

KING PRODUCTS TEST REPORT

SCOPE OF WORK

TAS 100(A) TESTING ON PERMANENT ROOF ANCHOR

REPORT NUMBER

R5804.01-109-18 R1

TEST DATE

07/02/24

ISSUE DATE

08/14/24

REVISION DATE

08/26/24

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22

DOCUMENT CONTROL NUMBER

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TEST REPORT FOR KING PRODUCTS

Report No.: R5804.01-109-18

Date: 08/14/24

Revision 1: 08/26/24

REPORT ISSUED TO

KING PRODUCTS

894 E Ocelot Street

Meridian, Idaho 83646

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by King Products to perform TAS 100(A) testing on their Permanent Roof Anchor. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

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 ten 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.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk Approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

| | | | |
|----------------------|---------------------------------|---------------------|---|
| COMPLETED BY: | Christopher E. Sartalis | REVIEWED BY: | Tanya A. Dolby, P.E. |
| TITLE: | Technician – Product Testing | TITLE: | Engineering Manager – Engineering Services |
| SIGNATURE: | | SIGNATURE: | |
| DATE: | 08/26/24 | DATE: | 08/26/24 |

CES:mas

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SECTION 2

TEST METHOD

The specimen was evaluated in accordance with the following:

TAS 100 (A)-23, *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 3

MATERIAL SOURCE

Test sample materials were provided by the client from King Products located in Meridian, Idaho. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of ten years from the test completion date.

SECTION 4

EQUIPMENT/CALIBRATION

Scale: 65571

Stopwatch: INT03723

Wind Generator - Vane Axial Fan: Y003346

Weather Station: 63316

Tape Measure Verification: 63788

Windstream, water supply, and water distribution calibration were performed prior to testing. Reference Intertek B&C Calibration Report No. Q9008.02-109-18, dated 01/31/24, for descriptions and results.

SECTION 5

LIST OF OFFICIAL OBSERVERS

| NAME | COMPANY |
|-------------------------|--------------|
| Larry D. Testerman II | Intertek B&C |
| Ken R. Stough | Intertek B&C |
| Tanya A Dolby, P.E. | Intertek B&C |
| Christopher E. Sartalis | Intertek B&C |

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TEST SPECIMEN DESCRIPTION

Manufacturer: King Products

Product Type: Permanent Roof Anchor

Roof Deck Description: An 8' 0" wide by 6' 0" long roof deck on a 2:12 slope was utilized. The roof deck consisted of #2 Spruce-Pine-Fir nominal 2x6 intermediate supports sheathed with 15/32" plywood sheathing. The intermediate supports were spaced 24" on center. The plywood was secured to the rafters with 8d common nails spaced 6" on center around the perimeter and 12" on center at the intermediate supports. The sheathing was covered with 30# felt paper underlayment. Three-tab shingles were then installed over the felt paper.

Roof Anchor Description: The roof anchor measured 3-3/4" wide by 3-1/8" long by 1" high. The anchor consisted of several components including cast aluminum two-piece body, stainless steel fasteners, zinc-plated forged steel D-ring, and a butyl adhesive pad. The lid of the aluminum body was secured to the base with six 1/4" x 20 x 1/2" stainless steel socket head screws. The D-ring was constructed from zinc-plated hot forged alloy steel. The butyl pad consisted of a EternaBond® DoubleStick™ MicroSealant® tape.

Installation: Two anchors were positioned 18" down from the ridge over the rafter within the edges of the shingle. The protective sheet was removed from the butyl adhesive pad and the anchor was placed over the rafter and pressed down into place. Two 3/16" pilot holes were drilled into the rafter using the top and bottom holes of the anchor base for location. Two 5/16" diameter x 3-1/2" lag screws were used to secure the base to the roof deck, tightening until the butyl bulged around the edges of the base. The D-ring was then inserted in the slot and covered with the lid. Six 1/4" x 20 x 1/2" cap screws were tightened in a star pattern securing the d-ring and the lid to the base of anchor.

Conditioning: The test deck was conditioned in a chamber at a temperature of 135°F for a total of sixteen continuous hours.

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TEST RESULTS

Protocol TAS 100(A)-23, 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.

