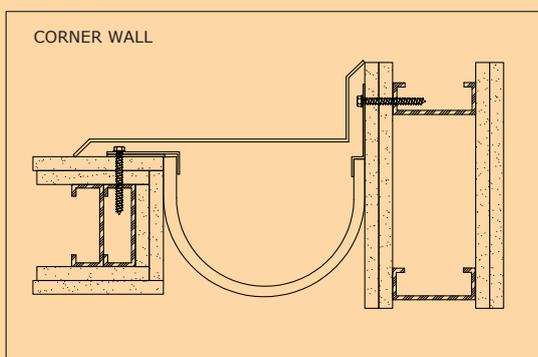
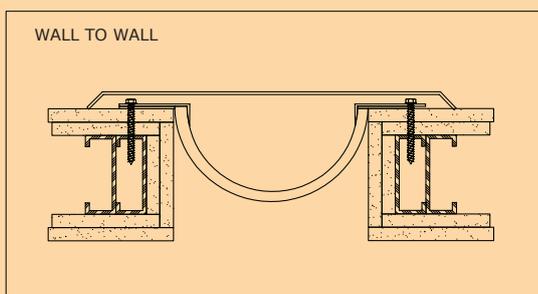
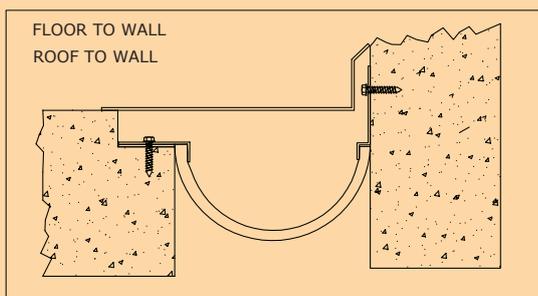
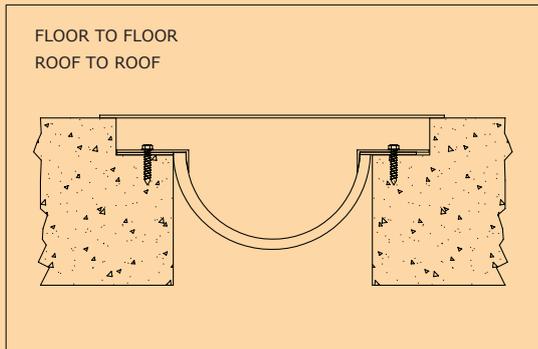


## ZFS Series

### General Instructions:

- Fire Barrier must be installed in accordance with installation instructions to maintain UL Rating.
- These Instructions are for all horizontal and vertical ZFS installations for 1" to 6" nominal joint widths.
- The galvanized flanges are welded to the fire barriers and are always required for installation.
- Appropriate fasteners supplied by others are required for all the horizontal and vertical installations.
- Typically, the same fasteners can be used to fasten the cover plate mechanism and fire barriers.
- If splicing is required, see the separate splicing instructions.
- Wear heavy duty work gloves and eye protection during the entire installation process.



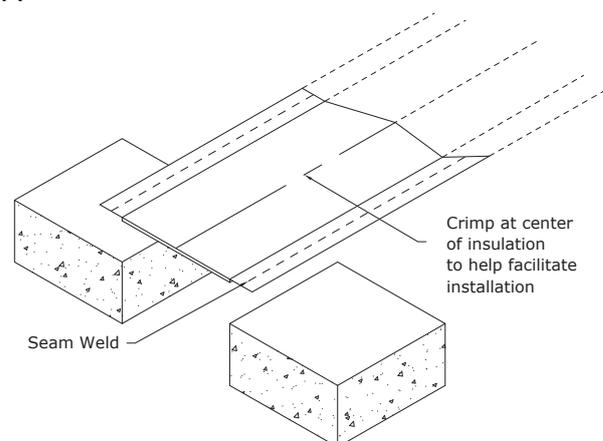
### Packing

Each carton contains 25 foot roll of the ZFS Fire Barrier, one kit with the necessary materials for splicing, the installation instructions and the splicing instructions. The galvanized flanges necessary for installation are packed separately.

### Material Preparation:

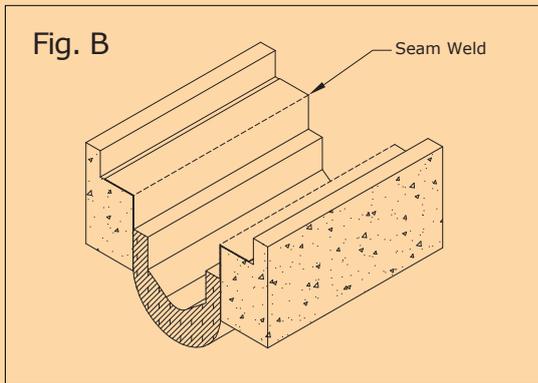
Roll out product face up (the side with the UL-label) and cut to length. The insulation portion of the product can be formed in to a "U" or "V" shape to help it fit into the expansion joint this can be done by crimping the insulation along the center line with a pipe or board (See Fig. A)

