

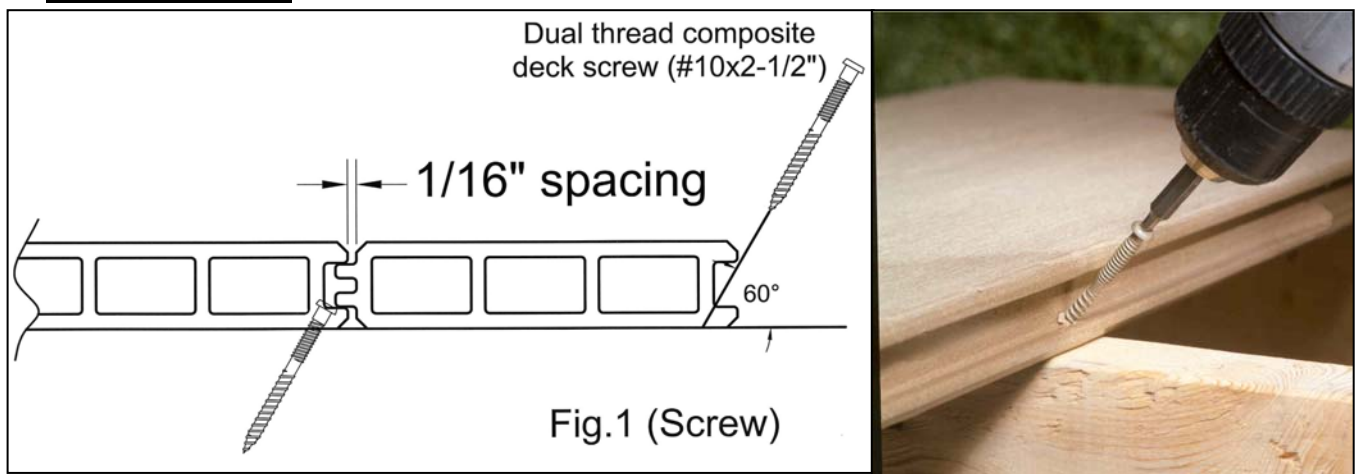
## Working with 5/4 Tongue & Groove Deck Boards

### General Information

**Cutting:** Carbide saw blades provide the best results (18-20 teeth for a 7¼" saw blade; Dimar 7¼"-24, 10"-24 RIP, or 12"-30 RIPX) for cutting through Nexwood deck boards, although regular saws can be used with similar effectiveness.

**Drilling:** It is important to keep the drill at a 60° angle to the horizontal axis and not less than a 45° angle when toe-screwing into the bottom part of the groove of the T&G board (see Fig-1). **Always pre-drill the deck board at ¾ of diameter of the actual screw before inserting the screw. NOTE: Nails are not recommended on T&G profiles and will void the warranty.**

**Screws:** For best results, use dual tread composite deck screw: **TrapEase (2½") from Fastenmaster (toll-free: 1-800-518-3569), or Sure Drive USA CDS #10x2½" (toll-free: 1-888-219-1700)**. Pre-drill the screw holes at ¾ of the diameter of the actual screw diameter. Screws should be placed at the center of the joist 60° from the horizontal axis. See Fig-1. Use a 0-1800 RPM variable speed corded or 18V cordless drill. Do not screw through - just deep enough to allow tongue and groove fitting. Must use double joists for butt joint. Screws should be placed about ¾" from each end of the boards. **Stainless steel trim screws should NOT be used for the installation of the 5/4 T&G boards.**

