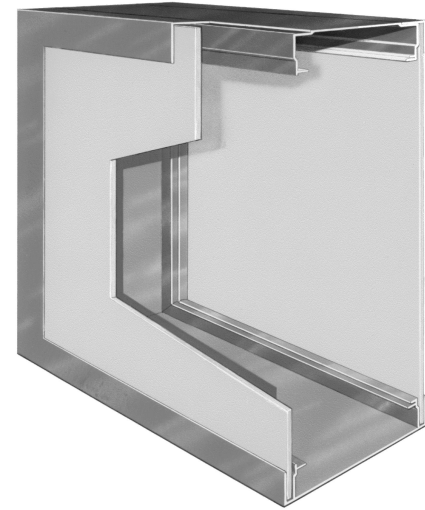


# Type IV Frame, E-Z Frame & Thrif-T Frame



## FOR DESIGNERS AND SPECIFIERS

These three Conventional Frames are ABC's smallest frame systems for building a wide variety of small sign applications. Each frame system has unique, labor saving features and thoughtful aesthetic design solutions, yet for very low cost. These features are a result of over forty years' experience at actually building signs with our extrusions. No other extrusion company has that kind of experience!

For example, all three of these frames can be built without welding when assembled with ABC's patented corner keys and internal aluminum corner angle brackets. This requires very few visible fasteners and minimizes labor. The corner angles are precision-cut for a light press-fit. For maximum rigidity they can also be tack-welded internally, so that the welding does not damage anodized or pre-painted frame components. Just consider all the features in the centerfold illustrations.

## TYPE IV FRAME

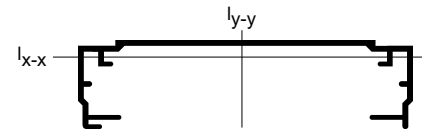
The 5" wide Type IV Frame will allow a 2.875" pipe to pass through the frame, but is more often end-mounted to ABC's half-round or rectangular tubes. (See ABC's Post & Panel catalog sheet)

It is available in two versions: The **Unit Frame** with integral retainers and the **Type IV End Frame** with removable retainers. It can be used with flat or pan-formed plastic faces or routed aluminum faces, with or without internal



illumination. It is recommended for small signs of approximately 16 square feet, maximum. It is ideal for those many small informative, directional and drive-through menu signs that are so important to institutions and franchises. It is a very cost effective frame system with great versatility.

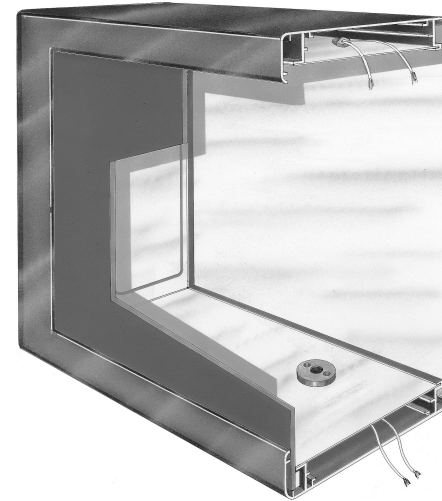
## Engineering



The neutral axes for the Type IV Frame are shown above. Details on Unit Frame available on request.

Cross sectional area (A) is .573 in<sup>2</sup>. Moments of inertia about the neutral axes are  $I_{xx} = .081 \text{ in}^4$  and  $I_{yy} = 1.562 \text{ in}^4$ .

All ABC extrusions are produced in 6063 alloy, T6 temper, in standard 26' lengths.



## E-Z FRAME

The 5.75" wide **E-Z Frame** is aesthetically unique. The generous 1.63" deep, round edged Retainers give the sign a smooth molded look, which is distinctive and totally different from most square-edged small signs. It has many time-saving features that make it very versatile, yet economical for small one-off or mass-produced signs.

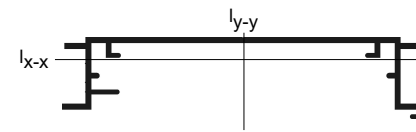
It features a hanger bar on the frame to suspend the faces from the top to prevent the slightly bowing that occurs when the faces sit in the bottom retainer. By using the ABC Corner Keys and Corner Brackets, it requires little skill to assemble in just *minutes!*

The multi-purpose Retainer is normally used for flat or formed plastic faces, but with its separate hanger bar it can also be used for sandwiching a transparency between two faces. It is designed to receive a metal back when used for single face signs,

To further reduce the cost of producing small signs profitably, the E-Z Frame comes in a high quality clear anodized finish that requires no painting and will never oxidize. This eliminates the time-consuming painting process. However, it can be painted over the anodized finish if a colored frame is required.

