



Cable Entry Solutions

FOR WIND POWER APPLICATIONS



Keep your wind turbines running

With the Roxtec sealing system for cables and pipes, the wind power industry has a standardized safety solution for maximum operational reliability. Our solutions cover all your protection needs and ensure a good return on your investment.

Standardize for efficiency

A standard solution for cable sealing, fixation and vibration damping is of great value to all players in the wind power business. It simplifies design, production, logistics, roll-out and maintenance, giving you the opportunity to save time and money all along the chain.

- Solution for standardization
- Maximized uptime
- Certified safety
- Long-term protection
- Locally global

Operational reliability

Every component of the Roxtec sealing system is developed to ensure long-term operational reliability in onshore and offshore wind farms. Our solutions are tested and certified to protect your investment against water, gas, fire, electro-magnetic disturbance, dust, vibrations, and rodents.

As a wind turbine manufacturer, you avoid warranty claims. As operator or owner, you maximize uptime.



Easy installation, faster roll-out

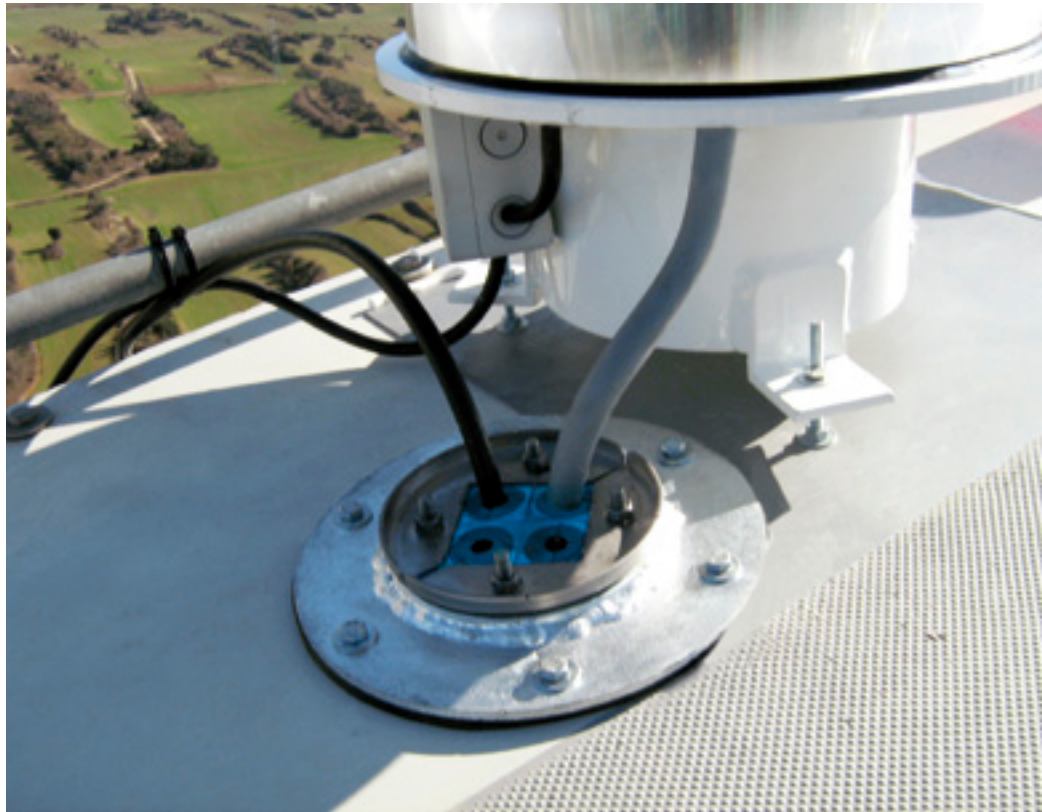


Flexible solutions

The adaptable Roxtec cable entry solutions give you an advantage on the global market, from engineering to on-site installation. Thanks to Multidiameter™, our technology based on sealing modules with removable layers, there is no need to worry about the cable configuration or the size of the cables used locally. You are always provided with a practical and safe standard sealing solution – that makes a perfect fit.

User-friendly system

Our seals are easy to install, and you can seal several cables of different sizes in one opening. The entire installation can be completed from one side, and the large frame opening even allows you to route cables with lugs or connectors through the transit. This is how we help contractors, installers and operators to keep up the high speed.



Faster roll-out

To stay competitive, you must be able to act quickly. Standardization with one supplier of sealing solutions will reduce stock, lower handling costs and enable time-savings during commissioning of turbines. Our solutions help on-site installers to finish their job before schedule. Customers further improve their logistics by choosing our tailor-made kits.