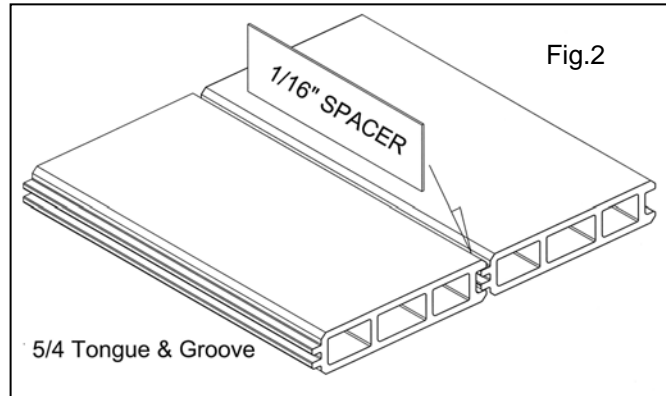


**Butt Joint:** Try to avoid abutment patterns especially for long boards (more than 12 ft). Use perpendicular accent board to avoid butt joints. Longitudinal gapping is required for joining Nexwood decking from end to end. Approximately 1/16" is required for every 20° F difference between the temperature during installation and the highest expected temperature in the area. It is recommended that the construction of a Nexwood deck be carried out on an average temperature day in your local area. **Where it cannot be avoided and a butt joint is required, use double joists to ensure screws are fastened ¾" from each end of the Nexwood boards.**

**Sanding:** To eliminate small nicks and stains on the Nexwood surface, you can use medium to heavy grit sandpaper (#40 grit) applied lightly in the direction of the grain.

**Requirement: 1/16" Gap for Width Expansion/Contraction – Polyethylene (HDPE)**

plastic is subject to expansion and contraction as air temperatures rise and fall. Nexwood 5/4 T&G boards will expand and contract with temperature changes in width and length. Width expansion/contraction is not measurable per individual piece but is measurable when multiple pieces are in contact with each other. Installation must accommodate the maximum annual temperature range to ensure product performance. Note: When



installing boards, use hand pressure only, do not force boards together. **A 1/16" gap between top V-groove edges of the 5/4 T&G board** is required to provide adequate width spacing. (Fig. 2) Gapping at the end of each board must also accommodate the maximum annual temperature range (see chart for linear expansion on page 17). In areas where the climate has a temperature range greater than 80<sup>0</sup> F, additional caution with 16' and 20' boards should be exercised. Design your deck carefully, see disclaimer on page 17.

**Drainage:** Nexwood 5/4 T&G deck boards have to be installed properly in order to ensure that water will run off along the boards to reduce water stain. For drainage purposes, it is required to **slope the deck at least 1/16" per foot along the boards.**

**Ventilation:** We suggest 8"-12" minimum clearance from the bottom of the deck joist to the ground when installing a low or ground level deck with minimum two sides open for ventilation purposes. More clearance is required when design or terrain impede air flow below your installation. This minimizes the possibility of uncontrollable expansion/contraction caused by trapped heat/humidity beneath your 5/4 T&G deck boards. We recommend using Nexwood 2x6 or 5/4x6 Radius Edge boards **for low deck** applications with a **3/16" gap** between each board.

**Never** install Nexwood 5/4 T&G boards directly over an existing wooden deck surface, concrete pad/slab, plywood or water barrier membrane. Nexwood boards must be installed directly onto pressure treated lumber sub-structure joists.

**Cantilevering:** The maximum extension for cantilevering is 4" over the rim joist. However, for best results, we recommend that deck boards not extend beyond the edge of the deck frame (see drawing on page 18, 19.)

**Warranty:** Nexwood provides a 10 year limited warranty for 5/4 Tongue & Groove deck boards when properly installed per our requirements. Please visit the website at [www.nexwood.com](http://www.nexwood.com) or call us for more details.

## Span Requirements

5/4 T&G Nexwood Deck Board, Joist spacing = 16"

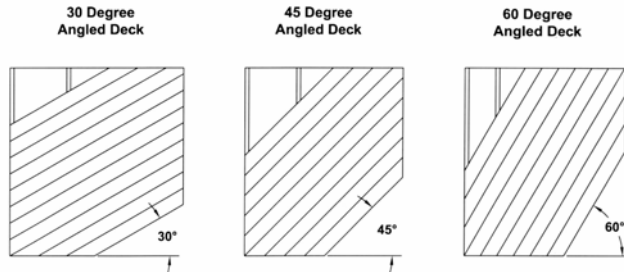
For angled decks:

30 Degree Decking Angle - joist spacing = 14"

45 Degree Decking Angle - joist spacing = 12"

60 Degree Decking Angle - joist spacing = 8"

- Special conditions will require an engineering inspection and/or reduced spans. Always consult local building codes.



