

# Cable and pipe seals for rail infrastructure





# Superior sealing solutions

Ensure safe and reliable operations – and save time and money. Standardize with the world's most innovative and flexible cable and pipe entry seals.

We offer a long-term partnership to protect your rail infrastructure against multiple hazards. Our certified solutions cover sealing requirements for facilities, structures and systems. We work with

multidisciplinary projects involving electrification, signaling and communication and contribute through the entire lifecycle of the infrastructure.

**The smartest way to ensure certified protection.**

[roxtec.com/certificates](https://roxtec.com/certificates)

# “Roxtec is beneficial for the long-term economy as you can add cables without making new holes.”

Mr. S Sundareshan, ABB Ltd – Namma Metro project in Bangalore, India

## Long-lasting protection

Our sealing technology and expertise can provide protection against water ingress, fire, smoke, gas, humidity, dust, pests and rodents as well as from vibration, electromagnetic pulse/interference (EMP/EMI) and risk of explosion.

We work to increase the durability of rail assets while minimizing the total cost of ownership.



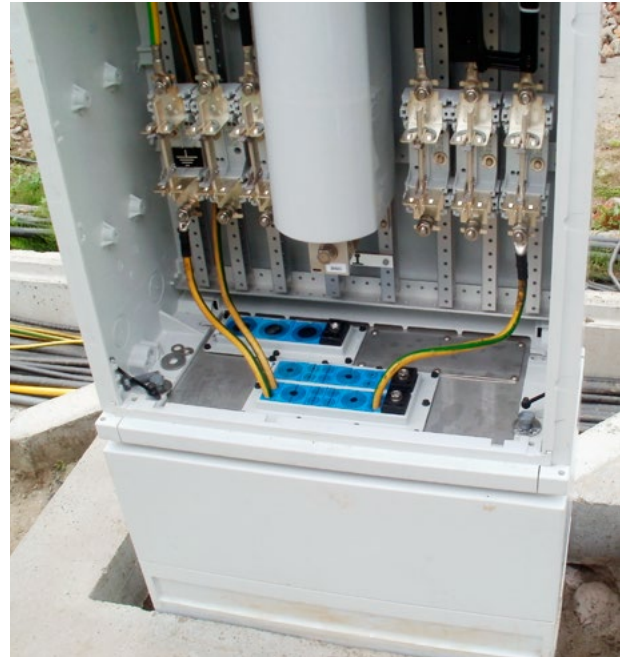
## Continuously adding value

Standardize with Roxtec seals for a range of benefits during design, procurement, construction, maintenance and operations.

- Design support from our global team of experts
- Flexibility for easy design, logistics and installation
- Built-in spare capacity for future expansion
- Custom-made solutions for specific needs
- Ability to seal around existing cables and pipes
- Safe re-entry with no damage or disruptions



See the Namma Metro site report on [roxtec.com](http://roxtec.com)



# Seals for all disciplines of rail infrastructure

Owners and rail operators, design and engineering firms, equipment manufacturers, contractors and installers standardize with Roxtec for urban, suburban, conventional, high-speed and freight railway.

## **Traction power supply and power distribution**

Substations, aerial decks, OCS (overhead contact systems)

Switching stations, paralleling stations

WPC (wayside power control cubicles)

Power and feeder cables

Duct banks and underground vaults

## **Signaling and rail control**

Control rooms

Trackside signaling cabinets

Junction boxes

## **Communication**

GSM-R, DAS (distributed antenna systems), optical fiber

Datacenters

Shelters and enclosures

Manholes and hand boxes

## **Tunnels and bridges**

Technical rooms and substations in rail and service tunnels

Communication equipment enclosures

## **Stations**

Passenger information systems and automatic fare collection



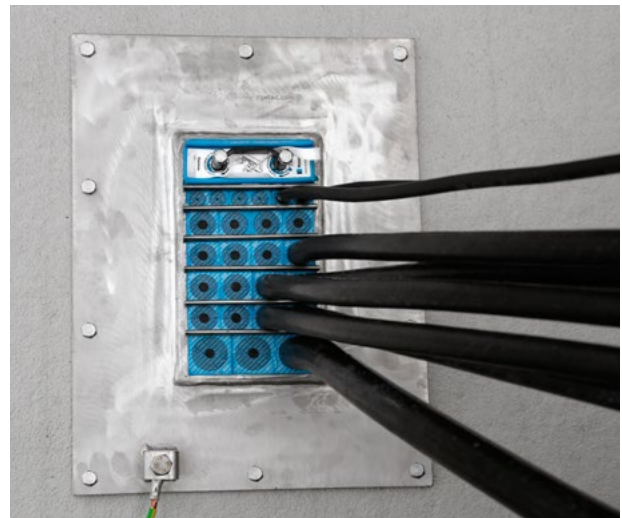
# Outstanding sealing portfolio

Roxtec modules are inserted around cables or pipes in frames that are attached to the structure by bolting or casting. The frames are available in different materials and for any type of structure. The system is sealed with a compression unit.

## Wall and floor penetration seals

Route all cables, metal and plastic pipes, and conduits through the same opening.

- Vibration and shock resistance
- Excellent cable retention
- Corrosion resistance
- Blast load protection
- Extreme temperature ranges



## Seals for cabinets, enclosures and equipment

Ensure bonding and grounding in control cabinets as well as in junction and terminal boxes.

