



**PREPARE FOR THE NEXT**

**EARTHQUAKE**

**WITH NEW SEISMIC (OSHPD) CERTIFIED  
SYSTEMS FROM POWEREX.**

In March 2014, Powerex was pleased to announce the assignment of our OSP number (OSP0380-10) for our Medical Air and Laboratory Air Scroll systems in accordance with California's Office of Statewide Health Planning and Development OSHPD, California Building Code 2013 (CBC), and International Building Code (IBC) 2012. In April 2014, our Medical and Laboratory Claw and Lubricated Vacuum packages also passed their seismic testing and received their OSHPD certification. The certification number for our Medical Vacuum and Laboratory Vacuum Claw and Lubricated systems is OSP-0393-10 and this certification is also available on the OSHPD website. To view a copy of our OSHPD certificates and a complete list of all Powerex models that are OSHPD certified, please visit the OSHPD website at [http://www.oshpd.ca.gov/fdd/Pre-Approval/special\\_seismic\\_cert\\_pre-approval.html#351to400](http://www.oshpd.ca.gov/fdd/Pre-Approval/special_seismic_cert_pre-approval.html#351to400) and search for number "OSP-0380-10" and "OSP-0393-10".

"IBC and CBC refer to ASCE 7-10 as the performance benchmarks for seismic criteria. An important element in designing systems to resist seismic events is Seismic Demand Spectrum (SDS). SDS represents the base acceleration forces for a specific site, which can range from 0 to 2.50. This equipment must be certified to the SDS values for both the site at which it will be installed and the location in the building where it will operate."<sup>1</sup> Powerex has tested at the highest level of 2.5 SDS for most of our air compressor systems.

"These IBC and OSHPD requirements for seismic certification and pre-approval of equipment can be game changers, raising the level of 'proof' that design, construction, and equipment specification as well as installation and operation will enable essential facilities to continue their intended function after a severe seismic event."<sup>1</sup>

Testing to these standards are difficult and stringent. The SDS number that is tested depends on the Site Classification and Building Occupancy Use. (Refer to pg. 2 & 3 of this brochure.) For example, the current requirement for a Hospital (Site Classification F, Building Occupancy Type IV) would require a 1.5 SDS. The industry assumption is that by 2016 this requirement will be much higher at the maximum of 2.5. In this case, Powerex has tested to meet the predicted future changes and requirements.

Powerex was the first to develop the scroll technology used today for Medical and Laboratory air packages. Powerex, incorporated in 1988, is a division of Scott Fetzer, a Berkshire Hathaway company.

“A Seismic Design Category is a classification assigned to a structure based on it's occupancy category, and the severity of the design earthquake ground motion. The category assignment can range from A-F, and can be defined as the following:

- Seismic Design Category A – Corresponds to buildings in areas where expected ground shaking will be minor. Good Soils
- Seismic Design Category B - Corresponds to buildings of Occupancy Groups I,II and III where expected ground shaking will be moderate. Stratified soils with Good and poor Soils
- Seismic Design Category C - Corresponds to buildings of Occupancy Groups IV ( Hospitals, Police Stations, Emergency control centers, etc.) I where expected ground shaking will be MODERATE AND buildings of occupancy categories I, II, and III where MORE SEVERE ground shaking will occur
- Seismic Design Category D -Corresponds to buildings and structures in areas expected to experience severe and destructive ground shaking But NOT located close to a major fault. Sites with poor soils are a good example
- Seismic Design Category E - Corresponds to buildings of Occupancy Groups I,II and III in areas NEAR MAJOR ACTIVE FAULTS. Soil or rock is of no consequence
- Seismic Design Category F - Corresponds to buildings of Occupancy Groups IV ( Hospitals, Police Stations, Emergency control centers, etc.) areas NEAR MAJOR ACTIVE FAULTS. Soil or rock is of no consequence”<sup>2</sup>



1—<http://ecmweb.com/contractor/seismic-certification-shakes-industry>

2—<http://www.isatsb.com/Seismic-Design-Category.php>



**“SOIL (SITE CLASS):**

Site class is based on the type of soil. Soil classifications are

A, B, C, D, E, or F.