Please review all the outstanding and unique features on the centerfold illustrations.

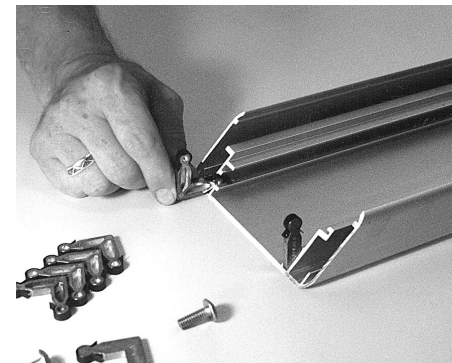
## Engineering



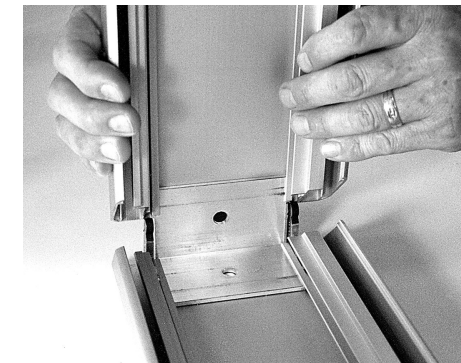
The neutral axes for the E-Z Frame are shown above.

Cross sectional area (A) is .650 in<sup>2</sup>. Moments of inertia about the neutral axes are  $I_{xx} = .070 \text{ in}^4$  and  $I_{yy} = 1.891 \text{ in}^4$ .

All ABC extrusions are produced in 6063 alloy, T6 temper, in standard 26' lengths.



A mitered section of ABC's E-Z Frame with Corner Keys. The Corner Keys easily insert into extruded slots. This same Corner Key system is used with our Type IV and Thrif-T Frames.



Once the Corner Keys and Corner Brackets are in place, another frame section is fit into place. The Corner Keys "bite" into the frame slots and lock the mitered corners together.

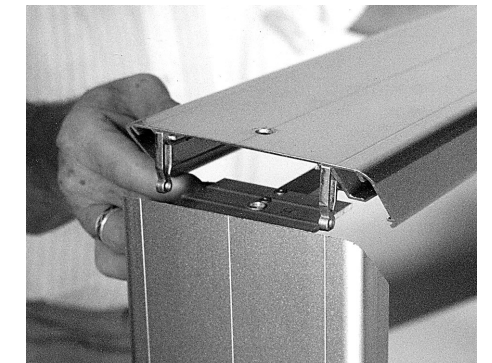
## THRIF-T FRAME

The wider **Thrif-T Frame** is designed for somewhat larger signs. When used with the **Face Frame**, it is 8" deep, or when used with the **Type III Flat Retainer** it is 6" deep. This frame absolutely minimizes the cost of building single face signs, yet it offers features that are normally only found in more expensive frame systems. It too can be assembled with Corner Keys and corner angles for weld-free assembly, with very few visible fasteners.

Both the 8" or 6" version features a hanger bar for suspending the faces from the top. The **Face Frame** also features a Corner Key slot at the bottom, to ensure a perfect miter fit every time.

It comes in your choice of black painted or mill finish.

Please review this outstanding economy frame system illustrated in the centerfold.



A close up of the final E-Z Frame section being fit into place. ABC's Corner Key system makes assembling small sign cabinets a snap! Suitable for indoor applications and small outdoor signs.



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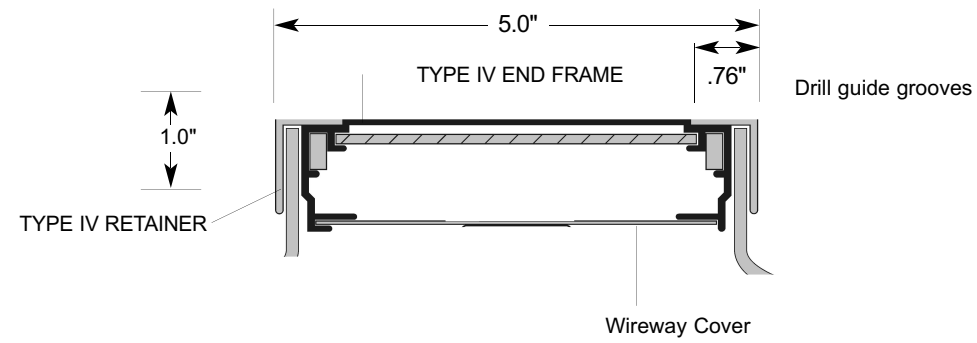


