Hand Squeeze Roll Applicators
HSRA-48, HSRA-36 and HSRA-12

Health and Safety Information
Read all health hazard, precautionary, and first aid statements found in the Material Safety Data Sheet, and/or product label of chemicals prior to handling or use.

Description
Hand squeeze roll applicators (HSRA) 48 inch and 36 inch are intended for use in the room temperature application of Scotchlite reflective sheetings with pressure sensitive adhesives and in the pre-application of series 2800 with heat activated adhesive.
The hand squeeze roll applicator consists of two rollers mounted in a frame, a lower steel roller, and an upper rubber covered steel roller which is driven by a hand crank. The upper roller is adjustable to provide proper application pressure on varying thickness sign blanks, either with hand knobs or air cylinders.

Specifications
HSRA-48 Dimensions:
Applicator
60 inches (1.5 m) wide, 141/4 inches (36.5 cm) high, 10 inches (25.4 cm) long
With Feed Tables
60 inches (1.5 m) wide, 141/4 inches (36.5 cm) high, 38 5/8 inches (98 cm) long

Construction:
Anodized Aluminum Frame
Rubber Coated Tubular Steel Upper Roll
Steel Lower Roll
Two Plated Steel Tables:
24 inches (61 cm) by 541/2 inches (138.5 cm)
Extension Table
14 inches (35.6 cm) by 541/2 inches (138.5 cm)

Weight:
Applicator 180 pounds (81.7 kg)
Feed Tables 47 pounds (21.3 kg)
Total Weight 227 pounds (103 kg)

Maximum Sign Size:
Up to 50 inches (127 cm) wide and 21/4 inches (7 cm) thick by any length

Minimum Size Table Required to Support Applicator:
60 inches (153 cm) by 24 inches (61 cm)

HSRA-36 Dimensions:
Applicator: 47" (1.2 m) wide, 13.5" (34.3 cm) high, 27" (68.6 cm) long (including base table)

Construction:
Steel and Aluminum Frame
Rubber Coated Tubular Steel Upper Roller
Steel Lower Roller
Galvanized Steel Feed Tables

Net Weight:
90 pounds (40.8 kg)

Maximum Sign Size:
Up to 36" (0.91 m) wide and 11/8" (2.81 cm) thick, by any length

HSRA-12 Dimensions:
19" (48.3 cm) wide
19.5" (49.5 cm) high (including air cylinders)
27" (68.6 cm) long

Construction:
Anodized Aluminum Frame
30 Durometer Rubber Coated Tubular Steel Upper Roll
50 Durometer Rubber Coated Tubular Steel Lower Roll
Galvanized Steel Feed Table
Net Weight:  
Approximately 40 pounds (18.2kg)  
Maximum Sign Size:  
Up to 12" (30.5cm) wide and 1.125" (2.876cm) thick  
by any length

**Operating Procedure**

A. **Applicator Adjustment**
Hand nip pressure adjustment
Careful adjustment of the rollers is necessary for proper sheeting application.
1. Turn the adjusting knobs until the rollers are opened wider than the thickness of the sign blanks.
2. Place a sign blank between the rollers.
3. Turn the adjusting knobs down until the top rubber roller begins to evenly contact the sign blank.  
   Remove “play” from adjusting knobs.
4. Tighten the adjusting knobs one-half turn to obtain proper application pressure.
5. Remove sign blank.
   **Note:** Release pressure on rollers at the end of the day.
   Air cylinder kit adjustment
   Adjust air regulator to 80 psi.
   **Note:** If compressed air is not available, use a portable compressor since minimal CFM is required.

B. **Sheeting Pre-application for Series 2800 and Sheet Application With Pressure Sensitive Adhesives.**
Two different methods are used for applying this sheeting, depending on the size of the sign. For small signs, start at one edge of the sign and roll the liner and blank through in one motion. For larger signs, start in the middle of the sign and roll first one end and then the other through the applicator.

After pre-application and trimming of series 2800, place the signs on loading boards and cover the sign faces with SCW-82 Slip-sheeting, with the shiny (unprinted) side against the sheeting face. Do not use other liner paper or the adhesive liner, as it may damage or adhere to the sheeting.

