



■ WINDOWS & DOORS ■

HERITAGE CASEMENT BOW & BAY WINDOW

INSTALLATION INSTRUCTIONS

READ THESE INSTRUCTIONS COMPLETELY
BEFORE STARTING ANY INSTALLATION



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⚠ Recognize this symbol. When this symbol appears be aware of possible injury or product damage.

TOOLS REQUIRED BEFORE STARTING

- Level
- Square
- Tape Measure
- Screws
- Wood shims
- 8d box nails
- Hammer
- Sealant
- Power drill
- 9/64" drill bit
- 3/16" drill bit
- 7/64" drill bit
- 1/8" drill bit
- 3/8" drill bit
- Phillips screwdriver
- Safety Glasses/Goggles
- Hearing Protection Device

⚠ WARNING: *REMEMBER SAFETY FIRST*

Always wear Proper Eye and Hearing protection when installing, removing or performing adjustments to Kolbe Window and Door products.

INTRODUCTION

This installation guide is intended for a wood or concrete/masonry wall (includes a rough opening, lined with a 1-1/2" (38mm) thick wood buck/treated where necessary). Contact your Kolbe Window & Door supplier for information on installing units into other wall conditions .

⚠ WARNING: Read the following instructions completely before attempting any installation. Proper installation and periodic home maintenance of Kolbe windows and doors is essential for upholding and sustaining the quality of our products. Failure to install and maintain our product properly will void any warranty, written or implied.

STEP #1: PREPARE ROUGH OPENING

Check:

1. The material/lumber quality and fasteners must be structurally adequate for design load requirements.
2. The opening must be sized correctly. Typically the rough opening should be sized 1/2" (13mm) wider and 1/2" (13mm) higher than the outside measurement of the window frame. The masonry opening should typically be sized 1/2" (13mm) wider and 1/2" (13mm) higher than the clad nosing/exterior casing (verify with local building codes).
3. The opening must be plumb, square, level and in plane (NOT TWISTED).
4. The individual construction members should not be twisted.
5. It is critical that the sill plate beneath the unit is perfectly level for proper operation.
6. Make sure the opening is properly flashed.

⚠ CAUTION: When installing into a wall with exterior rigid foam insulation panels, be sure to place solid blocking material behind the nailing fin/trim holder. This will provide proper support when fastening the unit into the provided opening. Any support bracket and blocking should be secured directly to the exterior sheathing.

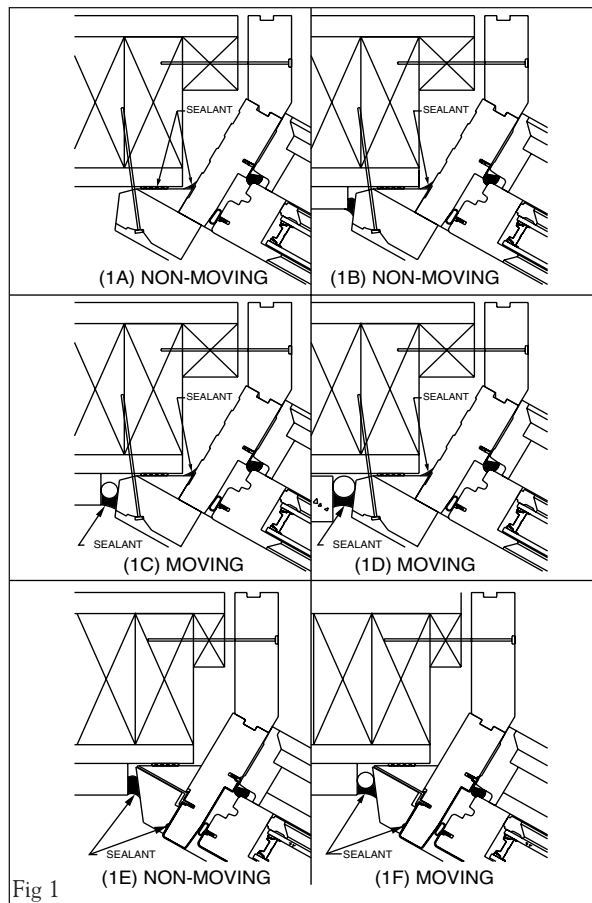
⚠ CAUTION: A brick, stone, marble or concrete face installed up against the window's sill could cause the unit to become inoperable.

