

# KOLBE<sup>®</sup>

## WINDOWS & DOORS

### **FORGENT<sup>®</sup> SERIES**

### **All Glastra<sup>®</sup> & Wood Glastra<sup>®</sup>**

### **Replacement Double Hung &**

### **Studio Windows**

### **Installation Instructions**

**READ THESE INSTRUCTIONS COMPLETELY BEFORE  
STARTING ANY INSTALLATION**

#### **⚠ CAUTION**

Lead-based paint may be present in older homes, and the removal of windows & doors may cause this paint to be disturbed. In order to minimize exposure to lead-based paint dust, please consult [www.epa.gov/lead](http://www.epa.gov/lead) for more information.

[www.kolbewindows.com](http://www.kolbewindows.com)

Installer: DO NOT DISCARD Please leave the Installation Guide with the home owner to file for future reference.

Please read and follow the Installation Instructions completely before installing. If you have any questions about this or any of our products, please call your local Kolbe dealer.

#### NOTICE

Failure to install and maintain our product according to these instructions will void any warranty, written or implied. The installer is responsible for consulting the contractor, structural engineer, architect, or consumer, for proper installation according to local codes and/or ordinances.

#### ⚠ CAUTION

Some codes require the use of pressure treated lumber to line rough openings. Corrosion resistant materials, such as stainless steel or hot-dip galvanized steel, must be used for fasteners and anchors having direct contact with pressure treated lumber.

#### ⚠ WARNING

Proper Eye and Hearing Protection must always be worn when installing, removing or performing adjustments to Kolbe window and door products.

#### NOTICE

Before applying sealant or adhesive pads, make sure the area to be sealed is clean, dry, and frost-free. Use color-matching or transparent sealant. Photos show contrasting sealant for clarity and demonstration only. Use a dab of sealant behind any exterior-facing screws or nails.

### INTRODUCTION

Proper installation and maintenance of this product is essential to its performance. The following instructions are to be used as guidelines only. Kolbe recommends consulting a local Kolbe supplier or an experienced contractor, architect, or structural engineer since every installation is different. Installation of this product is the sole responsibility of the architect, contractor, building owner, or consumer and Kolbe has no responsibility in this regard.

- **CAUTION:** Lead-based paint may be present in older homes, and the removal of windows may cause this paint to be disturbed. In order to minimize exposure to lead-based paint dust, please consult [www.epa.gov/lead](http://www.epa.gov/lead) for more information.
- Care must be taken to properly recycle or dispose of old materials. Any recyclable materials should be separated from non-recyclable or hazardous materials. Please consult with local or state authorities regarding proper disposal of non-recyclable or hazardous materials.
- In light of the exterior film's low surface tension and dirt repellent characteristics, it is important that proper sealants are chosen and used for sealing the perimeter of the window and door frames to the surrounding building structures. Sealants that have been approved are Dow Corning 758 silicone sealant and Dow Corning 795 silicone sealant.

### ITEMS REQUIRED BY INSTALLER

- Steel Toe Footwear
  - Hard Hat
  - Sealant
  - Rubber Mallet
  - Harness and Tie offs (per site regulations)
  - Safety Glasses
  - Cordless or Pneumatic Reversible Driver
  - P2 Phillips Head Bits (6 inches long)
  - Cordless or Pneumatic Caulk Gun
  - Level
  - Tape Measure
  - Construction Pencils
  - Tapcon screws or Drill Hammer for applying grommets (screw sleeves) into concrete.
  - Heat Gun (Impact units only)
  - Closed cell foam backer rod in 1/2" (13mm) diameter and 1" (25mm) diameter
  - Shims
  - Square
  - Flashing tape
  - Fiberglass Insulation
  - Putty knife
- For installation technique 1:
- 1-1/2" (38mm) or longer galvanized roofing nails
- For installation technique 2:
- Kolbe installation clips
  - #8 x 3/4" (19mm) flat head screws
  - #8 x 1-1/2" (38mm) flat head screws or 8d common nails
- For installation technique 3:
- 9/64" (4mm) drill bit
  - #10 x 2-1/2" (64mm) flat head screws

## PRELIMINARY PREPARATION

Remove the shipping packaging, skid plates or factory applied bracing. Make sure the unit is not damaged and the dimensions are appropriate for the rough opening. Check that you have all necessary hardware.

