

Declaration of Conformity

In Accordance with ANSI/ISEA 125-2014 and ANSI/ASSP Z359.7-2019

Declaration #: DOC-AFX209070

Declaration Date: 11/30/2023

Item #: AFX209070

Description: KStrong® EVAC-R+ Descender, Rescue and Lifting Device

Brand Name: KStrong

Manufacturer: KStrong

Address: 18505 Intercontinental Crossing, Houston, TX 77073

Additional Items Conforming
Under this Declaration (If Applicable):

KStrong declares that the product(s) listed above is in conformity with the requirements of the following performance standard(s):

ANSI Z359.4-2013

Conformity Assessment Method in accordance with ANSI/ISEA 125-2014



Level 1:

KStrong Lab Outside the Scope of ISO/IEC Standard 17025:2017



Level 2:

KStrong Lab Within the Scope of ISO/IEC Standard 17025:2017



Level 3:

Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2017

Supporting Documentation: KS-Test-AFX209070.pdf

This Certificate is a guarantee that the above standard(s) was met by the requirements of such standard. Testing was performed under normal operation mode. The results of testing apply only to the particular sample tested and the specific test carried out. This Certificate is only issued for products which have passed the testing requirements of listed standard(s).

Authorized Signature:



Chad McBride
Chief Operating Officer - KStrong

ISO 17025 Accredited Test Laboratory

intertek
Total Quality. Assured.



Intertek Testing Services NA, Inc.
3933 US Rt. 11
Cortland, NY 13045
Tel: 1 607-753-6711
www.intertek.com

KSTRONG ASIA PTE LTD

TEST REPORT

SCOPE OF WORK

ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components

REPORT NUMBER

105662636CRT-001

ORIGINAL REPORT NUMBER

105106877CRT-001

ISSUE DATE

November 30, 2023

PAGES

9

DOCUMENT CONTROL NUMBER

GFT-OP-10a (6-March-2017)

© 2017 INTERTEK



TEST REPORT FOR KSTRONG ASIA PTE LTD

Report No.: 105662636CRT-001

Date Issued: November 30, 2023

KSTRONG ASIA PTE LTD
33A CHANDER ROAD,
SINGAPORE 219539

TEST STANDARD

ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components

AUTHORIZATION

Job Number: 105105662636CRT-001
Quote Number: Qu-01409054
Purchase Order Number: None

PRODUCT DESCRIPTION

Product type: Auto Descending Device
Brand Name: KSTRONG ASIA
Model Numbers: AFX209070
Additional Models Covered: None

SAMPLE INFORMATION

Dates Tested: 6/24/2022-6/27/2022
Dates Samples Received: 6/15/2022

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 tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Date: November 30, 2023

SECTION 1

TEST PLAN SUMMARY

The following tests were identified as applicable under the scope of this report. These tests were conducted to determine compliance with the minimum test requirements ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.

SECTION	TEST	TEST DATES	STATUS
3	Design	6/24/2022	PASS
3.2.7.2	Decent Energy	6/24/2022	PASS
3.2.7.4	Dynamic Strength Testing	6/24/2022	PASS
3.2.7.5	Functional Test	6/24/2022	PASS
4.3.5.2	Static Strength Test, Hoist	6/27/2022	PASS
5	Marking and Instructions	6/24/2022	PASS
5.2.7	Decent Control Device Additional Markings	6/24/2022	PASS

SECTION 2

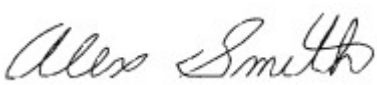
CONCLUSION

The results illustrated in this report are for use and evaluation by the client, within the scope of the limitation statement. This test report completes our portion of the evaluation of your product based on tests identified.

The PN 409N identified and manufactured by Karam has met the above testing requirements identified as applicable for minimum performance requirements defined in ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.

