



Twining Consulting Inc.  
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Listing No.  
**RAD-1373**

# Twining Consulting Inc. Listing Report

Issued Date: Sep 2024  
Revision Date: N/A  
Subjected to Renewal: Feb 2025

**Product:** ABS Pier Pads, Pier Caps, and Shims  
**Report Holder:** Oliver Technologies Inc.  
467 Swan Avenue  
Hohenwald, TN 38462  
[olivertechnologies.com](http://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, 2018, 2015 and 2012 International Residential Code (IRC) Appendix E, Sections AE502, AE601, AE602, R403.4.1
- 24 CFR § 3285.306, 3285.304, 3285.312, a Manufactured Home Construction and Safety Standards, United States Department of Housing and Urban Development (HUD).

## SECTION 1: INTRODUCTION

At the request of Oliver Technologies Inc., Twining Consulting Inc. has conducted an evaluation of their ABS Pier Pads, Pier Caps, and Shims, which are designed to provide support for Code-required Manufactured Homes, Modular Homes, Residential Structures, and Commercial Structures across various soil classes and load capacities. Any design considerations beyond this scope are the responsibility of the registered design professional. For specific details, Table 1 outlines the different ABS pier pad models and their maximum soil and load capacities for both single and double CMU piers, as well as steel piers. Table 2 details the maximum allowable loads for pier caps and shims. It is incumbent upon the design professional to ensure that the combinations of caps, shims, and pads utilized do not exceed the design capacity specified in the referenced tables. Table 3 outlines maximum allowable loads for multi-pad configurations of ABS pier pads.

## SECTION 2: DESCRIPTION

Oliver Technologies, Inc. manufactures ABS Pier Pads, Caps, and Shims, which are utilized within foundation footings. Their purpose is to effectively transfer concentrated loads from a home or structure through a

pier, and subsequently distribute the load onto the underlying soil.

ABS Pier Caps, placed on top of the CMU pier, serve to effectively transfer concentrated loads from a home or structure.

ABS Shims are designed to evenly spread concentrated loads from the home or structure to the top of the pier cap.

## SECTION 3: INSTALLATION

The ABS pier pads, caps, and shims shall be installed in accordance with the manufacturer's installation instructions, and the requirements of this listing for maximum soil and load capacities as required by the applicable referenced HUD, IRC, and IBC codes. 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 4: EVIDENCE SUBMITTED

1. Testing has been conducted and submitted to verify the compliance of Oliver Technologies Inc. ABS Pier Pads, Pier Caps, and Shims to the Twining Consulting Inc. Listing Requirements.
2. The quality and process control system used in the manufacturing process 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. ABS Pier Pads, Pier Caps, and Shims are to be Identified with one of the following criteria:

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



2. Listing identification number RAD-1373.

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**

Oliver Technologies, Inc. ABS Pier Pads, Pier Caps, and Shims 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 maintain compliance:

1. Each ABS Pier Pad, Pier Cap, and Shim shall be fabricated, identified, and installed in accordance with this listing, the manufacturer’s published installation instructions, and the applicable code(s). In the event of a conflict between the manufacturer’s published installation instructions and this listing, this listing shall govern. The installation instructions shall be available at the point of installation.

2. Each ABS Pier Pad, Pier Cap, and Shim shall be marked with the manufacturer’s name, product ID and Twining Consulting Inc. listing number, RAD-1373.
3. The ABS Pier Pads, Pier Caps, and Shims are of the same quality and size as originally submitted for testing.
4. Piers are limited to single or double stacked CMU block, or steel piers.
5. The design pier load does not exceed the lesser of the pad capacity, soil capacity, or pier capacity.
6. The home installer is responsible for the foundation design of each home.
7. Twining Consulting Inc.’s follow-up audits be continued at the prescribed frequency.

**SECTION 7: APPROVAL:**

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

Table 1: ABS Pier Pad Single & Double CMU Pier Models and Maximum Load Capacities.

Model	Dimension (in. x in.)	Maximum Pier Load (lbf)			
		Soil Unconfined Compression Strength (psf)			
		1,000	2,000	2,500	3,000
1055-14**	16 x 16	1,780**	3,560**	4,450	5,340
1055-23	16 x 18	2,000	4,000	5,000	6,000
1055-9**	18.5 x 18.5	2,375**	4,750**	5,935	7,100
1055-16	17 x 22	2,500	5,000	6,250	7,500
1055-21	17.5 x 22.5	2,667	5,334	6,668	8,000
1055-7**	20 x 20	2,750**	5,500**	6,875	8,250*
1055-17	17.5 x 25.5	3,000	6,000	7,500	9,000*
1055-13**	24 x 24	4,000**	8,000**		
1055-26	24 x 24	4,000	8,000	10,000*	12,000*
1055-22	21 x 29	4,000	8,000	10,000*	12,000*
1055-20	23.25 x 31.25	4,698	9,396*	11,745*	14,094*
All pads can be utilized with a single CMU, except where * indicates double-CMUs are required.					
** Indicates when and at what capacities steel piers can be used.					

Table 2: ABS Shims and Pier Caps Design Load Capacity

Installation	Maximum Component Load (lbf)
One or Two Stacked ABS Capboards	8,000
Two Stacked ABS Pier Capboards Stacked Parallel	16,000
ABS Shims (single CMU Pier, used in pairs)	8,000
ABS Shims used with ABS Cap on two stacked Parallel on Double CMU Pier	16,000

Table 3: Multi-Pad Configurations

Dimension (in. x in.)	Area (ft <sup>2</sup> )	Model	Multi-Pad Configuration	8" Cell Block	Soil Bearing Value	Maximum Load
16 x 18	2	1055-23	32" x 18" 3 Pad Configuration	Single Stack	1,000 lbs./ft <sup>2</sup>	4,000 lbs.
32 x 18 (3 pad)	4			Double Stack	2,000 lbs./ft <sup>2</sup>	8,000 lbs.*
17 x 22	2.5	1055-16	34" x 22" 3 Pad Configuration	Single Stack	1,000 lbs./ft <sup>2</sup>	5,000 lbs.
34 x 22 (3 pad)	5			Double Stack	2,000 lbs./ft <sup>2</sup>	10,000 lbs.*
17.5 x 25.5	3	1055-17	35" x 25.5" 3 Pad Configuration	Single Stack	1,000 lbs./ft <sup>2</sup>	6,000 lbs.
35 x 25.5 (3 pad)	6			Double Stack	2,000 lbs./ft <sup>2</sup>	12,000 lbs.*

**\*Concrete blocks are only rated at 8,000 pounds, 8,001 pounds and higher must be double stacked.**

**Three Pad Configuration**

