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Initial Approval
October, 2019

Re-Approved

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Report Owner

Independence Materials Group, LLC (IMG)
1741 Corporate Landing Parkway
Virginia Beach, VA 23454

Approved Manufacturing Location

Independence Materials Group (IMG)
634 Rosewood Drive, Door 7
Columbia, SC 29201

Product

IntelliJack Support Columns

Evaluation Report Information

www.independencematerialsgroup.com
IMG contact: Allen Gantt - (803) 807-8629

General Details

The following described support columns are evaluated for vertical compression load only. The support columns are intended for interior use in wood frame or light steel frame construction. These columns have a rust-inhibitive coating.

Product Description

The **IntelliJack** columns are a steel tube column with a loose bottom plate at one end and an adjustable screw at the other end. The columns are constructed of a Steel Tube, a Collar, Threaded Rod and two nuts. These columns have a 5" adjustability using the threaded rod with a damaged thread to limit travel.

Component Description

Steel Tube - 3-1/2" outside diameter by .165" thick made from ASTM A500 Steel, Grade 1010HR, $F_y \geq 50\text{ksi}$, $F_u \geq 55\text{ksi}$.

Collar - The collar is placed in one end of the steel tube. A threaded hole is in the center of the collar for the threaded rod. The collar is made from ASTM A1018 Steel and is zinc electroplated to meet ASTM B633.

Threaded Rod - The threaded rod is 1.25"-7 x 10" long. The threaded rod is made from ASTM F1554 Grade 55 Steel and is zinc electroplated to meet ASTM B633.

Nut - 1.25"-7 Heavy Hex nut, ASTM A563 Grade A with a zinc coating. One welded to the threaded rod and one used as a jam nut against collar.

Bottom Plate - The bottom plate is an assembly made from a 3-1/2" x 3-1/2" x 1/2" thick plate made from ASTM A36 steel and a 3/4" long piece of 3" outside diameter tube welded to the plate.

Top Plate - The top plate is an assembly made from a 6" x 5" x 1/2" thick plate made from ASTM A36 steel and a 1-1/4" long piece of 1-3/4" outside diameter tube welded to the plate.

Code Compliance

IntelliJack Support Columns	
2012 International Residential Code Section R407.2 and R407.3	2012 International Building Code Section 104.11 and 2205.1
2015 International Residential Code Section R407.2 and R407.3	2015 International Building Code Section 104.11, 2205.1 and 2205.2
2018 International Residential Code Section R407.2 and R407.3	2018 International Building Code Section 104.11, 2205.1 and 2205.2

Compliance with the following Standard

AISC-360-10 - Specification for Structural Steel Buildings-Allowable Stress Design

AISC-360-16 - Specification for Structural Steel Buildings-Allowable Stress Design

ICC-ES AC335 - Acceptance Criteria for Adjustable Steel Columns

General Product Use

1. All columns shall be installed vertically plumb with either end up and bear on a footing capable of carrying the imposed load. The base and top of the column must be restrained to prevent lateral movement except where exempt by the Building Code.
2. These columns are intended for vertical compression load only. They have not been evaluated for any other load direction or type.
3. For applications where the construction is to be permanent, the threads of the lifting rod shall be damaged with a cold chisel after adjustment to the desired length. One screw thread immediately above the threaded cap shall be damaged for at least half its depth and for a length of 1-1/2" to prevent loosening of the rod.
4. The **IMG IntelliJack** nominal size is the support column at its shortest adjustment and must not be adjusted to a longer length by more than 5".
5. The bearing capacity of the top and bottom plates and their attachment to load carrying members are outside of the scope of this evaluation report.
6. If the basement slab is poured around the IntelliJack, a corrosive resistant coating must be applied to the parts of the IntelliJack that will be in contact with concrete.

Items Requiring Verification

The following items are related to the use of **IMG IntelliJack** support columns, but not within the scope of this evaluation specification. However these items are related to the determination of code compliance.

1. Design, calculations, and details for the building system verifying compliance with this report.
2. Connections of the columns to the footing and supported structure.
3. Footing design and calculations for supporting the columns and the imposed load.
4. The bearing capacity of the beam/member supported.

Table 1
Load Rating for IntelliJack Columns

Nominal Size	3-1/2" O.D.	
	Allowable Load for ASD (lbs.)	Design Strength for LRFD (lbs.)
12"	24,860	39,780
↓		
96"	24,860	39,780
108"	24,100	36,220
120"	20,700	31,110

Notes:

1. All steel tube to be ASTM A500 $F_y \geq 50\text{ksi}$, $F_u \geq 55\text{ksi}$
2. Nominal size is the column at its shortest adjustment
3. Designed per AISC-360-16 - ASD
4. LRFD Design Strength must be compared to factored loads

