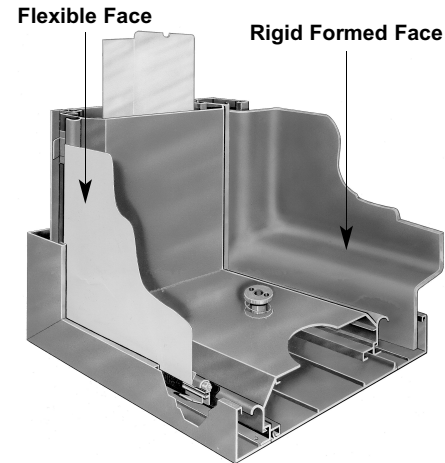
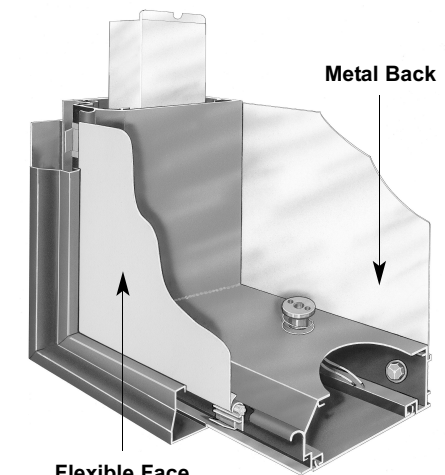


# Access/Flexframes



Double Face Large Access Frame



Single Face Small Access Frame



Virtually unlimited size pipe mounted signs!



ABC's Access/Flexframes offer three very important advantages for sign builders and end-users alike:

- **All service can be performed without opening the face!**
- **Access Frames are used to build rigid plastic or flexible faced signs!**
- **The most cost-effective method of building large to very large size high quality signs of almost any shape!**

At 13" wide, the Large Access/Flexframe is the widest, strongest, one-piece sign frame in the industry and is exceptionally cost-effective because no perimeter framing is ever required. The labor hours required to build and wire the sign frame are only about half, compared to angle iron and sheet metal construction. And they will never rust, like steel!

Designed to support either rigid plastic or flexible faces, it is ABC's "workhorse" sign frame system. For the flexible face option, our tensioner sets are made for at least 20oz material or cooley substrate and below. A choice of three Retainer styles and sizes offer aesthetic variation. Special accessory parts add versatility. ABC's unique kerf-cutting technique provides radius corners or curved frame design possibilities no other frame system offers! Just read what can be done with these "workhorse" frames.

ABC's Access/Flexframes are used for large to very large double-face and single-face signs. The Large Frame can be mounted on one or more columns or can project from a wall or structure.



Continuous, no shadow corners!



Kerf-cut radius corners and shapes!

Pipes up to 6-5/8" diameter can pass through the signs with little or no shadow.

ABC's frames are up to five times stronger than typical double angle iron and sheet metal frame construction! ABC also provides complete engineering data with which signs are built to meet any municipal wind-load code requirements up to hurricane velocity!

Lamps are 12" on center for double or single face signs. Lamp and ballast service is so much easier and safer with ABC's Access/Flexframes. The external C-Covers can be opened or removed entirely, anywhere around the perimeter of the sign for easy service access, *without ever disturbing the faces!*

The 8.5" wide Small Access/Flexframe for single face signs has the same advantages for supporting rigid or flexible faces, forming curved sections, and external service access. These features make it the perfect choice for single face sign applications of any size and shape.

Whether your project is for just one custom sign, or a thousand signs, when ABC's Access/Flexframes are built to our engineered standards, they are *guaranteed* to do the job!

**Questions? Call the experts!**  
**1-800-248-9889**

Features of the ABC Sign Products described herein may be covered by one or more of the following patents:  
U.S. 6,088,942 4,817,656 4,265,039 4,007,522  
Canadian 1,170,048-049-050 1,149,159 1,021,565



Bevel Retainers add depth & detail!

## For Designers, Engineers and Sign Buyers.

ABC Sign Products, Inc. wholesales ABC Extrusions direct only to sign companies. But ABC is much more than just a seller of aluminum. We are a very specialized company that is capable of **Networking between the designer, the sign buyer and the sign builder for the benefit of all.**

### FOR THE DESIGNER/ENGINEER:

Every good sign begins with a professional graphics designer. ABC offers designers free assistance for selecting the best and most economical frame and lighting system for their project. We also provide wind speed and design criteria for signs built with ABC Extrusions. We can even assist the designer with general installation design advice.

ABC also designs and produces custom extrusions for large projects, as we have done for McCarran Airport in Las Vegas, the Los Angeles Rapid Transit Rail System and General Electric's Plant Identity Sign Program.

