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QUICKBOLT – A DIVISION OF QUICKSCREWS INTERNATIONAL CORPORATION

TEST REPORT

SCOPE OF WORK
WATER TESING ON LOW PROFILE QUICKBOLT, 5-1/4" WITH 4" WASHER

REPORT NUMBER
H4949.01-301-32 R3

TEST DATES
08/25/17 – 09/01/17

ISSUE DATE **REVISION DATE**
09/15/17 10/14/19

RECORD RETENTION END DATE
09/01/22

PAGES
12

DOCUMENT CONTROL NUMBER
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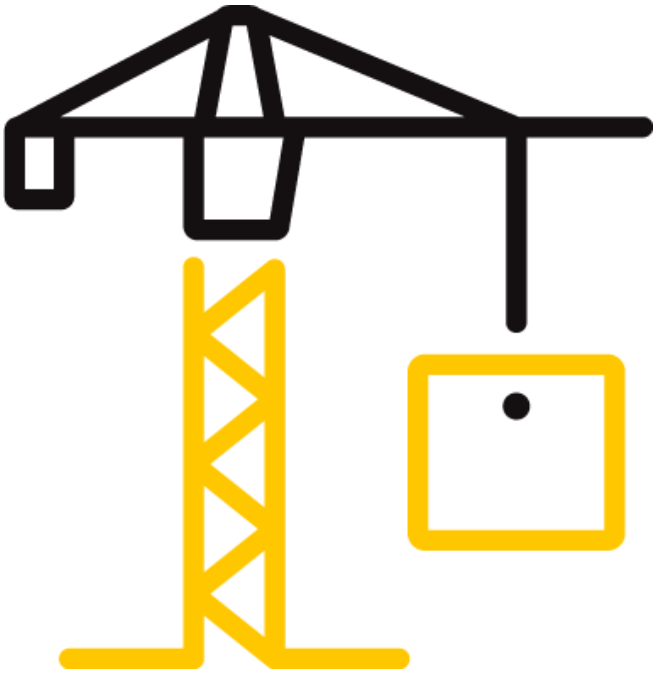

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TEST REPORT FOR QUICKBOLT – A DIVISION OF QUICKSCREWS INTERNATIONAL CORPORATION

Report No.: H4949.01-301-32 R3
Date: 09/26/17

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 QuickBOLT – A Division of Quickscrews International Corporation, Livermore, California to perform testing in accordance with ASTM E331, ASTM E331 (modified), and ASTM E2140 (modified), on their QuickBOLT with four-inch EPDM backed washer. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at Intertek 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

TITLE	RESULTS
ASTM E331 @ 15.00psf	No Leakage
ASTM E331 (modified), 120 min @ 30.0psf	No Leakage
ASTM E2140 (modified), 6" water column for 7 days	No Leakage

For INTERTEK B&C:

COMPLETED BY:	Erick Caldera	**REVIEWED BY:**	Tyler Westerling, P.E.
TITLE:	Technician	**TITLE:**	Senior Project Engineer
SIGNATURE:	Erick Caldera Digitally Signed by: Erick Caldera	**SIGNATURE:**	Tyler Westerling Digitally Signed by: Tyler Westerling
DATE:	10/14/19	**DATE:**	10/14/19

WJR:ss/ms

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SECTION 3
TEST METHODS

The specimens were evaluated in general accordance with the following:

ASTM E331-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E331-00(2016) - (modified), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

Note: the test time was extended beyond the time stated in the standard.

ASTM E2140-01(2017) - (modified), *Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head*

Note: The test time was extended beyond the time stated in the standard.

SECTION 4
INSTALLATION

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

A test roof was constructed using 2 x 10 and 2 x 4 lumber with a piece of rigid, clear plastic over the top. The specimens were then installed through a piece of generic asphalt roof shingle according to the manufacturer's instructions with provisions to observe any water leakage.

SECTION 5
EQUIPMENT

Type	Manufacturer	Asset Number
Control Panel	Intertek-ATI	Y003301
Spray Rack	Intertek-ATI	63331

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Tyler Westerling, P.E	Intertek B&C
William Jay Ratliff	Intertek B&C

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SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: Solar Panel mounting point for asphalt roofs

Name: QuickBOLT

Model/Part/Kit: 17720, 17721, 17722, 17723, 17724, 17725, 17726, 17727, 17728, 17729

COMPONENT	MATERIAL	DESCRIPTION
5.25 QuickBOLT (Part #17664)	Stainless Steel	5-1/4" overall length, stainless steel hanger bolt. One end was a 5/16" dia. X 4" Lag bolt, the other end was a 5/16 -18 bolt with a 6mm hex head. The ends of the bolt were separated by an integral 12mm dia. Flange.
Nut (Part # 15876)	Stainless Steel	5/16 – 18 Hex serrated flange nut
Low Profile L-Foot (part # 15894)	Aluminum	1-1/2 x 3-5/16" aluminium angle cut 1-1/2" wide. A 9mm countersunk hole was drilled on the bottom for mounting to the hanger bolt.
QuickBOLT Washer (part # 17659)	Stainless Steel	4" diameter 1/32" thick dished washer painted and backed with a 1/8" thick layer of EDPM rubber. A 5/16" hole was punched through the center.