## Thermal Expansion and Contraction (5/4 T&G Board)

The following table shows the change in profile length (in inch) due to thermal expansion and contraction.

Change in Temp. (on an average day)	12' board	16' board	20' board
-40° F	-3/16"	-3/16"	-1/4"
-20° F	-1/16"	-1/8"	-1/8"
Recommended Start Temperature	55° to 65°F	55° to 65°F	55° to 65°F
+20° F	+1/16"	+1/8"	+1/8"
+40° F	+3/16"	+3/16"	+1/4"

### Disclaimer:

It is important to note that all composite and plastic-based products will experience some degree of expansion and contraction with changes in temperature. Certain measures must be taken when building with these products to ensure an attractive finished project. Longer boards will experience a greater amount of expansion than shorter boards; eliminate butting boards end to end **by using perpendicular accent board (see page 7, Deck Surface Pattern)**. Deck should be designed to eliminate end-to-end joints (butt-joints) on deck surface so as not to exceed the length of one board. Design using shorter pieces (12' & shorter) to reduce the required end gap, and it will lessen the overall gap by half, when installed against the accent board. (See Fig. 3). Build deck at different levels (elevations) thereby eliminating any end to end joints. Make sure that each board is fastened securely at each end with 2 surface screws. One alternative is to build a deck with the Herringbone pattern, see page 7 (E). It will offer a striking visual effect and reduce the waste of deck boards.

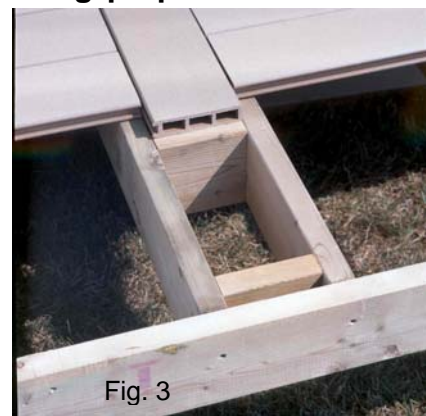


Fig. 3

NOTE: When building the substructure frame for your Nexwood deck, it is important to use pressure treated wood to reduce the amount of expansion and contraction and overall movement of the surface.