### FOR THE SIGN BUYER:

Every corporate sign buyer wants ensured uniformity and high quality for their signage projects. They want good value for cost and a trouble-free buying experience. They do not want a lot of headaches at the point of installation, or a lot of after-purchase service problems. ABC can help the sign buyer meet these demands. Many corporate identity sign programs are built with ABC Extrusions.

Although ABC does not sell signs to end-users, working with the designer or consultant ABC can build one-off prototype signs quickly and economically. This ensures quality satisfaction.

*Specifying ABC Extrusions frees corporate sign buyers to choose the vendor which best serves their needs. It may be one large sign company to build a quantity of signs, crated for shipment*



Large Access/Flexframe—Flexible Faces

*to their ultimate destination, or they may choose ABC's "Network of vendors, which makes a lot of sense.*

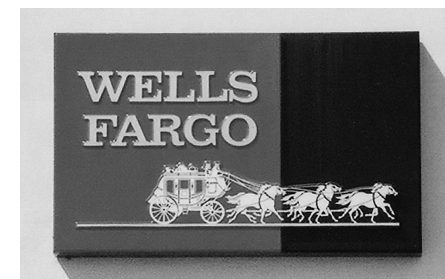
*Reputable electric sign builders, from every State in America, are skilled at building high quality signs with ABC Extrusions. Sign design firms or corporate signage buyers can initiate a national or regional sign program to be manufactured and installed on an as needed basis in a more local manner.*

*This eliminates crating and shipping, and provides local installations. It solves the problems of acquiring local site surveys, knowing local soil and wind conditions and knowing the local sign codes. It can also provide local maintenance to keep the sign clean and burning brightly.*

### FOR THE SIGN BUILDER:

Local and regional sign companies are eager to get their share of the national corporate sign market. ABC's "Network program enables them to serve this market simply by agreeing to build such signs to the uniform specifications using ABC Extrusion systems. Local or regional manufacturing and local installation benefits everyone.

ABC also assists our manufacturing customers with our **wholesale sign manufacturing division**. In this capacity, ABC partners with our customers to augment their own manufacturing capability, if needed, to meet their production schedules **on time**.



Small Access/Bleedframe



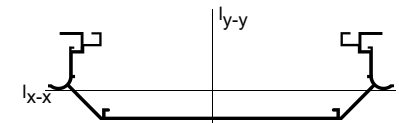
Large Access/Flexframe—Acrylic Faces

**For over forty years, ABC Extrusions have been our primary business. This long service to the sign industry has earned ABC the trust which makes the ABC network of sign vendors possible. Networking makes good sense because it is a better way!**

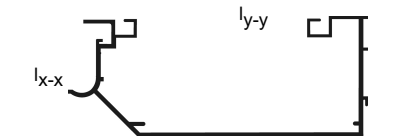
### NOTE:

- See easy sheet #1 for all tensioning inquiries
- ABC recommends using either Cooley or Panagraphics III for all flexible faces using our frames with our tensioning system
- Thickness: 20–24 mil (0.51–0.60 mm)

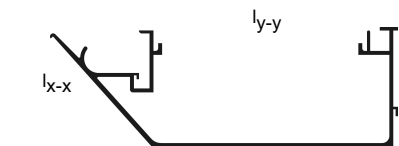
## Engineering



The neutral axes for the **Large A/Flexframe** are shown above.  
Cross section area (A) is 2.138 in<sup>2</sup>  
Moments of inertia about the neutral axes are  
 $I_{xx} = 3.76 \text{ in}^4$  and  $I_{yy} = 37.54 \text{ in}^4$



The neutral axes for the **Small A/Flexframe** are shown above.  
Cross section area (A) is 1.717 in<sup>2</sup>  
Moments of inertia about the neutral axes are  
 $I_{xx} = 3.30 \text{ in}^4$  and  $I_{yy} = 14.56 \text{ in}^4$



The neutral axes for the **Small A/Bleedframe** are shown above.  
Cross sectional area (A) is 2.22 in<sup>2</sup>  
Moments of inertia about the neutral axes are  
 $I_{xx} = 2.52 \text{ in}^4$  and  $I_{yy} = 19.99 \text{ in}^4$

All ABC extrusions are produced of 6063 alloy, T6 temper, in standard 26' lengths, or are available in pre-cut sign kits of any size.

