DECK MOUNT
FOR ASPHALT, EPDM, & TPO ROOFS

16317

A DIVISION OF QUICKSCREWS INTERNATIONAL CORP
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
</table>
| 3    | SPEC SHEET  
         QTY & MEASUREMENT INFORMATION |
| 5    | INSTALLATION INSTRUCTIONS  
         STEP-BY-STEP-INSTALLATION GUIDE |
| 6    | BUILDING CODE LETTER  
         REGARDING STAMP DATES |
| 7    | ENGINEERING REPORT #1  
         LOAD TESTING |
| 18   | ENGINEERING REPORT #2  
         TAS 100(A) TESTING |
| 26   | UL CERTIFICATION  
         PROOF OF UL CERTIFICATION |
### SPEC SHEET

<table>
<thead>
<tr>
<th>Part #</th>
<th>Box Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>16317</td>
<td>36 Mounts + 144 Screws w/Umbrella Washers</td>
</tr>
</tbody>
</table>

- **Silicone-backed**
DECK MOUNT (16317)

RECOMMENDED MATERIALS
• MFG approved sealant
• 1/2” Nut Setter

INSTALLATION INSTRUCTIONS
1. Install anywhere on roof. No need to locate rafters
2. Place sealant around the bottom of the T-Foot
3. Place the T-Foot onto the roof
4. Insert first 5/16” x 1-3/4” Hex Lags into T-Foot
5. Drive the screw until the Umbrella Washer is compressed
6. Repeat with remaining screws
To whom this may concern,

QuickBOLT is committed to excellence. The parts tested are durable goods, meaning the material composition and detailed specifications of the parts do not change. Therefore, all stamps are current. Any part tested will have the same results no matter what year the tests are performed.

SolarRoofHook is the previous name of QuickBOLT. Any test result referencing SolarRoofHook is referring to a QuickBOLT product.

All our parts were tested by a third-party test facility, in possession of a current engineering license for the state where the tests were performed for the following.

1. Uplift test
2. Downward load test
3. Lateral Test – Asphalt Mounts, and Metal Mounts only
4. ASTM E2440 and ASTM E330 Waterproof Tests - QuickBOLT only

The following is an excerpt from:

CALIFORNIA BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
guide to Engineering & Land Surveying for City and County Officials
Page 12, Line 27

27. If the license has expired between the time the engineering documents were prepared and the time when the local agency’s review is performed, do the documents need to be re-sealed by a licensee with a current license? (B&P Code §§ 6733, 6735, 6735.3, 6735.4)

As long as the license was current at the time the engineering documents were prepared, the documents do not need to be re-sealed prior to review by the local agency. However, any changes (updates or modifications) to the documents that are made following the review by the local agency would have to be prepared by a licensed engineer with a current license and those changes would have to be signed and sealed.

We trust the information provided will resolve any request for the test reports submitted to have a stamp from the current year.

Regards,
Rick Gentry
Executive Vice President
ENGINEERING REPORT #1

QUICKSCREWS INTERNATIONAL CORP.
TEST REPORT

SCOPE OF WORK
LOAD TESTING of Part# 16317 and 16318 Deck Mount Kit Stand

REPORT NUMBER
L2941.02-301-18- R0

TEST DATE
08/31/20

ISSUE DATE
09/14/20

PAGES
11

DOCUMENT CONTROL NUMBER
GFT-OP-10c (AUGUST 27, 2018)
© 2017 INTERTEK
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

REPORT ISSUED TO
QUICKBOLT - A DIVISION OF QUICKSCREWS INTERNATIONAL CORP.
5830 Las Positas Road
Livermore, California 94551

SECTION 1
SCOPE

Intertek Building & Construction (B&C) was contracted by Quickscrews to perform additional load testing on their Part# 16317 and 16318 Deck Mount Kit Stand Testing was conducted at the Intertek B&C test facility in Fresno, California.

Intertek B&C in Fresno, California has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-264) by International Accreditation Service, Inc. (IAS).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

COMPLETED BY: Dennis Janzen
TITLE: Technician
SIGNATURE: [Signature]
DATE: 09/14/20

REVIEWS BY: Tyler Westering, P.E.
TITLE: Operations Manager
SIGNATURE: [Signature]
DATE: 09/14/20

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SECTION 2
SUMMARY OF TEST RESULTS

| JOIST CONNECTION PERFORMANCE (DIRECT VERTICAL LOAD - SHEAR PERPENDICULAR) ¹ | Deck Mount Kit Stand Part# 16317 | Load at 1/8 in Displacement |

SECTION 3
TEST METHODS


Limitations
Bracket systems to the supporting structure is not included in the scope of this testing and would need to be evaluated separately.

SECTION 4
MATERIAL SOURCE/INSTALLATION

All anchor components including wood posts used for the testing reported herein were supplied by Quickscrews and were not independently sampled or selected by a third-party inspection agency.

