



SPORTS STRENGTH TILE FLOORING TECHNICAL MANUAL

Installation • Maintenance • Warranty



A Fishman Brand Product

**MANUFACTURED FOR
Fishman Flooring Solutions**

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Supersedes all previous versions.
Check website for updates and

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I. SURFACES & METHODS

INTERIOR INSTALLATION			EXTERIOR INSTALLATION		
24" x 24" x 1"	Method		24" x 24" x 1"	Method	
Surface	Quad Blok only	Quad Blok +Full Glue	Surface	Quad Blok only	Quad Blok +Full Glue
QTscu Sound Control Underlayment ¹	Approved	Approved	QTscu Sound Control Underlayment ¹	Not Approved	Not Approved
Concrete	Approved	Approved	Concrete		Approved
Asphalt	Approved	Approved	Asphalt		Approved
Plywood	Approved	Approved	Plywood		Not Approved
Compact Gravel	Not Approved	Not Approved	Compact Gravel		Not Approved
Wood or Tile	Approved	Bond test²	Wood or Tile		Not Approved
Resilient Flooring	Approved	Bond test²	Resilient Flooring		Not Approved
Carpet	Not Approved	Not Approved	Carpet		Not Approved
			Roofing		Not Approved

1. QTscu Sound Control Underlayment must be installed per applicable technical manual and full-adhered with E-Grip III
2. Bond test recommended; installer responsible to determine suitability

II. TOOLS / MATERIALS REQUIRED

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Two tape measures - 25' and 50' 2. Chalk line - white only! 3. Saber saw (Jig saw) or band saw 4. Blades for saber saw (7-10 teeth per inch, wood type) 5. Utility knife with heavy-duty blades 6. Framing square/metal straight edge 7. Silver or gold color paint pencils 8. Standard size caulk gun 9. 4" slot blade screwdriver 10. Notched trowel -1/8" square notch 11. Safety glasses 12. 1-1/2" flexible putty knife | <ol style="list-style-type: none"> 13. Coveralls 14. Kneepads 15. Solvent-safe rubber gloves 16. Rags 17. Trash bags 18. Push broom or shop vac 19. Mineral spirits 20. Installation instructions 21. String line 22. Cutting table (shipping pallet) 23. Dustpan 24. 2-3 lb. sledge hammer or rubber mallet 25. 2'x 4' to use as tapping block 26. 75-100 pound three section floor roller |
|--|---|

III. SITE WORK

NOTE: Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. From time to time during installation, it may be necessary to measure and hand select tiles to ensure course lines remain straight. Additionally, color tone and shading may vary to the extent that some hand selection is required to maintain maximum uniformity throughout the site.

A. Site Elevation

1. On grade installation - The finished installed height of the Sports Strength surface will be equal to or slightly higher than the perimeter grade but not more than 1" higher unless approved by the project engineer.

2. Above grade installation - The installation of Sports Strength over existing decks or slabs is referred to as “above grade installation” and will usually require the use of reducers around the perimeters of the area to transition smoothly back to the floor elevation, unless the site terminates at a wall or other vertical surface.

B. Site Slope/Drainage

1. When preparing a new hard base, if applicable, a minimum slope equal to 1” per 10’ of run shall be applied to the finished surface with slope toward the drain basin and drain trough or down-grade side of the site.
2. An acceptable drainage system needs to be put in place to eliminate standing water.

IV. BASE OPTIONS

A. Hard Base Construction

1. Concrete Base:
 - a. Concrete shall have a minimum compressive strength of 3000 psi. New concrete slabs should cure for a minimum of 28 days. It must be fully cured and permanently dried. Care should be taken to provide for the stated slope. The surface should be flat to the equivalent of 3/16” (4.8 mm) in 10’ (3.0 m). A light broom finish is best for maximum adhesion of Sports Strength.
2. Paved Asphalt Base:
 - a. Use a coarse asphalt aggregate mixture; the preferred aggregate size for the adhered system is 3/8” to 1/2”. Do not use asphalt mixtures with a high percentage of fines; they may become less stable hot weather and may become soft enough to allow the tiles to slide in high use areas.
 - b. The soil sub-grade must be compacted with a minimum of two passes using a 10-ton vibratory roller with no soft or moving areas upon completion. The crushed stone base must also be compacted with a minimum of two passes using a 10-ton vibratory roller. The binder and wear courses of the asphalt must both meet 95% of the theoretical maximum density of the Job Mix Formula.