Written By: Alex Smith

Title: Technician

Signature: 

Date: 11/30/2023

Project Reviewer: Matthew Stevens

Title: Team Leader

Signature: 

Date: 11/30/2023

Date: November 30, 2023

SECTION 3

TEST EQUIPMENT INFORMATION

TEST EQUIPMENT:

Used for Test	Description	Manufacturer	Control No.	Model No.	Serial No.	Cal. Date	Cal. Due
X	Drop Test Structure	Intertek	NA	CAT. 3	-	N/A	N/A
X	Test Dead Weight	NA	15064	220/310	-	VBU	VBU
X	Tape Measure	Kobalt	H422	25'	-	5/13/22	5/13/23
X	Load Cell	Interface	L099	-	-	11/11/21	11/11/22
X	Load Cell	PCB	N1392	-	-	7/22/21	7/22/22

SECTION 4

SYSTEM VERIFICATION INFORMATION

SYSTEM VERIFICATION PRIOR TO TESTING			
THE SYSTEM INCLUDES:	Load Cell (N1392)	NI Input Card	Labview Program
Attach weight to load cell	Weight (lbs) = 310.0		
Attach weight to load cell	Weight (lbs) = 220.0		
Record Weight	Weight Recorded (lbs) = 310.3		
Record Weight	Weight Recorded (lbs.) = 220.1		
Completed by and Date:	By: Steven Morey	Date: 6/24/2022	

Date: November 30, 2023

SECTION 5

ANSI Z359.4 – 2013 TEST DATA

Section (Test)	Requirement	Results	Compliance																											
<p>3.2.7.1/ 3.2.7.2 & (4.3.5.1)</p>	<p>Descent Energy: For manually operated descent control devices when tested in accordance with 4.3.5.1, the descent speed shall not exceed 6.6 feet/second (2m/s). The descent distance used to apply the descent energy shall be equal to the maximum allowable descent distance of the device. The test weight shall be 310 pounds (141kg). Measure the descent velocity by timing the descent over a 10-20 feet (3-6m) distance and calculating the descent speed or by direct velocity. For manual descent devices the descent velocity evaluation shall be operated at a nearly contact rate of speed, but not greater than 6.6 feet/second (2m/s). Evaluate in accordance with section 3.2.7.2 following the energy test and evaluate the descent device and line in accordance with requirements of 3.2.7.1.</p>	<table border="1"> <thead> <tr> <th colspan="3">Sample #1</th> </tr> <tr> <th>Descent #</th> <th>Decent Speed (ft/s)</th> <th>Function (YES/NO)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4.03</td> <td>YES</td> </tr> <tr> <th colspan="3">Sample #2</th> </tr> <tr> <th>Descent #</th> <th>Decent Speed (ft/s)</th> <th>Function (YES/NO)</th> </tr> <tr> <td>1</td> <td>4.27</td> <td>YES</td> </tr> <tr> <th colspan="3">Sample #3</th> </tr> <tr> <th>Descent #</th> <th>Decent Speed (ft/s)</th> <th>Function (YES/NO)</th> </tr> <tr> <td>1</td> <td>3.98</td> <td>YES</td> </tr> </tbody> </table>	Sample #1			Descent #	Decent Speed (ft/s)	Function (YES/NO)	1	4.03	YES	Sample #2			Descent #	Decent Speed (ft/s)	Function (YES/NO)	1	4.27	YES	Sample #3			Descent #	Decent Speed (ft/s)	Function (YES/NO)	1	3.98	YES	<p>PASS</p>
Sample #1																														
Descent #	Decent Speed (ft/s)	Function (YES/NO)																												
1	4.03	YES																												
Sample #2																														
Descent #	Decent Speed (ft/s)	Function (YES/NO)																												
1	4.27	YES																												
Sample #3																														
Descent #	Decent Speed (ft/s)	Function (YES/NO)																												
1	3.98	YES																												

Date: November 30, 2023

Section (Test)	Requirement	Results	Compliance																
<p>3.2.7.4 (4.3.5.3)</p>	<p>Dynamic Strength Test: (ambient) The descent device or line shall be connected to the test structure anchorage in accordance with the manufacturer’s instructions. For this test, there shall be no manual control of manually operated descent devices. The 220 pound test weight shall be connected directly to the descent device or the descent line. The descent device shall be located within 2 feet (0.6m) from the anchorage. The test weight shall then be raised to allow a free fall of 2 feet (.6m) before the descent device engages. Release the test weight using the quick release mechanism. Samples Shall Stop and Not release the test weight. Shall remain functional.</p>	<table border="1"> <thead> <tr> <th></th> <th>Sample:</th> <th>Sample:</th> <th>Sample:</th> </tr> </thead> <tbody> <tr> <td>SN or ID</td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>Functional</td> <td>YES</td> <td>YES</td> <td>YES</td> </tr> <tr> <td>Breakage</td> <td>NO</td> <td>NO</td> <td>NO</td> </tr> </tbody> </table>		Sample:	Sample:	Sample:	SN or ID	1	2	3	Functional	YES	YES	YES	Breakage	NO	NO	NO	<p>PASS</p>
	Sample:	Sample:	Sample:																
SN or ID	1	2	3																
Functional	YES	YES	YES																
Breakage	NO	NO	NO																
Section (Test)	Requirement	Results	Compliance																

