

# Accessory Parts

ABC's "Easy Sheet" series on building extruded aluminum sign frames - 9/99

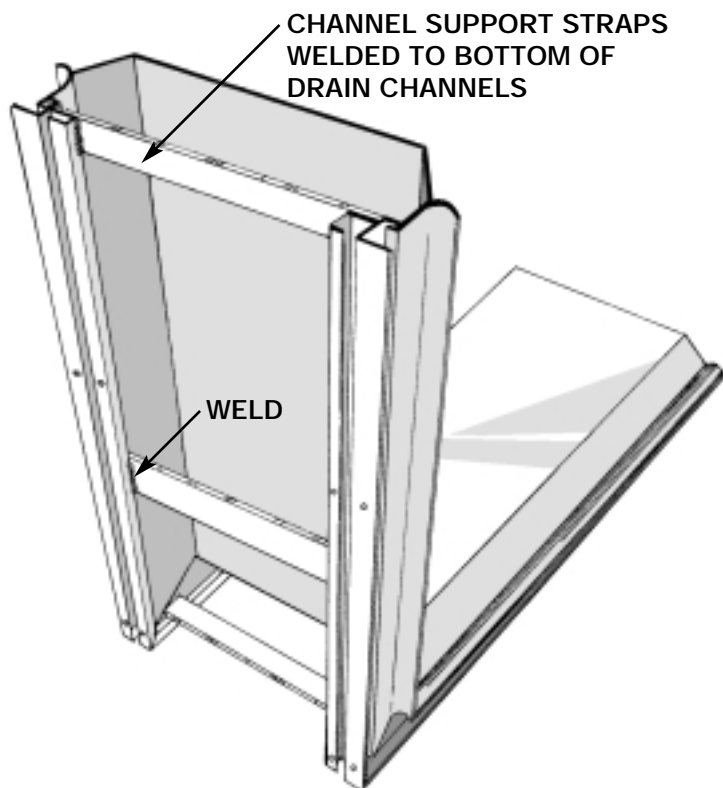
# 17

ABC Sign Products has developed a number of accessory parts to reduce labor costs and to ensure proper engineering requirements are used when building signs with our extrusion systems. As regular ABC inventory items, they are available when you need them.

Most of these parts are used regularly in our Large and Small A/Flexframe assemblies. By making these parts in large quantities, to precise specifications, ABC can sell them for less than most sign companies can make their own.

Other accessory parts, such as keyed locks for hinged frames, or Cone-Cups for changing the outside dimensions of a frame are made to serve seldom needed, but important functions.

By buying these parts from ABC, and having them in inventory as "off the shelf" accessories, production labor costs are much less than if these parts must be made individually as needed.



## CHANNEL SUPPORT STRAPS FOR A/FLEXFRAMES

These parts are used in both the Large and Small A/Flexframes as well as the Large and Small A/Bleedframes as illustrated in the Product Catalog sheets for these assemblies. They are 1" x 1/8" aluminum strap, cut 9-1/2" and 6-1/4" long, respectively

These straps are placed just under the drain channels. Be certain the frame walls are tight against the strap ends, using furniture clamps if necessary, then weld them in place. They hold the frame to it's exact width specification, and prevent the frame from spreading outwardly under wind and face tension loads. This relieves stress on the screws used to mount the C-Covers to the frame. Without these Channel Support straps, the frame might spread somewhat when a C-Cover is opened for service, making it difficult to re-fit the Cover to the screw holes in the frame.

The straps are placed close to each corner of every side of the frame, and thereafter 48" maximum on center.

For the Large and Small Bleedframes, these are extruded aluminum straps, designed to be knocked in, or to slide in from the ends of the frame before they are welded at the mitered corners. These very large frames can be slightly out of tolerance, making the Frame Braces difficult to slide in from the ends. A leather mallet or a wooden block and hammer can be used to drive the Frame Braces along, to their desired locations.

