



Since 1966

## Tubular Specialties Manufacturing, Inc.

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# GRD -121

# Guard Rail with Infill Panel

## Technical Data

Revised Feb. 2001



## Design Considerations

- Meets requirements that a 4" or larger sphere should not pass through the openings of a guard rail.
- It is recommended that railings for marine, pool or spa applications be specified in a bright polished finish to resist oxidation. Type 316 stainless steel is also available for extra protection against oxidation.

- The effectiveness of guard rails as safety rails depends entirely on a secure installation. The GRD-121 exceeds U.S. established guidelines for strength, but it is the responsibility of the design/build/install team to evaluate the specific installation conditions to determine the appropriate fasteners.
- Please check with local building inspectors for jurisdiction regarding codes affecting tubing O.D., etc.



## Suggested Architectural Specification

#GRD-121 Guard Rail with Infill Panel from TSM, Tubular Specialties Manufacturing, Inc., Los Angeles, California, 800/Call TSM (800/225-5876).

*Material:* Stainless steel satin finish type 304 (18-8), all welded construction.

*Mesh:* Woven wire mesh. Diameter .120"; distance between wire centers 1"; opening size wire .880"; open area 77.4%.

*Border:* U-Channel, 1" x 5/16" x 1" x 16 gauge.

*Panel Attachment:* Welded construction. Four (4) tabs heliarc welded to the border of each infill panel and the vertical posts. Tabs are 2" long x 1/4" x 1" bar stock.

*Rail:* Vertical posts and horizontal lines are 1.9" O.D. x .065" wall round tubing. Maximum centerline distance between vertical posts is 5'. Rail centerline height is 42" with 4" extension for imbed.

*Construction:* Up to 18' long rails made in one piece. Longer lengths made in sections to be joined at the jobsite using [internal dowel and adhesive, TSM model #T-526] [splice lock with set screw, TSM model #T-526-A][welding].



## Installation

1. Core holes in cement 3" in diameter and 4"-5" deep (allow 1" grout pad beneath post).
2. Position posts in holes.
3. Keep upright with wedges and fill hole 3/4 full with quick-dry,

- non-shrink grout (wedges and grout not supplied by TSM).
4. Drill weep holes just above the ground for exterior installations.
5. Remove the wedges when the grout has partially set.
6. Fill remainder of hole with grout and let dry.