2"
30"	5'- 6"
32"	5'- 10"
34"	6'- 2"
36"	6'- 6"
24/36"	5'- 6"

2 Lt. Glass Size	Sash Opening W x H
24" x 14"	2'- 4" x 2'- 10"
16"	3'- 2"
18"	3'- 6"
20"	3'- 10"
22"	4'- 2"
24"	4'- 6"
26"	4'- 10"
28"	5'- 2"
30"	5'- 6"
32"	5'- 10"
34"	6'- 2"
36"	6'- 6"
24/36"	5'- 6"
26" x 14"	2'- 6" x 2'- 10"
16"	3'- 2"
18"	3'- 6"
20"	3'- 10"
22"	4'- 2"
24"	4'- 6"
26"	4'- 10"
28"	5'- 2"
30"	5'- 6"
32"	5'- 10"
34"	6'- 2"
36"	6'- 6"
24/36"	5'- 6"

WIDTH ADJUSTMENT: This sash replacement kit can be adjusted to openings up to 1/4" wider than the standard opening. For openings that are more than 1/4" wider, place a 1/8" shim behind all the metal jamb liner brackets.

MAKE SURE EXISTING FRAME IS SQUARE

- Measure from upper left corner to lower right corner of existing frame with tape measure.
- Measure from upper right corner to lower left corner; compare measurements.
- If measurements are within 1/4", the frame is within tolerance; if more than 1/4" difference, the frame is not within tolerance. Call a contractor to adjust.



IMPORTANT: As with any retrofit project, SashPack® replacement kit installations may vary and require flexibility in methods and materials. This SashPack kit is designed to be installed into a structurally sound, plumb and square opening. Failure to do so will hinder the fit and performance of this product.

2 Lt. Glass Size	Sash Opening W x H
28" x 14"	2'-8" x 2'-10"
16"	3'-2"
18"	3'-6"
20"	3'-10"
22"	4'-2"
24"	4'-6"
26"	4'-10"
28"	5'-2"
30"	5'-6"
32"	5'-10"
34"	6'-2"
36"	6'-6"
24/36"	5'-6"
32" x 14"	3'-0" x 2'-10"
16"	3'-2"
18"	3'-6"
20"	3'-10"
22"	4'-2"
24"	4'-6"
26"	4'-10"
28"	5'-2"
30"	5'-6"
32"	5'-10"
34"	6'-2"
36"	6'-6"
24/36"	5'-6"

2 Lt. Glass Size	Sash Opening W x H
36" x 14"	3'-4" x 2'-10"
16"	3'-2"
18"	3'-6"
20"	3'-10"
22"	4'-2"
24"	4'-6"
26"	4'-10"
28"	5'-2"
30"	5'-6"
32"	5'-10"
34"	6'-2"
36"	6'-6"
24/36"	5'-6"
40" x 14"	3'-8" x 2'-10"
16"	3'-2"
18"	3'-6"
20"	3'-10"
22"	4'-2"
24"	4'-6"
26"	4'-10"
28"	5'-2"
30"	5'-6"
32"	5'-10"
34"	6'-2"
36"	6'-6"
24/36"	5'-6"

MAKE SURE EXISTING JAMB IS STRAIGHT

- Place a level or straightedge against jamb.
- Look for gaps anywhere between level and jamb.
- If the gap is greater than 1/16" for every 2" (not to exceed 1/8"), the surface is not straight. Call a contractor to adjust.



IMPORTANT: The replacement sash should be finished either before installation or immediately after (whichever is more convenient).

REMOVE OLD SASH

There are two types of old windows: those built with a weight and pulley balance system and those with jamb liners. Each requires special instruction.

For windows with jamb liners

- Remove upper and lower sash and both jamb liners.

For windows with weight and pulley balance system

- Use a utility knife to carefully score inside stops, (which run vertically on side jambs in front of lower sash) where they meet frame.
- Gently pry off inside stops with putty knife. Set aside for reuse.
- Cut the cords running to the lower sash (see caution).
- Remove lower sash.
- If present, score and remove jamb parting stops.
- Support upper sash.
- If upper sash is fixed (nonmoving), remove blocks or brackets that hold window in place; this will permit upper sash to be lowered.
- If upper sash is operational, cut cords running to sash and remove them from frame.
- Remove the upper sash.
- Use a utility knife to carefully score wood head parting stop (which runs horizontally on the head jamb filler between the two sash). Gently pry off with putty knife.