### PREPARE ROUGH OPENING:

1. The material/lumber quality and the fasteners must be structurally adequate for design load requirements.
2. Typically, the rough opening should be 1/2" (13mm) wider and 1/2" (13mm) higher than the outside measurement of the window frame.
3. The rough opening must be plumb, square, level and in plane.
4. Individual construction members should not be twisted.
5. The floor beneath the unit must be solid and level for proper unit operation.

### ⚠ CAUTION

Before applying sealant, make sure the area to be sealed is clean, dry, and frost-free. Use color- matching or transparent sealant.

## SELECT INSTALLATION TECHNIQUE

These techniques are general guidelines only, and may not be appropriate for all performance requirements. Kolbe recommends three installation types. Choose the best installation method for your situation.

### *Nail through the nail fin method*

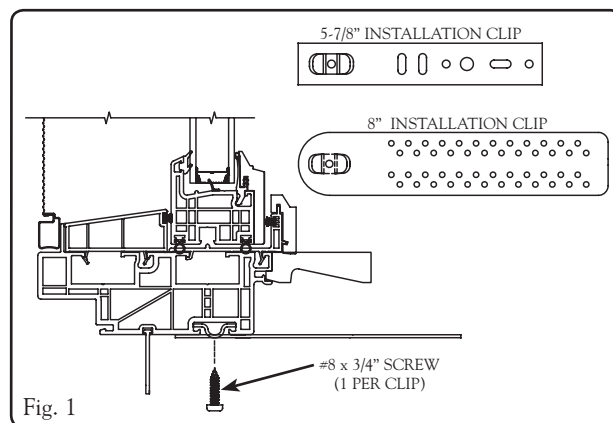
During nail through the nail fin installation, you will fasten the window by driving 1-1/2" galvanized roofing nails into every pre-punched hole in the nailing fin. Make sure nail fins lie flat as possible.

### *Installation clip method*

See Fig. 1. When using the installation clip method the installation clips are not factory applied and are installed in the field. Attach the installation clips to the frame now. The installation clips are installed by turning the clip catches into the frame. Use one #8 x 3/4" self-drilling screw per clip. On standard performance units, the clips are to be placed 6" from each corner and 16" on center. On impact rated units the clips are placed 6" in from each corner and 12" on center.

### *Screw through frame method*

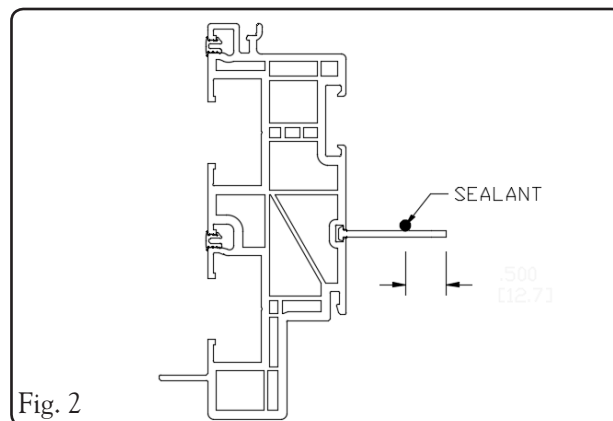
If chosen during ordering, the frame will come pre-drilled from the factory at the head and sides. The sill will need to be pre-drilled during installation. Shims are required to be placed at the same locations as the fasteners to prevent bowing of the frame. Use #8 x 2-1/2" screws spaced 6" from each corner and 16" on center (spacing for impact rated units is 6" from each corner and 12" on center) to attach the unit to the opening.



## SEALANT AND FLASHING

Kolbe recommends following ASTM E 2112-01 guidelines for sealing and flashing exterior windows. Maintain a gap of at least 1/4" (6mm) between the window frame and the rough opening structure. Create a proper seal between the window and the building exterior. For more details, see our pamphlets Sealant Information and Flashing Information. These publications are available from your Kolbe Window and Door supplier or visit our website to download a copy.

