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SLACKJACK®, HEAVYJACK™, AND MINIJACK® SHRINKAGE COMPENSATION DEVICES

CSI Section:
06 05 23 Wood, Plastic and Composite Fastenings

1.0 RECOGNITION

SlackJack®, HeavyJack™, and MiniJack®, manufactured by Earthbound Corporation, were evaluated for use as compression-controlled shrinkage compensation devices in wood-framed construction. The structural properties of the devices were evaluated for compliance with the following codes and regulations:

- 2018, 2015, 2012, 2009, and 2006 International Building Code® (IBC)
- 2018, 2015, 2012, 2009, and 2006 International Residential Code® (IRC)
- 2019, 2016, and 2013 California Building Code (CBC) – attached Supplement
- 2019, 2016, and 2013 California Residential Code (CRC) – attached Supplement
- 2020 Florida Building Code, Building (FBC, Building) – attached Supplement
- 2020 Florida Building Code, Residential (FBC, Residential) – attached Supplement
- 2020 City of Los Angeles Building Code (LABC) – attached Supplement
- 2020 City of Los Angeles Residential Code (LARC) – attached Supplement

2.0 LIMITATIONS

Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices recognized in this report are subject to the following limitations:

2.1 The SlackJack, HeavyJack, and MiniJack devices shall be limited to installations in dry, interior locations.

2.2 Use of the SlackJack, HeavyJack, and MiniJack devices in direct contact with fire-retardant or preservative-treated wood is beyond the scope of recognition of this report.

2.3 Where required, designs using these products shall be submitted to the building official for review.

2.4 No increase in the allowable capacities shown in Table 4 of this report shall be permitted.

2.5 The dead load is limited to the self-weight of the SlackJack, HeavyJack, and MiniJack devices. Additional dead load on the devices is beyond the scope of this report.

2.6 The maximum offset tolerance shall be 1.33 degrees from vertical.

2.7 "When the devices are used in continuous rod systems that resist light-frame shear wall overturning forces, calculations shall be submitted to the building official confirming that the total vertical displacement, which would include steel rod elongation and the shrinkage compensating device deflection is less than or equal to 0.20 inch (5 mm) for each story, or between restraints, whichever is more restrictive, using allowable stress design (ASD). Shear wall drift limit calculations shall consider the 0.20 inch (5 mm) vertical displacement limit. This 0.20-inch (5 mm) vertical displacement limit may be exceeded when it can be demonstrated that the shear wall story drift limit and the deformation compatibility requirements of IBC Section 1604.4 are met when considering all sources of vertical displacement." (AC316)

2.8 Buildings constructed to the IRC shall have engineered designs performed on the elements of construction using this device as required in Section R301.1.3.

2.9 The shrinkage compensation devices recognized in this report are produced by Earthbound Corporation in Monroe, Washington.

3.0 PRODUCT USE INSTRUCTIONS

3.1 The Earthbound installation instructions, this evaluation report, and the applicable provisions of the building code shall be followed when installing this product. Where conflicts occur between these documents, the more restrictive provisions shall govern. The published installation instructions shall be available at the jobsite during construction for use by installers and for quality assurance.

3.2 Where required by the building official or other authority having jurisdiction, calculations based on applied loads to the device shall be provided by a registered design professional to show the basis for its selection. The calculations shall show the projected shrinkage, deflection, and settlement the device will compensate for, and the method of transferring the loads through the supports. The appropriate SlackJack, HeavyJack, and MiniJack device shall be chosen based on the model and series characteristics. The Rated Shrinkage Capacity, Allowable Compression Load, Deflection at Allowable Load, and Device Average Travel and Seating Increment, Δ_R, for each model are shown in Table 4 of this report.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.

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3.3 The chosen SlackJack, HeavyJack, or MiniJack device shall be slid over a threaded-rod or anchor bolt, over an approved bearing surface or plate. The appropriate color-coded swivel washer (listed in Table 4 of this report), shall be installed as required by the manufacturer's installation instructions with the flat side up. A hex nut shall be installed over the rod and hand tightened.