CAUTION: Many older windows have hidden sash weights attached to the sash with a cord. Before you remove the sash, cut these cords with extreme caution. Ease the weights down until the cord goes slack. Leave weights inside the frame. If pulleys are visible, remove them from the frame to allow proper jamb liner installation or use a hammer to carefully knock them through the jamb. Fill holes with loose-fill insulation.



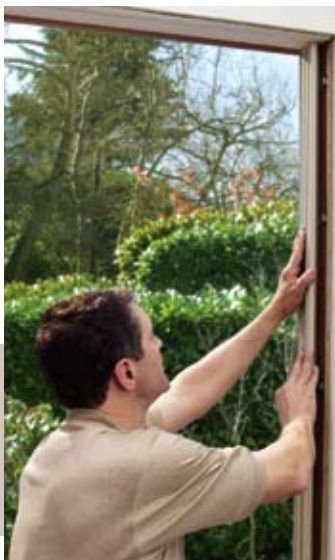
PREPARE FRAME

- Position a jamb liner (without brackets) against the side jamb.
- Measure the distance between the top of the jamb liner and the head jamb. If that distance is $\frac{3}{8}$ ", proceed with your installation using the head jamb filler. If the gap is less than $\frac{3}{8}$ ", you will only use the wood head parting stop, not the head jamb filler.
- Position head jamb filler in place with the front weather-strip flange facing the **exterior** of the home. Nail it in with finishing nails provided in the kit.



Apply the jamb liner brackets

Apply the jamb liners





Place the head filler

- Install metal jamb liner brackets on each side of the frame. These are included in your kit—use half the brackets on the left side and half on the right side.
 - Position the first one 1/16" from the blind stop and approximately 4" down from the head jamb. Secure the bracket with the common nails included in the kit. Secure a second jamb liner bracket 1/16" from the blind stop and 4" above the sill. Secure with the common nails provided.
 - Repeat on the other side of the frame.
 - Secure the remaining brackets, spacing them evenly between the upper and lower brackets.
 - A foam gasket pad is provided for each jamb liner. Remove the paper backing from the adhesive and position the pads at the top of each jamb liner.
-
- We recommend applying a bead of silicone along the interior side of the blind stops to seal the jamb liners in place.
 - Starting from the top, press one jamb liner onto the brackets, making certain they snap into place. Install the other jamb liner the same way.

INSTALL SASH

(You may need a helper for this part of the installation.)

- With the bulb weatherstrip facing the exterior, position the wood head parting stop horizontally between the jamb liners on the inside tracks. Slide the parting stop all the way to the top and check for proper fit. For uneven surfaces, a bead of quality caulking in the caulking groove of the wood head parting stop is recommended. Tack parting stop into position with the finishing nails provided. Do not nail tight at this time.
- Install the upper sash first. Hold the sash horizontally with the left side slightly lower than the right side.
- Insert the pivot pin into the jamb liner track nearest the **exterior** of the house.

The pivot pin must be positioned above the clutch inside the track.

- Being careful that the pivot pin remains above the clutch, lower the right side of the sash into the jamb liner track nearest the **exterior** side of the house until the sash is horizontal.
- Tilt the sash up into place while depressing the jamb liner on both sides.
- Slide it down until the pivot pins contact the clutch in both jamb liners. Now the upper sash should move up and down.
- With the upper sash in the closed position, check the alignment of the wood head parting stop to the sash for proper fit. Now the parting stop may be securely nailed.



Install the upper sash



Install the wood head parting stop

Install the lower sash

- To install the lower sash, repeat the previous steps with one important exception: pivot pins must be placed in the jamb liner track nearest the **interior** of the house.
- With left side of the sash lower than the right, insert the left pivot pin in the track.

The pivot pin must be positioned above the clutch.

- Lower the right side of the sash into the track.
- Tilt the sash up and engage the clutches.