Fig. A



## ZFS Series

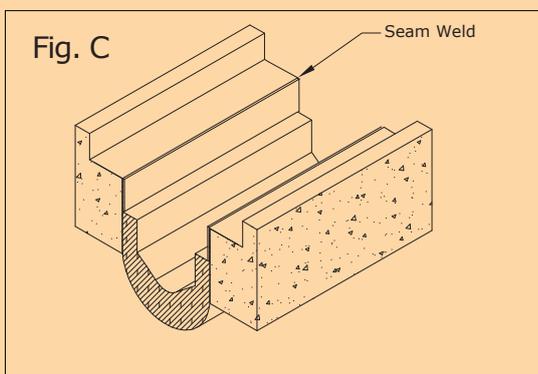
### Installation Instructions: Horizontal or Floor and Roof Joints



#### Step 1

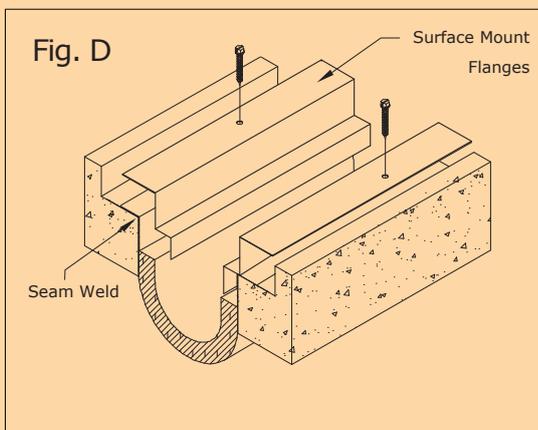
After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint. The foil flange can be folded along the seam weld line onto the exposed face of the concrete slab. (See Fig. B).

With the Low Profile (LP) galvanized flange, the foil flanges can be folded along the seam weld line down inside the expansion joint void so that no part of the barrier is on the exposed surface of the floor. (See Fig. C)



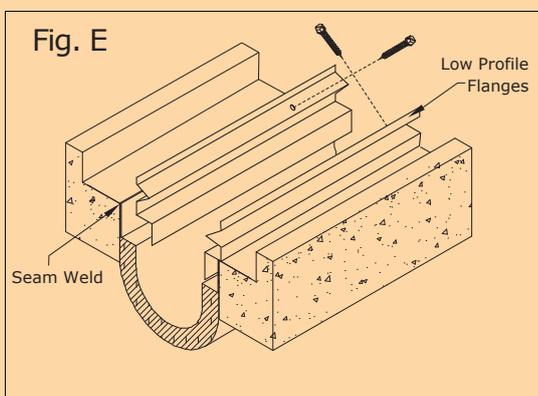
#### Step 2

Cut the galvanized flanges to length and drill appropriate size holes with maximum spacing of 18". Install the flanges with appropriate fasteners (by others) as shown. (See Figs D & E)



#### Step 3

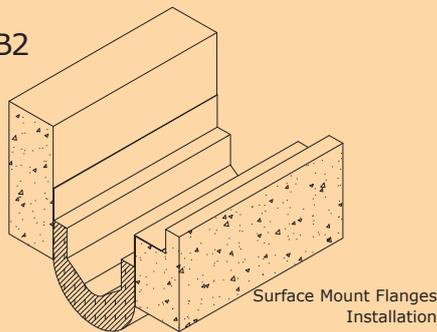
Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).



## ZFS Series

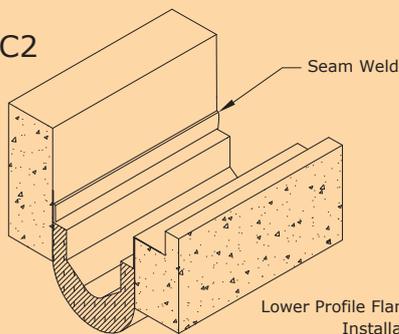
### Installation Instructions: Floor to Wall / Roof to Wall

Fig. B2



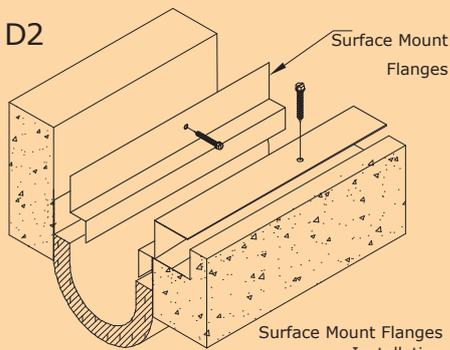
Surface Mount Flanges Installation

Fig. C2



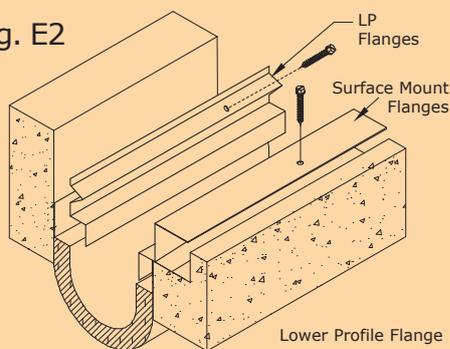
Lower Profile Flanges Installation

Fig. D2



Surface Mount Flanges Installation

Fig. E2



Lower Profile Flange Installation

#### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint. The foil flanges can be folded along the seam weld line onto the exposed face of the floor slab. The foil flanges can be run up the wall on the other side of the joint (See Fig. B2). With the Low Profile (LP) galvanized flange configuration on the wall side, the foil flanges can be folded over itself before the galvanized flange is fastened in to place. (See Fig. C2)

