

Gossen[®]
Since 1928



DECK & PORCH INSTALLATION GUIDELINES

before starting, visit www.gossencorp.com for the latest installation tips and best practices

DECKING INSTALLATION

Building with Gossen® Decking is similar to building with traditional decking materials. Installation must be compliant with local building codes and the Installation Guidelines below. Gossen Corporation accepts no liability or responsibility for the improper installation of this product. Gossen may not be suitable for every application, and it is the sole responsibility of the installer to be sure that Gossen Decking meets all requirements for the intended use. Since all installations are unique, it is the installer's responsibility to determine specific requirements for each Deck application. Refer to the "Factors to Consider" section. The following of Installation Guidelines differing from Gossen's Guidelines will void the Warranty. Gossen Corporation recommends that a licensed architect, engineer or local building official review all applications before installation. If you need further assistance, please call us at 800-558-8984 or visit our website at www.GossenCorp.com.

TOOLS NEEDED

- 100 tooth Circular or Miter saw using a carbide-tipped blade (The Amana Tool Saw Blade is designed for Plastic/PVC)
- Power drill
- Miter-box
- Tape measure
- Carpenters square
- Blue chalk line – red chalk lines will stain Boards' surface
- Safety glasses
- 4' level

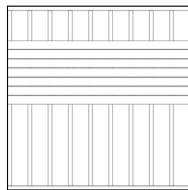
MATERIAL REQUIREMENTS

After designing your Deck, calculate the square footage. If your Deck is a rectangle, square footage (area) is width times length. If you are using 12-foot Boards, divide the square footage by 5.5; for 16-foot Boards, divide by 7.3; and for 20-foot Boards, use 9.2. These calculations give you the number of Boards you will need. Be sure to always round up and add for scrap. Always measure twice—cut once.

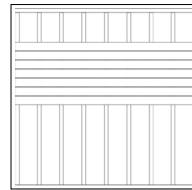
For example: 20' x 20' Deck = 400 sq. ft. divided by 5.5 (if using 12' Boards) = 72.7 Boards. Round up and add for scrap.

JOIST SUBSTRUCTURE

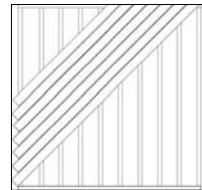
- Do not exceed 16"-on-center joist spacing when installing Deck Board perpendicular to joist.
- Do not exceed 12"-on-center for commercial applications.
- Do not exceed 12"-on-center when installing Deck Boards on a 45 degree angle, such as a herringbone pattern.
- Recommended pitch for proper drainage is 1/16" per linear foot away from the house.
- Ensure that all joists are crowned correctly and that all joists are level across the top, as Gossen Decking will conform to the surface of the substructure.
- If you are installing heavy loads on the Deck, such as hot tubs, you must comply with the manufacturer's installation requirements.



12"-on-center spacing for commercial applications



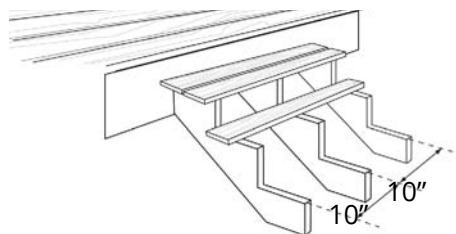
16"-on-center spacing for residential applications



12"-on-center spacing for herringbone applications

STAIR TREADS/SUBSTRUCTURE

- Do not exceed 10"-on-center for stair treads (stringers).
- Face screw only with stainless steel screws # 8, minimum 2-1/4" long.
- Do not use hidden fasteners on stair installations. For a hidden fastener look, use Starborn Pro Plug System.
- Overhang should not exceed 1/2."



FASTENERS

Gossen recommends a high quality fastener that meets the following specifications:

- #8 stainless steel screw (Trim head screws are most common) Coordinating colors are available.
- Minimum length 2-1/4" (for elevations above 6,000 feet a minimum length of 2-3/4" inches long is required)
- Pre-drilling is not required.
- Do not use composite deck screws.

Face screwing directly to the joist is Gossen's recommended method of installation. For a hidden fastener look, use Starborn Pro Plug System.