Total Passing Sieve	Percent by Weight
1/2”	100
3/8”	80-100
#4	45-90
#8	30-65
#50	5-25
#200	2-8
Asphalt Cement	6-8

- c. New asphalt should be allowed to cure for 28 days before adhering Sports Strength.

V. INSTALLATION

- A. 1” Sports Strength may be installed over most concrete, wood, or tile which is level, in good condition, and clear of dirt and loose debris.
- B. For installations requiring adhesion to concrete, moisture must be measured using the RH Relative Humidity test method per ASTM F2170 standard. Moisture content should not exceed 85% RH. If levels exceed the limitations the installation should not proceed until the situation has been corrected.

1. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.
- C. It is essential that pH tests be taken on all concrete floors. If the pH is greater than 9, it must be neutralized prior to beginning the installation.
- D. Installation should not begin until after all other trades are finished in the area.
- E. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65°F for 48 hours before, during, and after the installation.
- F. Unpack tiles and allow them to sit in the area to be installed. Tiles and adhesive must be acclimated at a uniform room temperature for a minimum of 48 hours prior to installation.

NOTE: Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. From time to time during installation, it may be necessary to measure and hand select tiles to ensure that course lines remain straight. Additionally, color-tone and shading may vary to the extent that some hand selection is required to maintain maximum uniformity throughout the site.

NOTE: Sports Strength is manufactured from recycled materials and slight variance in shade and color chip dispersion is normal. It is the installer's responsibility to inspect all products to insure the correct style, thickness, and color. Any moderate to severe discrepancies should be reported immediately before beginning the installation. No labor claims can be paid on material installed with visual defects.

As with any flooring product, dry laying and full inspection of all tiles will allow for a quality installation. Tiles should be inspected from several angles and adjusted as necessary.

I. SITE LAYOUT

- G. Sweep area clear of all dust and loose debris.
- H. Determine a starting point for the first course of tile to best suit the site area. Because most walls are not straight or corners square, tile installation generally starts in the middle of the room, so measure the width and length of the space, divide the room into 4 equal quadrants and snap chalk lines that are perpendicular (90 degrees) to each other.
- I. Place the first tile's edges where the two perpendicular chalk lines meet.
- J. Hint: Adjust the starting point to balance the tiles side-to-side and not end up with small cuts of tile against the walls.

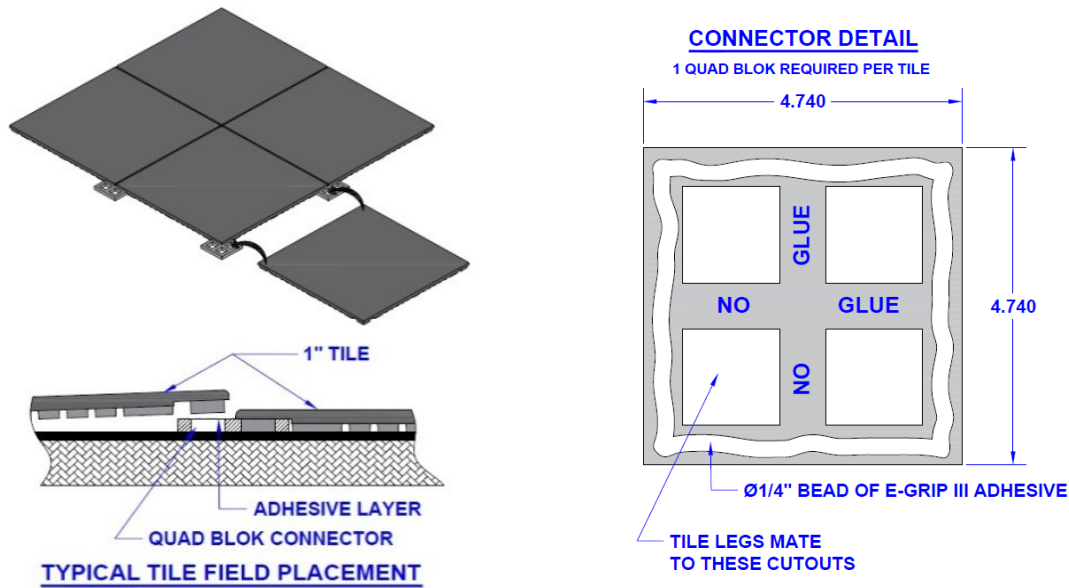
QUAD BLOK INSTALLATION (Quad Bloks must always be used)

