

Built-in Sealing System Eliminates the Need for External Weatherproofing

One of the most common causes of failure at telecom sites is water leakage. Installers must therefore go to great lengths to seal connectors by taping and applying other weatherproofing materials. But with Exir Broadcasting & Telecoms' products installers need never tape another connector. And as installation is often performed under adverse conditions, such as hanging from a tower while exposed to winds, our products represent the most economically sound investment you can make.

HERE'S WHY ...

Sven-Åke Karlsson of Växjö Radio Systems spells it out in simple terms: "A typical site may have as many as 24 connectors or more, so obviously we save a lot of time, and therefore money, by not having to worry about taping."

Växjö Radio Systems has been working with products from Exir Broadcasting & Telecom for many years. "Without tape," says Karlsson, "not only the initial installation but future service of the site as well is performed much more quickly and easily."

Exir Broadcasting & Telecoms' products are completely waterproof thanks to a unique system of O-rings that seal out water at all critical points within the connector. Manufacturing components in this manner does make them somewhat more expensive in comparison to less sophisticated products. However, the savings achieved through reduced installation time, the elimination of external sealing materials and the avoidance of rebuilds or service due to water damage more than compensate for this added expense.

"Since we began to use Exir Broadcasting & Telecoms' waterproof connectors in 1994, we have not had a single problem with water damage," says Sven-Åke Karlsson.

HOW WATER GETS IN

With simpler products there is a sizeable risk that water and moisture will enter into the antenna system. This can occur in various ways, the most likely of which being through poorly sealed connectors, jumper cables or grounding kits.

External sealants do not protect against moisture that

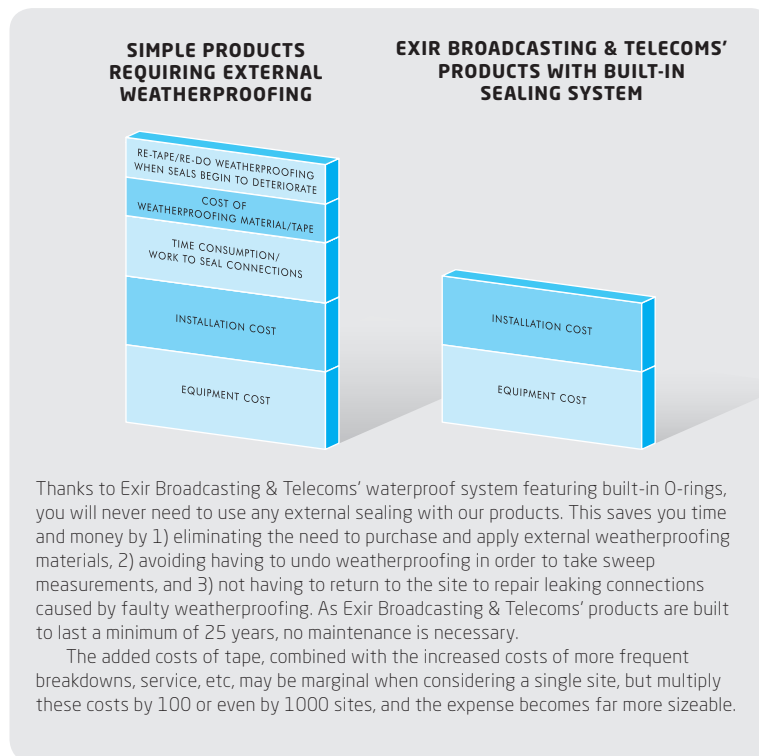
migrates within the feeder system. Water that collects in antenna panels or amplifiers can travel down through the system if the connector interface is not waterproof. Should a crack or hole appear in the feeder cable's plastic jacket, water will enter and travel along the outer conductor to nearby connectors. Exir Broadcasting & Telecoms' built-in O-ring system prevents migration of this kind from occurring inside antenna lines.

COSTLY WATER DAMAGE

The consequences of water leakage incidents can be broken down into four main stages:

- 1. VSWR alarm.** The presence of water in the system increases the amount of power reflected back to the transmitter and decreases output power. To alert the service operator of the problem and to avoid potential transmitter damage, a VSWR alarm lets the operator know when the VSWR has exceeded a preset threshold level.





2. A service team is dispatched to search for faults. The operator can expect costs for travel time and on-site analysis work.
3. Once the failing unit has been identified and located it will have to be replaced. In many cases even the feeder cable will have to be replaced. If for any reason the replacement parts are not in stock, the service team will have to wait for deliveries of both the replacement unit and possibly a new feeder cable. Aside from labour costs in connection with installation, the operator will also suffer the costs of a new feeder cable, connectors, etc.
4. While steps 1-3 are being carried out the operator is losing valuable revenue while the site is 'down'.

FROM THE COLDEST TO THE WARMEST CLIMATIC CONDITIONS

Exir Broadcasting & Telecoms' products are developed to withstand all climatic conditions. They have been designed primarily for the harsh Scandinavian climate, made to function in the freezing cold of near Arctic winters. Our products have been tested for performance in a variety of extreme climatic conditions, from the coldest to the warmest temperatures and at various humidity levels. They are also proven to be dust-tight and able to withstand the pressure of desert installation.

Products from Exir Broadcasting & Telecom are designed to operate problem-free for a minimum of 25 years without any maintenance or any external sealing. Our products have built-in weather protection consisting of O-rings made of EPDM. These O-rings feature completely seamless surfaces, superior workability of the sealing under extreme climatic actions and very good resistance to climatic changes, ozone and UV-radiation. O-rings of this type are used in the most demanding and highly critical applications including nuclear power plants, military uses and various medical equipment.

As our products require no external sealing whatsoever, you will never have to worry about the unnecessary cost, time-consumption and annoyance of taping ever again.

EXCEEDS IP 68

The International Standards IP Protection Classification established by IEC (International Electrotechnical Commission) provides a system for specifying enclosures of electrical equipment on the basis of the degree of protection required. In order to be awarded IP68 classification a product must be able to withstand a water pressure of 0.1 bar for 30 minutes. This corresponds to a depth one metre of water.

Exir Broadcasting & Telecoms' products have been successfully tested to withstand 2.5 bar. This means that they can safely operate at depths of 25 metres under water, which far exceeds the requirements of the international IP68 standard. ■