STEP #2: PRELIMINARY WINDOW PREPARATION

Remove the shipping packaging, skid plates or factory applied bracing. Make sure the unit is not damaged and that the dimensions agree with the rough opening.

STEP #2A: Sealant Caulking

For perimeter sealing the installer must decide if a moving or non-moving sealant joint is required (examples of moving or non-moving type joints are illustrated on drawings 1A - 1F).



These "Techniques" are general guidelines only, and may not be appropriate for all performance requirements. The installer is responsible for consulting the contractor, structural engineer, architect, or consumer for proper installation according to local codes and/or ordinances.

Kolbe Windows & Doors recommends that moving joints have at least a 1/4" (6mm) gap between building components. Kolbe & Kolbe has available a pamphlet on perimeter vapor barrier, flashing and sealing applications. The pamphlet contains information on a number of methods for applying a flashing material and sealant around the window rough opening. The information can be obtained by contacting your local Kolbe & Kolbe distributor. The window rough opening perimeter must be properly flashed.

⚠ CAUTION: Regardless of perimeter sealing techniques, the following steps must be followed.

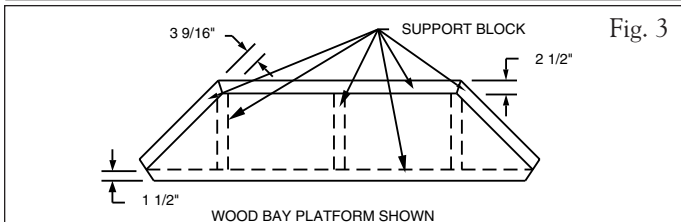
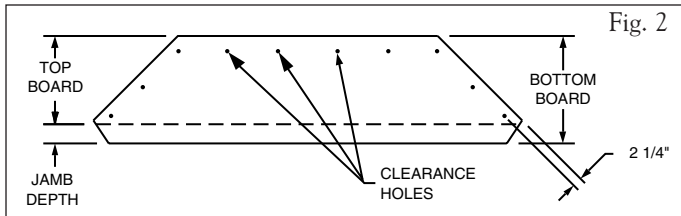
STEP #3: SILL SUPPORT PLATFORM PREPARATION

The sill plate beneath the unit must be perfectly level.

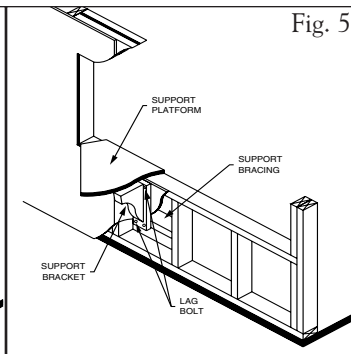
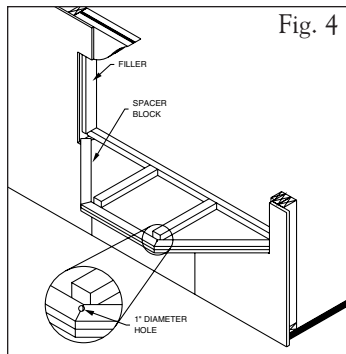
In cases where a Kolbe Window & Door insulated platform has not been purchased, one must be constructed. Begin by determining which platform layout (Fig.13, found on Page 5) represents your bow/bay. Next, from the provided chart, transfer the given values to the corresponding letter designations. Using these measurements, layout the outline of the support platform on a piece of 3/4" (19mm) plywood (Fig. 3). Cut along the outline.

NOTE: If your installation includes a head platform, it should be laid out at this point. Place the support platform/insulated platform on a sheet of 3/4" (19mm) plywood. Trace around the platform perimeter. Deduct the measurement allocated for the jamb depth (Fig. 2).

NOTE: If an installation, including the Kolbe Window & Door cable support kit is utilized, the preliminary platform preparation procedure (Step #6A) should be followed.



On the top surface of the support platform (Fig. 3), measure in from the exterior perimeter 2-1/2" (64mm) for clad and 3-9/16" (90mm) for wood units. Then measure in 1-1/2" (38mm) from the back face of the platform. Cut 3/4" (19mm) x 2" (51mm) support blocks and place inside the previously drawn lines. Cut 1 1/2" (38mm) x 1-11/16" (43mm) support blocks and place inside the previously mentioned lines. Then place insulation between the support blocks.