Final steps

- Now, slide both sash up and down to check for proper fit and smooth operation.
- Work the sashlock to make sure both sash are in the correct alignment.
- To finish off the new look, you may want to replace the interior trim.

Tilting out the sash for cleaning

- To access the sash for cleaning, simply unlock the window and open the lower sash about six inches.
- While gripping both ends of the lower sash top, depress the jamb liners and tilt the sash inward.
- Repeat for upper sash.



GLOSSARY

Clutch: a part of the balance system into which the pivot pins are inserted or engaged

Grille: a decorative grid on the interior or exterior of the glass, between the glass panes, or in any combination

Head Jamb: the horizontal frame element at the top of the window

Pivot Pin: the pin on the bottom corners of single or double-hung sash that engages the balance system and also allows the sash to pivot for easy removal and installation

Rails: the horizontal elements of the sash

Sash: a combination of stiles, rails and glass in a window

Sashlock: the primary lock on the sash that secures the window opening

Side Jambs: the vertical frame elements on either side of the window

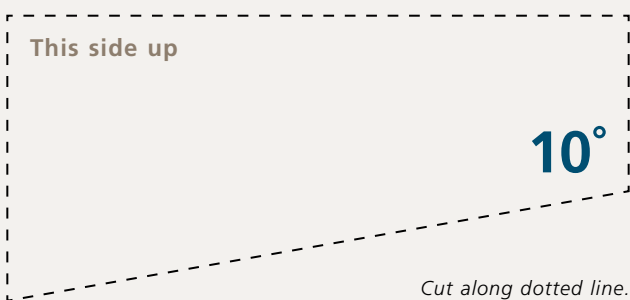
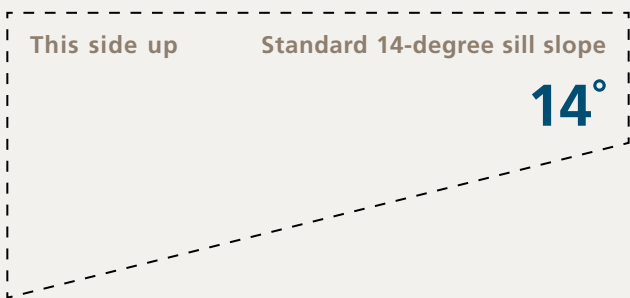
Sill: the horizontal frame element at the bottom of the window

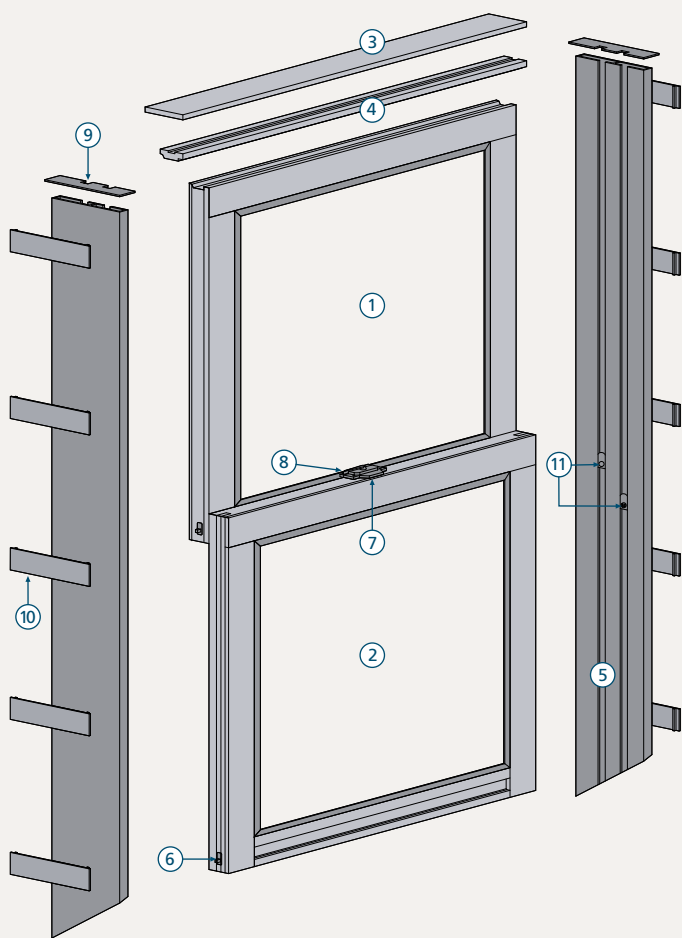
Stiles: the vertical elements of the sash