See Fig 2. For sealant on nailing Fin, apply a 3/16" (5mm) bead of sealant to the nail fin as shown. Silicone is required at the head and jambs. No sealant required at the sill.



## INSTRUCTIONS FOR ALL INSTALLATION TECHNIQUES

From the exterior, carefully tilt unit, sill first, into the rough opening. Press the nailing fin evenly against the exterior sheathing. Center the unit, equalizing the frame to rough opening gap.

See Fig. 3. Shim along the head, sill, and side. Shimming will ensure correct margins, parallel jambs, a level unit, and proper operation. Do not bow the side jambs. Do not over shim.

See Fig. 3 & 4. Measure the distance from the interior upper left frame corner diagonally down to the lower right frame corner, and then measure the other two corners. These measurements must be within 1/16" (2mm) of each other. In addition, the width of the frame at the center must be the same as the width at each end. The margins around the window should be even on all sides.

### Technique #1: Through the nail fin

See Fig. 5. Fasten the window in place by driving 1-1/2" galvanized roofing nails into every pre-punched hole (approx. every 4") in the nailing fin. Make sure nail fins lie as flat as possible.

### Technique #2: Kolbe Installation Clips

See Fig. 6. Double-check to ensure the sill is straight and level. Plumb the side jambs and level the head jamb. Shim on both sides of every installation clip to prevent the frame from bowing. Starting with an interior upper corner, bend clips to the rough opening frame and fasten using #8 x 1-1/2" (38mm) phillips pan head screws. Continue around the perimeter, making sure the jambs are straight and the unit is square.

### Technique #3: Screw Through the Frame

Double check to ensure the sill is straight and level. Plumb side jambs and level the head jamb. Remove the head insert (fig.7), then the sill riser (fig. 8) and finally the sash stops on the side jambs (fig. 9) from the frame prior to starting screw through the frame installation.