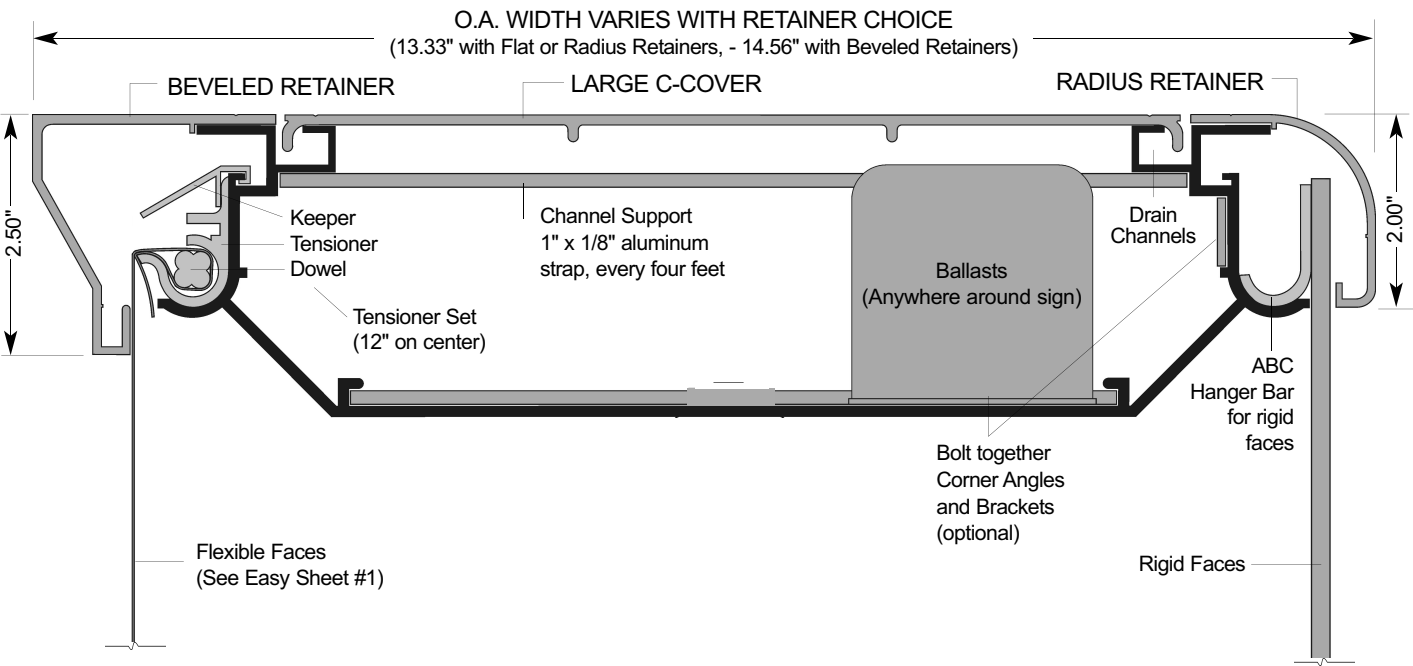
For complete construction engineering please refer to *Wind Speed and Design Criteria for Flexible Face Signs Constructed of ABC Extrusions*, 1998 edition.



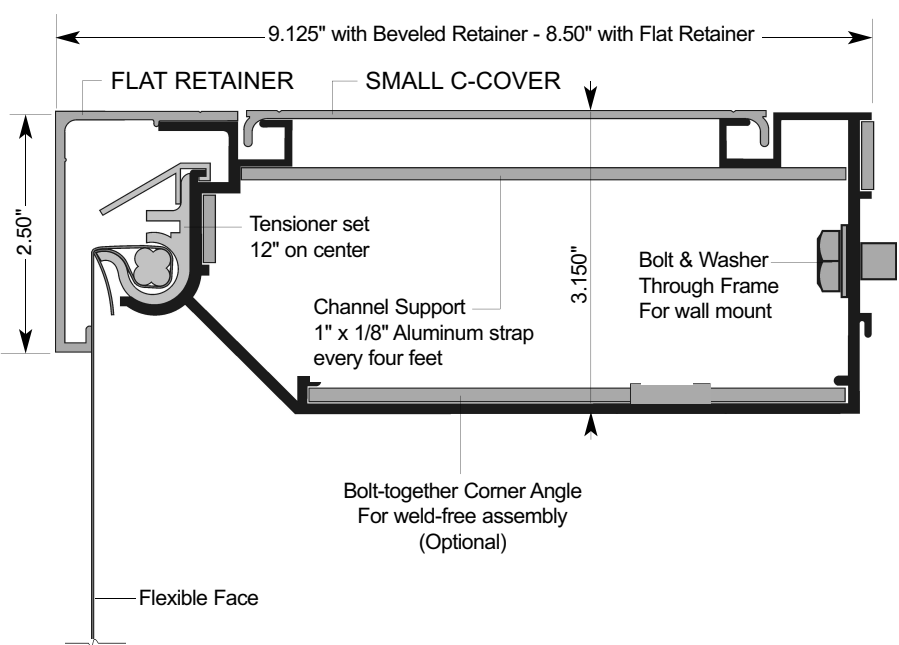
**EXTRUSIONS... The Original - and still the best!**