Window Frame: the assembly of frame elements (side jambs, head jamb and sill) that holds the sash and attaches to the rough opening

Wood Head Parting Stop: wood trim that runs horizontally across the head jamb

Cutout Templates for Checking Sill Angle





- | | |
|----------------------------------|---------------------------------------|
| 1. Upper Sash | 7. Sashlock |
| 2. Lower Sash | 8. Lock Keeper |
| 3. Head Jamb Filler | 9. Foam Head Jamb Liner Gasket |
| 4. Wood Head Parting Stop | 10. Jamb Liner Brackets |
| 5. Jamb Liner | 11. Clutch |
| 6. Pivot Pin (installed) | |

JELD-WEN LIMITED WARRANTY

JELD-WEN® WOOD and METAL CLAD WOOD Window & Patio Door Warranty

OUR WARRANTY TO YOU

JELD-WEN® Wood and Metal Clad Wood Window and Patio Door products are designed to create lasting value for your home. This warranty is effective for all JELD-WEN wood and metal clad wood products manufactured by us on or after October 1, 2005 for use in the United States and Canada. Any previous warranties will continue to apply to products manufactured by us prior to this date. For additional information, including care, maintenance, and installation instructions, refer to www.jeldwen.com.

What This Warranty Covers:

We warrant that your products as identified below will be free from defects in material or workmanship from the date of initial installation for the time periods described below. This warranty includes free replacement parts to replace components of the window or door. Skilled labor (where deemed necessary by us) to replace the insulating glass unit or component is provided for two years (unless specified otherwise).

Twenty Year for Window & Patio Door Products (insulating glass, metal clad and wood parts, and hardware unless specified otherwise):

We warrant your window, patio door and component parts (e.g. exterior casing provided by JELD-WEN) thereof for twenty (20) years. This includes coverage for twenty (20) years for wood cellular level breakdown (often referred to as "wood cellular structure failure" or "fungal infestation") caused by decay and/or termites in JELD-WEN manufactured pine wood products. Warranty coverage outside the contiguous 48 states and Alaska is contingent upon approval from the JELD-WEN Customer Care Department. Please contact us.

Clad Finish*: Under normal atmospheric conditions, the clad finish on your metal clad window or patio door manufactured by us will be free from defects as follows:

- Custom Collection "Kynar" finishes are warranted for twenty (20) years and will not peel, check, crack, chalk, fade or change color
- All other products that include "polyester" finishes are warranted for ten (10) years and will not peel, check, crack, chalk, or change color

*The term "clad finish" means the painted finish on metal cladding. Clad products installed within one mile of a salt-water source (or other corrosive environment) require additional and specific maintenance requirements. Refer to our full care and maintenance instructions.

Special Coverages:

Laminated Glass/Hurricane Glass/Special Glazings: We warrant laminated glass, hurricane (impact) glass and special glazings (glass options not listed in our product literature) for five years.

Electric Operators: We warrant electric operators provided by us for one year (to include free replacement parts and skilled labor necessary to replace the operator for one year).

TRANSFERABILITY: In the event you sell your residence/building, this warranty is transferable to subsequent owners.

How to Get Assistance:

If you have a problem with your JELD-WEN product, contact the dealer/distributor or contractor from whom you purchased your product or contact us directly:

Mail: JELD-WEN
Attn: Customer Care Department – Wood/Metal Clad Wood
P.O. Box 1329
Klamath Falls, OR 97601

e-mail: jwwoodwarranty@jeld-wen.com
Fax: 541-850-2617
Phone: 800-JELD-WEN

We can respond quickly and efficiently if you provide the following: a) Note the JELD-WEN product you purchased and the window identification number (found on corner of glass), b) how to contact you, c) the address of where the product can be inspected, and d) a description of the problem and the product (photographs are helpful).