#### Step 2

Cut the galvanized flanges to length and drill appropriate size holes with maximum spacing of 18". Install the flanges with appropriate fasteners (by others) as shown. (See Figs. D2 & E2)

#### Step 3

Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).



### Installation Instructions: Wall Joints

Fig. B1

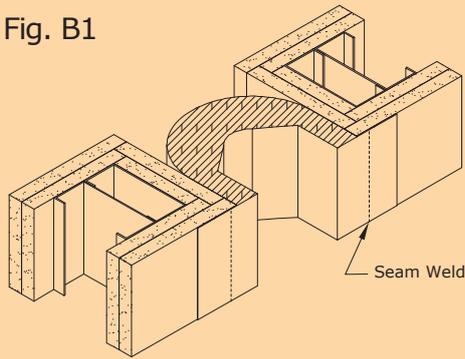


Fig. C1

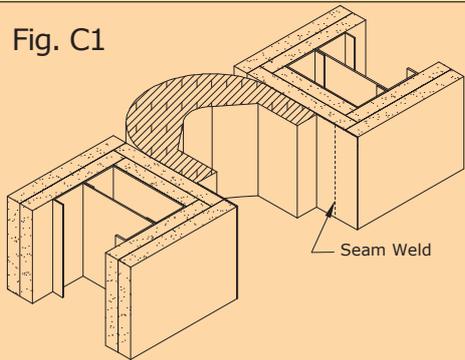
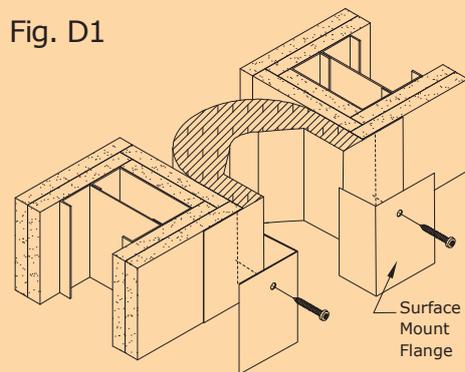
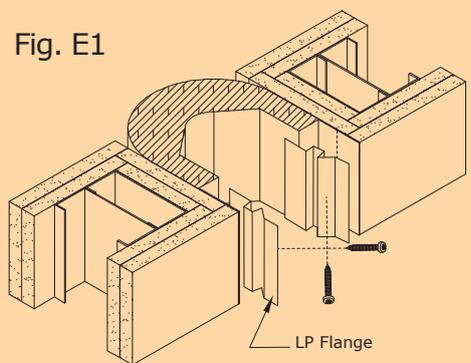


Fig. D1



Surface Mount Flanges

Fig. E1



Low Profile Flanges

#### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, place the fire barrier into the expansion joint. The foil flanges can be entirely on the exposed surface of the wall for the Surface Mount galvanized flange. (See Fig. B1).

With the Low Profile (LP) galvanized flanges, the foil flanges can be inside the joint cavity so that no part of the barrier is on the exposed surface of the wall. (See Fig. C1)

#### Step 2

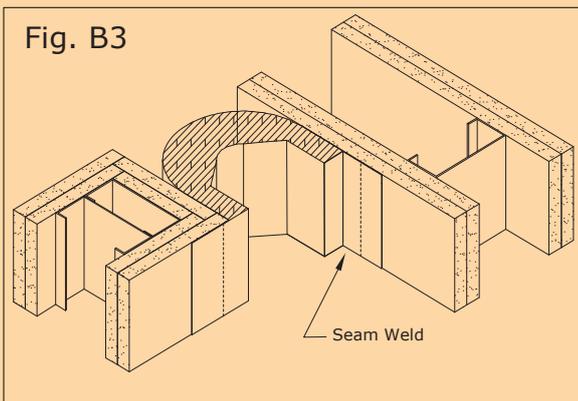
Cut the galvanized flanges to length and drill appropriate size holes with maximum spacing of 18". Install the flanges with appropriate fasteners (by others) as shown. (See Figs. D1 & E1)

#### Step 3

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).

