Twining Consulting Inc.
dba RADCO
18071 Mount Washington St. Unit A,
Fountain Valley, CA 92708
twiningconsulting.com

Listing No.
RAD-1371

Twining Consulting Inc. Listing Report

Issued Date: Jul 2024
Revision Date: Dec 2025
Subjected to Renewal: Feb 2026

Product: All Steel Foundation Systems (ASFS)
Report Holder: Oliver Technologies Inc.
467 Swan Avenue
Hohenwald, TN 38462
olivertechnologies.com
1 (800)-284-7437
Plant Location: 467 Swan Avenue
Hohenwald, TN 38462

Compliance with the following codes:

- 2021, 2018, 2015 and 2012 International Building Code (IBC)
- 2021, 2015 and 2012 International Residential Code (IRC)
- 24 CFR 3285.301(d)(2), 24 CFR 3280.305, 24 CFR 3280.306 for wind resistance (HUD)
- 24 CFR 3285.202, 24 CFR 3280.401 for soil bearing capacity and pier load (HUD)

SECTION 1: INTRODUCTION

At the request of Oliver Technologies Inc., Twining Consulting Inc. has examined their All Steel Foundation Systems for compliance with Code required Manufactured Homes, Modular Homes, Residential Structures, and Commercial Structures against the referenced codes.

SECTION 2: DESCRIPTION

The Model 1100, 1101, and 1102 series All Steel Foundation Systems are designed for use in manufactured housing to provide structural support and stability. All Steel Foundation Systems use steel tubes that tie the frame of the home to the ground. These tubes work in both tension and compression. With this active resistance, the systems can utilize the weight of the house and unitize it to the ground. Wind load forces are transferred from the home, through the steel arms into the pan or concrete base, subsequently using the surrounding soil as frictional resistance.

All Oliver Technologies Inc. All Steel Foundation Systems (ASFS) are manufactured using steel in conformance with ASTM A-36.

All Oliver Technologies Inc. All Steel Foundation Systems (ASFS) steel pads and concrete footings have been vertically pier load tested to an ultimate load of 12,000 lbs."

The steel pads may be used to distribute concentrated pier loads to underlying soil for manufactured housing constructed in accordance with The Federal Manufactured Home Construction and Safety Standards 24 CFR § 3285.202 of the HUD Standards for Manufactured Housing, IRC Appendix E, Sections AE502, AE601, AE602, AE604 and AE605, to the IBC 2015, 2018 and 2021 for commercial use and section 1806.2 Soil Bearing Values. The product(s) may also be installed in other suitable engineered applications for modular, commercial and residential building systems that comply with product designs and local jurisdiction requirements.

SECTION 3: INSTALLATION

The system must be installed according to Oliver Technologies, Inc.'s installation instructions, as well as any additional installation requirements per the home manufacturer.

SECTION 4: EVIDENCE SUBMITTED

1) Testing has been conducted to verify the compliance of Oliver Technologies Inc. All Steel Foundation System (ASFS) to the Twining Consulting Inc. listing requirements for foundation systems.
2) The quality and process control system used in the manufacture has been submitted to Twining Consulting Inc. An adequate method of traceability is maintained by the manufacturer. A follow-up quality assurance audit program is maintained by Twining Consulting Inc.

SECTION 5: MARKINGS / IDENTIFICATION

Oliver Technologies Inc. All Steel Foundation Systems (ASFS) are to be Identified with one of the following criteria:

1) Twining Consulting Inc. Conformity Logo: AA-650

2) Listing identification number RAD-1371.

Oliver Technologies Inc. will also put the Twining Consulting logo on their website to show that their quality assurance program is being monitored by an ISO/IEC 17020 inspection agency AA-650

SECTION 6: RECOMMENDATIONS

The Oliver Technologies, Inc. All Steel Foundation Systems Models 1100, 1101, and 1102 meet the requirements of all referenced HUD, IRC, and IBC codes for manufactured housing foundation systems in Wind Zone I, II, III. The systems provide reliable support and stability when installed according to the specified guidelines.

Twining Consulting Inc. recommends that the following guidelines be followed for this listing to be incompliance.

1) The Twining Consulting Inc. plant audit and testing program be continued at the prescribed listing frequency (4 times a year) to evaluate the ongoing compliance of the product, records keeping, traceability and overall Quality Control adherence to the Quality Control Manual.
2) Ensure all foundation system components are clearly marked with identification numbers, manufacturing dates, and other relevant information to facilitate traceability.
3) Update installation manuals and training materials as needed to reflect any changes in standards or best practices.
4) Schedule regular load and performance tests to verify that the foundation systems continue to meet the specified load capacities and performance criteria through sample selection.

SECTION 7: APPROVAL:

This listing is subject to annual re-examination and renewal.

Table 1: Maximum Design Load Capacity for Steel Pad

Model	Pad Size	Soil Bearing Capacity		
		1,000 psf	2,000 psf	3,000 psf
All Steel Foundation Steel Pad	20.875" x 20.875"	3,026	6,052	9,078

Table 2: Maximum Load Capacity for Pier

Model	Tested Load Capacity (lbs.)	Safety Factor Applied	Maximum Allowable Load (lbs.)	Minimum Load Angle	Maximum Load Angle
All Steel Foundation Steel Pier (ASFS)	12,000	3.0	4,000	40º	60º

Table 3: All Steel Foundation System Lateral Loads

Direction	Calculated Design Load (Total)	Systems Supporting Load	Allowable Load (lb/system)
Transverse	27,366	2	13,683
Longitudinal	15,858	2	7,929