Place the support platform into the opening. Center it in the opening, equalizing the platform to rough opening gap. The platform must be level across the width. Shim if necessary. Fasten the platform to the sill plate using #10 x 2-1/4" (57mm) screws. Place one fastener 4" (102mm) from each end and every 8" (203mm) to 10" (254mm) in between. Install a vapor barrier over the top of the insulation. As a final step, cut filler strips to secure to the sides of the rough opening (Fig. 4). Place fasteners 3" (76mm) from the ends and every 8" (203mm) to 10" (254mm) in between.

STEP#3A: SUPPORTING THE SUPPORT PLATFORM

A bow/bay that projects more than 12" (305mm) requires support from below and above. Place a Kolbe Window & Door support bracket or any other type of bracket below the support platform. If brackets are not required skip Step 3B.

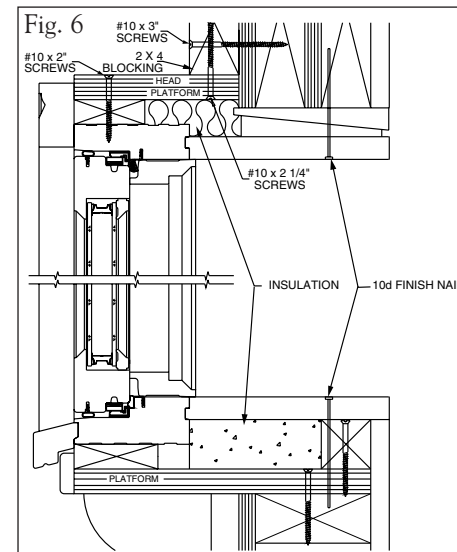
STEP #3B: SUPPORT BRACKETS

Place a Kolbe Window & Door support bracket or other type of brace under each mullion location, or as close as possible. If stud locations do not facilitate proper support placement, support blocking should be utilized (Fig. 5). Secure the bracket to a stud or support blocking with lag bolts.

Continue by securing through the platform into the support bracket with #8 x 1-1/2" (38mm) screws. A minimum of two brackets on bow units larger than a 4-wide N Series and on bay units is recommended. Three brackets are recommended on 7-wide bow windows.

STEP #3C: HEAD SUPPORT PLATFORM PREPARATION

When a roof soffit or cable support system cannot be used for support, you may choose to use a head platform. Attach a 2" (51mm) x 4" (102mm) blocking to the wall (Fig. 6). Fasten through the head platform blocking into the header with



#10 x 3" (76mm) screws. Screws must also be used to fasten through the headboard into the blocking. Kolbe Windows & Doors recommends pre-drilling a 3/16" (5mm) clearance hole through the head platform 2-1/4" (57mm) in from the face of the platform (Fig. 2). Place the holes 4" (102mm) in from each end and every 8" (203mm) to 10" (254mm) in between.

STEP #4: GENERAL INSTRUCTION FOR ALL INSTALLATIONS

Apply a 3/16" (5mm) bead of sealant to the valley created by the side jamb of the window and support wedge. Apply a second bead of sealant next to the first, along the back side of the support wedge (Fig. 1A).

Place the bow/bay on the support platform and slide the unit into the rough opening. The nailing fin/brickmould support block must be flush with the exterior sheathing. Center the unit, equalizing the box to rough opening gap.

CAUTION: When using the cable support kit, make sure that the ends of the cables will continue through the bow/bay post and support platform.

Insulate between the top platform and the headboard. Do not pack the insulation in too tightly.

Check to ensure the sill and seat board are level. Shim wherever necessary. Level and shim the sill and side extension jambs. Measure the distance from the upper left corner of the extension jamb to the lower right. Measure the remaining two corners. The two measurements must be within 1/16" (2mm). Adjust shims wherever necessary. Run 10d finish nails through the seat board and side extension jambs (Fig. 6). The nails should be placed 4" (102mm) from each corner then every 8" (203mm) to 10" (254mm) in between. Level, shim and secure the head board in the same manner as the seat board.

CAUTION: A 1/4" (6mm) (minimum) gap between the window perimeter and framing material should be provided when using brick, stone, marble or concrete as an exterior facing. This should provide for most movement or settling of the structure, which could affect the operation of the unit. The gap should be spanned by an appropriate sealant joint.