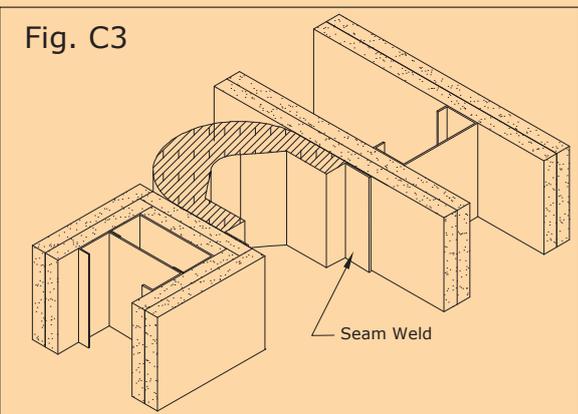


### Installation Instructions: Corner Wall



#### Step 1

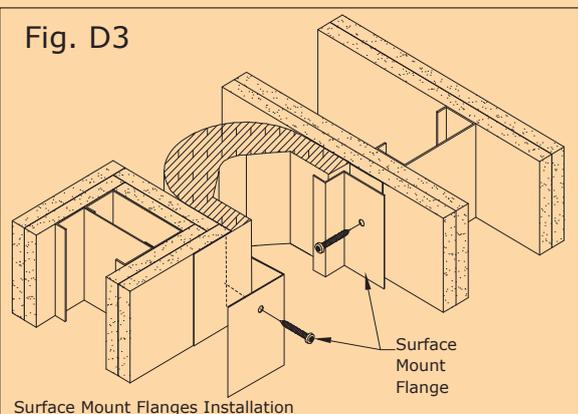
After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint. The foil flanges can be folded along the seam weld line onto the exposed face of the wall. The foil flanges can be run out the wall on the other side of the joint. (See Fig. B3).



With the Low Profile(LP) galvanized flange configuration on the wall side, the foil flanges can be folded over itself before the galvanized flange is fastened in to place.(See Fig. C3)

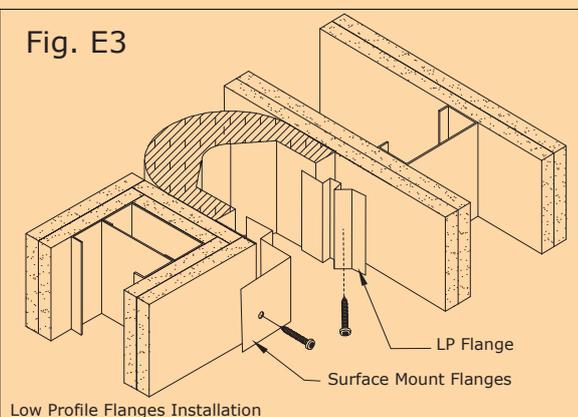
#### Step 2

Cut the galvanized flanges to length and drill appropriate size holes with maximum spacing of 18". Install the flanges with appropriate fasteners (by others) as shown. (See Figs. D3 & E3)



#### Step 3

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).



## ZFS Series

### General Instructions:

- Fire Barrier must be installed in accordance with installation instructions to maintain UL Rating.
- These Instructions are for all horizontal and vertical ZFS installations for 8" to 20" nominal joint widths.
- The 8" to 12" nominal joint width barriers are a single draped system.
- The 14" to 20" nominal joint width barriers are a double draped system as shown.
- The galvanized flanges are welded to the fire barriers and are always required for installation.
- Appropriate fasteners supplied by others are required for all the horizontal and vertical installations.
- Typically, the same fasteners can be used to fasten the cover plate mechanism and fire barriers.
- If splicing is required, see the separate splicing instructions.
- Wear heavy duty work gloves and eye protection during the entire installation process.

### Packing

Each carton contains: 10 foot lengths (custom-lengths are also available) of the ZFS Fire Barrier with galvanized flanges attached. One kit with necessary material for splicing. The Installation and splicing instructions.

### Material Preparation:

Set the product face up (the side with the UL label) and cut to length. The insulation portion of the product can be formed in to a "U" or "V" shape to help it fit into the expansion joint. This can be done by crimping the insulation along the center line with a pipe or board. (optional) (See Fig.A)