To place the device into service, the pull clip shall be completely removed and placed on the device to show that the device has been activated.

Where necessary, the devices may be reset in the field. The manufacturer's installation instructions shall be referenced for details.

3.4 SlackJacks may be substituted and interchangeable with HeavyJack devices per Table 3 of this report.

4.0 PRODUCT DESCRIPTION

4.1 SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices are spring-loaded, compression-controlled shrinkage compensating devices that are designed to work with threaded-rod or anchor bolt hold-down systems in wood-frame construction. The devices are cylindrical, high-strength structural connectors that enable axial compression travel along a bolted or sliding connection but to withstand movement due to tensile loads.

4.2 The materials used for the inner and outer cylinders, locking rings, springs, pull-clips, capture-rings, and swivel washers for the SlackJack, HeavyJack, and MiniJack models are shown in Table 1 of this report.

4.3 The model and series number describe the attributes of each shrinkage compensation device. The devices are color-coded to identify the specific model type, which varies based on strength and length of travel. The available travel lengths are: 1 inch, 1½ inches, 2 inches, and 3 inches (25.4 mm, 38.1 mm, 50.8 mm, and 76.2 mm). Table 2 of this report describes the model and series notations. Color coding is also used to identify the size of the swivel washer for the SlackJack devices as shown in Table 5 of this report.

5.0 IDENTIFICATION

A label shall be affixed on at least one of the following: product, packaging, installation instructions or descriptive literature. The label shall include the Earthbound name or trademark, the device model number, and the Evaluation Report Number (ER-429) to identify the products recognized in this report. A die-stamp label may be used as a substitute for the label. Either IAPMO UES Mark of Conformity may also be used as shown below:

IAPMO ES or UES

IAPMO UES ER-429

6.0 SUBSTANTIATING DATA

Data in accordance with ICC-ES Acceptance Criteria for Shrinkage Compensating Devices (AC316), dated June 2013 (Editorially Revised November 2017). Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This report describes the results of research carried out by the IAPMO Uniform Evaluation Service on Earthbound's SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices to assess their conformance to the codes and standards listed in Section 1.0 and serves as documentation of the product certification. Products are manufactured at the location noted in Section 2.9 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1 – Material Information for SlackJack, HeavyJack and MiniJack Devices

Component	Material
Internal and Outer Cylinders for HeavyJack Models HJS and HJX	ASTM A513/5 520 DOM Steel
Internal and Outer Cylinders for SlackJack Models SJT and SJA, HeavyJack Model HJA and MiniJack Model MJ	ASTM B221-08 6061-T6511 Aluminum
Locking Components for all Models	ASTM A313 Stainless Steel
Springs and Pull Clips for all Models	ASTM A764 Galvanized Hard Drawn Spring Wire
Capture Rings for all Models	Plastic Injection Molded
Swivel Washers	ASTM A108 12L14 Steel

TABLE 2 – Model and Series Notations

Notation	
Model Type	MJ = MiniJack, HJ = HeavyJack SJ = SlackJack
First Number (Series Type)	2= 2 Locking Rings 3= 3 Locking Rings 4= 4 Locking Rings 6= 6 Locking Rings 7= 7 Locking Rings
Second Number (Rated Shrinkage Capacity)	1 = 1 inch 1-5 = 1.5 inches 2 = 2 inches 3 = 3 inches
Third Number (Swivel Washer Code/Color)	See Table 5

Example Nomenclature: SlackJack model with a series number A420, the letter "A" indicates the model number, with the first number "4" which has 4 locking rings. The second number indicates the rated compensation capacity, which in this case is 2 inches and finally, the third number indicates the diameter of the rod and color code for the swivel washer. For example, if the rod is ½ inch in diameter, the swivel washer color will be purple.