Please contact ABC if you have any questions:  
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The parts described on this page are covered by one or more of the following patents:  
U.S. 4,007,552 4,265,039  
CANADIAN 1,021,565 1,149,159 1,170,048 1,170,049 1,170,050



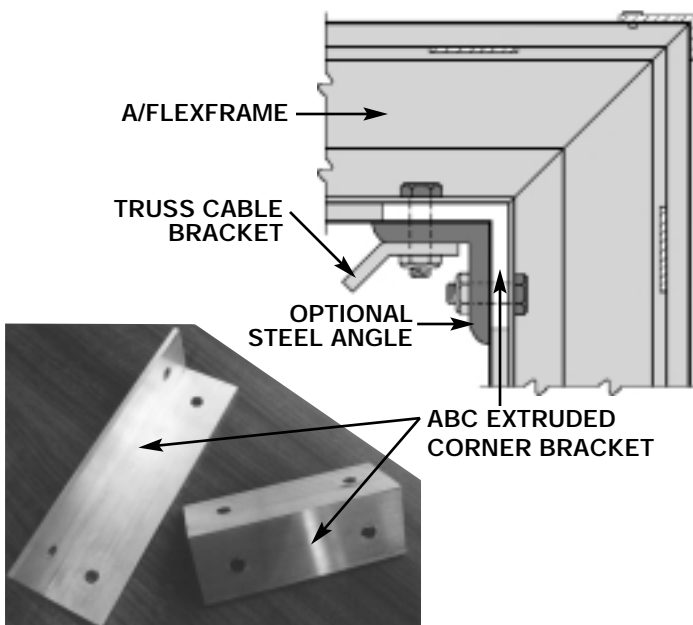
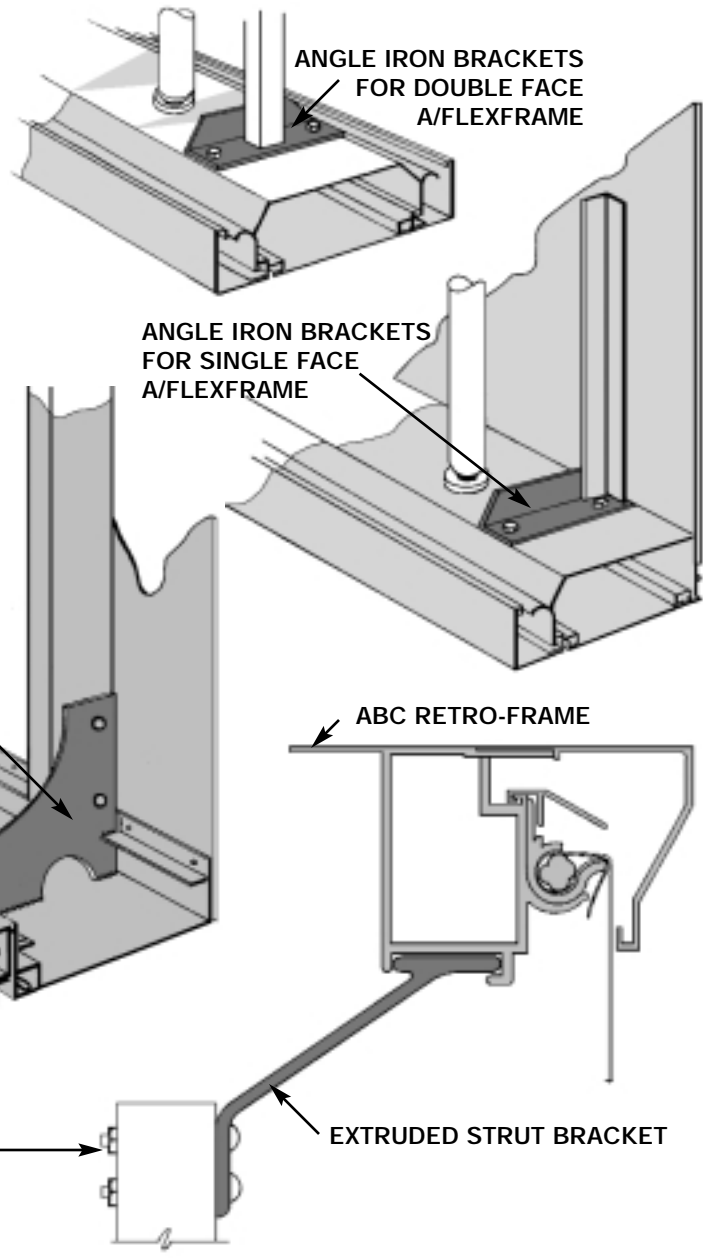
## STRUT BRACKETS AND GUSSETS