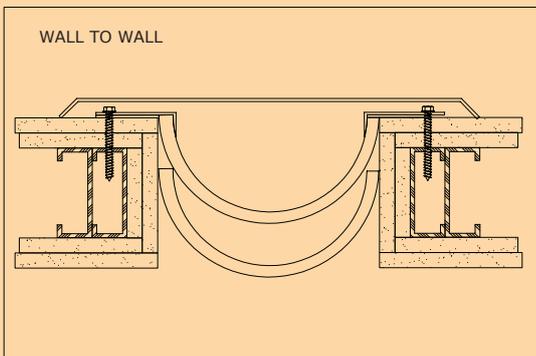
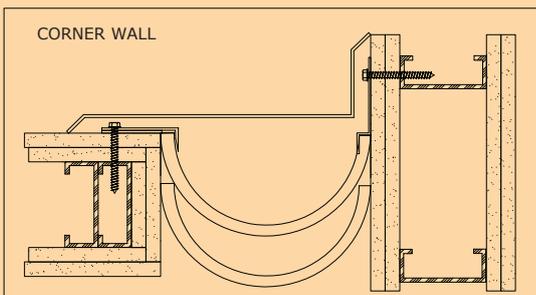
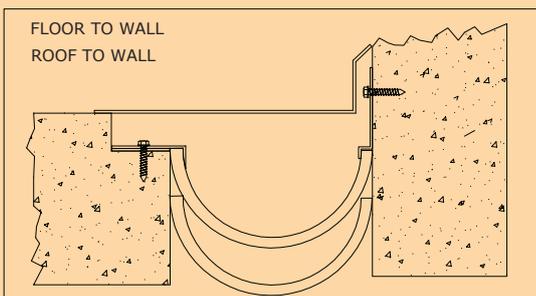
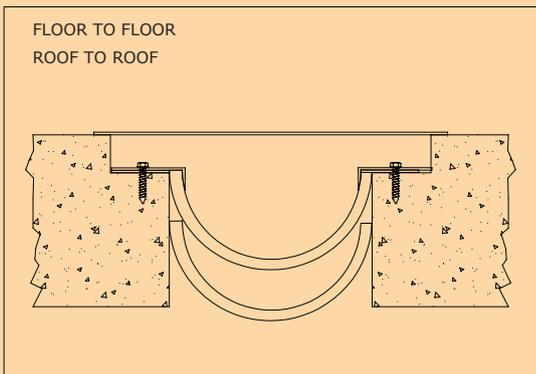
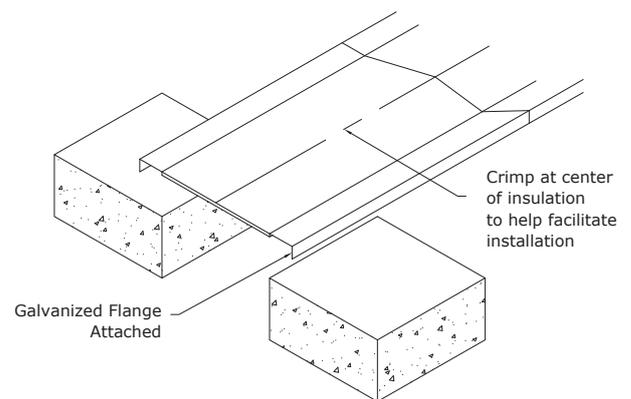


Fig. A



## ZFS Series

### Installation Instructions: Horizontal or Floor and Roof Joints

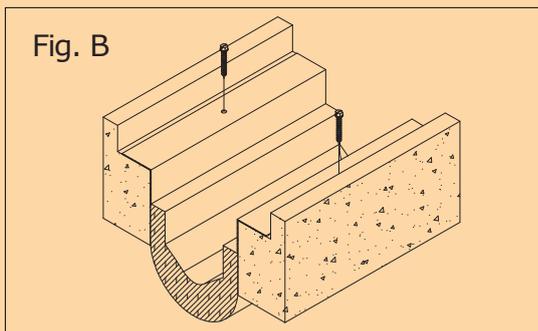


Fig. B

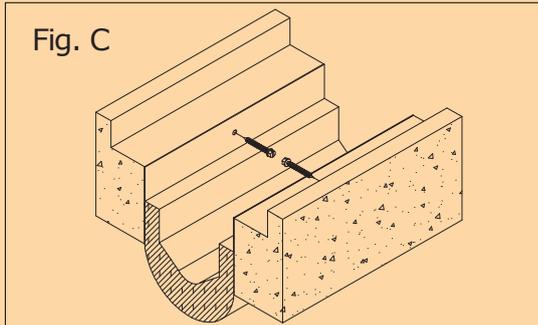


Fig. C

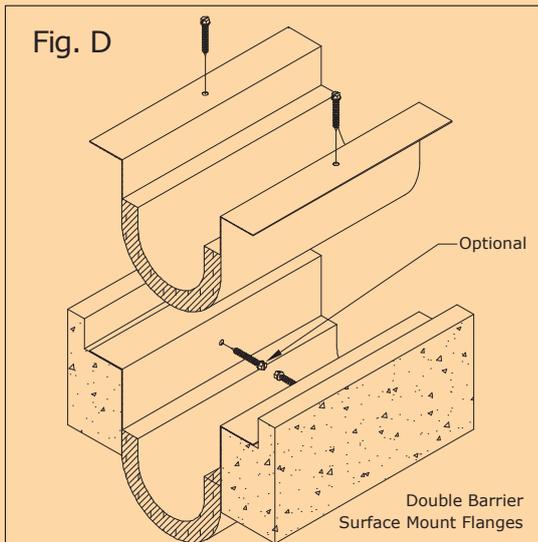


Fig. D

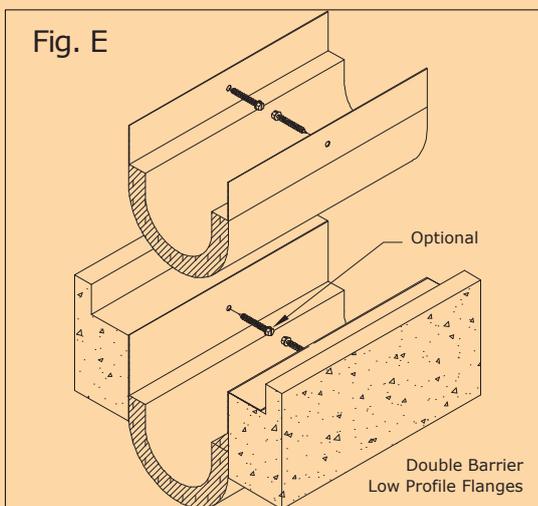


Fig. E

#### Single Fire Barrier Installation: 8" to 12" Nominal Joint Widths

##### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint cavity. Drill the appropriate size holes and secure the flanges with fasteners (by others) with a maximum spacing of 18 inches. (See Figs. B & C).