TABLE 3 – HeavyJack Device Substitution for SlackJack Devices

HJA, HJS, HJX Series HeavyJacks are interchangeable and maybe substituted where SJA, SJS, and SJX devices are specified under the following conditions:

SlackJack Devices	Allowed HeavyJack Substitution Devices	Conditions of Use
SJS-410	HJA-710	Loads up to 15,650 lbs
SJS-420	HJA-720	Loads up to 15,590 lbs
SJS-410	HJS-410	Any SJS-410 Load Conditions
SJS-420	HJS-420	Any SJS-420 Load Conditions
SJA-610	HJA-710	Loads up to 15,650 lbs
SJA-620	HJA-720	Loads up to 15,590 lbs
SJT-610	HJA-710	Loads up to 15,650 lbs
SJT-620	HJA-720	Loads up to 15,590 lbs
SJX-410	HJA-710	Loads up to 15,650 lbs
SJX-410	HJS-710	Any SJX-410 Load Conditions
SJX-410	HJX-410	Any SJX-410 Load Conditions

TABLE 4 - Attributes for the SlackJack, HeavyJack, and MiniJack Shrinkage Compensating Devices

Model[3] & Series Number	Capture Ring Color Code	Additional Color Code	Nominal Dimensions (Inches) Figure 1 Shows Dimensions A, B And C			Rated Shrinkage Capacity (Inches)	Allowable Compression Load [1,2,] (lbs)	Δ_A Deflection at Allowable Load (inch)[5]	Δ_R[5] (inch)
			Height Before Activation (A)	Outer Diameter of Body (B)	Inner Diameter of Body (C)				
MJ100[4]	Red	N/A	2.540	1.349	0.532	1.0	5,000	0.028	0.032
MJ150[4]	Green	N/A	3.040	1.349	0.532	1.5	5,000	0.030	0.032
MJ200[4]	Orange	N/A	3.540	1.349	0.532	2.0	4,900	0.033	0.031
SJA-210	Blue	N/A	3.330	2.365	1.420	1.0	7,360	0.013	0.045
SJA-21-50	White	N/A	3.830	2.365	1.420	1.5	8,000	0.018	0.047
SJA-220	Yellow	N/A	4.330	2.365	1.420	2.0	7,730	0.018	0.050
SJT-410	Orange	N/A	3.700	2.365	1.375	1.0	9,000	0.020	0.024
SJT-420	Black	N/A	4.700	2.365	1.375	2.0	9,000	0.018	0.028
SJA-410	Red	N/A	3.800	2.365	1.250	1.0	14,000	0.022	0.051
SJA-420	Green	N/A	4.800	2.365	1.250	2.0	14,000	0.030	0.047
SJA-430	Brown	N/A	5.800	2.365	1.250	3.0	14,750	0.033	0.046
SJA-610	Tan	N/A	4.800	2.365	1.250	1.0	20,340	0.028	0.045
SJA-620	White	Blue[6]	5.800	2.365	1.250	2.0	20,100	0.038	0.048
HJA-710	Purple	N/A	4.730	2.500	1.625	1.0	15,650	0.015	0.015
HJA-720	Gray	N/A	5.730	2.500	1.625	2.0	15,590	0.018	0.014
HJS-410[8]	Black	Blue[7]	3.270	2.500	1.625	1.0	22,000	0.020	0.028
HJS-420[8]	Black	Yellow[7]	4.270	2.500	1.625	2.0	22,000	0.026	0.028
HJS-710	Black	Green[7]	4.730	2.500	1.625	1.0	39,190	0.029	0.012
HJS-720	Black	Orange[7]	5.730	2.500	1.625	2.0	37,770	0.030	0.011
HJX-410[8]	Black	Gold[7]	3.700	2.500	1.625	1.0	34,220	0.035	0.047

(Information in Table 4 and Notes 1-4 are from Earthbound QC ("QC") Documentation and Test Data)

Notes to Table 4:

1. "Tabulated allowable loads are for the shrinkage compensating device only. The attached components (including anchors, tension rods, bearing plates, wood framing members, etc.) shall be designed to resist design loads in accordance with the applicable code." (QC)
2. "No further increases to the tabulated allowable loads are permitted." (QC)
3. "Model numbers beginning with an A or T are designed for use with W3 through W10 swivel washers capable of fitting over threaded rods or bolts having diameters ranging from 3/8 inch to 1¼ inches. Model numbers beginning with an S or X are designed for use with W10 or W12 swivel washers capable of fitting over threaded rods or bolts having diameters of 1 ¼ inches and 1 ½ inches respectively." (QC)
4. "MJ100, MJ150 and MJ200 Series are for either 3/8 -inch or 1/2 -inch rod diameter. Requires Heavy Hex nut when installing on 3/8-inch-diameter rod." (QC)
5. "The device Δ_R and Δ_A describe the total movement of the device at allowable load, Δ_T, and are additive. Take up devices that have a swivel washer to allow for threaded rods to be out of plumb yet allow for the device to rest on a bearing plate without angular deflection may provide a compensating adjustment to reduce Δ_T. The Δ_R values applicable when using swivel washers are available in Table 6 of this report. For design loads, P_D, less than the allowable load, P_A, the total movement of the device, Δ_T, is calculated as follows:

   $\Delta_T = \Delta_R + \Delta_A(P_D/P_A)$" (AC316)

6. Additional color code for this series is a painted compression spring.
7. Additional color code for this series is a painted outer cylinder.
8. Earlier series of SlackJacks SJS-4xx and SJX-41x are relabeled as HJS-4xx and HJX-41x HeavyJacks respectively in this report.

TABLE 5 – Swivel Washer Color Code

Number	Diameter of Rod	Color
	0=Base Model	
3	$^3/_8$"	Orange
4	$^1/_2$"	Purple
5	$^5/_8$"	Black
6	$^3/_4$"	Gray
7	$^7/_8$"	Blue
8	1"	Yellow
9	$1^1/_8$"	White
10	$1^1/_4$"	Green
12	$1^1/_2$"	Red