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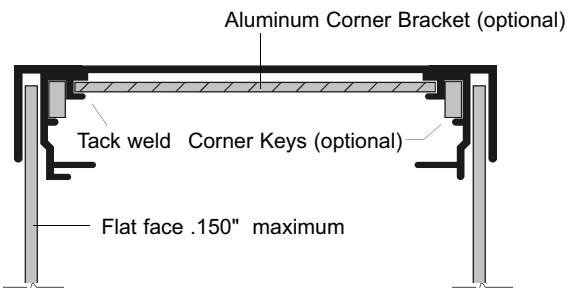
FAX: 970-482-4019 • 2028 S.E. Frontage Road, Fort Collins, CO 80525

## Type IV Frame

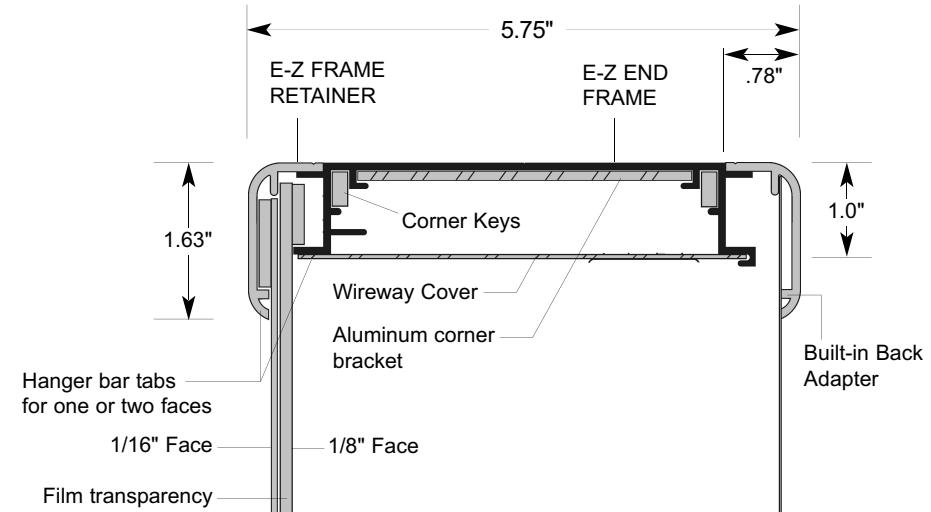


TYPE IV UNIT FRAME

NOTE: Frame is typically built 1/2" over nominal lamp length



## E-Z Frame



E-Z UNIT FRAME

## Retainers

**TYPE IV RETAINER:**  
1" wide, used only with the **Type IV Unit Frame**.

**TYPE IV RADIUS CORNER KITS:**  
Precision fabricated 6" Radius Corner Kits are available for The Type IV Frame.

**E-Z FRAME RETAINER:**  
This 1.63" wide Retainer is used only with the **E-Z End Frame**. Its special features are illustrated at the top left.

**TYPE III RETAINER:**  
The **Type III Retainer** can be used with the **Thrif-T Frame** as illustrated below right, for a very economical 6" deep single face sign cabinet. It can be used for rigid faces up to .150" thick.

## Accessories

**ALUMINUM ANGLE CORNER BRACKET**  
Made of architectural angles with inside square corner, cut to press-fit into each of these frames as an option to welding. When frames are anodized or painted, they must be used to prevent damage to the finish. If they are tack-welded to the inside flanges, no other fasteners are necessary.

**E-Z FRAME CORNER KEYS:**  
Die-cast, precision E-Z FRAME Corner Keys can be used with all three of these frame systems as an alternative to welding. They are necessary if the frame is anodized or pre-painted. A spring steel clip on each end locks them in place.

**E-Z RETAINER CORNER KEYS:**  
These Corner are designer to perfectly align mitered corners. A spring steel clip on each end locks them in place. If the clip is eliminated from one end of the key, it can be withdrawn to remove a retainer, and reinserted without any loss of strength.

**1" REVEAL:** Used as described above for connecting the **Type IV Frame** to the posts.

## Thrif-T Frame 1/2 Size Sectional