Run through the complete cycle of a Scotchlite heat lamp vacuum applicator equipped with Temperature Controller. See Information Folder 1.2.

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**Method 1 - Small Signs**

1. After the sign face or sheeting has been cut to the desired size, lay the sheeting face down on the HSRA feed table. Pull back the liner approximately 3 inches parallel to the edge of the sheeting to expose the adhesive. Crease the liner to hold it out of the way during positioning of the sheeting on the substrate.

2. Carefully position the sheeting onto the substrate, adhering the exposed adhesive to the surface.
3. Feed the adhered portion into the nip.

4. Drape non-adhered sheeting over upper roller and remove liner.

5. Keeping the draped sheeting taut, laminate remaining sheeting to substrate by cranking blank through rollers.

6. Trim edges from the face side using a sharp blade.

**Method 2 - Larger, Longer Signs**

HSRA with air cylinders

1. Center the substrate between open rolls of the hand squeeze roll applicator.

2. Place the cut sheeting, with the liner still on, over the blank and register the edges.
3. Lower the upper roller. Check alignment and realign if necessary.

4. Drape half the sheeting over the upper roller, and remove the liner back to the nip.

5. Fold and tuck the liner under to aid removal. Note: If liner is long, cut it away leaving a 3" length to tuck into the nip.

6. Run the linerless portion through the nip to laminate it to the blank.

7. Run the applied half back through the nip. Then drape the remaining portion of the sheeting over the upper roller and remove remaining liner.

8. Laminate remaining portion of sheeting to blank.
Extruded Street Name Signs - Adaptor

For Use on 48" and 36" Applications

Because of their irregular shape, extruded street name signs require a sponge rubber sheet to conform the sheeting to the blank. Sheet width should be 1/2” narrower than the overall blank width, so as not to wrap the sheeting over the rounded edges.

Figure 9

1. Install the ESNS adaptor on the top nip roll. Center it on the roll. See Figure 9.
2. Set the nip pressure as for flat blanks; either manually or with the air cylinders.
3. Use either Method 1 or 2, depending on size.
4. Remove the adaptor after completing applications.

Note: When applying VIP sheeting to double-sided signs, use either a piece of FR-2 sponge rubber or cardboard with SCW 82 slipsheet under the first side while applying the second side.

Method 3 - Application Using the 12" HSRA

Figure 1

1. The 12" Hand Squeeze Roll Applicator (Figure 1) complete with air cylinders is designed for the application of street name signs using both extruded and flat aluminum blanks. The application procedure is the same as method number two.

Figure 2

2. The 12" HSRA consists of two rubber nip rollers.

Table 1

<table>
<thead>
<tr>
<th>Applicator</th>
<th>Adaptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>36&quot; HSRA</td>
<td>HSRA-36-3.00&quot; DIA</td>
</tr>
<tr>
<td>48&quot; HSRA</td>
<td>HSRA-48-4.38&quot; DIA</td>
</tr>
<tr>
<td>48&quot; ISRA</td>
<td>ISRA-48-6.00&quot; DIA</td>
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</tbody>
</table>
How to use 3M™ Scotchlite Electronic Cuttable Film Series 1170

Here are the five easy steps for using Scotchlite cuttable film. For more detailed information, consult the manufacturer’s operating manual or call your 3M representative.

1. Enter text and cut film per your electronic cutting machine’s operating instructions.

2. Remove excess film, leaving behind the final text.

3. Mask the copy, using 3M TPM5 transfer tape.

4. The lower rubber roll allows double-sided application of Diamond Grade sheetings with only a piece of slipsheeting for protecting application of the first side. This slipsheeting protects the first side while applying sheeting to the second side.

3. The upper roll is soft which allows application to extruded blanks without the need for any special adapters.
4. Apply film to pre-sheeted substrate, using a hand-squeeze roller applicator.

5. Remove the transfer tape, revealing the completed sign.

**Premask**

The applicator may also be used to apply premask and prespacing tapes. Thread tape as in Figure 1, feed material to be laminated into nip, and complete lamination by pulling on premask.
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