##### Step 2

Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).

#### Double Barrier Installation: 14" to 20" Nominal Joint widths

##### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the lower fire barrier into the expansion joint cavity (See Figs. D & E).

Optional: Prior to installing the upper fire barrier, if the lower fire barrier requires fastening to hold it in place, drill appropriate size holes to the flanges and secure with fasteners (by others).

##### Step 2

Install the upper fire barrier and drill the appropriate size holes as shown in Fig. D. The fasteners (by others) need to be installed with a maximum spacing of 18 inches. The same fasteners used to install the cover mechanism can generally be used to install the fire barriers.

Fire barriers with Low Profile flanges are secured with fasteners inside the joint cavity. (See Fig. E)

Note: Fire barriers with surface mount flanges can also be secured with fasteners inside the joint cavity.

##### Step 3

Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).



## ZFS Series

### Installation Instructions: Floor to Wall / Roof to Wall

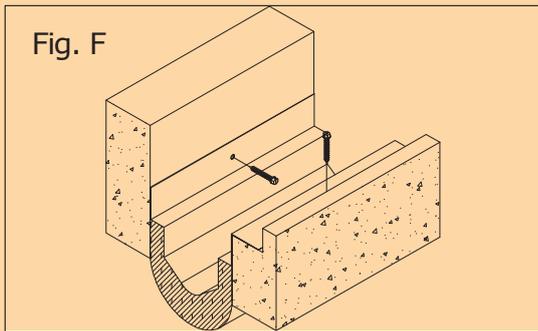


Fig. F

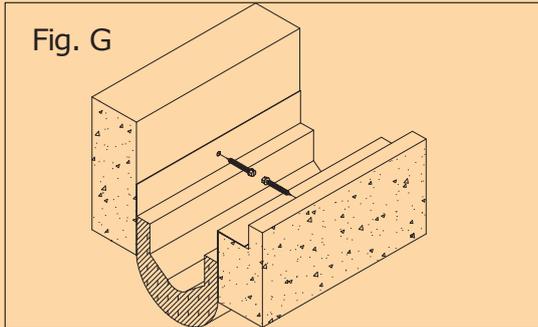


Fig. G

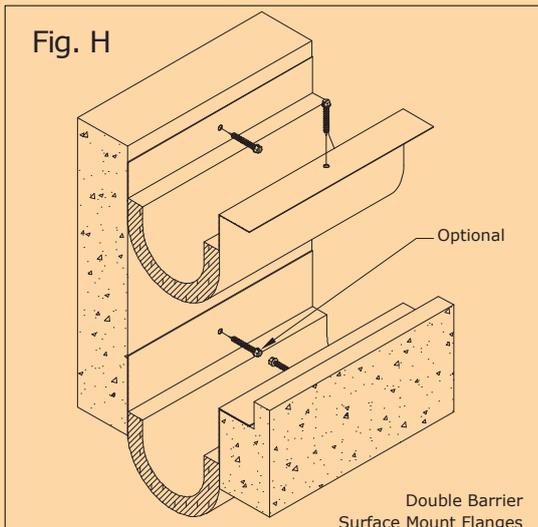


Fig. H

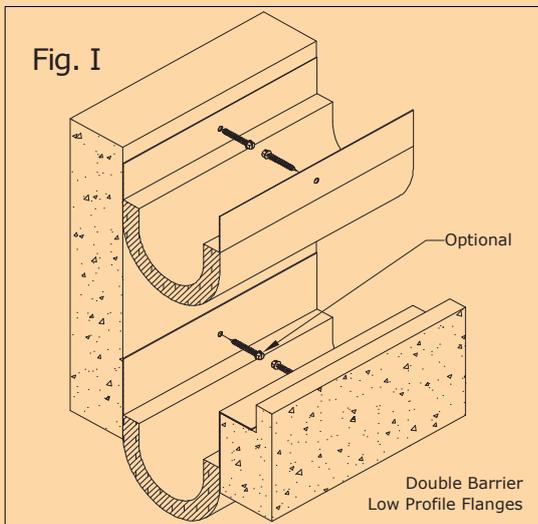


Fig. I

#### Single Fire Barrier Installation: 8" to 12" Nominal Joint Widths

##### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint cavity. Drill the appropriate size holes and secure the flanges with fasteners (by others) with a maximum spacing of 18 inches. (See Figs. F & G).