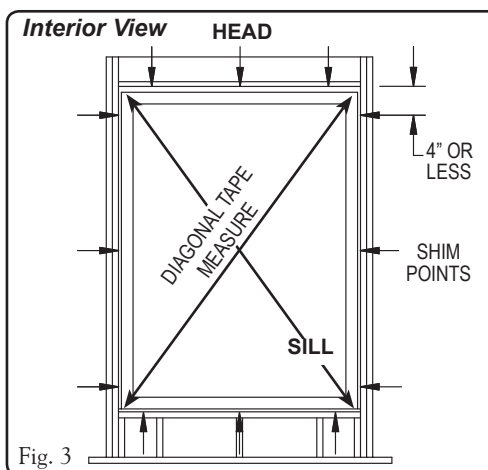


Fig. 3

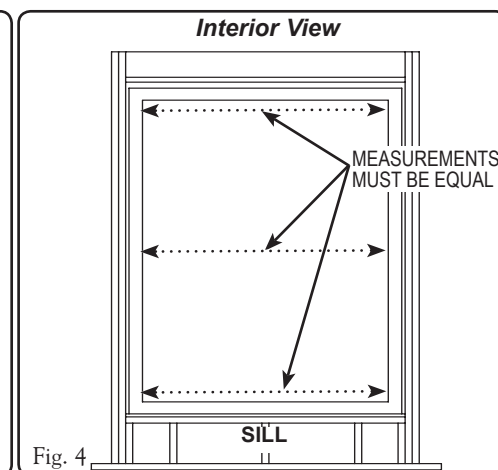


Fig. 4

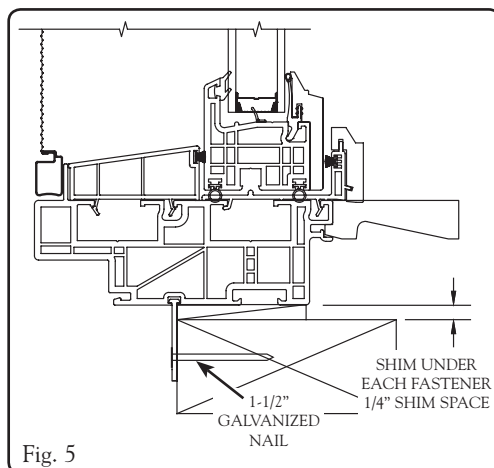


Fig. 5

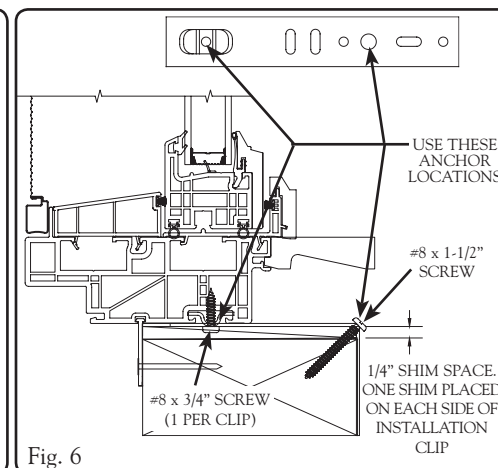


Fig. 6

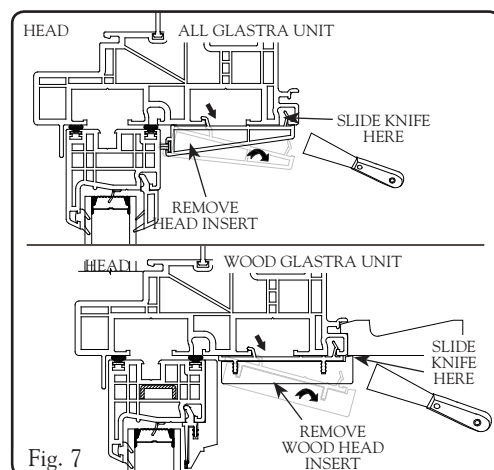


Fig. 7

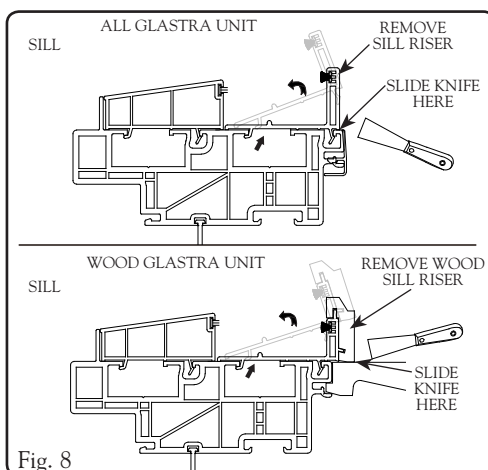


Fig. 8

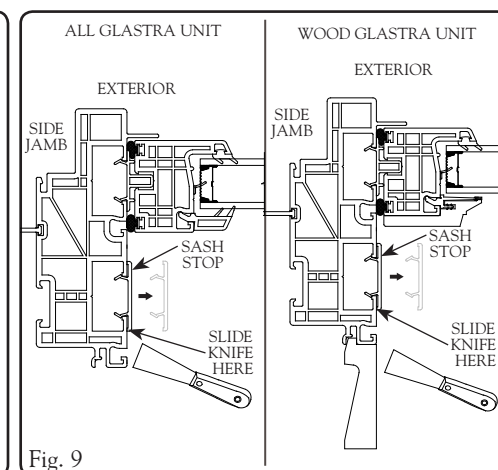
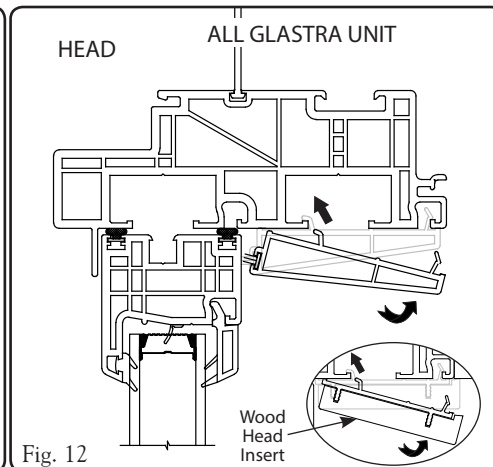
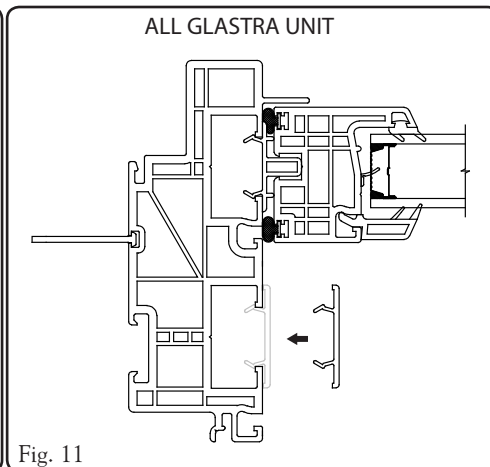
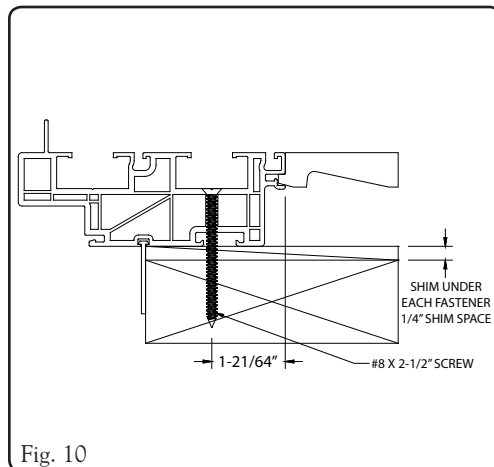
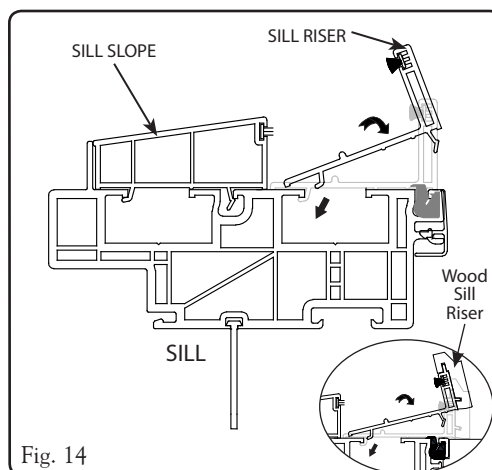
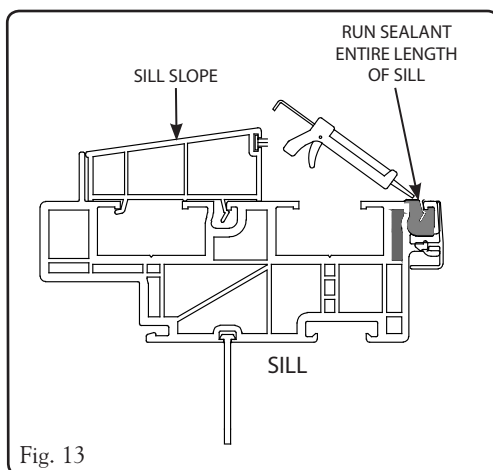


Fig. 9

See Fig. 10. Mark screw locations 6" in from corners and 16" on center thereafter on the head, side jambs and sill. Place a shim at each screw location. Check that the unit is still level. Drill a 9/64" (4mm) diameter pilot hole through the frame, shim and into the rough opening at each marked location on the head jamb, sides and sill. Fasten through these holes and into the rough opening with #8 x 2-1/2" (64mm) phillips flat head screws. Place sealant on the head of the screw(s) when fastening on the sill.