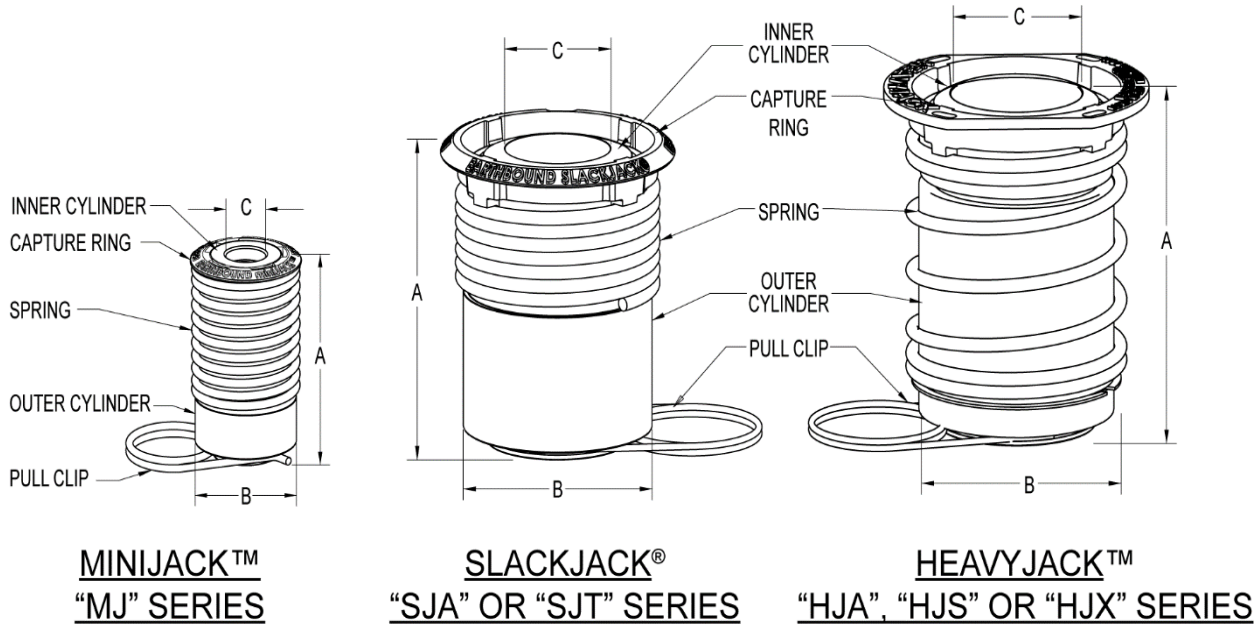

FIGURE 1 - SLACKJACK®, HEAVYJACK™ AND MINIJACK™ SHRINKAGE COMPENSATING DEVICES

TABLE 6 - Δ_R VALUES FOR USE WITH SWIVEL WASHERS

SLACKJACK ALUMINUM 200 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA214	SJA-210	1/2	1.0 in	**0.038**
SJA215	SJA-210	5/8	1.0 in	**0.036**
SJA216	SJA-210	3/4	1.0 in	**0.034**
SJA217	SJA-210	7/8	1.0 in	**0.032**
SJA218	SJA-210	1	1.0 in	**0.030**
SJA219	SJA-210	1 1/8	1.0 in	**0.028**
SJA2110	SJA-210	1 1/4	1.0 in	**0.026**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA224	SJA-220	1/2	2.0 in	**0.043**
SJA225	SJA-220	5/8	2.0 in	**0.041**
SJA226	SJA-220	3/4	2.0 in	**0.039**
SJA227	SJA-220	7/8	2.0 in	**0.037**
SJA228	SJA-220	1	2.0 in	**0.035**
SJA229	SJA-220	1 1/8	2.0 in	**0.033**
SJA2210	SJA-220	1 1/4	2.0 in	**0.031**

SLACKJACK ALUMINUM 400 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA414	SJA-410	1/2	1.0 in	**0.044**
SJA415	SJA-410	5/8	1.0 in	**0.042**
SJA416	SJA-410	3/4	1.0 in	**0.040**
SJA417	SJA-410	7/8	1.0 in	**0.038**
SJA418	SJA-410	1	1.0 in	**0.036**
SJA419	SJA-410	1 1/8	1.0 in	**0.034**
SJA4110	SJA-410	1 1/4	1.0 in	**0.032**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA424	SJA-420	1/2	2.0 in	**0.040**
SJA425	SJA-420	5/8	2.0 in	**0.038**
SJA426	SJA-420	3/4	2.0 in	**0.036**
SJA427	SJA-420	7/8	2.0 in	**0.034**
SJA428	SJA-420	1	2.0 in	**0.032**
SJA429	SJA-420	1 1/8	2.0 in	**0.030**
SJA4210	SJA-420	1 1/4	2.0 in	**0.028**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA434	SJA-430	1/2	3.0 in	**0.039**
SJA435	SJA-430	5/8	3.0 in	**0.037**
SJA436	SJA-430	3/4	3.0 in	**0.035**
SJA437	SJA-430	7/8	3.0 in	**0.033**
SJA438	SJA-430	1	3.0 in	**0.031**
SJA439	SJA-430	1 1/8	3.0 in	**0.029**
SJA4310	SJA-430	1 1/4	3.0 in	**0.027**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJT414	SJT-410	1/2	1.0 in	**0.017**
SJT415	SJT-410	5/8	1.0 in	**0.015**
SJT416	SJT-410	3/4	1.0 in	**0.013**
SJT417	SJT-410	7/8	1.0 in	**0.011**
SJT418	SJT-410	1	1.0 in	**0.009**
SJT419	SJT-410	1 1/8	1.0 in	**0.007**
SJT4110	SJT-410	1 1/4	1.0 in	**0.005**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJT424	SJT-420	1/2	2.0 in	**0.021**
SJT425	SJT-420	5/8	2.0 in	**0.019**
SJT426	SJT-420	3/4	2.0 in	**0.017**
SJT427	SJT-420	7/8	2.0 in	**0.015**
SJT428	SJT-420	1	2.0 in	**0.013**
SJT429	SJT-420	1 1/8	2.0 in	**0.011**
SJT4210	SJT-420	1 1/4	2.0 in	**0.009**