RECOMMENDED FASTENER SYSTEMS:

The following Fastener Systems have been 3rd party tested and approved with Gossen Decking.

- Starborn Pro Plug System
(Approved for use with Solid Deck Boards)
- Starborn Headcote Stainless Steel Screws
(Approved for use with Solid Deck Boards)
- Grabber Deckmaster G5 Clips
(Approved for use with Kerfed Deck Boards)
- Mantis Deck Clip System
(Approved for use with Kerfed Deck Boards)

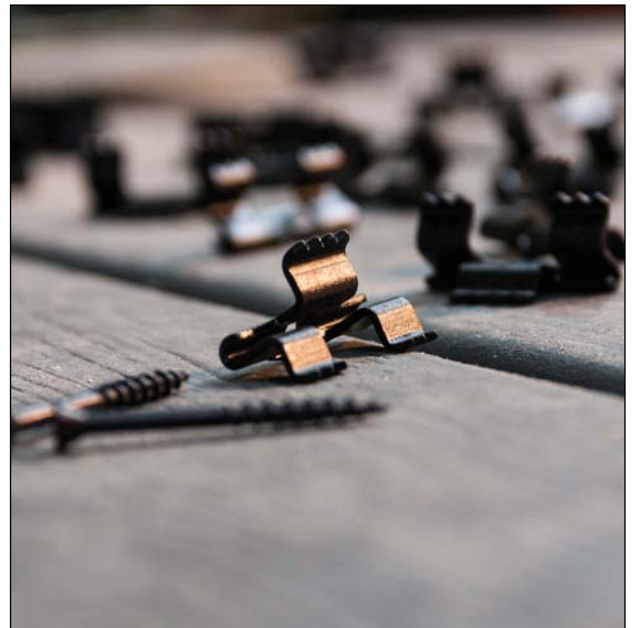
OTHER HIDDEN FASTENERS

Gossen's Warranty does not cover any movement, contraction, waving, squeaking, or bounce that is the direct result of the fasteners not holding the Deck Board in place. These issues must be communicated to your installer and/or the fastener company. Movement of Boards due to fastener failure is not covered by Gossen's Warranty.

Gossen Decking is available with an optional factory grooved edge designed for use with hidden fasteners. Each fastener must hold the Board securely to the substructure.

IMPORTANT CONSIDERATIONS WHEN SELECTING A HIDDEN FASTENER:

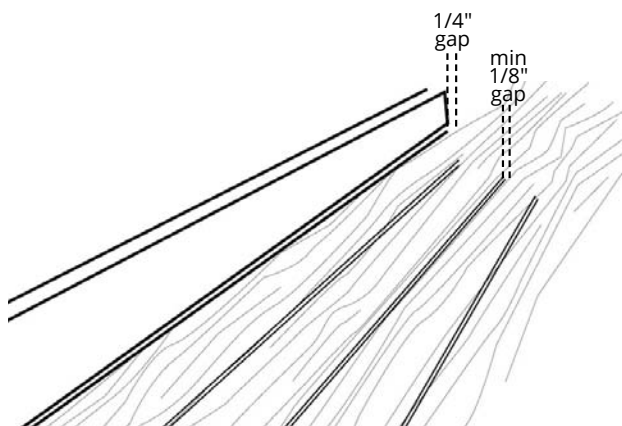
- Fasteners must hold Board securely to the joist (do not use fasteners that allow for Board movement of any kind).
- Groove dimensions: 5/32" wide x 3/8" deep (0.420" profile)
- Hidden fasteners are not recommended for installations above 6,500 feet.
- For greater rigidity, consider 12"-on-center joist spacing, especially when using hidden fasteners.
- To prevent movement, face-screw or toe-screw at butt joints.
- Grabber Deckmaster G5 clips and Mantis clips have been tested and approved for use with Gossen Kerfed Decking. Other hidden fastening systems not mentioned have not been third party tested. Therefore, Gossen does not recommend them.



Grabber G5 clip

VENTILATION

- Minimum 1/4" space from any solid structure
- Minimum 1/4" space around the Deck post
- Minimum 6" between bottom joist and ground
- Recommended side-by-side spacing of a minimum of 1/8". For hidden fasteners, refer to fastener manufacturer's spacing requirements.
- To prevent heat and moisture build-up, an unobstructed airflow is required below the Deck (try adding flow-through vents at various locations around rim joist to increase air flow).