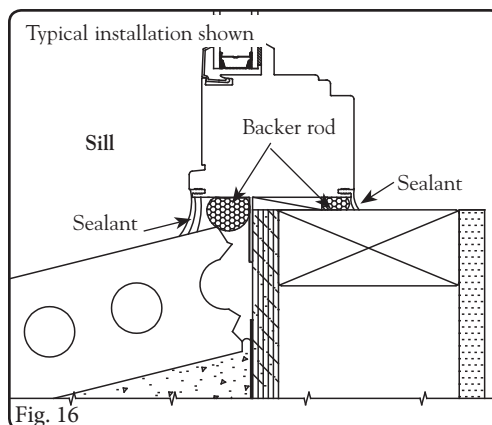
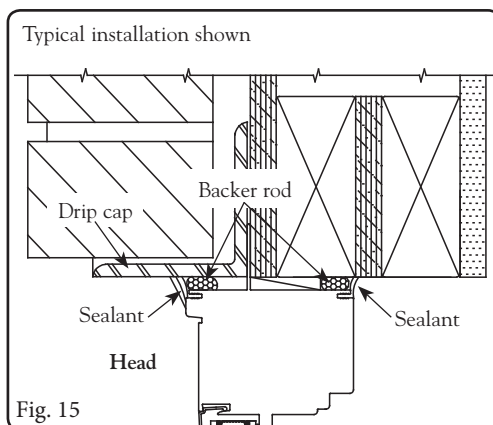
Re-install the sash stops (fig. 11) on the side jambs, and then re-install the head insert (fig. 12) at the head. Next, run a bead of sealant along the entire length of the sill (fig. 13) and replace the sill riser (fig. 14) at the sill.



## COMPLETING THE EXTERIOR

See Fig. 15 & 16. Install backer rod and sealant around the interior and exterior perimeter of the frame. Both components are required to seal the window to the self-adhering flashing when no nailing fin is required.

A drip cap must be installed to direct water away from the window and lessen the chance of water seepage. Seal the side edges of the drip cap to the window. Seal between the drip cap and the exterior sheathing.



## INTERIOR FINISHING

Interior: Finish bare wood interiors immediately using a top quality stain, sealer and/or polyurethane varnish. On factory primed interiors, apply a quality top coat system. See our Pre-finish Recommendations/Instructions for more information

### ⚠ CAUTION

Avoid getting finishing products on any hardware, vinyl components and weatherstripping.

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## MAINTENANCE TIPS AND PROCEDURES

Inspect your Kolbe products periodically/yearly to see if the exterior sealants and/or finishes have any gaps, cracks, or signs of damage and deterioration. Caulk any cracks immediately with a high quality sealant to maintain the seal integrity and to prevent air and water infiltration.

## CLEANING

A quarterly cleaning with a mild unscented soap and sweet water (tap water) solution is recommended for the sash and frames; rinse well. (***Cleaning on units installed in high salt spray areas require a monthly cleaning and rinse.***) Clean glass with standard glass cleaner, keeping it from running onto the sash and weather-strip.

### ⚠ CAUTION

Do not pressure wash!

### ⚠ CAUTION

Avoid getting finishing products on any hardware, vinyl components and weatherstripping.

## HARDWARE

Check all fasteners, making sure all hardware is properly secured. All operating components can be greased or oiled once a year. Security strikers made of steel require continuous greasing in order to avoid unnecessary abrasion.

## SASH TILT-IN/REMOVAL

See Fig. 17 & 18. Unlock the bottom sash by moving the lock lever to the right, past center, until it automatically stops. Slide the bottom sash up about three inches. To completely remove the bottom sash, tilt the sash down to a 90 degree angle to the window side jamb. Lift one side of the sash upward. You should see the pivot pin, located on the side of the sash. When the pivot pins have cleared the jamb, swing the sash out.

To completely remove the top sash, slide the sash down far enough to reach the tilt latches comfortably. Place both hands, one at each end, on top of the sash over the tilt latches. Slide each finger tab toward the center of the sash to unlock the sash. While holding the tilt latches in the open position, pull the top of the sash towards you. Tilt the sash down to a 90 degree angle with the window side jamb. Remove the sash by lifting one side of the sash upward. When the pivot pins have cleared the jamb, swing the sash out. The process is similar to bottom sash.

### ⚠ CAUTION

Be careful not to pinch your fingers between the sash and jamb.