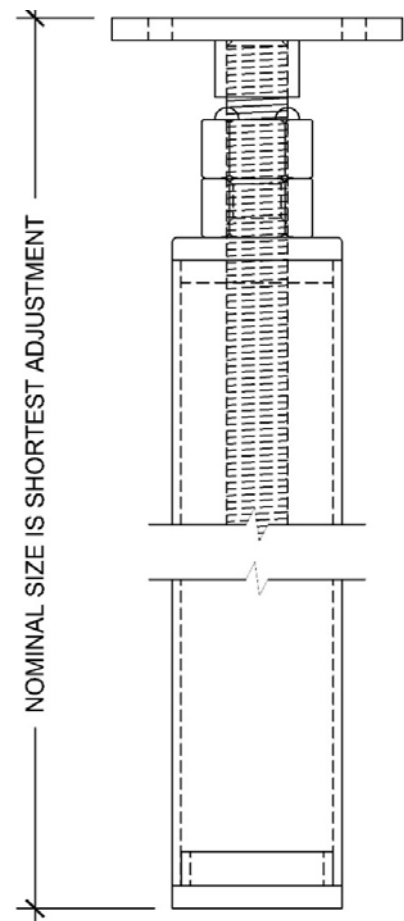


Figure 1 - IntelliJack Column

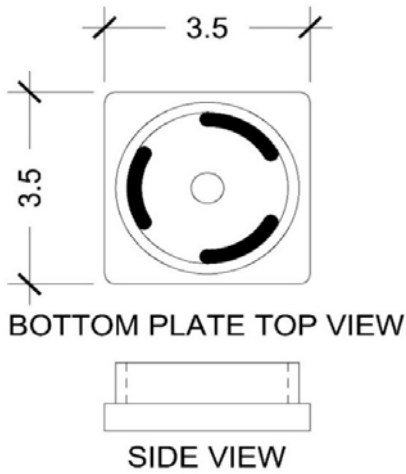


Figure 2 - Bottom Plate

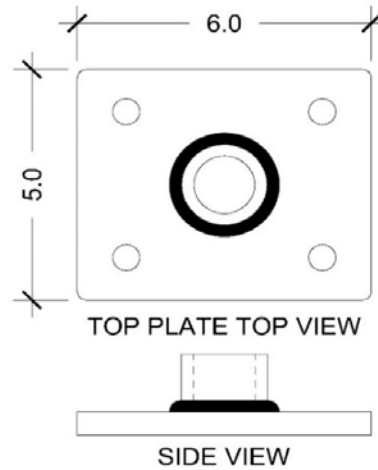


Figure 3 - Top Plate

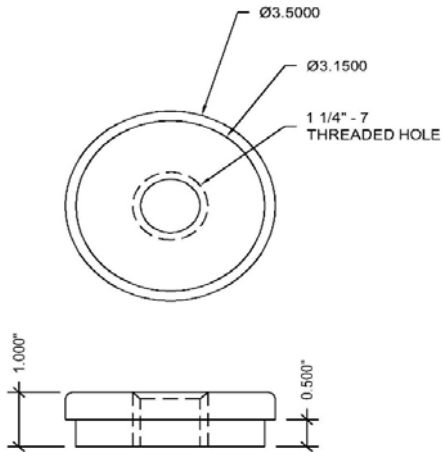


Figure 4 - Collar

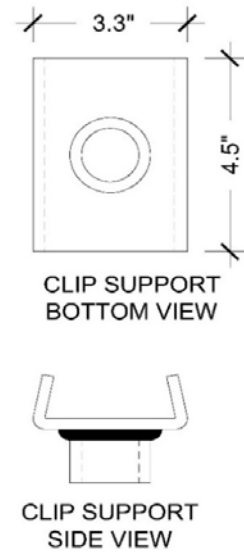


Figure 5 - Clip Support

Product Labeling

All columns manufactured by **independence Materials Group** that are covered by this **PER** must have a label attached with at least the following information:

1. Manufacturer Name
2. Load Capacity of Column
3. This **PER** Number & **Pei ES** Logo
4. On Adjustable Column Labels, the Minimum and Maximum Column Length

Acceptable Evaluation Marks



Product Documentation

- A Product Evaluation Service Agreement between **Pei Evaluation Service®** and **Independence Materials Group, LLC**
- An Follow-up Inspection Service Agreement between **Progressive Engineering Inc.** and **Independence Materials Group, LLC**
- A **Independence Materials group, LLC** - IntelliJack support columns Quality Control Manual - Dated: **8/25/2019**
- A **Independence Materials Group, LLC** - IntelliJack support columns Components Drawings - Dated: **September, 2015**
- Pei** Calculations No. 2019-3169 - IMG - Column Calculations - Dated: 6/18/2019 - stamped by a Professional Engineer
- Pei** Calculations No. 2019-3169 - IMG - Adjustment Screw Calculation - Dated: 11/1/2019 - stamped by a Professional Engineer
- Pei** Calculations No. 2020-0214 - IMG - Intellijack Eccentric Loaded Axial Capacity - Dated: 1/23/2020 - stamped by a Professional Engineer
- Pei** Test Report 2019-6392 - Dated: 12/19/2019 - stamped by a Professional Engineer