Future capacity built-in

When time has come for maintenance or upgrades, you will not regret having chosen Roxtec. You can open up the sealed cable entry, add cables or perform last minute changes, and then re-seal the transit again. This work can be done quickly, without any spare parts, whenever the opportunity occurs.

Protection against vibration



Extended cable lifetime

Our system gives you more than an outstanding sealing solution. Thanks to the flexible modules of the system, cables of different sizes are securely sealed and fixed. The rubber in the sealing modules is softer than the outer jacket of the cables. The cables are well-protected from damage due to vibrations and the lifetime of cables and related components is extended.

Seal, fix and soften

What more can you ask for than a certified standardized solution for cable sealing, fixation and protection? With Roxtec, you protect your investment from the design phase, through manufacturing, roll-out, and operation. In fact, you protect the equipment until long after the turbine manufacturer's warranty has expired. No wonder Roxtec has become a globally preferred industry standard.

- Easy installation
- One supplier of seals – one stop shop for all solutions
- Future capacity included
- Cable-friendly fixation
- Protection of cables

Our flexible sealing system

Multidiameter™ by Roxtec

Our adaptable solution, based on modules with removable layers, makes installation easy and safe. From each seal, you can peel off layers to enable a perfect fit to different sizes of cable or pipe. You can seal traditional cables and optic fiber cables or pipes side by side.

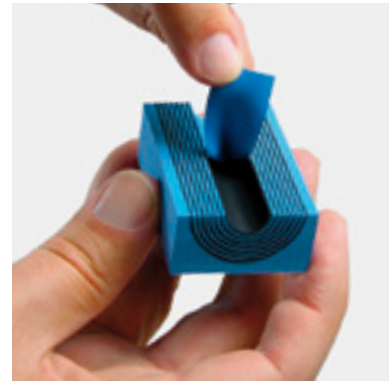
Better space management

Thanks to the modular-based seal, cables are neatly organized in the

transit. A small, but proper distance between each cable creates area efficiency, and facilitates overview and maintenance.

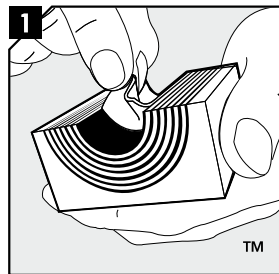
Easy upgrading

The Roxtec flexibility and built-in spare capacity gives you the possibility to seal an opening and add cables later on. It facilitates maintenance and modifications. The re-powering of wind farms has suddenly become very cost-effective.

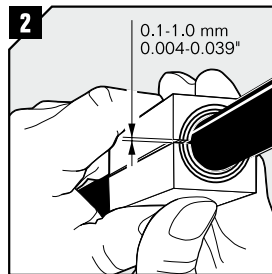


Basic steps

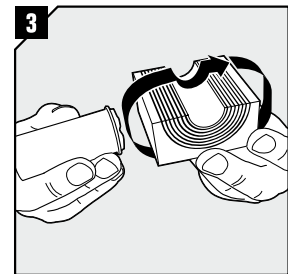
in the assembly of a modular-based Roxtec sealing solution



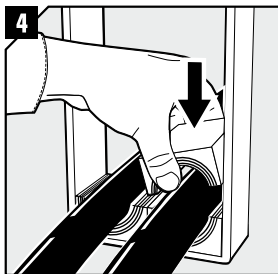
Adapt modules, which are to hold cables or pipes, by peeling off layers until you reach the gap seen in pic. 2. The halves may not differ by more than one layer.



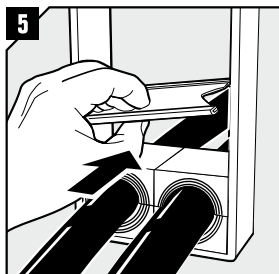
Achieve a 0.1-1.0 mm gap between the two halves when held against the cable/pipe.



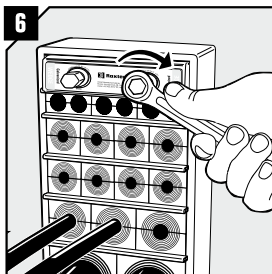
Lubricate all modules for the frame thoroughly, both the inside and the outside surfaces.



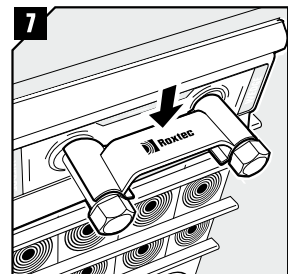
Insert the modules according to your installation plan (transit plan). It is recommended to seal cables/pipes at the bottom of the frame and put spare modules on top.



Insert a stayplate on top of every finished row of modules.



Insert the Roxtec Wedge and tighten the screws until full stop.