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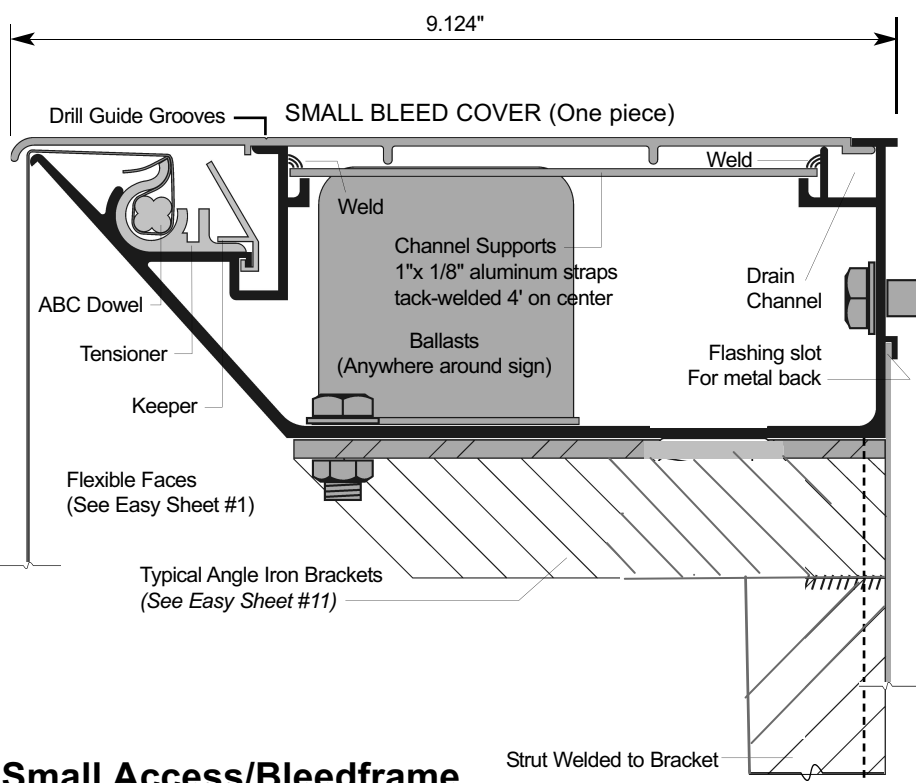
**Access/Frames**  
**1/2 size sectional views**



**Large Access/Flexframe**  
For Double Face Signs; Rigid or Flexible faces



**Small Access/Flexframe**  
For Single face signs; Rigid or Flexible faces



**Small Access/Bleedframe**  
For Single Face Signs with Flexible Faces

**Retainers**

**BEVELED RETAINERS**  
A "picture frame" style Retainer, often used to add interest to an otherwise flat sign face. Available in two sizes: 2.50" and 3.00" wide.

**FLAT RETAINERS**  
Available in two sizes: 2.5" wide. Normally used for pan-formed plastic faces or flexible faces. They must be used if radius corners or curved frame is to be used.

**RADIUS RETAINER**  
This 2" wide radius retainer is only used with rigid faces. It forms a very unusual and aesthetically pleasing cabinet design.

**Accessories**

**BLEEDFACE SADDLE**  
Used to make a wider, 16" face-to-face "Bleed" frame which illuminates the face to the very edge, with no visible Retainer. Can also be used with the Small A/Flexframe (see Easy Sheets 1 & 7)

**BLEEDFACE TRIM**  
Used only with the Bleedface Saddle to provide a trim cap over the tensioning hardware.

**LARGE BACK ADAPTER**  
Allows the Large Access/Flexframe to be used for very large single face signs.

**RADIUS CORNER KITS**  
Provides a relatively economical way to build 8" radius corners on the Access Frames. (see Easy Sheet 3).

**DIVIDER BARS**  
Used with either Access/Flexframe to divide large plastic faces into smaller panels to control expansion, contraction and wind load. Each Divider Bar provides built-in hanger bar for lower panel. Available in three sizes: 3.125" - 2.50" and 1.75".

**Z-BRACKETS**  
Heavy aluminum brackets designed for use with either Access/Flexframe when sign is to be end mounted. (see Easy Sheet 5)

**PLASTIC HANGER BAR**  
Available in one verizon, used to cement or attach to the top of rigid plastic faces to hang from either Access Flexframe. (see Easy Sheet 2)

**BUILDING RADIUS SHAPES**  
Most any radius cabinet can be built more easily than with steel, by kerf-cutting the frame, as described and illustrated in Easy Sheet 8

**ABC's Access Frames are the most versatile extrusion system in the world!**

...If only one extrusion system can be in your inventory - it should be ABC's Workhorse!

**Call the Experts**  
**1-800-248-9889**