ULTRA CASEMENT AND DOUBLE HUNG ADJUSTABLE ANGLE MULL TIE
INSTALLATION INSTRUCTIONS

Failure to install and maintain our product according to these instructions will void any warranty, written or implied.

WARNING: *REMEMBER SAFETY FIRST* Always wear proper eye and hearing protection when installing, removing or performing adjustments to Kolbe window and door products.

## ITEMS REQUIRED BY INSTALLER

- Hearing protection device
- Safety glasses/goggles
- Rubber mallet
- Caulk gun and sealant
- Wood cross blocking
- Table saw with carbide blade
- Styrofoam block or other backing

Measure from the innermost edge of the head accessory groove to the innermost edge of the sill accessory groove. Cut two flange trim to this measurement. For units without brickmould, also cut two receiver channels to this length. For units with brickmould, cut two receiver channels $1 / 2^{\prime \prime}$ ( 13 mm ) shorter than this length. (The brickmould should overlap the flange trim but not the receiver channels.)

See the Flange Trim Width chart on page 2. Cut both flange trim to the width required for your bow or bay.

1. Apply the PVC insert to the cut edge of the flange trim. Trim the insert flush with the top and bottom edges.
2. Press the "U" shaped side of the receiver channel onto the PVC insert/flange trim assembly.
3. Lay both assemblies on a flat surface with the opening in the receiver channel facing up and the sides touching. Press the flexible joint into the channels, making sure the upper set of fins snap into the upper channel grooves. Trim the joint flush with the top and bottom edges.
4. Install wood cross blocking at the head and sill, and about every $2^{\prime}(610 \mathrm{~mm})$ in between. Use a foam block for sealant backing at the head and sill. Press the short projecting leg of the flange trim in to the accessory groove on one side of the mull and then into the other side. Gently tap into place with a rubber mallet.
5. Run a bead of color-matching sealant down the center of the joint area. On units without brickmould, add the trim edging then create a watertight seal between it and the building at the head and sill. For units with brickmould, create a watertight seal between the mull covers and the building at the head and sill, then install the brickmould and create a second water-tight seal between the brickmould and the building.

Contact your Kolbe Window and Door supplier or visit us at www.kolbe-kolbe.com for further information.


## Flange Trim Widths for Casement Units

| Angle | Trim Width in Fractions | Trim Width in Decimals |
| :---: | :---: | :---: |
| 20 | 17/32 | 0.5318 |
| 21 | 9/16 | 0.5746 |
| 22 | 5/8 | 0.6175 |
| 23 | 21/32 | 0.6606 |
| 24 | 23/32 | 0.7039 |
| 25 | 3/4 | 0.7473 |
| 26 | 25/32 | 0.7909 |
| 27 | 27/32 | 0.8347 |
| 28 | $7 / 8$ | 0.8786 |
| 29 | 15/16 | 0.9227 |
| 30 | 31/32 | 0.9671 |
| 31 | 1 | 1.0116 |
| 32 | 1-1/16 | 1.0564 |
| 33 | 1-3/32 | 1.1014 |
| 34 | 1-5/23 | 1.1466 |
| 35 | 1-3/16 | 1.1920 |
| 36 | 1-1/4 | 1.2378 |
| 37 | 1-9/32 | 1.2837 |
| 38 | 1-11/32 | 1.3300 |
| 39 | 1-3/8 | 1.3765 |
| 40 | 1-7/16 | 1.4233 |
| 41 | 1-15/32 | 1.4704 |
| 42 | 1-17/32 | 1.5178 |
| 43 | 1-9/16 | 1.5655 |
| 44 | 1-5/8 | 1.6136 |
| 45 | 1-21/32 | 1.6620 |
| 46 | 1-23/32 | 1.7108 |
| 47 | 1-3/4 | 1.7599 |
| 48 | 1-13/16 | 1.8094 |
| 49 | 1-27/32 | 1.8592 |
| 50 | 1-29/32 | 1.9095 |

## Flange Trim Widths for Double Hung Units

| Angle | Trim Width in Fractions | Trim Width in Decimals |
| :---: | :---: | :---: |
| 20 | 23/32 | 0.7193 |
| 21 | 25/32 | 0.7717 |
| 22 | 13/16 | 0.8243 |
| 23 | 7/8 | 0.8771 |
| 24 | 15/16 | 0.9300 |
| 25 | 31/32 | 0.9832 |
| 26 | $11 / 32$ | 1.0365 |
| 27 | $13 / 32$ | 1.0901 |
| 28 | $15 / 32$ | 1.1438 |
| 29 | $13 / 16$ | 1.1979 |
| 30 | 1 1/4 | 1.2521 |
| 31 | $15 / 16$ | 1.3066 |
| 32 | $13 / 8$ | 1.3614 |
| 33 | $113 / 32$ | 1.4165 |
| 34 | 1 15/32 | 1.4718 |
| 35 | $117 / 32$ | 1.5275 |
| 36 | 1 19/32 | 1.5834 |
| 37 | $15 / 8$ | 1.6397 |
| 38 | 1 11/16 | 1.6963 |
| 39 | $13 / 4$ | 1.7532 |
| 40 | $113 / 16$ | 1.8105 |
| 41 | $17 / 8$ | 1.8681 |
| 42 | 1 15/16 | 1.9262 |
| 43 | 2 | 1.9846 |
| 44 | $21 / 32$ | 2.0434 |
| 45 | $23 / 32$ | 2.1027 |
| 46 | $25 / 32$ | 2.1623 |
| 47 | $27 / 32$ | 2.2224 |
| 48 | $29 / 32$ | 2.2830 |
| 49 | 2 11/32 | 2.3440 |
| 50 | $213 / 32$ | 2.4056 |

Thank you
for purchasing Kolbe products.