SLACKJACK ALUMINUM 600 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA614	SJA-610	1/2	1.0 in	**0.038**
SJA615	SJA-610	5/8	1.0 in	**0.036**
SJA616	SJA-610	3/4	1.0 in	**0.034**
SJA617	SJA-610	7/8	1.0 in	**0.032**
SJA618	SJA-610	1	1.0 in	**0.030**
SJA619	SJA-610	1 1/8	1.0 in	**0.028**
SJA6110	SJA-610	1 1/4	1.0 in	**0.026**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJA624	SJA-620	1/2	2.0 in	**0.041**
SJA625	SJA-620	5/8	2.0 in	**0.039**
SJA626	SJA-620	3/4	2.0 in	**0.037**
SJA627	SJA-620	7/8	2.0 in	**0.035**
SJA628	SJA-620	1	2.0 in	**0.033**
SJA629	SJA-620	1 1/8	2.0 in	**0.031**
SJA6210	SJA-620	1 1/4	2.0 in	**0.029**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJT614	SJT-610	1/2	1.0 in	**0.028**
SJT615	SJT-610	5/8	1.0 in	**0.026**
SJT616	SJT-610	3/4	1.0 in	**0.024**
SJT617	SJT-610	7/8	1.0 in	**0.022**
SJT618	SJT-610	1	1.0 in	**0.020**
SJT619	SJT-610	1 1/8	1.0 in	**0.018**
SJT6110	SJT-610	1 1/4	1.0 in	**0.016**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJT624	SJT-620	1/2	2.0 in	**0.023**
SJT625	SJT-620	5/8	2.0 in	**0.021**
SJT626	SJT-620	3/4	2.0 in	**0.019**
SJT627	SJT-620	7/8	2.0 in	**0.017**
SJT628	SJT-620	1	2.0 in	**0.015**
SJT629	SJT-620	1 1/8	2.0 in	**0.013**
SJT6210	SJT-620	1 1/4	2.0 in	**0.011**

SLACKJACK STEEL 400 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJS415	SJS-410	5/8	1.0 in	**0.019**
SJS416	SJS-410	3/4	1.0 in	**0.017**
SJS417	SJS-410	7/8	1.0 in	**0.015**
SJS418	SJS-410	1	1.0 in	**0.013**
SJS419	SJS-410	1 1/8	1.0 in	**0.011**
SJS4110	SJS-410	1 1/4	1.0 in	**0.009**
SJS4112	SJS-410	1 1/2	1.0 in	**0.006**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJS425	SJS-420	5/8	2.0 in	**0.019**
SJS426	SJS-420	3/4	2.0 in	**0.017**
SJS427	SJS-420	7/8	2.0 in	**0.015**
SJS428	SJS-420	1	2.0 in	**0.013**
SJS429	SJS-420	1 1/8	2.0 in	**0.011**
SJS4210	SJS-420	1 1/4	2.0 in	**0.009**
SJS4212	SJS-420	1 1/2	2.0 in	**0.006**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
SJX415	SJX-410	5/8	1.0 in	**0.038**
SJX416	SJX-410	3/4	1.0 in	**0.036**
SJX417	SJX-410	7/8	1.0 in	**0.034**
SJX418	SJX-410	1	1.0 in	**0.032**
SJX419	SJX-410	1 1/8	1.0 in	**0.030**
SJX4110	SJX-410	1 1/4	1.0 in	**0.028**
SJX4112	SJX-410	1 1/2	1.0 in	**0.025**

HEAVYJACK STEEL 400 SERIES (SAME AS SLACKJACK STEEL 400 SERIES)

