

## **Distribution board helps keep divers' pressure stable**

AK Air condensation-free IP65 rated distribution boards from Spelsberg have proven themselves on one of the world's most demanding applications, decompression chambers for deep sea divers.

The Bends, or decompression sickness, is one of the greatest fears for all divers. If they rise from great depths too quickly, the decompressing of their bodies as the water pressure reduces can cause gas bubbles to form in their bodies, blocking blood flow and causing cellular damage.

To prevent this, professional divers often prefer to decompress slowly in pressurised chambers. In fact, some divers are so busy that they live in the pressure chamber every day while they are on shift: eating, sleeping and relaxing between dives, rather than risk compressing and decompressing every time.

In essences, there are two type of decompression chambers: those integrated into the design of a divers' support ship as it is built and 'modular' systems, which are designed to be deck-deployed on existing work vessels and can be quickly removed and re-installed on other vessels. The latter are typically 9-12 man systems and fitted with a diving bell which is used to lower the divers to their working depths.

Naturally, the engineering systems that support the decompression chambers have to be completely reliable because lives are at stake. So, when it comes to the electrical systems, only the best equipment will do.

However, there is a something of a dilemma to overcome. Electrical systems need to be kept dry, in a marine environment this is naturally very difficult. Items like distribution boards need to be sealed to IP65, or another similar standard. Of course, electrical equipment warms up when it is in use and cools down when it is not, so inside a sealed box the air pressure will raise and lower, causing moisture to precipitate out onto the colder surfaces.

Spelsberg overcame this problem with the introduction of the AK Air distribution boards range, which is fitted with special air vents to maintain equal internal and external pressures. The units have proven themselves many times in demanding applications in industry and agriculture, indoors and outdoors, in hot climates and cold.

The sea is one of the most hostile environments in which man works, yet the AK Air distribution boards reliably protect the lives of the brave men and women in the saturation chambers.

Chris Lloyd MD of Spelsberg UK says: "You have to admire the divers who put their lives on the line every time they go to work. Supplying electrical equipment for their critically important decompression chambers is a very responsible undertaking, but it is also a privilege."

The AK distribution box design is certified to EN 60670-24. EN 60670-24, which is also known as VDE 0606-24, and establishes special requirements for acceptance of protective devices and similar energy-consuming devices for fixed local electrical installations. The AK Air is for installations with a measured voltage up to 400V and feed current of up to and including 125A.

It has a number of design features that make it easy to install and operate. For instance, there are a number of flange options including smooth and knock-out versions to enable variable cable entry configurations, while the hinged front window has ergonomically shaped grips for simple opening and replacement of door end stops. The internal mounting rail is height-adjustable, allowing easy accommodation of different sized electrical components. It can be used with M50 combination connectors or Schuko sockets, and its three-point- and exterior installation options allow a number of different mounting options.

## **“Space for you”**

Spelsberg's company philosophy is based around the idea of providing flexibility and freedom to its customers. The space provided within each junction box; the large distribution and warehousing space; and the freedom to customise almost any product, irrespective of quantity, all equates to “Space for you”.

## **About Spelsberg**

Spelsberg is one of the largest manufacturers of electrical enclosures in the world. With over 4,000 enclosures available as standard and further customisation possible, it offers solutions for almost any application.

With the largest supply of non-metallic enclosures, ex-stock in the UK, its products are often available for delivery within 24 hours; customisation is possible on any product, including bespoke entries, engraved corporate logos or fitted terminals, within 48 hours. Products can be ordered direct from Spelsberg or from most leading supply specialists including RS, Rapid, Farnell and CPC.

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