Date: November 30, 2023

<p>3.2.7.5 (4.3.5.4)</p>	<p>Function Test: Device shall function as intended and descent speed shall meet the requirements of 3.2.7.2. In the case of manually operated devices, the device shall stop and hold the load if the device is released (hands free) or if excessive application of the control device is applied (panic grasp). When tested in accordance with 4.3.5.4 in the two stop models (hands free, panic grasp) the amount of line movement through the descent device or movement of the decent device on the line shall not exceed 6 inches (152mm) This test series shall be repeated following wet conditioning defined in 4.3.5.4.</p>	<table border="1"> <thead> <tr> <th>Hands Free Function</th> <th>Sample 1</th> <th>Sample 2</th> <th>Sample 3</th> </tr> </thead> <tbody> <tr> <td>Function?</td> <td>YES</td> <td>YES</td> <td>YES</td> </tr> <tr> <td>Wet Function?</td> <td>YES</td> <td>YES</td> <td>YES</td> </tr> <tr> <td>Met Decent Speed?</td> <td>YES</td> <td>YES</td> <td>YES</td> </tr> </tbody> </table>	Hands Free Function	Sample 1	Sample 2	Sample 3	Function?	YES	YES	YES	Wet Function?	YES	YES	YES	Met Decent Speed?	YES	YES	YES	<p>PASS</p>
Hands Free Function	Sample 1	Sample 2	Sample 3																
Function?	YES	YES	YES																
Wet Function?	YES	YES	YES																
Met Decent Speed?	YES	YES	YES																
<p>4.3.5.2</p>	<p>Static Strength Test</p> <p>The descent device shall be connected to the test structure as shown in Figure 3a or 3b for the static test. If the test configuration of Figure 3a is used, a load of 1,350 pounds (6kN) shall be applied using the static tensile test equipment in accordance with 4.1.6. If the test configuration of Figure 3b is used, a load of 2,700 pounds (12kN) shall be applied using the static tensile test equipment. The prescribed load shall be maintained for a period of one minute upon completion of this period. Examine the test sample in accordance with the requirements of 3.2.7.3.</p>	<table border="1"> <thead> <tr> <th>Sample #</th> <th>Sustain Load of 2700lbs/1 min</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>YES</td> </tr> <tr> <td>2</td> <td>YES</td> </tr> <tr> <td>3</td> <td>YES</td> </tr> </tbody> </table>	Sample #	Sustain Load of 2700lbs/1 min	1	YES	2	YES	3	YES	<p>PASS</p>								
Sample #	Sustain Load of 2700lbs/1 min																		
1	YES																		
2	YES																		
3	YES																		

Date: November 30, 2023

Section (Test)	Requirement	Results	Compliance
5.0	Markings and Instructions	<ul style="list-style-type: none"> • part number and model designation. • year of manufacture. • manufacturer’s name or logo and contact information. • capacity range. • standard number (ANSI/ASSE Z359.4); • warning to follow the manufacturer’s instructions included with the equipment at time of shipment from the manufacturer. • the need for inspection in accordance with the manufacturer’s instructions. 	PASS
5.2.7	5.2.7 Descent Control Device. In addition to the requirements in 5.1, descent control devices shall be marked to identify:	<ul style="list-style-type: none"> • direction of use if not bi-directional. • warning to avoid descending into electrical, thermal, chemical sources or other hazards. • method of applying braking action, if applicable. • the compatible size and type of rope. • warnings against use of incompatible rope. • single or multiple use, with multiple use specified • reference to separate instructions and caution statements. • the need for inspection at periodic intervals and at least annually. • maximum length of descent; • maximum number of descents (if applicable) • proper routing of line through the device if not integrally installed by the manufacturer. 	PASS

SECTION 6
REVISION HISTORY

REPORT NUMBER	DATE OF REVISION	DESCRIPTION OF CHANGE:	PROJECT OWNER	REVIEWED BY
105106877CRT-001	6/27/2022	Original Report	Steven Morey	Matthew Stevens
105662636CRT-001	11/30/2023	Report Extension	Alex Smith	Matthew Stevens

SECTION 7
PHOTOGRAPHY