- A. Follow the Site Layout instructions to prepare the area for the installation of the 1" tiles.
- B. Once chalk lines are established, place the first tile at the intersection of two chalk lines, aligning adjacent edges of the tile with the chalk lines.
- C. Apply a continuous 1/4" diameter bead of E-Grip III adhesive around the perimeter of the Quad Blok connectors. Working adhesive time is dependent upon environmental conditions. See NO GLUE zones in Connector Detail drawing below.
- D. Fit the first tile with four prepared Quad Blok connectors by lifting each tile corner slightly, sliding the connectors under each corner and engaging the four corner legs of each tile with the respective apertures in the Quad Blok. Continue to sequentially lay the tile and to set the Quad Blok connectors along one chalk line until the first course of tile is complete.

NOTE: Cut the Quad Blok connectors in half to secure perimeter tiles

- E. Complete the other three quadrants in a similar fashion.

- F. Roll with a 75–100 pound flooring roller after gluing tiles into Quad Bloks. Roll again 1 hour later.
- G. Allow 24 hours for adhesive to cure before opening area for foot traffic, 48 hours for heavy loads and 72 hours before placing equipment.
- H. One 10.1 ounce tube of E-Grip III is required for approx. 15 of the Quad Bloks.



Note: Adhesive spills must be removed while still wet. Use a dry rag to pick up the majority of the adhesive. Wipe the remaining residue with a rag dampened with mineral spirits, followed by a rag damp with water to remove the mineral spirits. Cured adhesive can only be removed from surfaces by mechanical means, such as scraping or sanding.

II. FITTING THE OUTER COURSE TILE

- A. In most wall-to-wall installations, the tile in the outer course will have to be cut to fit. Tile may be cut using a heavy-duty utility or carpet knife and a straight edge. A saber saw utilizing a 7-10 TPI wood cutting blade also works well. A saw with a 3-3.5 amp rated motor having a 1" stroke with variable orbital settings will produce the best results. A cutting table used to support the work is required during cutting. A standard shipping pallet works well for this purpose for in-field use.
- B. If 1" Sports Strength tile is being installed wall-to-wall, the tiles **MUST** be held together with Quad Bloks, with the walls serving to contain the outer rows of tile. Tiles that are not contained by walls, either at openings in the wall (i.e. doorways) or freestanding, should be contained by adhering the outer tiles and 1" Sports Strength ramps around the outer perimeter. The adhered ramps provide a transition from the 1" thick tile to the original floor level. The perimeter tiles and ramps must be adhered using Fishman's [Anchor E-1000](#), [Mapei ECO-570](#), [Mapei Ultrabond ECO-985](#), or [WAKOL MS-552](#). Follow adhesive recommendations for the trowel notch and contact your sales representative for more details.

III. ADHERING THE OUTER COURSE TILE

- A. Ramps can be cut in the same way as the tiles. Corner ramps should be miter cut.
- B. Ramps and outer tiles, which are not contained by walls, should be adhered to the existing floor using the previous recommended adhesives with a 1/8" square notched trowel indoors over substrate. Set tiles and ramps in the adhesive bed. Tiles being set in the adhesive bed should be connected to the next inner course of tiles but need not be connected to each other.
- C. Once tiles are laid into the wet adhesive, roll the floor with a 75-100-pound flooring roller. Adhesive should be allowed to cure for 24 hours before walking on the tile.