Most sign frames should have struts which span vertically or horizontally between the top and bottom frame members. For the Large and Small A/Flexframes, ABC makes steel angle iron brackets for bolting to the aluminum frame, then welding steel struts to the brackets. The standing leg of these brackets are cut off at a 45 degree angle to prevent shadows on the face, and are pre-punched for bolts in the proper place.

ABC provides die-stamped aluminum strut gussets which precisely fit the Single Hinge frame, and weld thereto. The steel strut member at the back of the frame is then bolted to the gusset.

For the Hinged face frames, Cad/Cam-cut strut gussets are made of heavy aluminum. These support the cantilevered saddle for Bleed-Face applications. They are stitch welded to the bottom of the Saddle and give support to the very lip of the part.

An extruded aluminum bracket is used to attach struts to the Retro-Frame, placing the struts sufficiently behind the face to prevent shadows. The bracket snaps into the track on the bottom of the frame, and can be screwed or welded thereto.



## BOLT-TOGETHER CORNER BRACKETS

For those who prefer to bolt the Large or Small A/Flexframes together instead of welding them, ABC's heavy extruded aluminum corner brackets fit into the internal extruded frame slots designed for that purpose. They are cut to the precise width to fit either frame, with pre-punched bolt holes.

This technique is also recommended to reinforce the upper corners of extremely large signs, in addition to the customary welding, to prevent racking in high wind areas. Whenever possible, welded construction is recommended for large signs; (6' x 10' and larger). When welded construction for large signs is not possible, the optional inside steel angle may be used in conjunction with the internal aluminum bracket to further strengthen the top corners.

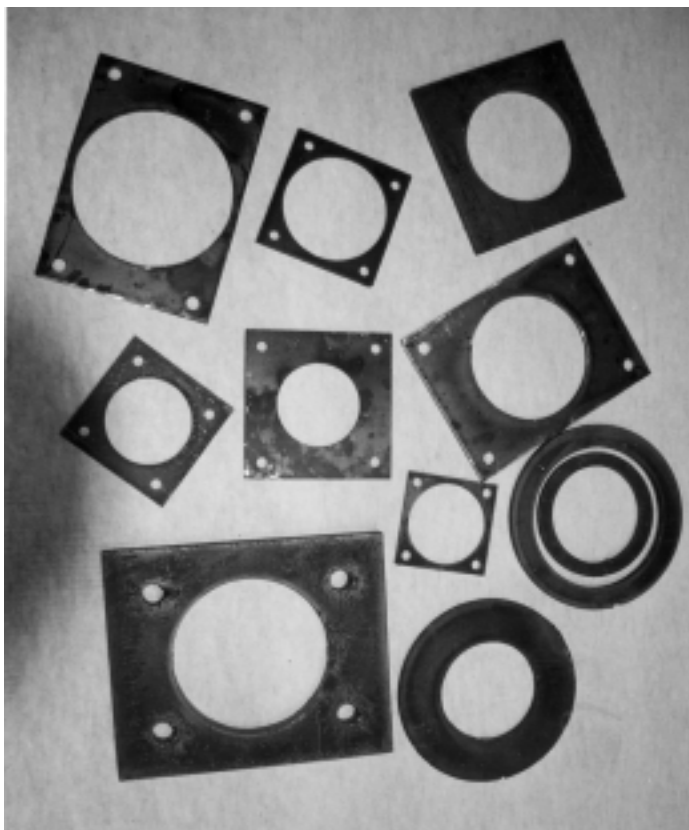
The Bolts which are used with the brackets provide a quick, easy means of attaching cable truss brackets when needed.