## Deck Building Guidelines (5/4 Tongue & Groove Deck Board)

### Creating a Starter Board

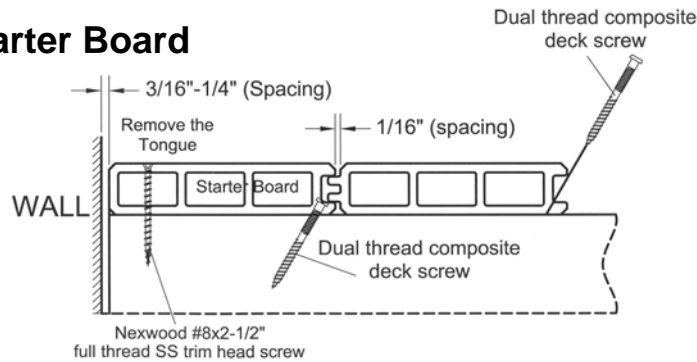


Fig. 4

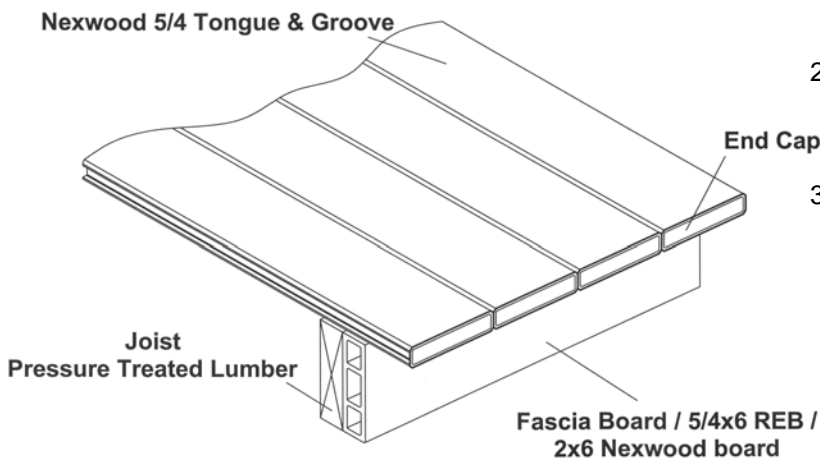
Since the 5/4 deck boards are all tongue and groove, you must create a starter board (without a tongue) out of one of the boards.

1. Remove the tongue from 5/4 T&G deck board by cutting along the length of the board using a circular saw. NOTE: Be sure to keep the wall intact.
2. Fasten the starter board to the substructure from the surface by screwing through the first hollow chamber using #8x2-1/2" Nexwood full thread trim head SS screw. (Fig-4).
3. Using hand pressure, slip the "tongue" of the next full deck board into the starter board, put a gapping tool between the V-groove edges and drive the screw as indicated in Fig. 1.
4. Ensure the head of the screw does not impede the insertion of the second 5/4 T&G profile.

### Covering the Deck Board's Open Profile

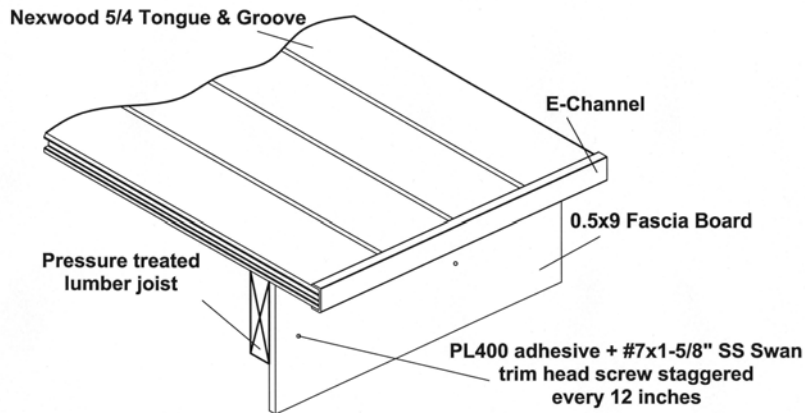
For a finished look, Nexwood offers many ways to cover the open 5/4 T&G profile with: E-Channels, Fascia board, or individual End Caps.

#### Using Nexwood End Caps



1. Insert Nexwood End Caps to cover the deck board's open profile (one side of the cap covered the groove side).
2. Use Nexwood recommended adhesive: OSI/Lepage PL400, to secure the End Cap to the deck board.
3. Fasten a 2x6 deck board, 5/4x6 Radius Edge board, or a fascia board to the joist for a complete Nexwood deck. Use 2 Nexwood SS screw at 12" intervals to screw board to joist. For additional adhesion, use OSI/Lepage PL400 adhesive between joist and board (along with screws).

### Using Nexwood E-Channel



#### Instructions (E-CHANNEL):

1. Fasten the E-Channel from the bottom side using #6x3/4" pan head screws. Pre-drilling is necessary.
2. Fasten 0.5"x9" Nexwood Fascia Board to the joist using OSI/Lepage PL 400 adhesive and #7x1-5/8" SS Swan trim head screws staggered every 12".

**NOTE:** The Nexwood 5/4 T&G deck board has a maximum overhang tolerance of 4 inches. Do not cantilever.