IV. CUTTING 1" TILE & RAMPS

- A. Ramps can be cut in the same way as the tiles. Corner ramps should be miter cut.
- B. Avoid leaving a cut edge of a tile exposed to eyesight. To guarantee a finished appearance, any tile that has its factory molded, radius edge removed for any reason should be backed along that edge using a 1" masonry or timber edging, unless that edge is to be placed against a wall or other vertical member.
- C. The most accurate cuts in tiles are made using a heavy-duty utility or carpet knife and a straight edge. A saber saw utilizing a 7-10 TPI wood cutting blade also does an acceptable job, especially for radius or free-form cuts. A saw with a 3-3.5 amp rated motor having a 1" stroke with variable orbital setting will produce the best results. A cutting table used to support the work is required during cutting. A standard shipping pallet works well for infield use.

V. PREPARATION FOR INSTALLATION OF ADA RAMPS

- A. Make sure that the subfloor is flat, clean, dry and free of contaminants such as waxes, finishes, sealers, or other extraneous materials that would prevent a good adhesive bond.
- B. Unpack the materials and allow them to sit in the area to be installed. Materials and adhesive must be acclimated at a uniform room temperature for a minimum of 48 hours prior to installation. **Note:** The toe edge of the ramp contains a wire reinforcement material. Take care not to bend the edges as it will be difficult to get ramps with bent reinforcement to lay flat.
- C. After completing the Sports Strength installation, clean and prep remaining area for full adhesion of ramps.

VI. INSTALLATION – ADA RAMP

- A. Cut away any protruding Quad Blok material
- B. Sweep area clear and vacuum up all dust.
- C. Dry lay ramps and make appropriate cuts before opening the adhesive.
- D. To cut the ramps, use a band saw or a saber saw with 7-10 TPI wood cutting blade.

Note: The toe edge of the ADA ramp contains a wire reinforcement material. Take care not to bend the edges as it will be difficult to get ramps with bent reinforcement to lay flat.

- E. Mark the areas where adhesive is to be applied and temporarily remove the ramps.
- F. Spread the recommended adhesive using a 1/8" square notch trowel. Do not spread more adhesive than can be covered in 30 minutes.
- G. Carefully place the ramps into the adhesive. Be sure to press down firmly to assure proper adhesive transfer to the back side of the ramp or roll with a 75-100 pound three sectional flooring roller.
- H. Use weight to evenly hold down the entire transition and/ or ramp.

Note: The entire toe edge of ADA transitions should be weighted to prevent it from lifting out of the adhesive.

Note: Adhesive spills must be removed while still wet. Use a dry rag to pick up the majority of the adhesive. Wipe the remaining residue with a rag dampened with mineral spirits, followed by a rag dampened with water. Cured adhesive can only be removed from surfaces by mechanical means, such as scraping or sanding.

- I. After 24 hours, remove the weight from the ramps.
- J. Clean and maintain the area in accordance with the instructions in the Maintenance Section below.

I. FULLY ADHERED INSTALLATION – Mandatory for exterior installations

- A. Follow the site layout instructions to prepare the site area for installation. The tiles, accessories, and substrates should be weather tight and maintained at a minimum uniform temperature of 65°F (18°C) for 48 hours before, during, and after the installation.

NOTE: Dimensional tolerance for tiles is +/- 1/8" in thickness and +/- 1/8" in width. From time to time during installation, it may be necessary to measure and hand select tiles to ensure that course lines remain straight. Additionally, color tone and shading may vary to the extent that some hand selection is required to maintain maximum uniformity throughout the site. As with any flooring product, dry laying and full inspection of all tiles will allow for a quality installation. Tiles should be inspected from several angles and adjusted as necessary.

NOTE: Sports Strength is manufactured from recycled materials and slight variance in shade and color chip dispersion is normal. It is the installer's responsibility to inspect all products to insure the correct style, thickness, and color. Any moderate to severe discrepancies should be reported immediately before beginning the installation.

NOTE: Use a recommended notch trowel.