## FLAME-CUT STEEL PIPE PLATES AND PIPE RINGS

For mounting any of our extrusion frames to steel pipes, ABC has determined that a rectangular steel plate, at the top and bottom of the frame is the very best method for securely mounting the frame to the pipe. The pipe passes through both plates and extends into the top frame. The 120 volt primary wiring can then enter the top frame from the top of the pipe.

Precision flame-cut on ABC's Cad/Cam machine, each plate has four bolt holes, and should be bolted to the frame with grade 5 bolts and nuts secured by lock washers. The hole for the pipe is cut slightly over the O.D. pipe size, to enable welding all the way around the pipe to the plate.

ABC provides plates for all of their frames which can be used for pipe mounting. Plates are available for 3"- 4"- 5" and 6" pipes. ABC also stocks standard size pipe rings and provides fast service for custom pipe rings, match-plates and base plates. Just call or fax a drawing of your needs and we will quote prices immediately.



## HINGED FACE FRAME PROPS

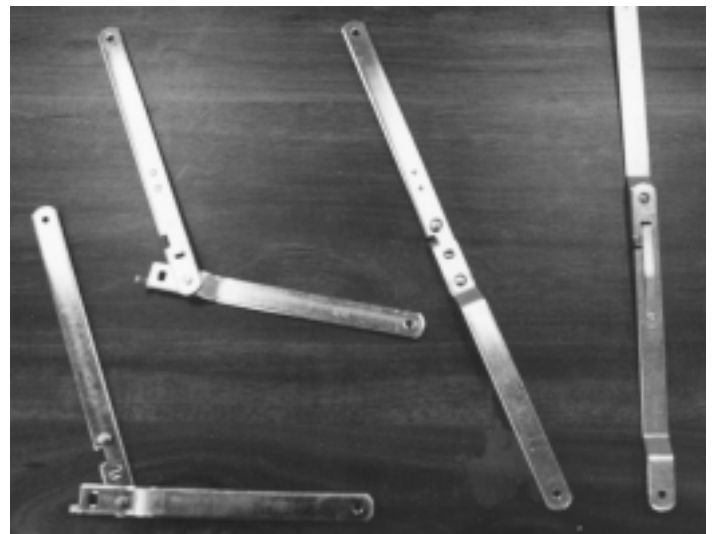
ABC stocks these Hinged face frame props for your convenience. They are a standard cabinet-maker's hardware item. They lock when in the full-open position, and have a spring release button to fold into the closed position. Two are required; one on each end of the hinged frame.

## WATER-TIGHT FLASHING FOR C-COVERS

All C-Covers for the Large and Small A/Flexframes need certain aluminum flashing at the top corners, and horizontal or vertical cover splices. ABC makes these of aluminum sheet, and uses a U.L. approved pressure sensitive neoprene tape developed especially for ABC.

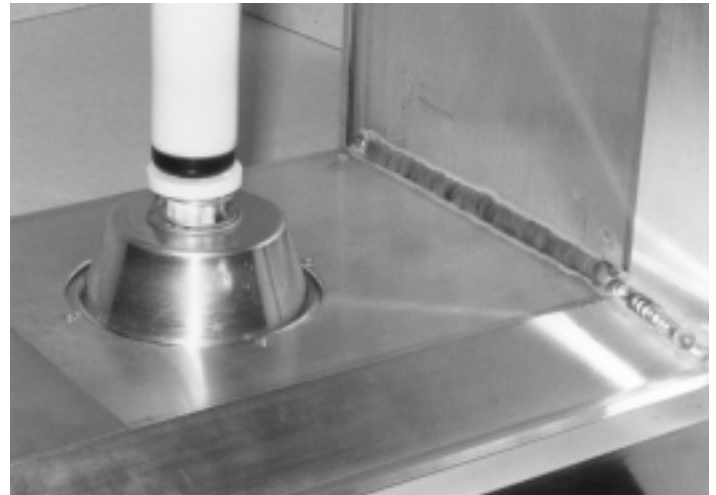
This tape has adhesive on one side only (which is applied to the flashing metal.) The side without adhesive presses against the C-Cover to seal the joint from water entry. The cover can be opened for service, and replaced without damaging the ability to seal the joint.