Attach the Wedge Clip to the wedge bolts to check that the wedge is properly tightened.

Roxtec solutions for wind turbines



Transits for converter.



Transits for generator.



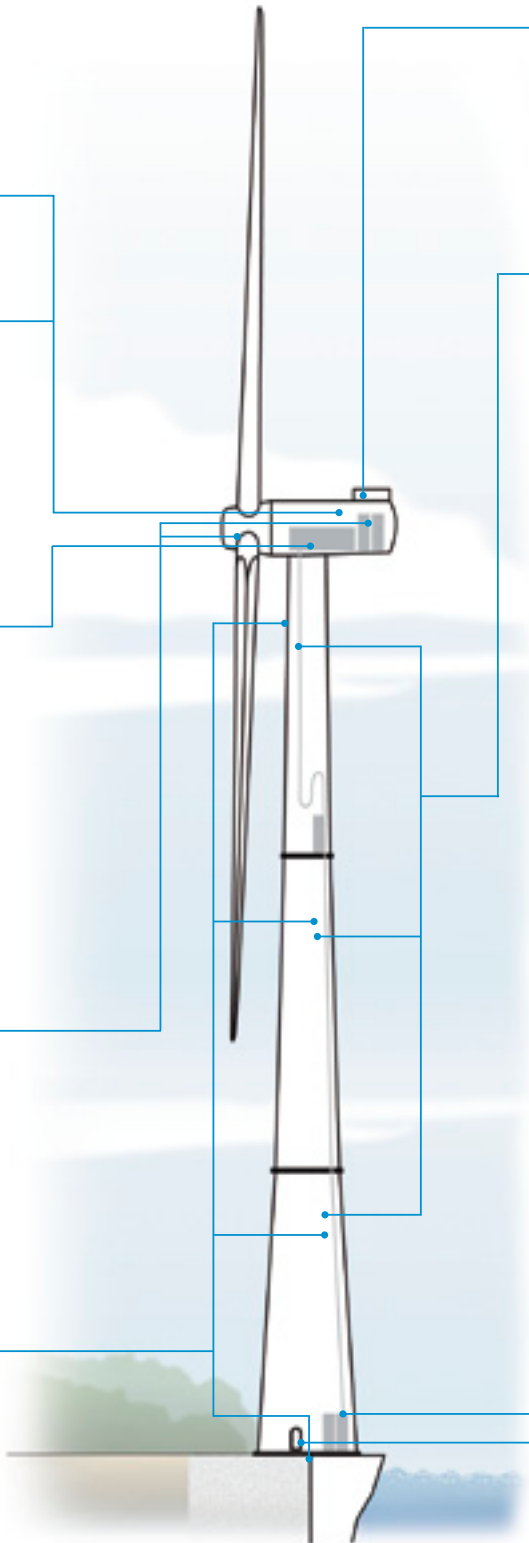
Transits for potential equalization, and standard system for control cabinets in the nacelle.



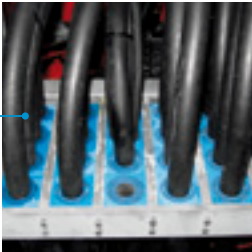
Bus bar transits for transformer room.



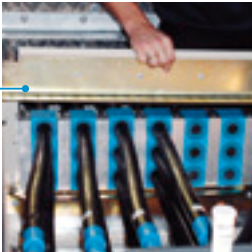
Transits between fire zones.



Transits for hub, radar, weather station and aeronautical obstruction lighting.



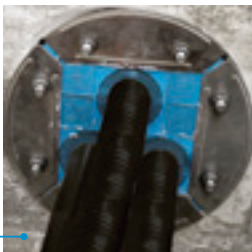
Retention systems below nacelle and in tower.



Openable frames for easier installation of power cables in cabinets.



Transits for cabinets and panels.



Transits for foundations.

Roxtec keeps your wind turbines running

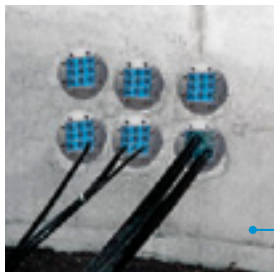
Here are examples of applications where the Roxtec sealing system protects onshore and offshore wind power infrastructure and adds value.



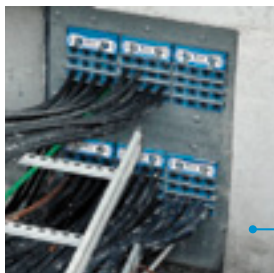
Deck transits for instrumentation.



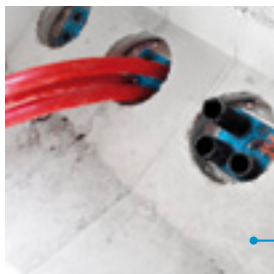
Deck transits for high voltage cables.



