

The Phantom<sup>®</sup> EC Hidden Fastener is a deck fastening system designed specifically for a fastener free surface around the perimeter of the deck to create a smooth deck surface, uninterrupted by visible screws or nails.

**CAUTION:** Contains parts with sharp edges. Use proper care. Use of gloves is recommended.

- Place End Clip a minimum of 1/4" (6 mm) from wall and secure with a single screw into joist. Repeat no further than 12" (30 cm) on center.
- Position deck board, and insert clips into edge groove. It may be helpful to angle the board slightly to start the clips.
- With the deck board fully inserted into the clips, use Phantom Hidden Deck Fasteners to secure the board along the other side (Figure 1).

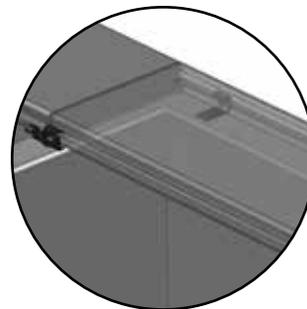
**To secure the final deck board, there are two options using the End Clip:**

1. Position the clip on the inside of the rim joist securing it with a single screw inserted perpendicular to the joist. After positioning the last deck board in place, secure the board by angling a screw through the clip and into the board at a 30°- 45° angle. Be careful to make sure the screw inserts fully and pulls the board down (Figure 2). When thickness of rim joist exceeds 1 1/2" (4 cm), End Clips should be secured to the outer edge of the joist. Space no more than 12" (30 cm) apart.
2. Position the clip on the outside of the rim joist securing it with a single screw inserted perpendicular to the joist. After positioning the last deck board in place, secure it by angling a screw through the clip and into the board at a 30°- 45° angle. Be careful to make sure the screw inserts fully and pulls the board down (Figure 3). Space no more than 12" (30 cm) apart

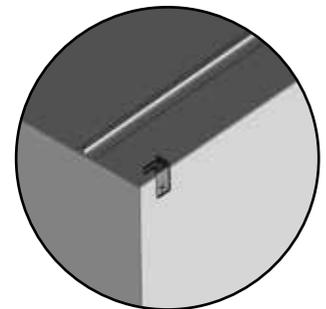
**Using two deck boards as fascia:** (approximately 11 1/8" (28 cm) of fascia coverage)

1. Secure the outermost deck board using the End Clip with the longer leg secured into the rim joist, and spaced no more than 12" (30 cm) apart (Figure 3).
2. Size and cut the first fascia/deck board, allowing for 1/4" (6 mm) clearance from the wall or other permanent structures.
3. Insert the fascia/deck board over the upper half of the rim joist and into the End Clips.
4. Secure the lower edge of the deck board with Phantom Hidden Deck Fasteners spaced no more than 12" (30 cm) apart. Tip: Use a field-made jig or clamp to keep the fascia/deck board fully engaged during installation.
5. Attach End Clips to the underside of the rim joist,

6. spaced no more than 12" (30 cm) apart (Figure 4).
6. Insert the lower deck board into the Phantom Hidden Deck Fasteners, and secure the board by fully inserting a screw at an angle through the End Clip and into the board, making sure to draw the board tight (Figure 5).
7. Continue around entire fascia surface.



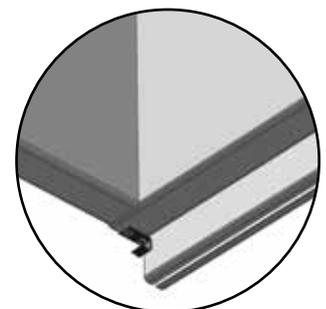
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4**



**Figure 5**

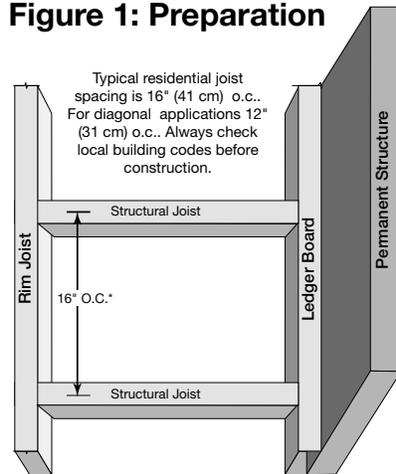
The Phantom<sup>®</sup> Hidden Fastener is a deck fastening system designed specifically for grooved (GV) deck boards, and is a fast and simple way to create a smooth deck surface, uninterrupted by visible screws or nails.

