

IBC 2006 Seismic Product Data Sheet

IP Series Battery Cabinets
IP5, IP5D, IP3, IP2, IP1

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This Data Sheet gives a brief summary of the structural verification as transmitted in the full seismic analysis report. The full report documents the analysis according to IBC 2006 guidelines for a high seismic area and shows that the product listed meets industry criteria for its required loading. A secondary purpose of this Data Sheet is to give a brief explanation of the applicable codes and pathways utilized in the analysis of this product. A key concern of the purchaser located in a seismic area is to be assured the structural design of the product is governed by and complies with applicable building codes.

The purpose of the building code concerning the product is to provide:

1. Seismic intensity (ground shaking accelerations) for the various locations (via a map). In older codes the map was divided into Zones (e.g. zones 1-4). Current codes do not have zones; they have mapped acceleration values measured in "g's".
2. Means of converting ground accelerations (g's) to the load applied to the structure in question, i.e. the designated product. Analysis of the product for the load will determine if it is deemed acceptable for the site. Many factors come into play in this portion of the code including:
 - Soil type: Default (Type D)
 - Product structure type: Braced and Ordinary Moment Resisting Space Frame (R=4)
 - Grade Level: At or below grade
 - Critical Installation: Yes (Ip=1.5)

The codes have a multitude of pathways that the design and structural engineer may navigate to invoke sections and paragraphs that are applicable to the product, the site usage and the owner. In many cases the Local Building Official has final authority of which pathways and sections are applicable for the site and equipment (such as battery racks, battery cabinets and floor stands) installed at the site.

Code References:

- A. IBC. International Code Council, "International Building Code" (IBC), 2006
- B. UBC. International Conference of Building Officials, "Uniform Building Code" (UBC), 1997
- C. AISC. American Institute of Steel Construction (AISC), "Steel Design Manual, ASD", 9th Edition
- D. ASCE. American Society of Civil Engineers, ASCE 7, "Minimum Design Loads for Buildings & other Structures", 2005
- E. RMI. MH16.1-2004 – Rack Manufacturer's Institute "Specification for the Design, Testing and Utilization of Industrial Steel Storage Racks"

Conclusion:

This section describes the pathways utilized through the most popular US building code, the International Building Code, or IBC for this product. Excerpts from the codes are displayed in a white paper offered by IntraPack (dated October 13, 2008) which further details the understanding of the requirements of the International Building Code 2006 IBC 2006.

This product was analyzed for seismic loading in a high seismic environment according to IBC, Ref. A. IBC supersedes UBC, Ref. B, which is no longer in print and is obsolete. IBC Section 1621 and 1622 refer design of equipment items supported by structures to ASCE 7, Ref. D. ASCE 7 refers design of Steel Storage Racks to RMI, Ref. E. Thus design referenced to RMI, Ref. E satisfies requirements of IBC 2006, UBC and ASCE 7. The RMI publication is the pathway chosen for the analysis of this product.

Pathways utilized in the applicable codes have been chosen in that they cover the structural requirements of our products for high seismic areas according to IBC 2006, ASCE 7 and RMI, Ref. D guidelines. These products have been designed for seismic structural acceleration of 0.413g. The structural analysis report for this product is performed by our consulting engineer registered and licensed in the State of Texas. Other states may require the seal of an engineer in that state. Please contact IntraPack if such arrangements are required. The products listed have been analyzed to IBC 2006 and have a full report available: IP5, IP5D, IP3, IP2, IP1 - Report No: INT080929-L



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10817 Sanden Drive • Dallas, Texas 75238-1338
Tel: 214-348-7105 • Fax: 214-348-7115 • Email: sales@intrapack.com