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJS415	HJS-410	5/8	1.0 in	**0.019**
HJS416	HJS-410	3/4	1.0 in	**0.017**
HJS417	HJS-410	7/8	1.0 in	**0.015**
HJS418	HJS-410	1	1.0 in	**0.013**
HJS419	HJS-410	1 1/8	1.0 in	**0.011**
HJS4110	HJS-410	1 1/4	1.0 in	**0.009**
HJS4112	HJS-410	1 1/2	1.0 in	**0.006**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJS425	HJS-420	5/8	2.0 in	**0.019**
HJS426	HJS-420	3/4	2.0 in	**0.017**
HJS427	HJS-420	7/8	2.0 in	**0.015**
HJS428	HJS-420	1	2.0 in	**0.013**
HJS429	HJS-420	1 1/8	2.0 in	**0.011**
HJS4210	HJS-420	1 1/4	2.0 in	**0.009**
HJS4212	HJS-420	1 1/2	2.0 in	**0.006**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJX415	HJX-410	5/8	1.0 in	**0.038**
HJX416	HJX-410	3/4	1.0 in	**0.036**
HJX417	HJX-410	7/8	1.0 in	**0.034**
HJX418	HJX-410	1	1.0 in	**0.032**
HJX419	HJX-410	1 1/8	1.0 in	**0.030**
HJX4110	HJX-410	1 1/4	1.0 in	**0.028**
HJX4112	HJX-410	1 1/2	1.0 in	**0.025**

HEAVYJACK ALUMINUM 700 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJA715	HJA-710	5/8	1.0 in	**0.006**
HJA716	HJA-710	3/4	1.0 in	**0.004**
HJA717	HJA-710	7/8	1.0 in	**0.002**
HJA718	HJA-710	1	1.0 in	**0.000**
HJA719	HJA-710	1 1/8	1.0 in	**0.000**
HJA7110	HJA-710	1 1/4	1.0 in	**0.000**
HJA7112	HJA-710	1 1/2	1.0 in	**0.000**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJA725	HJA-720	5/8	2.0 in	**0.005**
HJA726	HJA-720	3/4	2.0 in	**0.003**
HJA727	HJA-720	7/8	2.0 in	**0.001**
HJA728	HJA-720	1	2.0 in	**0.000**
HJA729	HJA-720	1 1/8	2.0 in	**0.000**
HJA7210	HJA-720	1 1/4	2.0 in	**0.000**
HJA7212	HJA-720	1 1/2	2.0 in	**0.000**

HEAVYJACK STEEL 700 SERIES

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJS715	HJS-710	5/8	1.0 in	**0.003**
HJS716	HJS-710	3/4	1.0 in	**0.001**
HJS717	HJS-710	7/8	1.0 in	**0.000**
HJS718	HJS-710	1	1.0 in	**0.000**
HJS719	HJS-710	1 1/8	1.0 in	**0.000**
HJS7110	HJS-710	1 1/4	1.0 in	**0.000**
HJS7112	HJS-710	1 1/2	1.0 in	**0.000**

DEVICE	SERIES	ROD DIA.	TRAVEL	Δ_R
HJS725	HJS-720	5/8	2.0 in	**0.002**
HJS726	HJS-720	3/4	2.0 in	**0.000**
HJS727	HJS-720	7/8	2.0 in	**0.000**
HJS728	HJS-720	1	2.0 in	**0.000**
HJS729	HJS-720	1 1/8	2.0 in	**0.000**
HJS7210	HJS-720	1 1/4	2.0 in	**0.000**
HJS7212	HJS-720	1 1/2	2.0 in	**0.000**

For SI: 1 inch = 25.4 mm

CALIFORNIA SUPPLEMENT

EARTHBOUND CORPORATION
17361 Tye Street S.E.
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www.slackjack.com

SLACKJACK®, HEAVYJACK™ AND MINIJACK® SHRINKAGE COMPENSATION DEVICES

CSI Section:
06 05 23 Wood, Plastic and Composite Fastenings

1.0 RECOGNITION

Earthbound Corporation's SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices evaluated in IAPMO UES ER-429 are satisfactory devices for use with the following codes and regulations:

- 2019, 2016, and 2013 California Building Code (CBC)
- 2019, 2016, and 2013 California Residential Code (CRC)

2.0 LIMITATIONS

Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices recognized in this supplement are subject to the following limitations:

2.1 Eartbound Corporation's SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices have been reviewed for compliance with the requirements of the CRC and Chapters 16, 16A, 17, 17A, and 23 of the CBC and complies when the applicable construction and design requirements of those chapters are used.