Optional/Alternative Parts:

COMPONENT	PART NUMBER	DESCRIPTION
7 QuickBOLT	17670	7" QuickBOLT
8 QuickBOLT	17678	8" QuickBOLT
9 QuickBOLT	17686	9" QuickBOLT
L-Foot	15794	Low profile L-Foot, Black
L-Foot	15891	Aluminum offset L-Foot
L-Foot	15891blk	Aluminum offset L-Foot, Black

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SECTION 8
TEST RESULTS

The temperature during testing was 21.1-29.4°C (70-85°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
ASTM E331 @ 15.0psf	No leakage	No Leakage	1
ASTM E331 (modified) @ 30.0psf	No leakage	No Leakage	2
ASTM E2140 (modified) @ 6" static water column	No leakage	No Leakage	3

Note 1: *The test was conducted for a period of 15 minutes*
Note 2: *The test was conducted for a period of 120 minutes*
Note 3: *The test was conducted for a period of 7 days*

End of test results

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SECTION 9
PHOTOGRAPHS

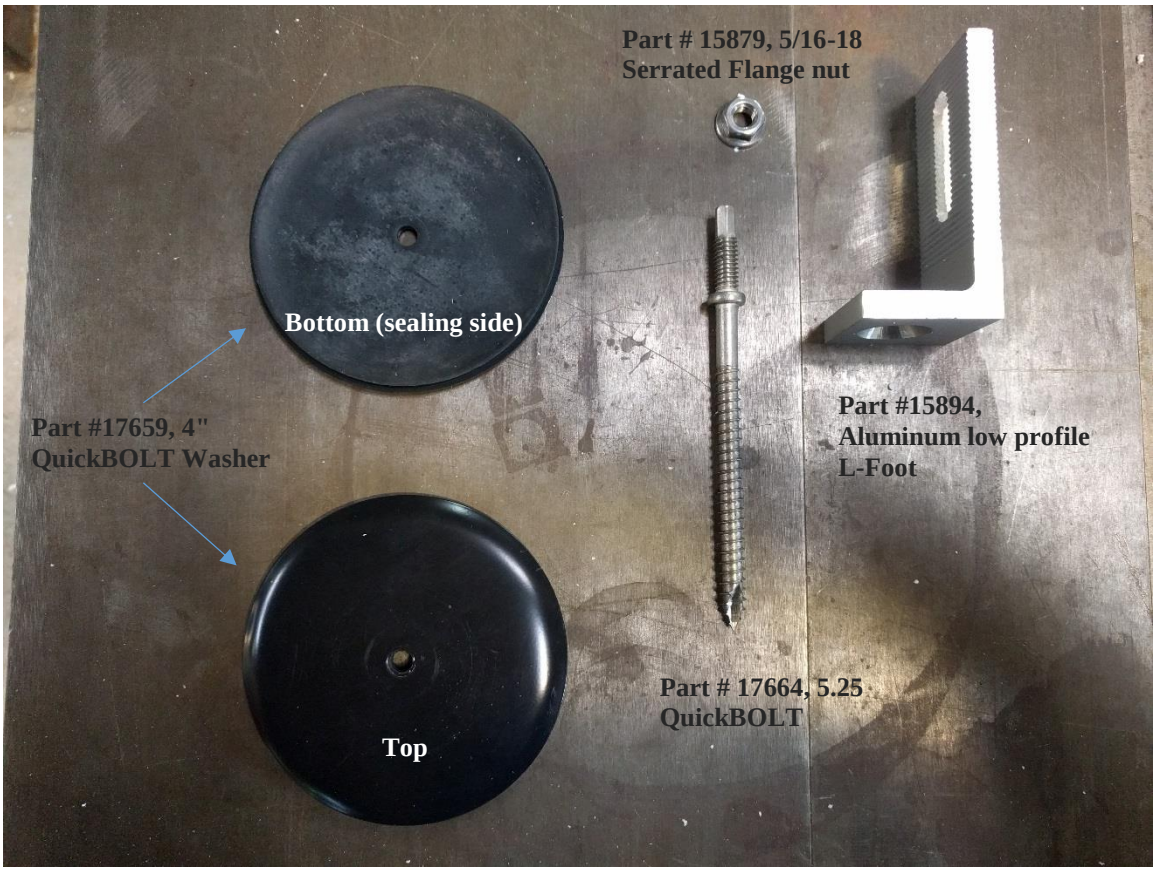

Photo No. 1
Contents of the kit tested (only includes one washer)

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Photo No. 2
The specimen during ASTM E331 testing.

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Photo No. 3
ASTM E2140 testing

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Photo No. 4
The water level maintained at 6" depth for 7 days.

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SECTION 10
INSTALLATION INSTRUCTIONS





LOW PROFILE QUICKBOLT™
INSTALLATION INSTRUCTIONS

RECOMMENDED MATERIALS

- Rafter locater
- Chalk or crayon
- 3/16" Drill Bit
- Roofing Manufacturer's approved sealant

INSTALLATION INSTRUCTIONS

1. Locate and mark the rafters.
2. Predrill the hole with the 3/16" Drill Bit.
3. Fill the predrilled hole with sealant.
   *We also recommend creating a circle of sealant on the back of the washer.
4. Place the EPDM Washer & drive the Bolt until the Washer compresses to the roof.
5. Place the L-Foot & Nut.
6. Tighten the Nut until the L-Foot is secure.

WHERE IS MY FLASHING?

The Stainless Steel backed EPDM Washer is fully Code-Complaint and does not require additional Sheet Metal Flashing. The collar on the QuickBOLT™ compresses the washer down onto the roof, forming a 100% leak-proof seal.

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SECTION 11
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/26/17	N/A	Original Report Issue
1	9/25/17	Cover, 4, Photo 1	Corrected client name, corrected part names, added part numbers, labeled components in Photo No. 1.
2	03/12/19	All	Revision of Customer Name.
3	10/14/19	2	Corrected EPDM