GELCO CROWN FORM INSTRUCTIONS

Gelco Crown Forms are reusable forms for pouring cement chimney crowns. Different form lengths can be combined and adjusted to create crown widths and lengths from 14" to 92". Crowns can be made 3" to 5" deep. Choose the form style you want, with either straight or slanted sides.

- **Preliminary notes.** Use caution when working on a roof. Proper and safe scaffolding and fall protection equipment should be used when installing a new crown. Do not use these crown forms in extreme cold and/or inclement weather. These forms are designed to be used by a qualified professional who works with chimneys and masonry related products on a regular basis.

- **Step 1: Chimney check.** Measure the height of the flue tile to ensure it will be at least 2" higher than the intended height of the crown. If a stainless liner is installed, be sure to follow requirements of the liner manufacturer in regards to termination height and other requirements. If liner does not exceed this measurement, either increase liner height or reduce the intended height of the crown. **Note: The National Fire Protection Association Standards No.'s 54 and 211 require the chimney extend at least 3' above the highest point where it passes through the roof and at least 2' higher than any portion of any structure within 10'.**

Step 2: Chimney preparation. To allow for thermal expansion, wrap a noncombustible material around the portion of the clay flue tile liner(s) that would come in contact with either the cement or the plate that supports the cement. Not providing an expansion joint can cause damage to the liner and/or cause lifting of the crown, leading to chimney damage.

Create a plate to support the cement between the liner(s) and the chimney wall — use sheet steel or other strong, noncombustible material. Cut material to fit tightly around the liner(s) to prevent cement from running inside the chimney. If there is a stainless steel liner, consult the liner manufacturer for thermal expansion recommendations.

Step 3: Form preparation. If using this crown form the first time, oil the screws and insert them into the clamps. Measure the chimney top and select the four appropriate form sides. Use the 56" sections for chimneys wider than 28". Use the 92" sections (straight side forms only) for chimneys wider than 54". On a flat surface, lay the forms out in a rectangular formation, with equal lengths opposite each other. Figure 1 shows how the sides will be configured in the next step — note that the flanges are to the inside of the rectangle.

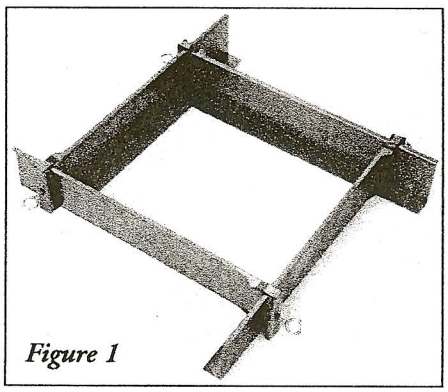

Figure 1

- **Step 4: Form assembly.** Assemble the crown forms by sliding the plain end of each side through the clamp end of its clockwise neighbor, as shown in Figure 2. Lightly tighten the clamp on each section.

Place the form on top of the chimney and adjust each side to overhang the outside of the chimney, while leaving ⅛" to ½" of each flange rest on the chimney. Do not create an overlap more than ½", as that will make removing the form difficult.

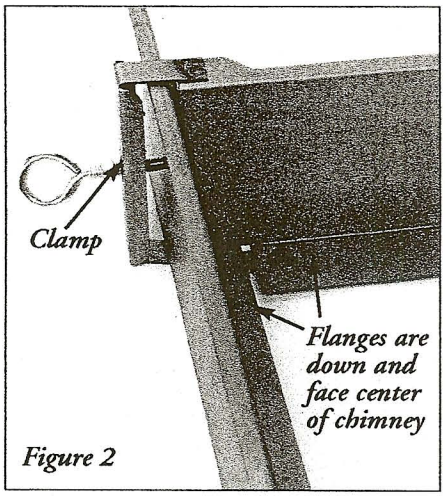

Figure 2

An alternate setup is to suspend the form from masonry fasteners placed 1" – 2" below the chimney top.

Check that forms are square either by using a square on each corner or measuring to ensure that opposite sides are parallel. Once the form is perfectly square, tighten all clamps. To prevent long forms (over 56") from bowing out when filled with cement, apply pipe clamps or bar clamps across the middle of opposite sides.

Oil all inside surfaces of the form including the 2" flange, otherwise cement will adhere to the form and prevent easy removal.

- **Step 5: Crown pouring.** If there is a very large space between the inside chimney wall and the liner, rebar and reinforcing mesh may be needed in the crown. Prepare enough cement to pour a crown to the desired depth (minimum thickness – 3"). Fill the form with cement, making sure mesh is properly positioned. Tap sides of form gently with a hammer to release trapped air bubbles. Cover with plastic and allow cement to set overnight. Weather conditions will affect the curing rate, so check the cement for hardness before removing forms.

Remove forms by loosening all clamps. Tap forms lightly to free from cement and lift over the crown. Immediately scrape forms clean and lightly oil them for storage. Using a stone, miter edges of cement crown to desired angle.

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