

REPORT

Fast and safe upgrade
with Roxtec for fiber
optic systems



More and more providers of distribution systems for telecom, broadband and TV are changing technology. The demand for higher bandwidth makes the change from traditional copper-based cables to fiber optics

necessary. The Roxtec sealing system presents an attractive and cost-effective way to handle both fiber optics and copper cables and the transfer from one technology to the other. This is illustrated in this report

from the Netherlands, where the change of technology is well under way, for existing as well as new communication and telecom networks.

Roxtec team reports on site
New and old technology side by
side thanks to Roxtec

We Seal Your World™



The Roxtec sealing system allows plastic conduits for fibers to be installed quickly and safely.



Fast and safe upgrade

For operators, like KPN in the Netherlands, it is important that the practical work with the new cable installation can be pursued in a convenient and time saving way. It is also important that the results are safe seals against water and dust. For these reasons KPN has used Roxtec's penetration seals for several years.

The possibility for adaptation to different dimension of cable is a radical cost and time saver for KPN. Another benefit is that the penetration seals are reliable and simple for the installers to use. Rob Borst, Project Coordinator at

KPN, summarizes the advantages seen at a switch station on IJburg, Amsterdam: "Copper cables frequently vary in size. This is why we need Roxtec's Multidiameter™ for our cable installations". He explains that the possibility to seal different amount of cables and with different diameter helps KPN all the time.

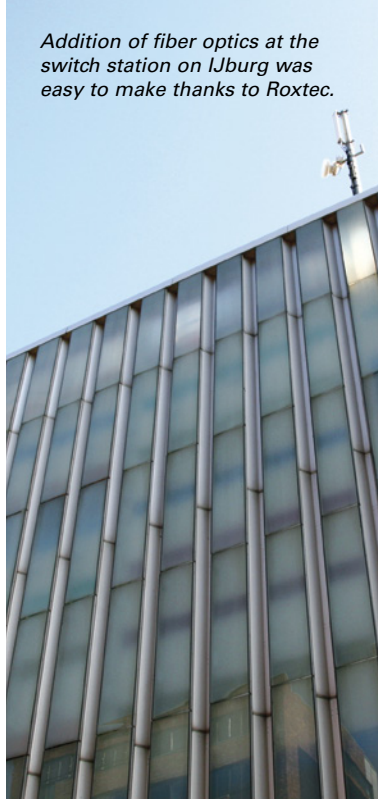
Simple fiber-upgrade at switch station

With the addition of fiber optics, KPN see even more benefits with Roxtec. One reason is that the sealing system easily handles plastic conduits for fibers. Rob turns our attention to the new routing of

the fibers that enter the switch station. "A great flexibility with Roxtec is it also allows reinstallation, when fibers need to be installed. The Roxtec sealing system is very familiar to the installers and the possibility to use the same system also for fibers is an important factor", he concludes.

Minimum down-time at network shelters

All house holds in Amsterdam will have access to broadband. This means that fiber optic systems are routed in to the existing fixed-line telecom shelters. Roxtec is highly valued because it allows modifications on site and a high amount of cables in a limited space. "Adaptability to changes in technology, is why the owner, KPN, likes Roxtec. You can easily change the cables, even when going from copper cables to fibers", says



Addition of fiber optics at the switch station on IJburg was easy to make thanks to Roxtec.



” Copper cables frequently vary in size. This is why we need Roxtec’s Multidiameter™ for our cable installations.

the installer from Darico Infra-techniek to Harald Niessen from Roxtec BV. “I like Roxtec. It is reliable and guaranteed water-proof”, he continues.

Time-savings in new building projects

Time savings and reliability are reasons why Roxtec is used also for new builds in the IJburg area outside Amsterdam. The first time saving is achieved when Roxtec’s frames are cast into the wall sections of the technical buildings, prior to the delivery to the building sites. This, in turn, reduces onsite work with sealing systems.

As copper cables and fiber optics are routed at site the Roxtec standard then allows several dimensions of cable and fiber optics conduits to be installed side by side. They can be sealed instantly

and should they need to be modified, it is also easy to re-open the seals. The Roxtec sealing system has been used by Dutch telecom operators for more than 12 years. The sealing solutions have been proven very

safe and reliable against both water and dust. At IJburg this is a frequent challenge.



Multidiameter™ adaptability and reliable safety make Roxtec the perfect seal for new builds and refurbishment.

Facts

Project types New build and upgrade of telecom and broadband connections from copper cable systems to fiber optic systems.

Customers KPN (owner/operator)
Trilink (network engineering/network supplier)
Darico Infratechniek (installers)
Van den Berg (installers/field design)
Spijkerman (suppliers/shelter builders)

Applications Plastic conduits for fiber optics through walls in the ground. Typical dimensions OD 40 mm.
Copper cables through walls in the ground.
Typical type 450x4x0,5 GPEW/G.

Requirements Protection against:
Water
Gas
Sand/dust

Adaptability to different cable dimensions (Multidiameter™).
Ease of installation.

The build-out of new communication systems and upgrade of existing networks need to be made as simple as possible and without disturbances to the operational reliability.

Roxtec products Solutions based on Roxtec G in single type and in width-combinations, R, RS.

Reasons for choosing Roxtec Sealing of both copper cables and fiber optics.
Short delivery time (within 24h).
Support and competence, such as help with optimisation, design and product selection.
Instant high and combined sealing capacity against water, gas, sand and dust.
Flexibility including adaptability through Multidiameter™ Technology.
Ease of installation.



Telecom industry references

AT&T inc, Bharti Airtel, China Telecom, Ericsson, GTL, Huawei, Hutchison, KPN, Motorola, Nokia, Orange, Orascom, Reliance, Siemens, Sprint Nextel, Telecom Italia Mobile, Telefónica, TeliaSonera, T Mobile, Vodafone, ZTE.



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