STEP #5: FASTENING HEAD PLATFORM TO UNIT

Predrill a 7/64" (3mm) pilot hole through the head platform clearance hole and into the head of the bow/bay. Secure a #10 x 2" (51mm) screw into the head jamb of the bow/bay, through each of the clearance holes (Fig. 6).

STEP #6: ADDITIONAL ANCHORING

You may choose to drive a fastener through the side jamb nailing fin/brickmould. When nailing through the brickmould, the holes must be properly filled and or sealed.

Nailing through the nailing fin or brickmould alone is not sufficient to permanently secure the window into an opening. See Step #6A for additional anchoring requirements.

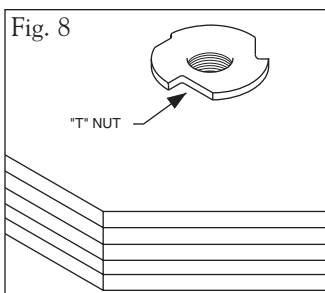
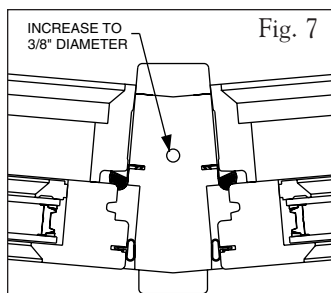
Nailing through the K-Kron finish will void the finish warranty, unless proper procedures are followed.

STEP #6A: CABLE SUPPORT

Follow the instructions provided with your cable support kit.

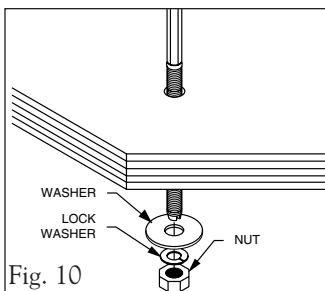
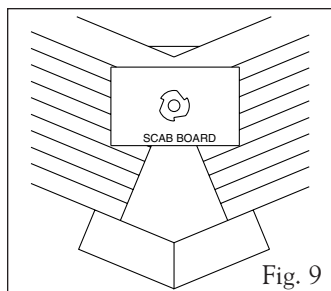
Using the template supplied with your cable support kit, mark the location of the holes utilized by the cable support system. After the hole placements have been transferred from the template to the support platform, drill a 1" (25mm) diameter hole through the support platform and a 3/8" (10mm) diameter hole through the head platform (if utilized) (Fig. 4).

If a head platform is not used on a bow unit, increase the diameter of the hole in the end of the bow post to 3/8" (10mm) (Fig. 7). Drill down about 1/2" (13mm) from the top of the head jamb. Additional drilling is not required on bay units without a head platform.



Into each of the predrilled 3/8" (10mm) diameter holes, place a "T" nut. Tap the nut into place until properly seated. Slide cable, rod end, through each of the "T" nuts or PVC bay post tubes (Fig. 8).

If a headboard is not used on a bay unit, the "T" nut is omitted from the assembly procedure. Kolbe Windows & Doors recommends placing a scab board over the end of the bay post. Drill a 3/8" (10mm) diameter hole through the scab board, at the bay post tube location (Fig. 9).

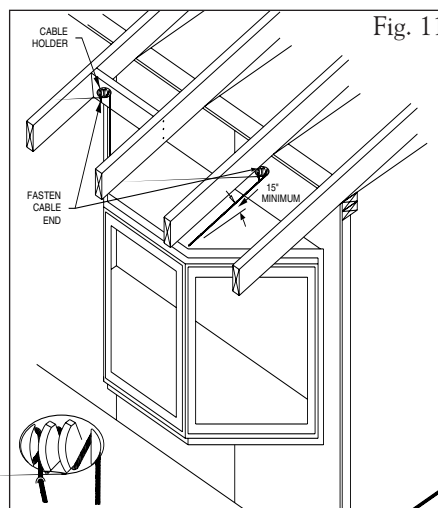


STEP #6B: APPLYING CABLE COMPONENTS

Slide the 1 1/4" (32mm) washer and lock washer over the end of the rod at the end of the cable. Continue by threading the hex nut onto the rod end (Fig. 10). Turn the nut until the end of the rod extends just beyond the nut.

STEP #6C: MOUNTING CABLE HOLDER

Fasten the cable holder to the building structure. Determine the most appropriate location for the cable holder. Fig. 11 illustrates a number of



possible mounting scenarios. Set the holder in place and mark the screw hole locations. Drill a 1/8" (3) diameter pilot hole through each of the marked hole locations. Secure the cable holder in place with 2 - #10 x 2" (50mm) screws.