Test Date: 07/02/24

The temperature during testing was 25°C (77°F). The results are tabulated as follows:

Test Procedure: The wind speed intervals were conducted as follows:

| Interval No. | Wind Speed (mph) | Time (min) | Water Spray |
|--------------|------------------|------------|-------------|
| 1 | 35 | 15 | On |
| 2 | 0 | 5 | Off |
| 3 | 70 | 15 | On |
| 4 | 0 | 5 | Off |
| 5 | 90 | 15 | On |
| 6 | 0 | 5 | Off |
| 7 | 110 | 5 | On |
| 8 | 0 | 5 | Off |

Test Results: The TAS 100(A) test results are as follows:

| Wind Speed | Results |
|------------|---------|
| 35 mph | 0.0 oz. |
| 70 mph | 0.0 oz. |
| 90 mph | 0.0 oz. |
| 110 mph | 0.0 oz. |

Result: Pass

Note 1: Tested at a 2:12 roof pitch.

SECTION 8

CONCLUSION

The specimen(s) tested met the performance requirements set forth in the protocols.

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PHOTOGRAPHS



Photo No. 1
Top Side Before Testing

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Photo No. 2
Underside Before Testing

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Photo No. 3
35 MPH Top Side

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Photo No. 4
35 MPH Underside

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Photo No. 5
70 MPH Top Side

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Photo No. 6
70 MPH Underside

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Photo No. 7
90 MPH Top side

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Photo No. 8
90 MPH Underside

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Photo No. 9
110 MPH Top Side

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Photo No. 10
110 MPH Underside

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Photo No. 11
Post Test Top Side

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Photo No. 12
Post Test Underside



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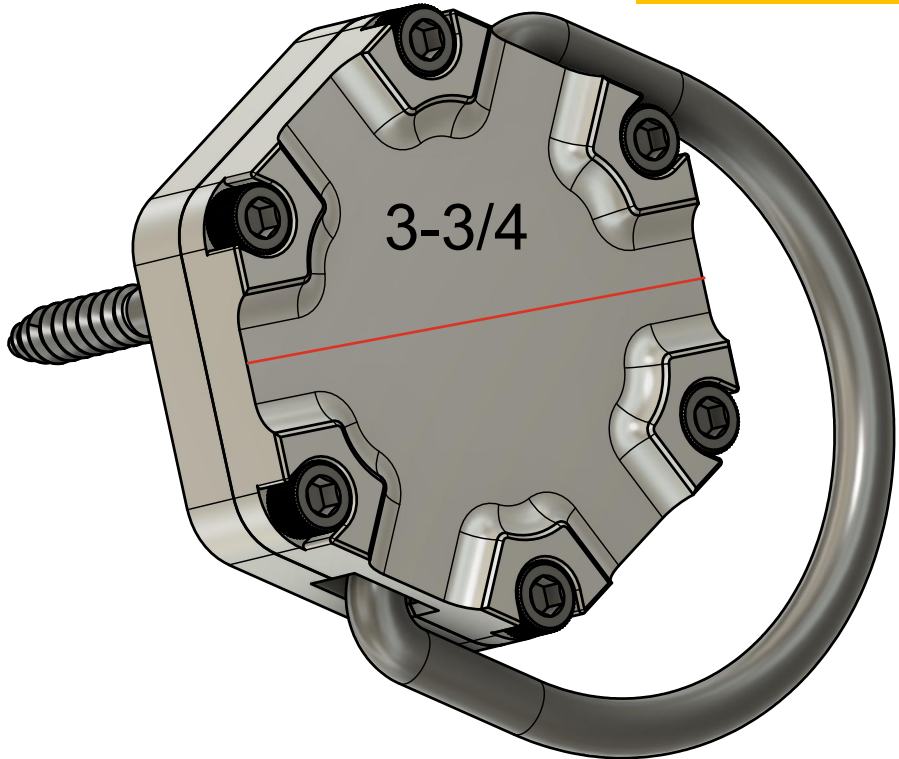
SECTION 10