##### Step 2

Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).

#### Double Barrier Installation: 14" to 20" Nominal Joint widths

##### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the lower fire barrier in the expansion joint cavity (See Figs. H & I).

Optional: Prior to installing the upper fire barrier, if the lower fire barrier requires fastening to hold it in place, drill appropriate size holes to the flanges and secure with fasteners (by others).

##### Step 2

Install the upper fire barrier and drill the appropriate size holes as shown in Fig. H. The fasteners (by others) need to be installed with a maximum spacing of 18 inches. The same fasteners used to install the cover mechanism can generally be used to install the fire barriers.

Fire barriers with Low Profile flanges are secured with fasteners inside the joint cavity. (See Fig. I)

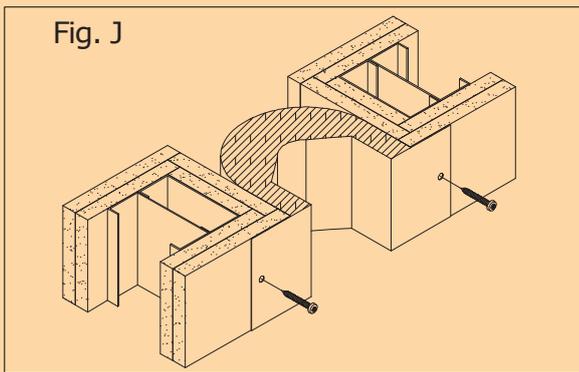
Note: Fire barriers with surface mount flanges can also be secured with fasteners inside the joint cavity.

##### Step 3

Install the expansion joint covers (by others) over the joint or in the blockout with appropriate fasteners (by others).



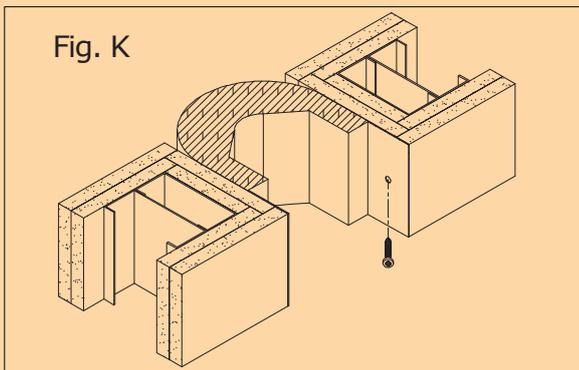
### Installation Instructions: Wall Joints



Single Fire Barrier Installation:  
8" to 12" Nominal Joint Widths

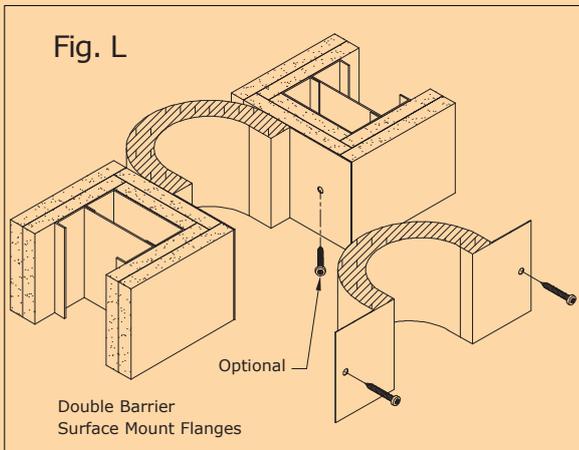
#### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint cavity. Drill the appropriate size holes and secure the flanges with fasteners (by others) with a maximum spacing of 18 inches (See Figs. J & K).



#### Step 2

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).



Double Barrier Installation:  
14" to 20" Nominal Joint widths

#### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the inner fire barrier in to the expansion joint cavity (See Figs. L & M).

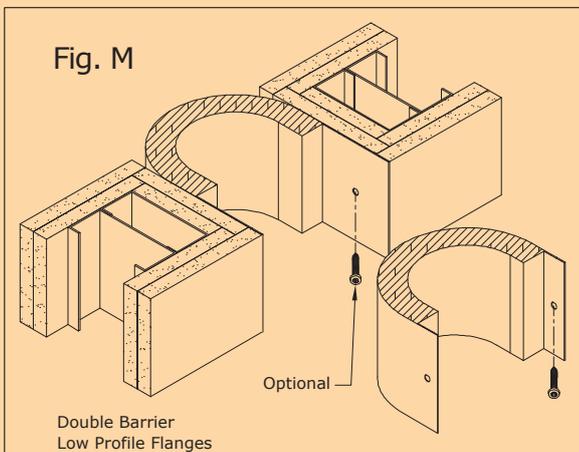
Optional: Prior to installing the outer fire barrier, if the inner fire barrier requires fastening to hold it in place, drill appropriate size holes to the flanges and secure with fasteners (by others).

#### Step 2

Install the outer fire barrier and drill the appropriate size holes as shown in Fig. L. The fasteners (by others) need to be installed with a maximum spacing of 18 inches. The same fasteners used to install the cover mechanism can generally be used to install the fire barriers.