**CAUTION:** Contains parts with sharp edges. Use proper care. Use of gloves is recommended.

## Initial installation of deck boards

1. Refer to Figure 1 - typical joist spacing is 16" (41 cm) o.c.. Diagonal installations typically require 12" (30 cm) o.c.. 1/4" (6 mm) spacing from any permanent structure (wall or post) is required. **Side board spacing:** 3/16" (5 mm); between board and any permanent structure or post 1/4" (6 mm) **Between board ends:** at temperatures up to 30°F (-1°C) space 1/4" (6 mm); at 50°F (10°C) space 3/16" (5 mm); at 70°F (21°C) space 1/8" (3 mm); at 90°F (32°C) space 1/16" (2 mm); at temps over 110°F (43°C) space 1/32" (1 mm). Phantom Hidden Fasteners are not to be used on stair treads. (Stair treads require the use of Fiberon straight-edge boards and must be surface fastened/screwed).

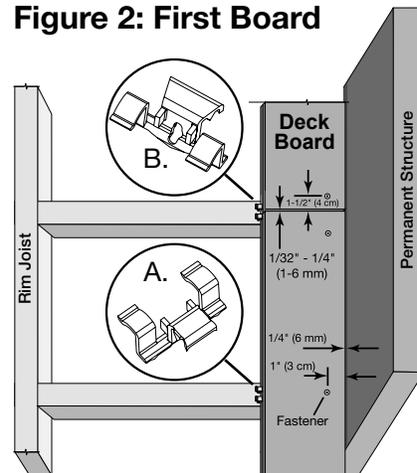
**Figure 1: Preparation**



2. Requires 6" (15 cm) of unobstructed airflow. See deck ventilation information page 9.
3. Position the first deck board on the support joists. Leave a 1/4" (6 mm) gap from any permanent structure (Fig. 2).

4. Pre-drill the first deck board with a 1/8" (3 mm) drill bit along the outside edge of the board at every support joist. To prevent cracking of the board, the holes at the end of the board should be a minimum of 1 1/2" (4 cm) from the board end. The holes along the grooved edge of the board should be a minimum of 1" (3 cm) from the board side.

**Figure 2: First Board**



5. Secure the first deck board by face fastening with a stainless steel or high quality composite decking screw in each pre-drilled hole. **DO NOT OVER-TIGHTEN THE SCREWS.**
6. On opposite side of first deck board, insert a Phantom Hidden Fastener into the side groove of the board at every support joist (single tab first). The single tab should engage the deck board by a minimum of 5/16" (1 cm) (Fig. 3). Center the screw hole on the joist. To secure the ends of two boards use the Butt Joint fastener as shown below. (Fig. 2B)
7. Install a screw (provided with the fasteners) through the hole in the Phantom Hidden Fastener into the center of each support joist. Angle the fastener toward the first deck board (Fig. 3, Step 1). **DO NOT OVER-TIGHTEN THE SCREWS.**
8. Position the next deck board against the fastener tabs and slide the board onto the tabs. If necessary, slightly lift the outer edge of the board to ease the assembly of the board onto the fastener tabs (Fig. 3 Steps 1-2). When installed properly, the fastener will ensure a 3/16" (5 mm) gap (Fig. 3, Step 3).
9. Repeat steps 6 - 8 for each deck board.
10. Position the final deck board onto the last set of Phantom Hidden Fasteners. For face fastening, to ensure a consistent gap between boards, predrill the final deck board with a 1/8" (3 mm) drill bit along the outside edge of the board at every support joist. The holes at the end of the board should be a minimum of 1 1/2" (4 cm) from the board end. The holes along the grooved edge of the board should be a minimum of 1" (3 cm) from the board side. See Phantom EC for installing hidden fastener end clips around the perimeter of the deck for a fastener free surface.
11. Secure the final deck board by fastening a #8 x 2 1/2" (6 cm) long stainless steel or composite deck screw in each pre-drilled hole. **DO NOT OVER-TIGHTEN THE SCREWS.**

**Figure 3: Line Fastener Installation**