- B. For an interior installation, moisture must be measured using the RH Relative Humidity test method per ASTM F2170 standard. Moisture content should not exceed 85% RH. If the levels exceed the limitations, the installation should not proceed until the situation has been corrected.
 1. In the event that a moisture mitigation system is required, consult your Landmark Interiors Representative.
- C. It is essential that pH tests be taken on all concrete floors. If the pH is greater than 9, it must be neutralized prior to beginning the installation.
- D. Apply the adhesive out slightly wider than the tile being placed. Do not spread more adhesive than can be covered in 30 minutes.
- E. **Quad Bloks must be used and installed per Quad Blok installation section above.**

- F. Place tiles with Quad Bloks into the fresh adhesive bed following pre-established course lines. If applicable, place ramps into the fresh adhesive in a similar manner.
- G. After placing tiles into adhesive bed, roll the tiles with a 75 pound three section flooring roller to ensure adhesive transfer to the back of the tile feet.
- H. Adhesive should be allowed to cure for 24 hours before allowing foot traffic. All heavy traffic and/or light rolling loads should be avoided for a minimum of 72 hours after installation to allow adhesive to develop strength. In cases where 72 hours is not possible, it is recommended to cover the floor with a rigid covering such as ½” plywood sheeting with a fully sanded face against the surface of the tiles.
- I. Tile cuts are typically laid out by referencing dimensions from the edges of the tiles, already in position, to a wall or other obstruction along or around which the tiles are to fit. These dimensions are then transferred to and laid out on the tile to be cut.
- J. Corner ramps should be miter cut.

Maintenance

Fishman recommends our environmentally friendly E-Cleaner and E-Strip maintenance products.

Proper protection and maintenance post-installation should be specified by the architect/designer. Sports Strength should not be subject to construction debris and potential damage caused from construction activities.

FLOOR PROTECTION

The specifier should include specification details to protect the floor post-installation and until job construction is complete, such as covering the entire floor with paper or other floor covering device (plastic, plywood, etc.) and thorough cleaning and maintenance can be implemented.

ASSIGNMENT OF CLEANING AND MAINTENANCE

The specifier should determine and assign the responsibility for the initial cleaning to the flooring contractor, general contractor, maintenance contractor, or owner.

Steps	Cleaning Product	Mixture	Equipment
Initial Cleaning	Fishman's E-Cleaner	10 oz. /gal. water	Soft Nylon Brush or 3M 5100 Red Pad or equal
Daily Cleaning	Fishman's E-Cleaner	2-4 oz. /gal. water	Microfiber Mop, Soft Nylon Brush or 3M 5100 Red Pad or equal
Heavy Soil & Restorative Cleaning	Fishman's E-Cleaner or E-Strip	16 oz. /gal. water	Soft Nylon Brush or 3M Blue 5300, Brown 7100, or Black 7200 pad as req'd. (Do not use High Productivity Pad)

CLEANING PROCEDURES

1. Initial Cleaning
 - a. Remove all surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming with a high CFM vacuum. For large areas, use auto scrubbers to clean floors.
 - b. Scrub floor with neutral cleaner (10 oz. /gal. of water), using buffer or auto scrubber with a soft nylon brush or pad per table above. Avoid flooding the floor.
 - c. Pick up solution with a wet vacuum. Rinse with clean water, picking up the rinse water with a wet vacuum and allowing it to dry thoroughly (6-8 hours).
2. Daily/Regular Cleaning
 - a. Sweep, dust mop, or vacuum floor to remove surface soil, debris, sand, and grit.
 - b. Damp mop with a microfiber mop or auto-scrub with neutral cleaner and pad per table above.
 - c. Mop again with clean water to remove residue.
3. Restorative Maintenance
 - a. Sweep and dry vacuum floor thoroughly.
 - b. Heavy scrub floor with neutral cleaner (10 oz. /gal. of water) or E-Strip. This cleaning may be performed with an auto scrubber or rotary scrubber with pad per table above.
 - c. Vacuum soiled solution with a wet/dry vacuum.
 - d. Rinse with clean water.
 - e. Pick up solution with wet vacuum.
 - f. Allow floor to dry thoroughly (6-8 hours).
 - g.
4. Heavy Soil
 - a. Remove surface soil, debris, sand, and grit by sweeping, dust mopping, or vacuuming.
 - b. Scrub floor with neutral cleaner or E-Strip, using a buffer or auto scrubber with pad per table above.
 - c. Pick up solution with a wet vacuum, rinse with clean water, and allow to dry thoroughly (6-8 hours).