SECTION 5
LIST OF OFFICIAL OBSERVERS

<table>
<thead>
<tr>
<th>NAME</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyler Westerling</td>
<td>Intertek B&amp;C</td>
</tr>
<tr>
<td>Dennis Janzen</td>
<td>Intertek B&amp;C</td>
</tr>
</tbody>
</table>
SECTION 6
TEST PROCEDURE

Specimens were mounted to an Asphalt shingle covered 2x6 lumber frame with 5/8” plywood. Vertical load was applied to the bearing block through a load cell attached to the testing machine. Test speed was 0.200 in/min. Displacement was taken with one linear transducer, attached to the frame, which were zeroed at zero load. Ultimate load was the maximum load the test assembly could withstand in that direction without deflection exceeding 1/8”. See photographs in Section 10 for typical test set-up.

SECTION 7
TEST SPECIMEN DESCRIPTION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>MATERIAL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deck Mount Kit Stand Part# 16317</td>
<td>Stainless Steel</td>
<td>Bracket (0.20” thick) Backed with 0.040” thick EPDM</td>
</tr>
<tr>
<td>Mount Screw with Umbrella Washer</td>
<td>Stainless Steel</td>
<td>Stainless Steel Lag 5/16” diameter by 2” long with stainless steel and EPDM washer</td>
</tr>
</tbody>
</table>

Refer to photographs in Section 10 and drawings in Section 11 for additional details.
SECTION 8  
TEST RESULTS

Connection Performance Testing (Direct Vertical Load - Shear - Perpendicular)

The purpose of this testing was to determine the direct load capacity of the L-foot in three direction in accordance with ASTM D7147.

Specimen No. 1-3

<table>
<thead>
<tr>
<th>Pounds Load at 0.125” deflection</th>
<th>Anchor #1</th>
<th>Anchor #2</th>
<th>Anchor #3</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bending (weak direction)</td>
<td>201 lbs</td>
<td>192 lbs</td>
<td>196 lbs</td>
<td>196 lbs</td>
</tr>
<tr>
<td>Pullout</td>
<td>148 lbs</td>
<td>143 lbs</td>
<td>136 lbs</td>
<td>142 lbs</td>
</tr>
<tr>
<td>Shear</td>
<td>95 lbs</td>
<td>103 lbs</td>
<td>110 lbs</td>
<td>103 lbs</td>
</tr>
</tbody>
</table>

Test/Ultimate loads should not be used as design loads or safe working loads.
SECTION 9
PHOTOGRAPHS

Photo No. 1
Pullout Test
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

Photo No. 2
Shear Test
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

Photo No. 3
Bending Weak
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

Photo No. 4
Deck Mount
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

Photo No. 5
Instrumentation
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.02-301-18- R0
Date: 09/14/20

SECTION 10
REVISION LOG

<table>
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<th>REVISION</th>
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<tbody>
<tr>
<td>0</td>
<td>09/14/20</td>
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<td>Original Report Issue</td>
</tr>
</tbody>
</table>

17
ENGINEERING REPORT #2

QUICKSCREWS INTERNATIONAL CORP.
TEST REPORT

SCOPE OF WORK
TAS 100(A) TESTING on Part# 16317 and 16318 Deck Mount Kit Stand

REPORT NUMBER
L2941.01-301-18 R1

TEST DATE
08/31/20

ISSUE DATE
09/14/20

REVISION 1 DATE
09/14/20

RECORD RETENTION END DATE
08/31/30

PAGES
8

DOCUMENT CONTROL NUMBER
ATI 00479 (07/24/17)
RT-R-AMER-Test-2805
© 2017 INTERTEK
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.01-301-18 R1
Date: 09/14/20

REPORT ISSUED TO
QUICKBOLT - A DIVISION OF QUICKSCREWS INTERNATIONAL CORP.
5830 Las Positas Road
Livermore, California 94551

SECTION 1
SCOPE

Intertek Building & Construction (B&C) was contracted by Quickscrews Company to perform testing in accordance with TAS 100(A) – 95 testing on their Part# 16317 and 16318 Deck Mount Kit Stand. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at Intertek B&C test facility in Fresno, California.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2
SUMMARY OF TEST RESULTS

The specimens tested met the performance requirements set forth in the protocols.

Product Type: Solar Mounting Fastener
Series/Model: Part# 16317 and 16318 Deck Mount Kit Stand

<table>
<thead>
<tr>
<th>SPEC.</th>
<th>TEST PROTOCOL</th>
<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TAS 100(A) – 95</td>
<td>110 MPH</td>
</tr>
</tbody>
</table>

For INTERTEK B&C:
COMPLETED BY: Dennis Janzen
TITLE: Technician
SIGNATURE: [Signature]
DATE: 09/14/20

REVIEWED BY: Tyler Westerling, P.E.
TITLE: Operations Manager
SIGNATURE: [Signature]
DATE: 09/14/20

This report is for the exclusive use of Intertek’s Client and is provided pursuant to the agreement between Intertek and its Client. Intertek’s responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample[s] tested. This report by itself does not imply that the material, product, or service is or has ever been under an intertek certification program.