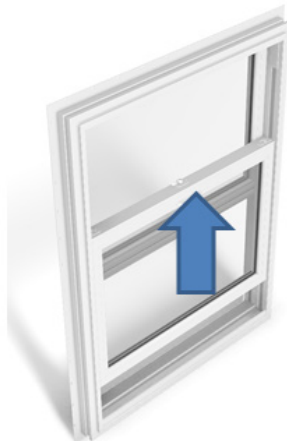


Fig. 17



Fig. 18



## SASH INSTALLATION

See Fig. 19, 20 & 21. With the top sash interior facing towards the floor, grasp the sash on each side. With one side higher than the other, place the sash into the sash opening, positioning the pivot pins above the clutches in the clutch/balance tracks. Place the pivot pin of the lower side into the cam, then rotate the higher side of the sash down so the sash is level and the second pivot pin sits into the other cam. Snap the pivot pins down into the cams to engage the clutches. (If you're right-handed, it may be easiest to place the left pivot pin into the clutch/balance track first, then lower the right pivot pin down into position.)

### ⚠ CAUTION

The pivot pins must be seated all the way down in the cams of the clutches to avoid damaging the clutches.

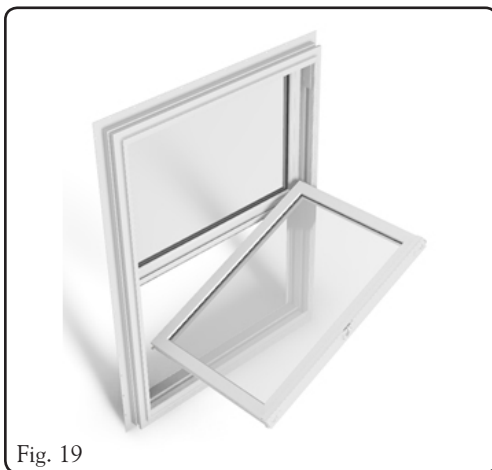


Fig. 19

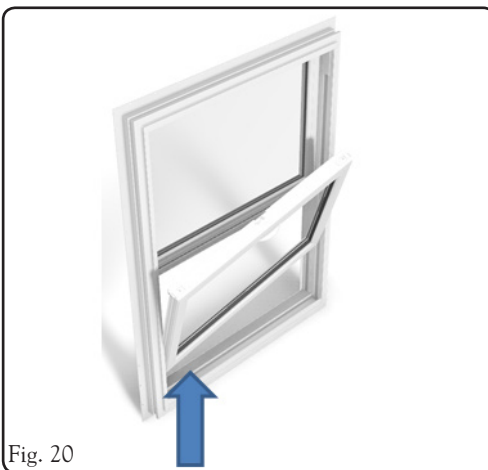


Fig. 20

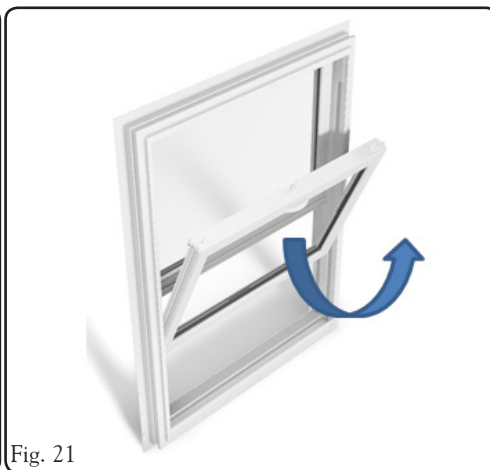


Fig. 21

To avoid marring the frame when tilting the sash back into place, retract the latches. On the top sash, place a hand at each end, on top of the sash over the tilt latches. Slide both finger tabs toward center to retract the latches. While retracting the tilt latches, rotate the top of the sash towards the exterior until it is in operating position on the jamb. Release the finger tabs, allowing the latches to snap into place. Slide the sash to the top of the frame.

On the bottom sash, retract the latches by pressing and holding the lock button down and moving the lock lever all the way to the right. Continue to hold the lever in the full right position to keep the latches retracted and rotate the top of the sash towards the exterior until it is in operating position on the jamb. Release the lock lever allowing the latches to snap into place. Slide the sash down to the sill. Move the lock lever to the full left position to lock the sash. The lock button will automatically retract.

Contact your Kolbe window and door supplier or visit us  
at [www.kolbewindows.com](http://www.kolbewindows.com) for further information.

**THANK YOU  
FOR PURCHASING KOLBE PRODUCTS.**

*Kolbe & Kolbe Millwork Co., Inc. reserves the right  
to change specifications without notice.*