Any of these flashing pieces can be purchased in small quantities to have in stock, rather than making them for each sign. If making them is preferred, the tape is also available in 50' rolls from ABC's inventory. In very heavy rain or snow regions, ABC suggests using this tape on the frame flanges under the top C-Covers to prevent possible water entry from melting snow and ice which might overflow the depth of the drain channels. Be certain to follow this procedure for wide-fab frames also.



## ALUMINUM CONE-CUPS

ABC's Large and Small A/Flexframes are normally built 4-1/2" over the nominal lamp length in the lamp direction. But sometimes a sign cannot be this dimension for some reason. These cone-cups can be inverted to inset the lamp sockets into the 45/8" diameter punched holes, or used as illustrated to outset the lamp sockets 1-1/2". This makes it possible to increase or decrease the frame size in 1-1/2" increments up to three inches larger or smaller than the normal size.



## VHB TAPE

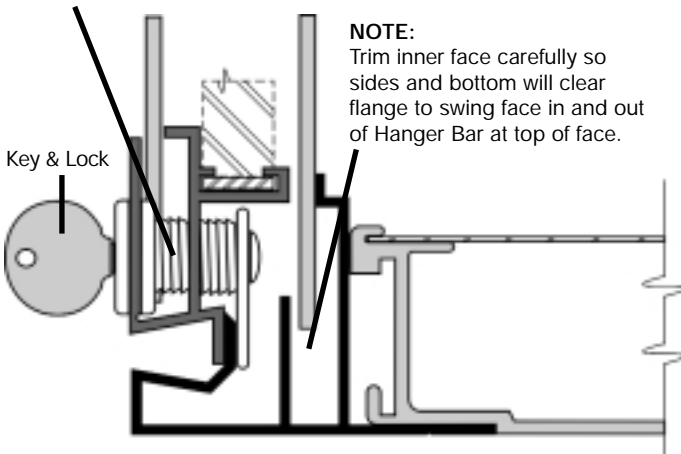
ABC stocks Very High Bond (VHB) tape for building architectural signage using their Architectural Frame shapes with flat aluminum faces. You can order this tape from ABC in standard half-inch or one inch rolls, or by the foot, at competitive prices.

## CONTINUOUS ABC TENSIONER STOCK

For some large signs, especially those with ABC's Bleedface type frames, a "continuous" tensioner can be used to eliminate any wrinkles or stress lines caused by individual tensioners. The Tensioner Saddle is available in 13' stock lengths, and the dowel in 16" and 32" lengths. For easy control of installation and sideways adjustment of the face, we recommend the Tensioner extrusion be used in approximate 15" or 31" lengths, spaced one inch apart in the frame Saddle. This provides for sufficient sideways adjustment of the Tensioner in the Frame Saddle. The dowel stock is then one inch longer. A keeper every 15" is adequate for locking the "continuous" Tensioners to the frame in the usual manner.



Notch face for  
Lock placement



**NOTE:**  
Trim inner face carefully so  
sides and bottom will clear  
flange to swing face in and out  
of Hanger Bar at top of face.

**BOTTOM FRAME VIEW, WITH LOCK**  
(Hinge and lock placement optional)

## KEYED LOCKS FOR HINGED FRAMES

ABC stocks standard keyed locks for use with the Zero Clearance Frame when used for hinged security face frames. These unique locks eliminate the need for any screws in the outer frame.

Two locks per face should be used; one on each vertical end of the frame, or on the bottom of the frame if preferred. If the locks are placed on the bottom, the outer face cannot be removed by sliding it, as notches must be cut out of the bottom edge of the outer face to allow sufficient engagement in the retainer. The cam of the lock is turned by the key with the frame in the closed position. The key is then withdrawn, and the frame is locked in place.

When you have need of an inner face with an outer security face, such as a reader panel with changeable copy, these locks can be ordered with ABC's Hinge frame components.