Transits into foundation.



Transits for converter and transformer stations onshore, with EMC and standard products.

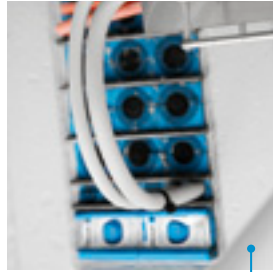


Transits for transformer shelters and transformer stations.





Transits between fire zones in offshore substations.



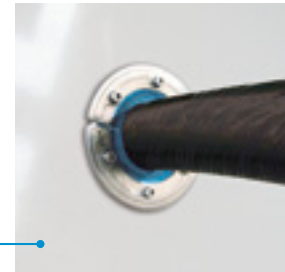
Transits between fire zones in offshore substations.



Transits between fire zones in offshore substations.



Transits for submarine cables in gravity foundation.



Transits for submarine cable in monopile.



Transits for submarine cables.



TECHNICAL COMPETENCES

- Fire protection
- Watertight
- Gas-tight
- Protection against rodents/pests
- EMC potential equalization
- Vibration damping

We support you globally



Sharing our knowledge

Roxtec is more than a supplier. Our staff around the world works in close co-operation with customers to find the optimal solution. Our knowledge, acquired through many years of work in the field, enables us to guide you to a solution that suits your unique needs. Whether you invest in onshore or offshore wind farms, or both, we are able to provide seals that guarantee operational reliability.

We help ensure quality

Our extensive R&D resources, with design departments, a fire test lab and a technical center, give us the opportunity to continuously develop and improve products and solutions for your specific needs. We provide tests and certificates as well as support and documentation for transferring knowledge within your organization.



Installation training

Whenever desired, we provide product installation training on site through our sales staff and technicians. In the Installer's section of our global website www.roxtec.com, we have collected useful information for staff involved in assembly and installation of the Roxtec sealing system. Instructions and videos can be viewed online or downloaded for free.

The world's most available modular seal

All our sealing solutions are available through our extensive network of local suppliers. This means direct support and fast deliveries from local stocks on more than 70 markets.



Among our wind power customers you find:

ABB, Acciona, Aerodyn, AMSC Windtec, AREVA, BARD Engineering GmbH, Clipper Wind, Dongfang, Fuhrländer, Gamesa Eolica, GE Wind Energy, Goldwind, Hyundai Heavy Industries, MHI, Multibrid GmbH, REpower Systems AG, Samsung, Siemens, Siemens Wind Power A/S, Sinovel, Suzlon Energy, The Switch, UESA, Vattenfall, Vestas Wind Systems A/S and WinWinD Oy.



Local presence worldwide

Roxtec is the world-leading provider of flexible sealing solutions for cable and pipe penetrations. Our adaptability solution, Multidiameter™, is based on modules with removable layers. It seals perfectly, regardless of the dimension of the cable or pipe. We are present all over the world in order to ensure product availability as well as quick support and supply.

Sweden, Roxtec International AB, HQ
Argentina, INGIAR Representaciones SRL
Australia, Roxtec Australia Ltd
Belgium, Roxtec b.v.b.a/s.p.r.l
Brazil, Roxtec Latin América Ltda
Chile, FACOR Ltda
China, Roxtec Sealing System (Shanghai) Co. Ltd
Croatia, Roxtec d.o.o.
Czech Republic, Roxtec CZ s.r.o
Denmark, Roxtec ApS
Finland, Roxtec Finland Oy
France, Roxtec France
Germany, Roxtec GmbH
Hungary, Glob-Prot Trade and Service Ltd
India, Roxtec India Pvt Ltd
Italy, Roxtec Italia S.r.l
Japan, Roxtec Japan K.K
Kazakhstan, Company ECOS
Lithuania, SWELBALT
Mexico, Roxtec de México, S.A. de C.V
Nigeria, Structured Resource Business Ltd
The Netherlands, Roxtec BV
Norway, Roxtec AS
Peru, Synixtor S.A.C
Poland, Pionet Sp. z o.o
Portugal, Glacis, LDA
Russia, Roxtec RU
Romania, Roxtec RO s.r.l.
Singapore, Roxtec Singapore PTE Ltd
South Africa, Roxtec Africa (PTY) Ltd
South Korea, Roxtec Korea
Spain, Roxtec Sistemas Pasamuros S.L
Switzerland, Agro AG
UAE, Roxtec Middle East F.Z.E
UK/Ireland, Roxtec Ltd
USA/Canada, Roxtec Inc

For other markets and detailed contact information, please visit www.roxtec.com

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