Fire barriers with Low Profile flanges are secured with fasteners inside the joint cavity. (See Fig. M)

Note: Fire barriers with surface mount flanges can also be secured with fasteners inside the joint cavity.



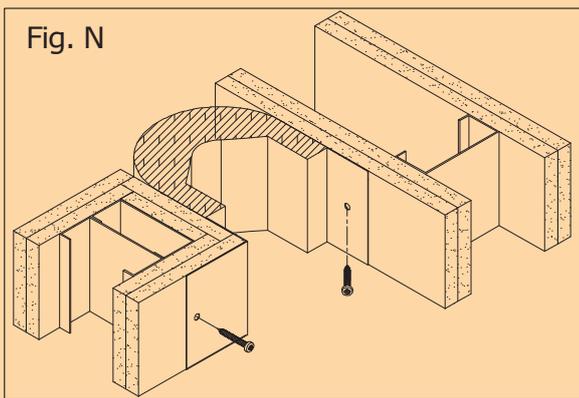
#### Step 3

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).



## ZFS Series

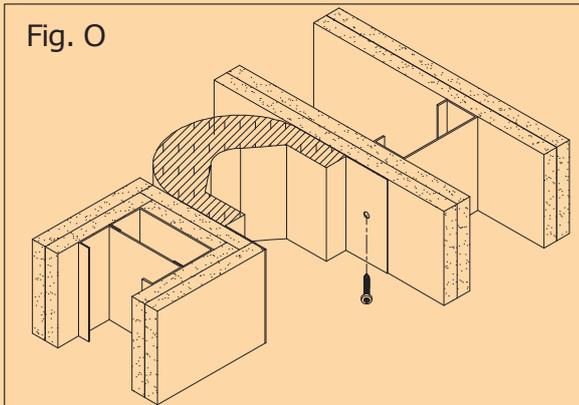
### Installation Instructions: Corner Wall



Single Fire Barrier Installation:  
8" to 12" Nominal Joint Widths

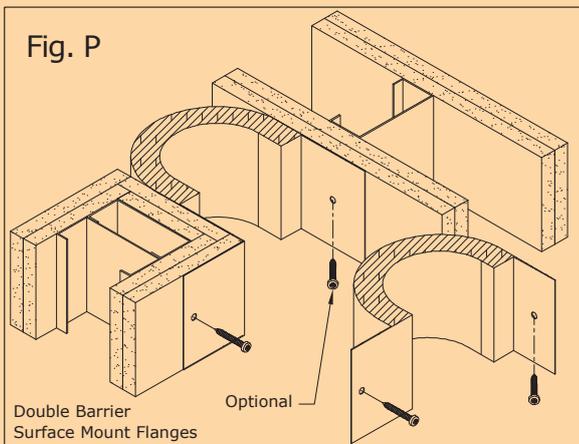
#### Step 1

After completing material preparation described on page 1 and as shown in Fig. A, Place the fire barrier into the expansion joint cavity. Drill the appropriate size holes and secure the flanges with fasteners (by others) with a maximum spacing of 18 inches (See Figs. N & O).



#### Step 2

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).



Double Barrier Installation:  
14" to 20" Nominal Joint widths

#### Step 1

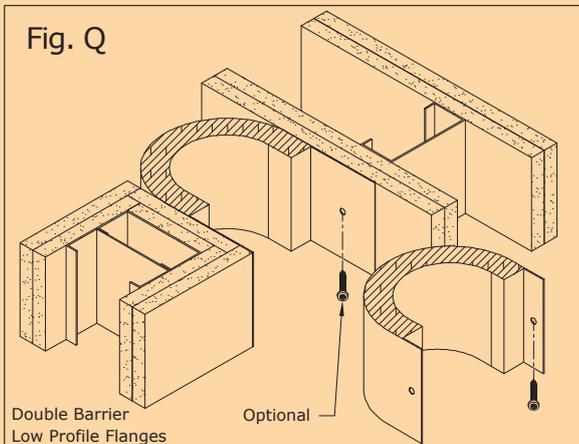
After completing material preparation described on page 1 and as shown in Fig. A, Place the inner fire barrier in to the expansion joint cavity (See Figs. P & Q).

Optional: Prior to installing the outer fire barrier, if the inner fire barrier requires fastening to hold it in place, drill appropriate size holes to the flanges and secure with fasteners (by others).

#### Step 2

Install the outer fire barrier and drill the appropriate size holes as shown in Fig. P. The fasteners (by others) need to be installed with a maximum spacing of 18 inches. The same fasteners used to install the cover mechanism can generally be used to install the fire barriers.

Fire barriers with Low Profile flanges are secured with fasteners inside the joint cavity. (See Fig. Q)  
Note: Fire barriers with surface mount flanges can also be secured with fasteners inside the joint cavity.



#### Step 3

Install the expansion joint covers (by others) to either side or both sides of the wall when accessible with appropriate fasteners (by others).