Warranty

Fishman (the “Seller”) warrants that the Sports Strength surfacing system will be free from defects in materials and workmanship.

What does the warranty cover?

- Surface wear due to ordinary abrasion from pedestrian traffic will not penetrate the wear course of the surface.
- The tiles, when installed according to the manufacturer’s specifications, will ensure the surface remains fixed and functional.

How long does the warranty coverage last?

This is a 15 year limited warranty, prorated as outlined in the warranty coverage schedule shown below. This warranty may be transferred with the property.

What will we do?

Any segment of a Sports Strength surface that meets the warranty criteria will be repaired or replaced, at the Seller’s option and in conjunction with the warranty coverage schedule below.

Warranty Coverage Schedule:

The Seller shall be responsible for 100% of the purchase price of any product found to be defective or not in compliance with the warranty herein within the first six (6) years following the original shipment of the product. Where any product is found to be defective or not in compliance with the warranty herein more than six (6) years following the original shipment of the product, the Seller shall only be responsible for a portion of the cost of the purchase price of such products as follows (and the buyer shall bear and pay the remaining portion of such costs):

<i>Number of years from date of original shipment to date of claim</i>	<i>Percentage of purchase price of product for which Seller is responsible</i>
<i>0-6 -----</i>	<i>100%</i>
<i>More than 6 and equal to 7 -----</i>	<i>60%</i>
<i>More than 7 and equal to 8 -----</i>	<i>40%</i>
<i>More than 8 and equal to 9 -----</i>	<i>30%</i>
<i>More than 9 and equal to 10 -----</i>	<i>20%</i>
<i>More than 10 and equal to 12 -----</i>	<i>10%</i>
<i>More than 12 and equal to 15 -----</i>	<i>5%</i>

Warranty Exclusions

This warranty does not cover:

- Product failure caused by accidents, misuse, natural disaster, vandalism, improper installation, or maintenance and the like (see installation, care, and maintenance instructions).
- Color change caused by exposure to UV and/or normal abrasion from pedestrian traffic.
- Failure due to improper sub-surface preparation.
- Resilient flooring may suffer visible damage as a result of extreme high forces (up to 2,000 pounds per square inch). Common contributors to this type of force include, but are not limited to, stiletto or high heels, and narrow tipped chair supports. Sports Strength are not designed to perform under such concentrated high pressure.

Landmark Interiors will not accept claims for damage caused by extreme high forces.

Additional Considerations:

- The Seller’s liability is limited to the material and transportation costs of repair or replacement of the product at the Seller’s option. The Seller shall be responsible for installation costs and the costs of other work in connection with such repair and replacement only if such work was performed by Seller in the original installation. Where Sports Strength is installed only in high traffic areas or installed in combination with other surfacing products not sold by the Seller, such Sports Strength tiles are excluded from this warranty.
- In the event of repair, replacement, or refinishing under this warranty, the warranty applicable to the replacement material or to the repaired or refinished products will extend only for the time remaining under the original warranty.
- The Seller reserves the right to discontinue or change any design or color of any products at any time and without notice or liability. If, for any reason, products of the type originally purchased are no longer available at the time a warranty claim is made, Seller may substitute another product determined by Seller to be of comparable quality and price.
- THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- Your exclusive remedy for any breach of warranty is as set forth in this warranty. This warranty gives you specific legal rights. You may have other rights which vary from state to state and province to province.
- **The Sports Strength warranty shall not cover dissatisfaction due to improper installation, damage from improper maintenance or usage, or general misuse, including and without limitation: burns, cuts, tears, scratches, scuffs, damage from rolling loads, damage from cleaning products not recommended by Fishman, slight shade variations or shade variations due to exposure to direct sunlight, or differences in color between samples or photographs and actual flooring.**



Landmark Interiors
Sports Flooring

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A Fishman Brand Product

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