2.2 This supplement expires concurrently with ER-429.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

FLORIDA SUPPLEMENT

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SLACKJACK®, HEAVYJACK™, AND MINIJACK® SHRINKAGE COMPENSATION DEVICES

CSI Section:
06 05 23 Wood, Plastic and Composite Fastenings

1.0 RECOGNITION

Earthbound Corporation's SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices evaluated in IAPMO UES ER-429 are satisfactory devices for use with the following codes and regulations:

- 2020 Florida Building Code, Building (FBC, Building)
- 2020 Florida Building Code, Residential (FBC, Residential)

2.0 LIMITATIONS

Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices recognized in this supplement are subject to the following limitations:

2.1 Verification shall be provided that a quality assurance agency audits the manufacturer's quality assurance program and audits the production quality of products, in accordance with Section (5)(d) of Florida Rule 61G20-3.008. The quality assurance agency shall be approved by the Commission (or the building official when the report holder does not possess an approval by the Commission).

2.2 Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices in applications exposed to the weather within High-velocity Hurricane Zones (HVHZ) set forth in the FBC, Building and the FBC, Residential is beyond the scope of this supplemental report.

2.3 This supplement expires concurrently with ER-429.

3.0 DESIGN

3.1 The scope of review includes the requirements for the High-velocity Hurricane Zone in the 2020 Florida Building Code, Building and 2020 Florida Building Code, Residential.

3.2 For uses inside the High-velocity Hurricane Zone, installation and design of the shrinkage compensation devices shall comply with the wind load requirements of Section 1620 of the Florida Building Code, Building.

3.3. Load combinations shall be in accordance with Sections 1605.2 or 1605.3 of the FBC, Building, as applicable.

3.4 Design wind loads shall be in accordance with Section 1609.5 of the FBC, Building or Section R301.2.1.1 of the FBC, Residential, as applicable, and Section 1620 of the FBC, Building where used in High-velocity Hurricane Zones (HVHZ).

3.5 Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices in High-velocity Hurricane Zones (HVHZ) as set forth in Section 2321.5.2 of the FBC, Building and Section 4409 of the FBC, Residential to resist wind uplift is permitted. The devices shall be designed to resist the uplift forces as required in Section 1620 (HVHZ) of the FBC, Building or 700 pounds (3114 N), whichever is greater, in accordance with FBC, Building Section 2321.7.

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CITY OF LOS ANGELES SUPPLEMENT

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SLACKJACK®, HEAVYJACK™, AND MINIJACK® SHRINKAGE COMPENSATION DEVICES

CSI Section:
06 05 23 Wood, Plastic and Composite Fastenings

1.0 RECOGNITION

Earthbound Corporation's SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices evaluated in IAPMO UES ER-429 and this LABC and LARC for use as compression-controlled shrinkage compensation devices in wood-framed construction. The structural properties of the devices were evaluated for compliance with the following codes and regulations:

- 2020 City of Los Angeles Building Code (LABC)
- 2020 City of Los Angeles Residential Code (LARC)

2.0 LIMITATIONS

Use of the SlackJack, HeavyJack, and MiniJack Shrinkage Compensation Devices recognized in this supplement are subject to the following limitations.

2.1 Use and installation shall be in accordance with ER-429, the manufacturer's published installation instructions, and the City of Los Angeles Building and Residential Codes, as applicable. A copy of the manufacturer's installation instructions shall be available on site for Registered Deputy Inspectors. Where conflicts occur, the more restrictive shall govern.

2.2 Design loads shall be determined in accordance with 2020 LABC Chapter 16 or 2020 LARC Section R301, as applicable. Allowable loads values shall not be further increased for short duration loading such as wind and seismic.

2.3 Construction documents and calculations shall be approved and stamped by a California licensed design professional for each tie-down system installation. Calculations shall consider the following.

a. The rod value of 0.2-inch elongation between connectors and restraints.
b. Bearing plate capacity, considering the wood bearing capacity and plate bending.
c. Wood post design, considering the combined stresses at the critical net section and for compression parallel and perpendicular to grain.
d. Allowable values for the anchor bolt and tension rod.

2.4 This supplement expires concurrently with ER-429.

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