What We Will Do:

Upon receiving your notification, we will send out an acknowledgement within three business days. We will investigate your claim and will take appropriate action within 30 days after notification. If it is determined that the product does not have a defect covered by the warranty, we may charge an inspection fee for any onsite inspection that is required or requested by you. Because manufacturing materials and techniques can change, replacement part(s) may not be an aesthetic match to the original. If we are unable to provide replacement parts and repair is not practicable or cannot be made timely, then

For more information please visit
www.jeld-wen.com/resources

we will refund the purchase price. This guarantee gives you specific legal rights, and you may have other rights that vary from state to state.

What This Warranty Does Not Cover:

JELD-WEN is not liable for:

- Normal wear and tear; and natural weathering of surfaces (note: natural tarnishing of copper clad is not considered a defect).
- Naturally occurring corrosion or tarnishing of hardware finishes; damage to metal surfaces caused by chemicals (e.g. brick wash) or a harsh environment (e.g. salt spray or airborne pollutants) unless otherwise stated above.
- Glass breakage; failure due to misuse or abuse; and damage caused by failure to properly finish and provide maintenance, by alteration or modification to the window (e.g. customer applied tints or films, paint finishes, security systems), or as a result of any cause beyond the control of JELD-WEN (e.g. fire, flood, earthquake, other acts of nature).
- Slight imperfections or wavy distortions in the glass that don't impair structural integrity.
- Improper installation not in conformance with JELD-WEN installation instructions (note: see www.jeld-wen.com for current installation instructions); operational problems and problems related to water and/or air infiltration/leaking as a result of improper installation or flaws in building design or construction.
- Damage or poor product performance resulting from installation into a condition that exceeds product design standards and/or certified performance specifications and/or is not in compliance with building codes.
- Condensation or damage as a result of condensation (Note: most condensation problems are related to excessive humidity levels in a structure; contact a heating/air conditioning specialist for help).
- Labor and materials for repainting or refinishing activities, or the removal or disposal of defective product(s).
- Wood cellular structure failure for wood components other than of pine species and any components (including pine) that come in direct contact with soil. Note: superficial mold/mildew does not indicate wood cellular structure failure.
- Incidental or consequential damage. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this may not apply to you.

Note: Variance in color or texture of natural wood parts is not considered a defect. "Chalking" of the clad finish is not a defect unless it exceeds a numerical rating of eight (8) when measured in accordance with the standard procedures specified in ASTM D4214. Fading or changing in color of the "clad finish" is not a defect unless it exceeds five (5) E units (NBS), calculated in accordance with ASTM D2244, paragraph 6.3. Color change shall be measured on an exposed "clad finish" that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed "clad finish." Fading or color changes may not be uniform if the surfaces are not equally exposed to the sun and elements. If the above ASTM standards change, the standard in effect at the time of purchase applies. As an option to replacement, we may choose to refinish the product.

IMPORTANT LEGAL INFORMATION

This Warranty sets forth our maximum liability for our products. We shall not be liable for special, indirect, consequential, or incidental damages. Your sole and exclusive remedy with respect to any and all losses or damages resulting from any cause whatsoever shall be as specified above. We make no other warranty or guarantee, either express or implied, including implied warranties of merchantability and fitness for a particular purpose to the original purchaser or to any subsequent user of the product, except as expressly contained herein. In the event state or provincial law precludes exclusion or limitation of implied warranties, the duration of any such warranties shall be no longer than, and the time and manner of presenting any claim thereon shall be the same as, that provided in the express warranty stated herein.

No distributor, dealer or representative of JELD-WEN has the authority to change, modify or expand this warranty. The original purchaser of this product acknowledges that they have read this warranty, understand it and are bound by its terms and agrees to provide this warranty to the original owner of the structure into which the product is installed.

"JELD-WEN Wood and Metal Clad Wood Window and Patio Door products" as noted in this warranty shall refer to products produced in the United States and marketed under the JELD-WEN name.

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RELIABILITY *for real life*[®]

The JELD-WEN Web site is your ultimate resource for learning about our reliable windows and doors. It has all the product information and design advice you need. Visit us at www.jeld-wen.com today.

JELD-WEN[®]
WINDOWS & DOORS

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JELD-WEN reserves the right to change product specifications without notice. Please check our Web site, www.jeld-wen.com, for current information.

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