DRAWINGS

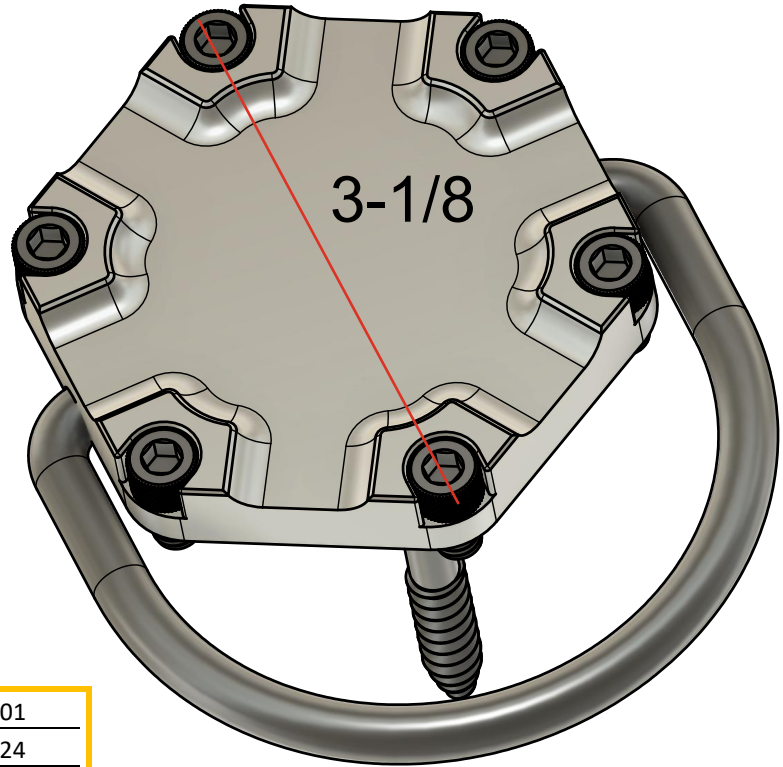
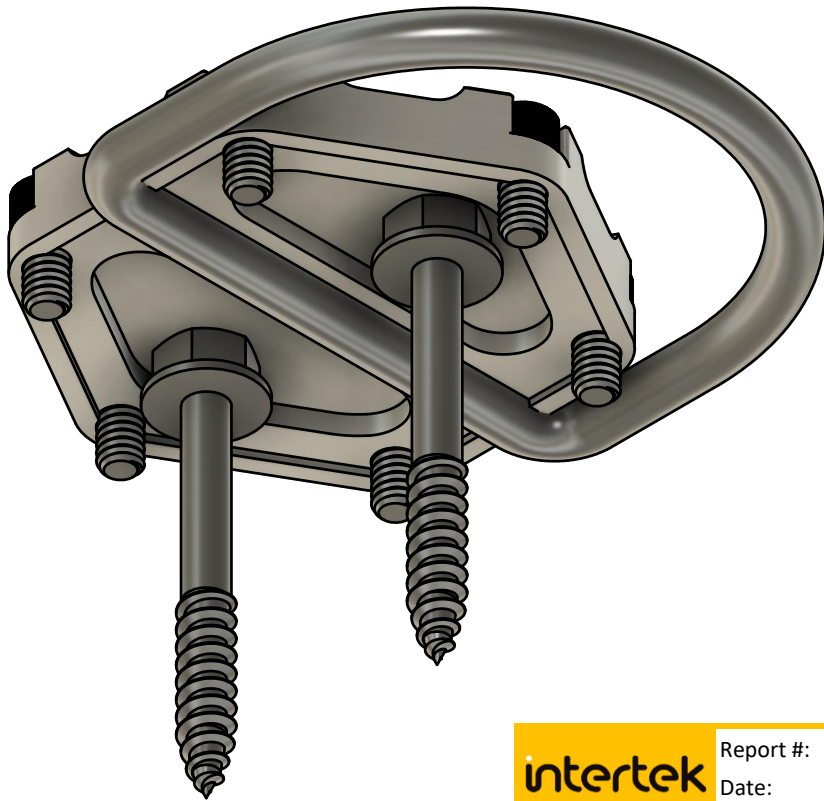
The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.



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Date: 07/31/24
Verified by: *Charles E. J...*



| | | | | |
|----------------------------|------------------------------|--------|-----------|-----|
| | PROJECT | | | |
| | Perminant Roof Anchor | | | |
| | TITLE | | | |
| | Roof Anchor Complete Body | | | |
| APPROVED | SIZE | CODE | DWG NO | REV |
| CHECKED | A | | | |
| DRAWN Kevin King 4/24/2023 | SCALE 1:1 | WEIGHT | SHEET 1/1 | |