A. Hard Rock

B. Rock

C. Very Dense Soil, Soft Rock

D. Stiff Soil (default)

E. Soft Soil

F. Special Soil”<sup>3</sup>



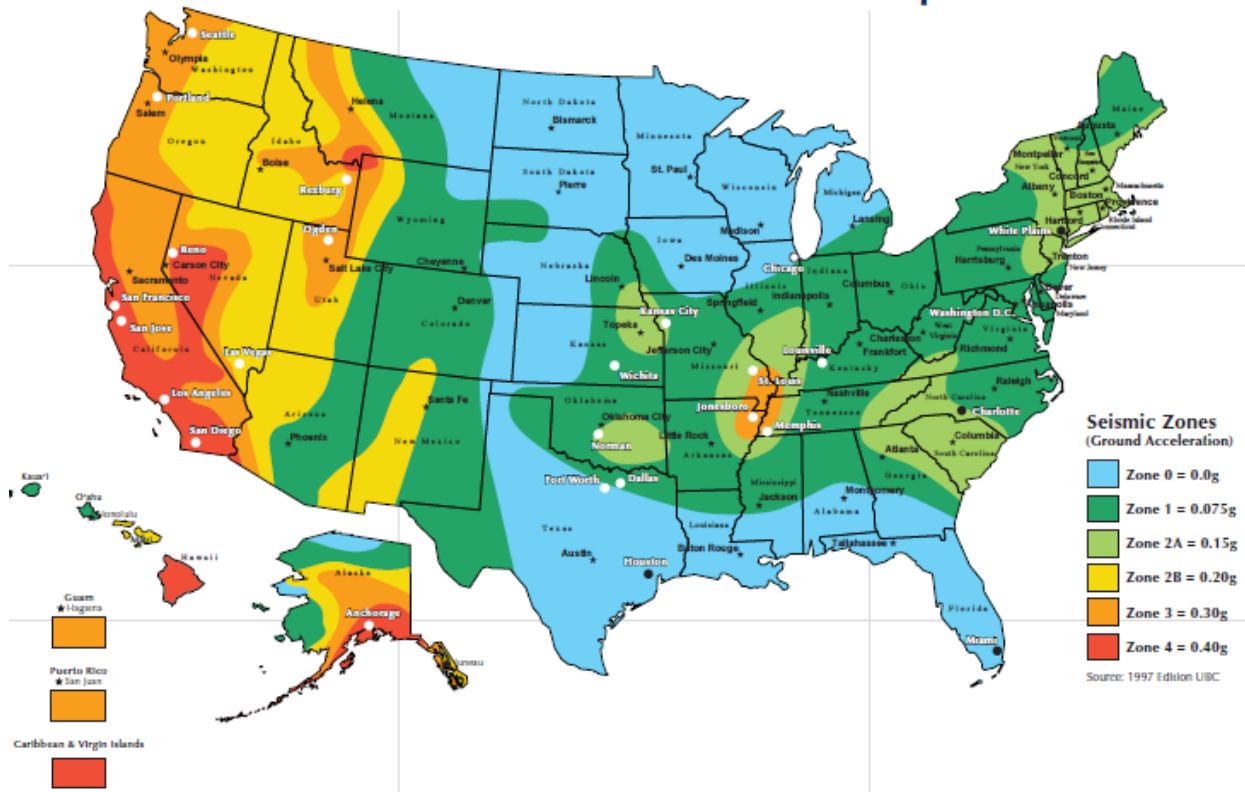
**“BUILDING OCCUPANCY USE:**

Building occupancy groups are broken into four (4) types.

- Type IV: Agricultural Buildings
- Type III: Essential Buildings
- Type II: Structures that represent a substantial hazard in the event of collapse or failure
- Type I: For buildings that do not fit Type II, III or IV”<sup>3</sup>



## United States Seismic Zones Map



### Powerex Medical Scroll System



Even though OSHPD is mandatory and specific to the state of California, many other states are adopting IBC 2012 regulations or creating their own similar seismic requirements for their healthcare facilities as they are also in high risk areas for seismic activity as show in the image above. These seismic standards demonstrate a high level of quality and achievement for the most critical environments for continued operation.



Powerex Scroll Compressor

**FOR MORE INFORMATION, CONTACT YOUR LOCAL POWEREX DISTRIBUTOR OR POWEREX SALES REPRESENTATIVE.**



150 Production Drive, Harrison, Ohio 45030  
 Telephone: (888)769-7979 Fax: (513)367-3125  
 www.powerexinc.com

Distributed by: