

Roxtec mobility seals – lightweight solutions for railway vehicles



Protecting life and assets

Benefit from the world's most flexible cable and pipe transits. You can count on our expertise, from design to installation and throughout the lifecycle of your railway vehicles. Aiming to contribute to safety and sustainability, we offer a long-term partnership for efficiency and operational reliability.

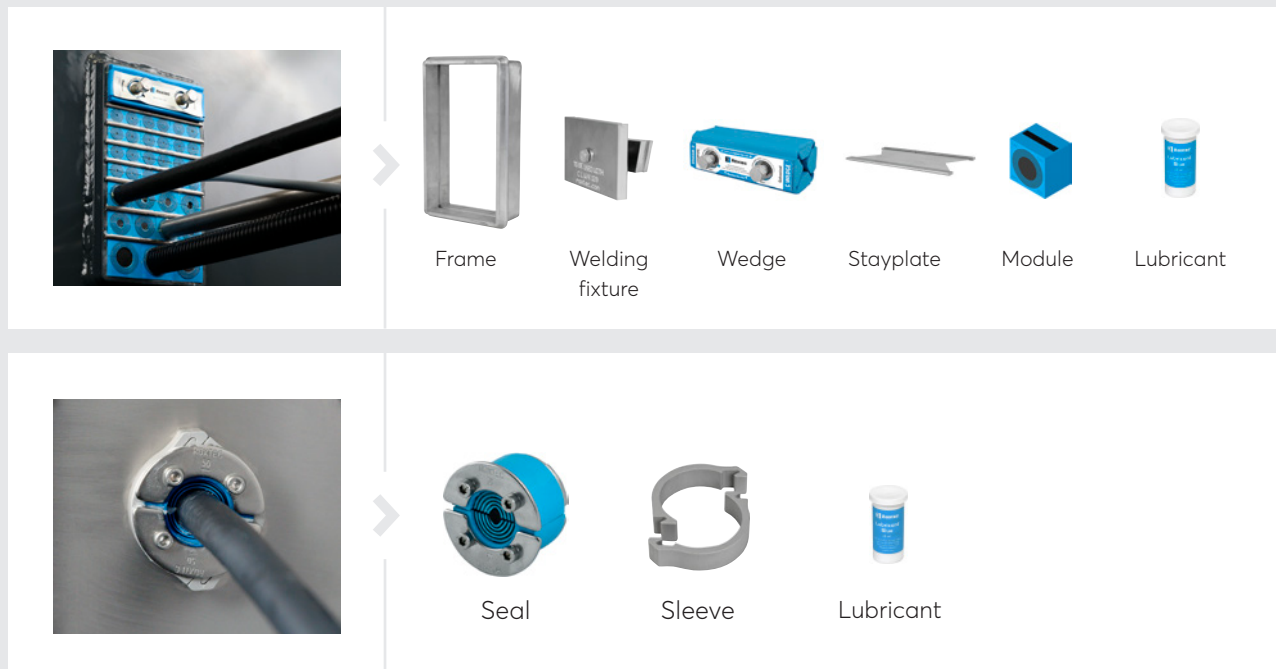


roxtec.com/mobilityseals

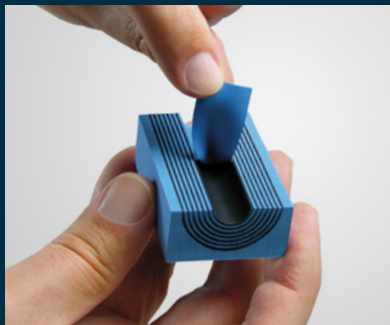
The Roxtec sealing system

Our mechanical system is smart, safe and flexible. We provide rectangular, round and customized sealing solutions for one or multiple cables, pipes and plastic conduits as well as pre-configured kits. Thanks to the adaptability, you can cover the sealing requirements with only a few components.

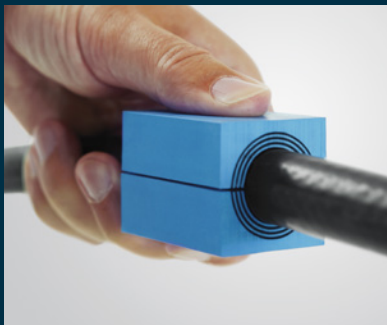
Components for rectangular and round solutions



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



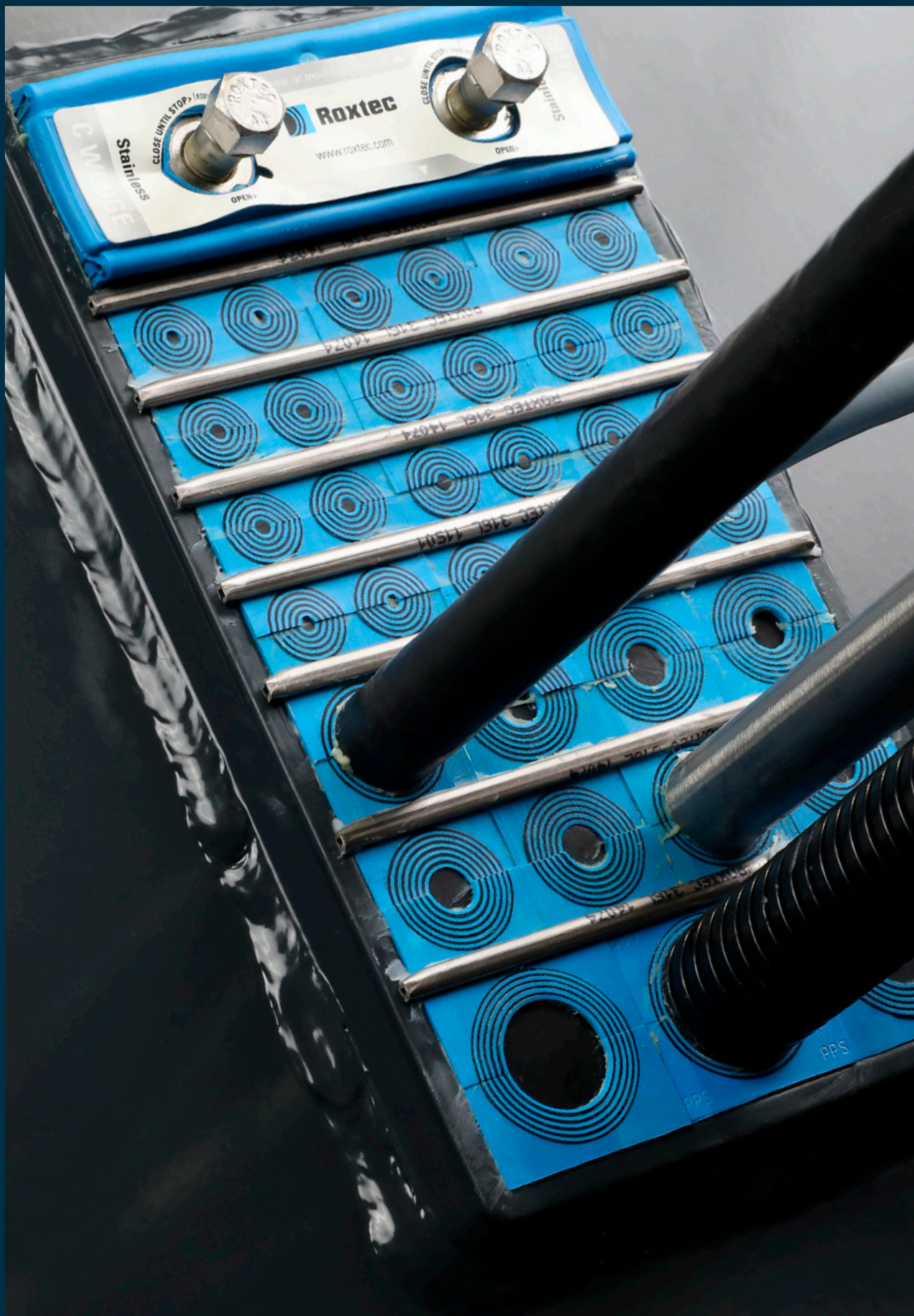
Roxtec Multidiameter™ is an innovation for flexibility based on removable layers.



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



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



Ensuring multi-hazard protection

We have developed Roxtec mobility seals for cables, pipes and plastic conduits passing through fire rated barriers throughout the railway vehicle structure.

The penetration seals cover the highest fire hazard levels, prevent ingress of dust and water, and withstand shock and vibration.

Light yet very robust

Our mobility seals bring more benefits than multi-hazard protection. They are very strong but also extremely light to help rolling stock manufacturers reduce weight onboard.

We have, in fact, been able to develop seals that are more than 50 percent lighter than our steel-based transits. By reducing weight, you can lower energy use and reduce CO₂ emissions all while transporting more passengers and goods.

Space-saving design

Roxtec mobility seals are very compact – to help you save space onboard. This optimization for area efficiency also reflects our commitment to supporting the development towards sustainable mobility.

When the seals require less space, you make better room for other important equipment.

Why use Roxtec mobility seals?

- Fire protection
- Ingress protection
- Shock and vibration resistance
- Weight optimization
- Area efficiency





Product features

At Roxtec, we have extensive research and development resources, a fire test lab and other testing capabilities for use in the product development, pre-certification and customization processes.

We conduct third-party witnessed tests at our laboratories and external tests at accredited laboratories around the world. The performance of Roxtec mobility seals is thoroughly tested, resulting in numerous approvals.

Fire ratings

- HL3 in accordance with EN 45545-2 (R22, R23)
- E30 in accordance with EN 45545-3

IP ratings

- IP 66 in accordance with IEC 60529

Shock and vibration

- Shock and Vibration Category 2 in accordance with IEC 61373



All welded mobility frames are manufactured in accordance with EN 15085 CL 2/CP C3/CT3.

Select the right sealing solution

Use the table to find the cable and pipe sealing solution that matches your needs and requirements. If you need assistance, you are always welcome to contact your Roxtec representative – also if you have a specific request for a tailored and customized solution. We can, provide customized versions of all Roxtec mobility seals for specific needs or requirements. The latest updated product data are found on roxtec.com.






Modules















	CM 30 mm
	CM PPS 30 mm
Complete solution	

C LH	C LW/K	C RS SLO
		
		
		

Ratings

Hazard level	EN45545-2	HL3	HL3	HL3
Fire barrier	EN45545-3	E30	E30	E30
IP level	IEC 60529	66	66	66
Vibration	IEC 61373	Cat.2	Cat.2	Cat.2
NFPA130	ASTM E162, 1354, 662, 648 BSS 7239 SMP 800-C			

Installation

 Welded	 Bolted	 Openable			
Services/penetrants Single (S) Multiple (M)			M	M	S
Cables					
Pipes					
Plastic conduit					

Material

Aluminum			
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Roxtec C RS SLO seal

Round seal for space and weight optimization.

The Roxtec C RS SLO is a lightweight yet very strong sealing solution for single cable and pipe entries in cabinets, enclosures, and equipment. Providing ingress and fire protection as well as vibration-proof cable retention, it is ideal for mobility sectors such as rolling stock. The solution consists of an adaptable Roxtec C RS seal and a Roxtec C SLO sleeve. It is available in four different sizes to cover cables and pipes ranging from 4 to 54 mm. Roxtec C RS SLO is delivered without core.



- Lightweight
- Area efficient
- Allows pre-terminated cables
- Openable
- Single-side installation

We tailor sealing solutions upon request.

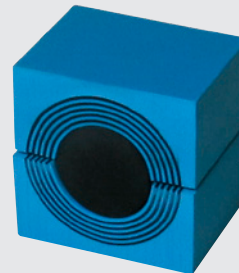


For technical product data, such as dimensions, ratings and mounting specifications, please scan the QR code.

Roxtec CM module

Roxtec CM modules are 30 mm (1.181") deep and easily adapted to cables and pipes of different sizes. When used with a solid core, the module functions as a spare module for future capacity.

- To be used with corresponding Roxtec components to form a complete sealing solution
- For cables and pipes 3.5-34.5 mm (0.138"-1.358")OD



We tailor sealing solutions upon request.

Roxtec CM PPS module

Roxtec CM PPS modules are 30 mm (1.181") deep and easy to adapt to plastic conduits of different sizes. They include intumescent material that expands up to 35 times its size in case of fire to close off and protect plastic conduit penetrations. The modules are tested and approved for rolling stock applications with plastic conduits.

- To be used with corresponding Roxtec components to form a complete sealing solution
- For plastic conduits and pipes 4.0-33.5mm (0.157"-1.32") OD

We tailor sealing solutions upon request.



Roxtec C LH transit

Lightweight transit for bolting to the structure.

The Roxtec C LH is a compact and lightweight yet very strong sealing solution for multi-cable, pipe and plastic conduit penetrations. It is available in five different sizes. The frame is produced in aluminum and is attached to the structure by bolting. The sealing modules are adaptable to cables, pipes and plastic conduits of different sizes, and can be used to build in spare capacity in the transit.

Providing ingress and fire protection as well as vibration-proof cable retention, it is ideal for floor, wall and cabinet applications in mobility sectors such as rolling stock.

- Lightweight
- Area efficient
- Provides built-in spare capacity

We tailor sealing solutions upon request.



For technical product data, such as dimensions, ratings and mounting specifications, please scan the QR code.

Roxtec C LW/K transit

Lightweight transit for welding to the structure.

The Roxtec C LW/K are compact and lightweight yet very strong sealing solutions for multi-cable, pipe and plastic conduit penetrations. The frames are produced in aluminum, available in five different sizes and come in versions with different depth: the C LW frame is 30mm deep while the C LWK frame has an extended depth of 60mm. They are attached to the structure by welding.

The sealing modules are adaptable to cables, pipes and plastic conduits of different sizes, and can be used to build in spare capacity in the transit. Providing ingress and fire protection as well as vibration-proof cable retention, it is ideal for floor and wall applications in mobility sectors such as rolling stock.

- Lightweight
- Area efficient
- Provides built-in spare capacity

We tailor sealing solutions upon request.



For technical product data, such as dimensions, ratings and mounting specifications, please scan the QR code.



Welding information

We recommend using our welding fixtures Roxtec C LW/K 120 or Roxtec C LW/K 60 when attaching Roxtec mobility seals by welding.

The welding fixtures are specifically designed for these frames to maintain the tolerances when welding the frame to the structure. The welding fixtures are ordered separately – and they are always supplied with welding guidelines.



Here are some important things to consider when welding:

- Preheat the transit frame to approx. 50°C
- Keep the interpass temperature below 150°C
- Mind the tolerance for optimum performance
- Make sure weld runs are max 150 mm/weld pass
- Let the welding fixture remain in place for a while to avoid tolerance deviation
- Measure the frame after removing the welding fixture and its temperature is below 50°C



For technical product data, such as dimensions, ratings and mounting specifications, please scan the QR code.

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.

- R&D resources and test facilities for product development and customization
- Inventor of Multidiameter™
- Customers in more than 80 markets



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