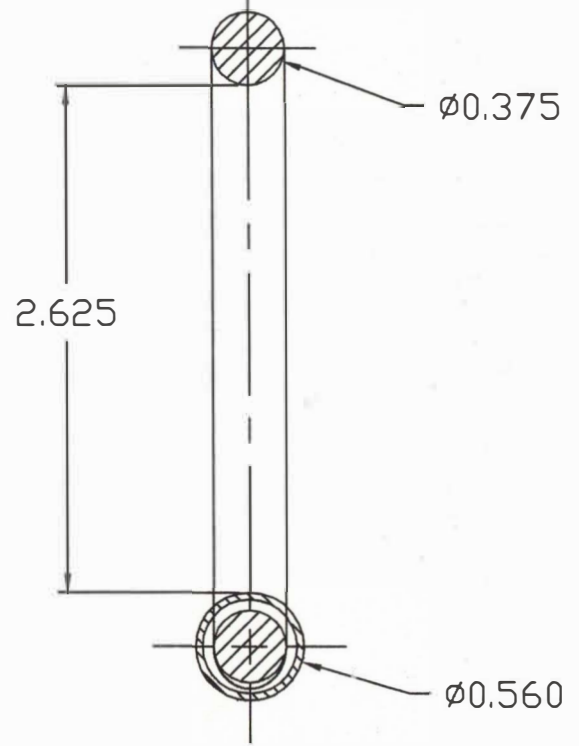
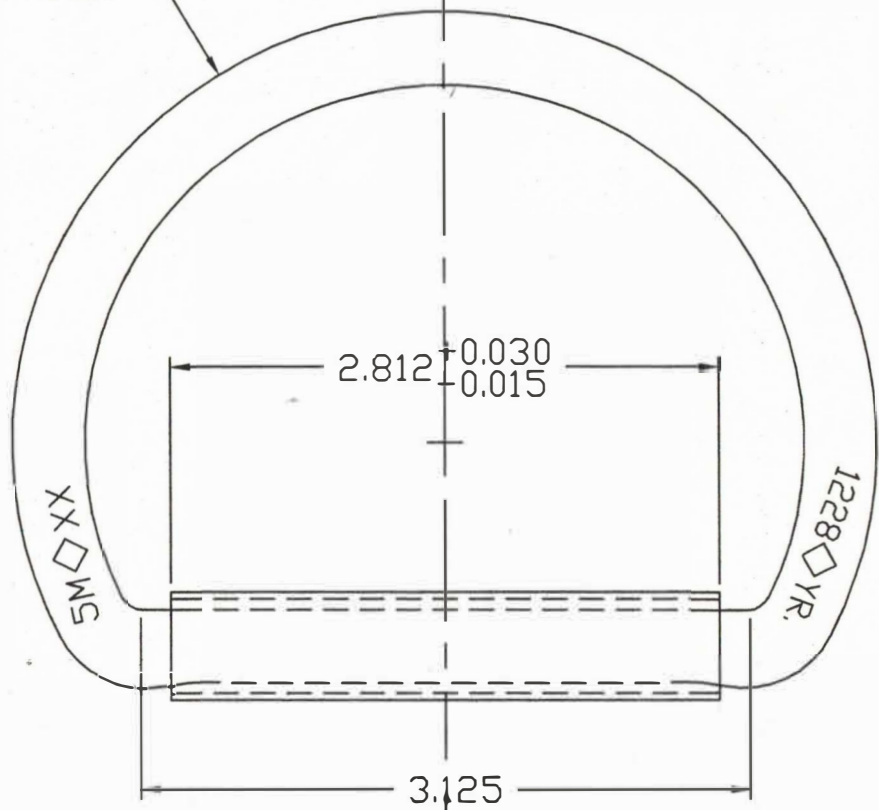



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| | | | | |
|----------|------------|-----------------------|-----------|--------|
| | | PROJECT | | |
| | | Perminant Roof Anchor | | |
| | | TITLE | | |
| | | Roof Anchor Cap | | |
| APPROVED | SIZE | CODE | DWG NO | REV |
| CHECKED | A | | | |
| DRAWN | Kevin King | 4/24/2023 | SCALE 1:1 | WEIGHT |
| | | | SHEET 1/1 | |

| REVISIONS | | | | |
|-----------|-----|-------------|------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |

Ø4.437



SECTION "A-A"

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Verified by: *Charles E. Jeter*

1. DROP FORGED ALLOY STEEL.
2. ROLLER .560 O.D. SPECIFY WITH OR WITHOUT ROLLER.
3. PROOF LOAD 5000 LB.
4. ZINC PLATED PER ASTM B633.

| | |
|------------------------------|---------------|
| TITLE: 3" D-RING WITH ROLLER | |
| SCALE: FULL | REV.: |
| DWN.BY: Z.R | SHT.NO.: |
| ENGR: <i>[Signature]</i> | DIE NO.: 1228 |
| DATE: 2-20-01 | P/N: 1228 |



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SECTION 11

REVISION LOG

| REVISION # | DATE | PAGES | REVISION |
|------------|----------|-------|--|
| 0 | 08/14/24 | N/A | Original Report Issue |
| 1 | 08/26/24 | 21 | Revised drawings to exclude manufacturers information. |