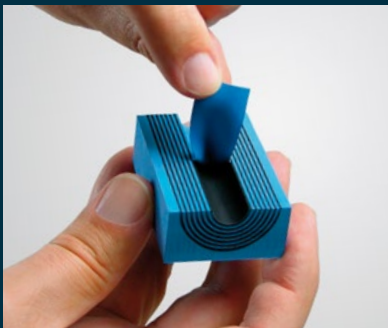
- Lightning strike protection
- Compact solutions for high cable density
- Use pre-terminated cables without cutting connectors and reduce installation time



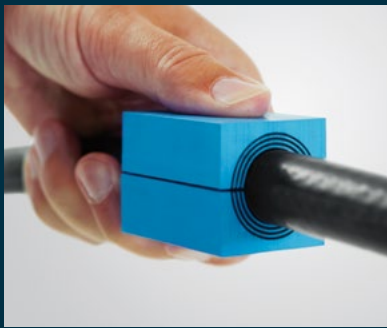
# Multidiameter™ by Roxtec

This unique solution simplifies design, installation and inspection. Avoid surprises onsite due to late changes and reduce the number of inventory items. The spare modules are always ready for upgrades and to handle high cable and pipe density.

Roxtec ensures a perfect fit, regardless of the dimension of the cable or pipe.



Roxtec Multidiameter™ is an innovation for flexibility based on removable layers.



It makes the mechanical system adaptable to cables and pipes of different sizes.



With few reliable parts you get a strong barrier securing operational performance.

## Ratings

- Fire rated (up to 4 hours)
- Water-tight (up to 4 bar/58 psi/133 feet of water)
- Gas- and air-tight (2.5 bar)

## Tests and certificates

- EN 1366-3
- UL 1479
- BS 476
- DIN 4102-9
- GB 23864-2009
- The building standard law of Japan
- NEMA 4, 4X, 6P
- IP 67/68
- EN 61373
- NFPA 130-2014
- EN 45545
- Flammability, smoke emission and toxicity
- Air-shock



## Roxtec at your service

We are committed to safety and perfection – and eager to use our expertise to extend the life of your infrastructure and maintain its value for years to come. We provide design support to help you choose the right solution. We also support you

onsite and conduct visual inspections to see if your penetration seals meet safety requirements and official regulations. We include installation training sessions and corrective action recommendations in our full line of service offerings.



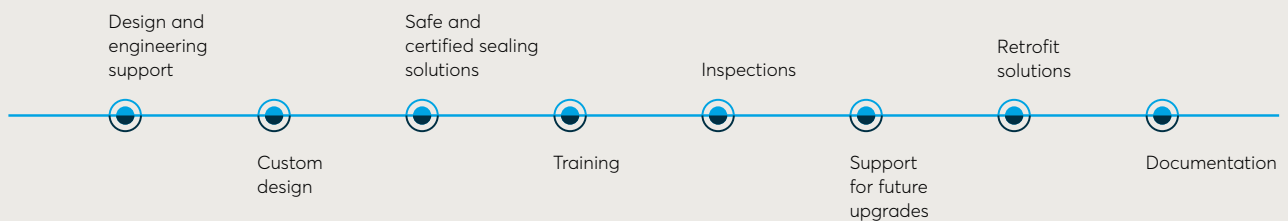


## Custom-made solutions

Are you preparing for a major upgrade or replacing another sealing technology? Our team of designers, engineers and test technicians is always ready to take on your sealing challenge – even if it requires a quick preparation and delivery of a customized sealing solution or the creation of an entirely new one.

Roxtec designed and built heavy-duty custom-made solutions for Network Rail. Read more on [roxtec.com/railinfrastructure](http://roxtec.com/railinfrastructure).

### Roxtec support throughout the lifecycle of your project



More on [roxtec.com](http://roxtec.com)

**"By importing data into the Roxtec software, we saved several weeks – if not months."**

Gary Jennings, Lead Electrical Designer of Wood Group Mustang



## Smart engineering tool

Roxtec Transit Designer™ is your shortcut to safety and efficiency. This free, web-based engineering tool simplifies product selection as well as the entire process that surrounds cable and pipe transits. Simply enter your input and it automatically provides you with full documentation.

Sign up for Roxtec Transit Designer™ at [roxtec.com](http://roxtec.com).

### Roxtec project references

- Dulles Corridor Metrorail Project in Washington, D.C, USA
- Guanhui Intercity Railway Project in Guangdong, China
- London Bridge railway station, Thameslink programme, UK
- Diabolo, Brussels City Center to Airport, Belgium
- Namma Metro Project Bangalore, India
- Honolulu Rail Transit, Hawaii, USA
- Brussels to Oostende Line, Belgium
- London Underground's lines: District, Circle, Metropolitan and Hammersmith & City, UK
- South Europe Atlantic high-speed rail (SEA HSR), France
- Hallandsås Rail Tunnel, Sweden
- Javel André Citroën station – Paris Metro, France

See site reports on [roxtec.com](http://roxtec.com)



## **Roxtec is a global company with a strong local presence**

You can always reach a Roxtec representative in your region. We are present all over the world to ensure everything from quick support to smooth logistics and just in time deliveries from local stocks. It is our job to help you succeed if there are late changes in design or production requirements.

Reach your Roxtec contact via [roxtec.com](https://www.roxtec.com)

# Protecting life and assets

Roxtec is the world leader within flexible cable and pipe transits. Since the start in Sweden in 1990 we have grown successfully to cover all continents. Our passion is innovative sealing solutions, and our goal is to make our world a safer place.

- Extensive R&D resources and advanced test facilities
- Inventor of Multidiameter™
- Customers in more than 80 markets