From the upper end of the cable, pull the cable tight. The washers and nut should be drawn up to one another and flush with the bottom of the window frame (Fig. 12).

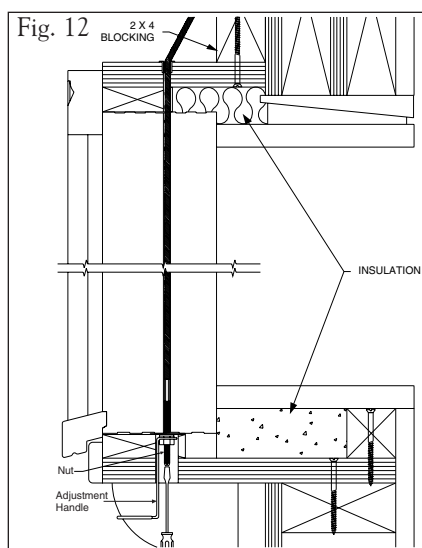
Proceed by wrapping the cable around the cable holder, as shown in (Fig. 11). Cable should be taut. Secure the remaining length of cable.

STEP #6D: CABLE ADJUSTMENT

If temporary braces were used, they should be removed at this time.

Check to make sure the seat board is level. If an adjustment is necessary, it can be performed by tightening the nut at the base of the support cable. You will need a standard screwdriver and the adjustment handle provided with your cable support kit.

Slide the adjustment handle over the nut on the end of the support cable (Fig. 12). Fit the blade of the screwdriver into the slot on the end cable rod. While keeping the screw driver in a stationary position, turn the adjustment handle. Follow this procedure for the remaining



cable(s), checking as you go the level of the seat board.

Insert the adjustment hole plug into the adjustment hole.

CAUTION: If the unit is severely out of alignment, incremental adjustments may need to be spread out over a period of time. This will avoid any damage that may occur to your unit. If minor adjustment does not remedy a problem, the unit may need to be removed and re-installed.

STEP #7: GENERAL MAINTENANCE

Periodic checks should be made to your bow/bay window. Make sure that your unit is level.

Adjustments can be made by removing the adjustment hole plug and tightening the adjustment nut. Follow the instructions given in Step #6D.

STEP #8: INSULATION & INTERIOR CASING/TRIM

It is recommended to install fiberglass insulation in the void created by the outer perimeter of the door frame and rough opening members. Using a putty knife, work in the insulation. It should be installed loosely, and fill entire depth of gap.

⚠ CAUTION: Over-packed insulation can lessen the insulating effectiveness and cause the frame to be distorted, which may result in poor operation of the sash. If you choose to use a foam type insulation, it must be of a low expansion type foam and, used in conjunction with fiberglass insulation. Follow the manufacturers instructions for proper application of the foam.

As a final step, apply interior casing.

STEP #9: EXTERIOR AND INTERIOR FINISHING INSTRUCTIONS

This instruction step has been kept brief. When applying a finish, follow the information provided by the manufacturer. Contact your Kolbe Window & Door distributor for additional finishing information. Primed wood units must remain dry and finishing should be completed within 30 days. Bare wood should be prefinished or finished immediately following installation.

A high quality, exterior rated, acrylic latex topcoat should be applied to factory primed exterior surfaces. On a bare wood exterior, apply an installer selected quality system. On bare wood interiors, use an installer selected, top quality stain, sealer and/or polyurethane varnish. On factory primed interiors apply, a quality top coat system.

MAINTENANCE TIPS AND/OR PROCEDURES

Periodic/Yearly inspection and maintenance of Kolbe & Kolbe windows for damage or deterioration of exterior sealants and/or finishes should be performed. Also, check to see if the exterior sealants have any gaps, leaks, or signs of damage and deterioration. Cracks in the K-Kron finish, resulting from joint movement, which may occur during the installation process or over the life of the product, must be caulked with a high quality sealant immediately to maintain the integrity of this paint finish. Finally, check insulating (IG) units for cracks or fogging.

CLEANING

A yearly cleaning with mild soap and sweet water (tap) solution is recommended for the sash and frame, then rinse. Clean glass with any standard glass cleaner, keeping it from running down the sash onto frame and weatherstrip. **DO NOT PRESSURE WASH.**

HARDWARE

Check all fasteners, making sure all hardware is properly secured.

INSULATING GLASS

Broken or fogged IG units, requiring reglazing or replacement, should be referred to your Kolbe & Kolbe distributor.

⚠ CAUTION: Kolbe Window & Doors standard H°K insulating glass has a LoE coating on surface two (2). It does not match clear glass or other LoE products. Do-it-yourself reglazing/replacing without Kolbe Windows & Doors permission will void the product's warranty.

Figure 13 – PLATFORM LAYOUT

UNIT		OA	A	B	C	D	E	F	G	H
3 WIDE	S	47-1/2	4-3/16	3/4	7	15-3/4	N/A	N/A	N/A	N/A
	N	59-7/16	4-3/16	3/4	7-11/16	19-11/16	N/A	N/A	N/A	N/A
	W	71-5/16	4-3/16	3/4	8-3/8	23-5/8	N/A	N/A	N/A	N/A
	X	89-1/8	4-3/16	3/4	9-7/16	29-9/16	N/A	N/A	N/A	N/A
4-WIDE	S	62-13/16	4-5/16	1-3/16	8-1/2	15-1/2	9-7/8	N/A	N/A	N/A
	N	78-1/2	4-5/16	1-3/16	9-1/2	19-5/16	11-1/4	N/A	N/A	N/A
	W	94-3/16	4-5/16	1-3/16	10-9/16	23-3/16	12-5/8	N/A	N/A	N/A
	X	117-3/4	4-5/16	1-3/16	12-1/16	29	14-3/4	N/A	N/A	N/A
5 WIDE	S	77-5/8	4-7/16	1-5/8	9-15/16	15-1/16	12-11/16	15-3/4	N/A	N/A
	N	97	4-7/16	1-5/8	11-5/16	18-13/16	14-3/4	19-11/16	N/A	N/A
	W	116-3/8	4-7/16	1-5/8	12-11/16	22-9/16	16-13/16	23-5/8	N/A	N/A
	X	145-1/2	4-7/16	1-5/8	14-11/16	28-3/16	19-15/16	29-9/16	N/A	N/A
6 WIDE	S	91-13/16	4-9/16	2-1/8	11-5/16	14-1/2	15-1/2	15-1/2	16-7/8	N/A
	N	114-3/4	4-9/16	2-1/8	13	19-5/16	18-3/16	19-5/16	19-15/16	N/A
	W	137-11/16	4-9/16	2-1/8	14-3/4	21-3/4	20-15/16	23-15/16	23-1/16	N/A
	X	172-1/8	4-9/16	2-1/8	17-1/4	27-3/16	25	29	27-5/8	N/A
7 WIDE	S	105-5/16	4-11/16	2-3/4	12-11/16	13-7/8	18-3/16	15-1/16	20-15/16	15-3/4
	N	131-5/8	4-11/16	2-3/4	14-11/16	17-15/16	21-9/16	18-13/16	25	19-11/16
	W	157-15/16	4-11/16	2-3/4	16-11/16	20-13/16	24-15/16	22-9/16	29-1/16	23-5/8
	X	197-7/16	4-11/16	2-3/4	19-11/16	26	29-15/16	28-3/16	35-3/16	29-9/16

UNIT		OA	A	B	C	D
30 BAY	S	(31-1/4 + CENTER UNIT WIDTH)	4-11/16	2-3/4	13-3/16	14-11/16
	N	(38-1/8 + CENTER UNIT WIDTH)	4-11/16	2-3/4	15-3/16	18-1/8
	W	(45-1/16 + CENTER UNIT WIDTH)	4-11/16	2-3/4	17-3/16	21-5/8
	X	(55-1/2 + CENTER UNIT WIDTH)	4-11/16	2-3/4	20-3/16	26-13/16
45 BAY	S	(27-9/16 + CENTER UNIT WIDTH)	4-11/16	2-3/4	17-3/8	12-3/8
	N	(33-1/4 + CENTER UNIT WIDTH)	4-11/16	2-3/4	20-3/16	15-3/16
	W	(38-7/8 + CENTER UNIT WIDTH)	4-11/16	2-3/4	23	18
	X	(47-3/8 + CENTER UNIT WIDTH)	4-11/16	2-3/4	27-1/4	22-1/4