Version: 07/24/17
Page 2 of 8
RT-R-AMER-Test-2805
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.

Report No.: L2941.01-301-18 R1
Date: 09/14/20

SECTION 3
TEST METHOD

The specimens were evaluated in accordance with the following:

Testing Application Standard (TAS) No. 100(A) - 1995, Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen were provided by the client. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of five years from the test completion date.

The specimen was installed into an asphalt shingle test buck with lexan viewing window on the underside. Installation of the tested product was performed by Intertek B&C.

<table>
<thead>
<tr>
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<th>MATERIAL</th>
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<td>Stainless Steel Lag 5/16” diameter by 2” long with stainless steel and EPDM washer</td>
</tr>
</tbody>
</table>

SECTION 5
EQUIPMENT

Calibrated Wind Generator - Reference calibration report I6737.03-801-44-r0 for calibration results.

SECTION 6
LIST OF OFFICIAL OBSERVERS

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</tr>
</tbody>
</table>
SECTION 7
TEST RESULTS

Protocol TAS 100(A) – 95, Wind Driven Rain Resistance

Test Date: 08/31/20
The temperature during testing was 35°C (95°F). The results are tabulated as follows:

<table>
<thead>
<tr>
<th>Wind Speed</th>
<th>Gallons Sprayed</th>
<th>Inches Per Hour</th>
<th>Gallons Collected</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>77.02</td>
<td>10.30</td>
<td>0</td>
<td>15 Minutes</td>
</tr>
<tr>
<td>70</td>
<td>75.11</td>
<td>10.04</td>
<td>0</td>
<td>15 Minutes</td>
</tr>
<tr>
<td>90</td>
<td>79.89</td>
<td>10.68</td>
<td>0</td>
<td>15 Minutes</td>
</tr>
<tr>
<td>110</td>
<td>27.88</td>
<td>10.08</td>
<td>0</td>
<td>5 Minutes</td>
</tr>
<tr>
<td>Total</td>
<td>259.9</td>
<td>11.18</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1% of total water sprayed</td>
<td>2.59 Gallons</td>
<td></td>
<td>0 Gallons Collected</td>
<td>Pass</td>
</tr>
</tbody>
</table>

General Note: All testing was performed in accordance with the referenced standard.

SECTION 8
CONCLUSIONS

Intertek B&C observed no signs of failure in any area of the test specimens during the test; as such, the test specimens satisfy the requirements of TAS 100(A) – 95.
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.01-301-18 R1
Date: 09/14/20

SECTION 9
PHOTOGRAPHS

Photo No. 1
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.01-301-18 R1
Date: 09/14/20
TEST REPORT FOR QUICKSCREWS INTERNATIONAL CORP.
Report No.: L2941.01-301-18 R1
Date: 09/14/20

Photo No. 3
SECTION 10
REVISION LOG

<table>
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<td>1</td>
<td>09/14/20</td>
<td>4</td>
<td>Correction of Test Date.</td>
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</tbody>
</table>
CERTIFICATE OF COMPLIANCE

Certificate Number 20191115-E493748
Report Reference E493748-20170817
Issue Date 2019-NOVEMBER-15

Issued to: QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP
5830 Las Positas Rd
Livermore, CA 94551

This is to certify that representative samples of COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS (See Adendum for Additional Information.)

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information.

This Certificate of Compliance does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL’s Follow-Up Services.

Look for the UL Recognized Component Mark on the product.
CERTIFICATE OF COMPLIANCE

Certificate Number  20191115-E493748
Report Reference  E493748-20170817
Issue Date  2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models  15891 15893 15987 16000 16988 16990
16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520
17521 17522 17523 17524 17525 17526 17527 17528 17536 17537 17538 17539 17540 17541 17542 17543
17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559
17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585
17596 17597 17598 17599 17600 17601 17602 17603 17604 17605 17606 17607 17608 17609 17610 17611 17612
17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628
17629 17630 17631 17632 17633 17634 17635 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649
17650 17651 17652 17653 17654 17655 17656 17657 17658 17659 17660 17661 17662 17663 17664 17665 17666
17667 17668 17669 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711
17712 17717 17718 17719 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS
17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17726SS 17730SS 15894SS
15891SS 15987BSS 17660 17681 17682 17683

Ratings: Overcurrent Protection Rating – 25 Amps

*Signature*

Barrett McKee, Director North American Certification Program

UL LLC

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