



Cable entry seals for expanding data centers

REPORT FROM THE PROJECT Q REALIZATION IN MEXICO

When building the Project Q data center in the city of Queretaro, the owner representative Santander Global Facilities México faced a real challenge when it came to sealing cable and pipe penetrations. How to route multiple cables and pipes

through a 45 centimeter thick wall and still maintain its integrity? Construction coordinator DIINESA specified Roxtec cable entry solutions – and got excellent help both with regards to protection and preparation for future needs.

Roxtec – a modern and efficient sealing method.

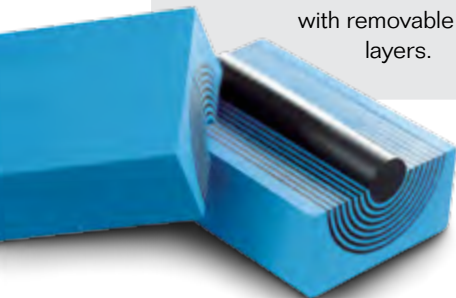


The seals are openable to allow for changes and upgrades.

Thanks to the co-operation with Roxtec, the project partners were able to seal power and fiber optic cables as well as steel, PVC and HDPE pipes of varying sizes.

ROXTEC SEALING SYSTEM

Roxtec cable and pipe seals ensure safety, efficiency and operational reliability. They are adaptable to cables and pipes of different sizes thanks to Multidiameter™, a solution based on modules with removable layers.



A data center contains sensitive equipment that is crucial for the operation of societies and enterprises, so the construction project required all perimeter walls to be completely watertight and weather resistant. The walls were also to be fire resistant and capable of keeping out rodents and insects.

Perfect solution

It was obvious that the traditional cable sealing method, which consisted of a portion of pipe casted into the wall with intumescent mastics, would not work. Instead they looked for a modern and efficient method. The Santander

company instantly saw the Roxtec sealing system as the perfect solution for their needs.

“We will always use Roxtec”

Drill fewer openings

Roxtec seals are area efficient and easy to adapt to cables and pipes of different sizes. The installers from Lebank handled cables ranging from 13 to 34 mm in diameter and pipes from 29 to 305 mm. The seals are openable to provide spare capacity. Who wants to drill new holes in the thick wall for every additional cable?



Alfonso Guarneros of Roxtec de México, Fco. Guillermo Martínez Mónico, Project Q Construction Director, and David Romero, Director of Operations México from Santander Global Facilities.

WHY ROXTEC?

The projects partners decided to use Roxtec to meet sealing requirements, maintain wall integrity, and prepare Project Q for future needs. Reliable standard solutions and spare capacity help holding down the total cost of ownership.

Would you recommend Roxtec to others?

“Yes, for all the buildings in my care that are either data centers or offices we will build with Roxtec solutions.”

David Romero Montes de Oca, Engineer and Proyecto Q Director, Santander Global Facilities.



Roxtec seals are adaptable to cables and pipes of different sizes.

High safety demands

Special concrete mixtures and last generation waterproofing were used to ensure the impermeability of the wall surface, so the cable and pipe transits had to meet the same strict requirements. The huge perimeter wall was made of high-strength concrete making it difficult to open a passage for additional installations in the future. That is why the goal was to leave transit preparations for easy upgrades.

Customized solution

Selecting Roxtec meant certified protection. Still it was crucial to

find a way of holding together many pairs of sleeves with RS seals and R frames at a distance of 45 cm. DIINESA and Roxtec managed to solve the problem – with custom-made steel structures that were cast between the sophisticated grillage foundation allowing only small tolerances between walls. The steel structures hold together seals and frames through a pair of sleeves connected with paper casting molds.



Facts

Project type	Construction of data center
Involved companies	Santander Financial Group/Santander Global Facilities – owner Kaplan McLaughlin Diaz (KMD) México and Desarrollo Integral en Ingeniería Eléctrica, S.A. de C.V. (DIINESA) – design and engineering Lebanc, S.A. de C.V. and DCI Constructions – contractors Dasby, S.A. de C.V. – installations
Applications	Sealing of cables and pipes of different sizes routed through a 45-centimeter thick perimeter wall.
Sealing requirements	Watertight Fire barrier Protection against dust and vermin
Roxtec products	Roxtec RS AISI 316 seals in sizes 75 to 400, primed, sleeves without flange and Roxtec R frames 150, galvanized, with modules for telecom and data cables.

Roxtec construction references

Berlin Hauptbahnhof, Boston Central Artery Tunnel, Clinical Center Jena, Dow Chemical, Hamburger Hochbahn, Laboratory for Molecular Biology in Cambridge, Pfizer, Royal Alex Hospital, St John's Waste Water Treatment Plant, ST Microelectronics, Winnipeg Int. Airport.



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