UNDERDECK SYSTEMS AND ROOFTOP & PATIO DECKS

SUBSTRUCTURE MUST BE:

- Solidly attached to roof or existing patio. Boards should not be attached to any kind of a "floating" or unsecured substructure.
- Allow for a minimum of 6" of space between the bottom of the joists and under Deck system, rooftop, or ground.
- Must be adequately ventilated to ensure Board temperature does not exceed 160 degrees Fahrenheit.
- For enclosed watershed systems under deck, watershed manufacturer Installation Guidelines must be followed, and watershed ventilation standards must meet Gossen Decking temperature requirements.

EXPANSION AND CONTRACTION

It is not necessary to space for expansion at butt joints. Boards will not expand in width. When properly installed, they will have minimal contraction. The contraction encountered may result in slight gaps, which might be noticed at the ends of Boards or at butt joints. Fastening the Deck Boards according to Gossen guidelines will help minimize contraction.

- Fasten Boards within 1/2" from the end of the Board.
- Butt joints must be tight (do not gap).
- Minimum 1/4" space from any solid structure
- Minimum 1/4" space around the Deck post
- For best results, stagger butt joints and miters across Deck surface so that all butt joints and miters do not break on the same joist.
- Install Boards as soon after cutting as possible.
- Best practice is to either double joist or scab in additional framing at butt joints. Most fastener manufacturers and many area building codes require this.
- Contraction is most significant where extreme temperature change exists.

RIMBOARD (FASCIA)

Gossen RimBoards are designed to cover rim joists. They are solid colored with a deep wood grain surface texture.

- Dimension: Thickness-5/8", length-12', width-7-1/4" or 11-1/4"
- #8 stainless steel screw (Trim head screws are most common) Coordinating colors are available.
- Fasten Boards within 1/2" from the edge/top/bottom of the Board.
- Use 2 screws every 16" for the 7-1/4" wide Boards.
- Use 3 screws every 16" for 11-1/4" wide Boards.
- RimBoards must be fastened along it's full length and width to a supporting structure of the Deck. For example 11-1/4" Boards must attach to a minimum of a 2"x10" rim joist.
- To help minimize contraction, consider adding a screw through the edge of mitered corners.

T&G PORCH INSTALLATION

Gossen® T&G Porch Flooring is made like our Gossen Deck Board—solid core cellular PVC with no inconsistent organic fillers. The Gossen Porch Board can be installed in a covered or uncovered application. However, drainage with a Tongue and Groove Board is limited and must be taken under consideration. Porch Boards are not water tight and should not be used over enclosed living spaces.

TOOLS NEEDED

- 100 tooth Circular or Miter saw using a carbide-tipped blade (The Amana Tool Saw Blade is designed for Plastic/PVC)
- Power drill
- Miter-box
- Tape measure
- Carpenters square
- Blue chalk line – red chalk lines will stain Boards' surface
- Safety glasses
- 4' level

JOIST SUBSTRUCTURE

- Do not exceed 16"-on-center joist spacing when installing Porch Board perpendicular to joist.
- Do not exceed 12"-on-center for commercial applications.
- Do not exceed 12"-on-center when installing Porch Boards on a 45 degree angle, such as a herringbone pattern.
- If you are installing heavy loads on the Porch, such as hot tubs, you must comply with the manufacturer's installation requirements.
- Recommended pitch for proper drainage is a minimum of 1/16" per linear foot away from the house.
- Ensure that all joists are crowned correctly and that all joists are level across the top, as Gossen Porch will conform to the surface of the substructure.
- If replacing an existing Porch Floor, make sure all joists are structurally sound and free of nails.

FASTENERS

Minimum size recommended — #7 x 2" stainless steel trim head screw. Pre-drilling is not necessary. Be sure to counter sink screws at least 1/16" to avoid interference with the next Board. Manual or pneumatic floor-nailers may be used. When using a floor-nailer use stainless steel 2" serrated T nails.

VENTILATION

- Minimum 1/4" space from any solid structure
- Minimum 1/4" space around the Deck post
- Minimum 6" between bottom joist and ground
- Must be adequately ventilated to ensure Board temperature does not exceed 160 degrees F.
- To prevent heat and moisture build-up, an unobstructed airflow is required below the Porch (try adding flow-through vents at various locations around rim joists to increase airflow).

EXPANSION AND CONTRACTION

When properly fastened to the substructure, Porch Boards will have minimal expansion and contraction. It is not necessary to space for expansion at butt joints. The contraction encountered may result in slight gaps, which might be noticed at the ends of Boards or at butt joints. Fastening the Porch Boards according to Gossen Guidelines will help minimize contraction.

- Keep butt ends and miters tight.
- All butt joints must be fastened at the end of each Board to a solid joist.
- Fasten each Board within 1/2" from the end of Board.
- Minimum 1/4" space around the Deck post
- Minimum 1/4" space from any solid structure
- For best results, stagger butt joints and miters across Porch surface so that all butt joints and miters do not break on the same joist.
- Install Boards as soon after cutting as possible.
- Some area building codes may require double joisting when joining Boards end to end. Always check with your local code authority for specific requirements before installation.

PERIMETER TRIM SUGGESTIONS

There are a couple of options available to finish the perimeter of the porch:

- Gossen RimBoards in color matched
- Gossen 5-1/2" Deck Boards for perimeter strips. Porch Boards color match Gossen Deck Boards.

Please note that there is no start or end board of the Gossen Tongue & Groove Porch Boards. In order to create a finished look on the porch, please use one of the above options to finish the perimeter of the porch.

FACTORS TO CONSIDER

- Excessive heat-build on the surface of Gossen Products from external sources, such as, but not limited to, fire or reflected sunlight can potentially lead to damage. For example, sunlight reflected by low-emissive (Low-E) glass can lead to damage of exterior building products, due to elevation of surface temperatures, which far exceed that of normal exposure of the same materials to direct sunlight. Possible damage by such reflected concentrated light might include sagging, warping, distortion, increased contraction and unusual weathering. Deck & Porch Board core temperature cannot exceed 160 degrees.
- Gossen Deck & Porch Boards are manufactured with surface finishing technology on three sides. Boards should be stored face up on a dry, flat surface. Do not store on gravel driveways or roads.
- Cellular PVC Deck & Porch Boards are less rigid than treated wood or composite boards. For greater rigidity, consider 12"-on-center joist spacing, especially when using hidden fasteners.
- When cutting Boards, consider flipping the Board over and making your cuts starting on the back side for a cleaner cut.
- **IMPORTANT:** Do not allow dust from tile, concrete, landscape blocks, or any masonry product to accumulate on the Deck or Porch surface as it may damage the surface. Never cut any construction materials on or near the Gossen Deck or Porch.

CARE & CLEANING

- Mild soap, such as Simple Green®, and a garden hose will clean up the Deck in most cases. If a stain proves particularly stubborn, use Krud Kutter® and a soft cotton cloth or a diluted chlorine bleach solution (about 4:1 water to bleach). Avoid use of abrasive scrubbers. A soft-bristled brush can be effective.
- Minor surface scratches on the Deck Boards can be removed by using Soft Scrub with Bleach® (green label). Put a small amount of Soft Scrub® on a non-abrasive cotton cloth and gently rub it on the scratched surface. It will not remove gouges, but it will help with minor scratches. Be sure to rinse the Deck Boards with water after using any cleaner.
- There should be no need to pressure-wash the Deck. If you choose to do so, be sure to use a fan-tip and keep the spray at least 10" above the Deck, and do not exceed 1200 psi.
- Gossen does not recommend the placement of rubber or vinyl materials such as those in grill mats, rubber backed welcome mats, vinyl or PVC potted containers, etc. on the surface of Gossen Deck & Porch for extended periods of time. Additives in the rubber and PVC products have a tendency to migrate from these materials to Gossen Deck & Porch, resulting in discoloration of the Boards. If discoloration occurs, a heat gun will restore the Boards. Hold the heat gun 12" away from the Board's surface using a back and forth motion until color is restored.
- Do not use PVC glue or similar product on the surface of Gossen Deck & Porch Boards as it may discolor and permanently damage the Deck or Porch surface.
- Exposing the Deck or Porch surface to sunscreens that contain Benzyl alcohol or bug sprays that contain Deet can damage the Boards. If you spill these substances on the Deck, clean it off immediately. Check product labels and consult with the manufacturer as to product compatibility with plastic materials prior to use on or near your Gossen Deck or Porch.
- For snow and ice removal, you can use most products containing calcium chloride without damaging the Deck & Porch Boards (Magnesium Chloride is also an excellent Green De-icer). Be cautious when using rock salt; it can cause minor scratching. If you are physically removing snow or ice, use a plastic shovel without a metal edge.
- Never use paint removing solvents, such as Goof Off®, as it will permanently damage the Deck or Porch surface. Do not use any product not specified in the Care and Cleaning section without consulting Gossen 800-558-8984.

TROUBLE SHOOTING GUIDE

DECK SQUEAKS WHEN WALKED ON **COMMON CAUSES:**

- Deck Boards not properly secured to joists (possible fastener failure or improper installation).
- The sub-structure is moving.
- Or a combination of both

POTENTIAL SOLUTIONS:

- Contact the fastener manufacturer (possible installation or fastener failure).
- Face screw with two screws one on each side of the Board at the location of the squeak. Use Starborn Pro Plug Systems for a hidden fastener look.
- Ensure the joists are properly blocked and substructure is solid.

DECK HAS A "WAVY" LOOK **COMMON CAUSES:**

- Joists are not level.
- Deck Boards not properly secured to joists (possible installation or fastener failure).
- Improper venting below Deck generating excessive heat can cause Board to warp (+160 degree Fahrenheit Board temperature).
- Reflected sunlight generating excessive heat can cause Board to warp (+160 degree Fahrenheit Board temperature).

POTENTIAL SOLUTIONS:

- Properly secure Boards to joists as instructed above.
- Level joists per installation instructions.
- Ensure the joists are properly blocked and substructure is solid.
- To reduce heat build-up, create an unobstructed airflow below the Deck (try adding flow-through vents at various locations around rim joists to increase airflow).
- Install window screens or contact the window manufacturer regarding potential damage caused by low-emissive (Low-E) glass/reflected sunlight.

DECK BOARDS CONTRACTING BEYOND EXPECTATIONS **COMMON CAUSES:**

- Deck Boards are not properly secured to joists (possible fastener failure or improper installation).
- Sub-structure is moving.

POTENTIAL SOLUTIONS:

- Face screw within 1/2 inch of the end of the Board-one on each side of the Board. Only do this if the fasteners along the length of the Board have been properly secured to prevent movement. Use Starborn Pro Plug System for a hidden fastener look.
- Secure the structure and correctly block joists.

DECK HAS SPRINGY OR BOUNCY FEEL WHEN WALKED ON

NOTE: Cellular PVC is less rigid than traditional materials. However, Boards are code-approved and will not fail when properly installed a minimum of 16"-on-center.

COMMON CAUSES:

- Deck Boards are not properly secured to joists (possible fastener failure or improper installation).
- Improper joist spacing

POTENTIAL SOLUTIONS:

- Face screw with 2 screws on every joist as instructed above. Use Starborn Pro Plug System for a hidden fastener look.
- Reduce joist spacing to 12- inch on center.

WATER STANDING OR POOLING ON DECK **COMMON CAUSES:**

- Deck is not properly pitched away from house.
- Deck Boards are not properly secured to joists (Board must be level on joist).
- Joists are not properly leveled.

POTENTIAL SOLUTIONS:

- Pitch Deck 1/16" per linear-foot away from house (per installation instructions)
- Face screw with 2 screws on every joist as instructed above. Use Starborn Pro Plug Systems for a hidden fastener look.
- Properly level joists

DECK SURFACE DISCOLORED BY RUBBER/VINYL MATS ETC.

POTENTIAL SOLUTION:

- Apply dry heat to the area; most effective is a heat gun. Keep the gun 12" above the Deck surface and use a continuous movement. Be sure not to scorch the Deck surface.

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- **TRIMBOARD**
- **T&G PORCH FLOORING**
- **DECORATIVE EXTERIOR
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