

# **Product Bulletin**

# **Retrofit Installation by Diver or ROV**

#### **Background**

With new industry practices and technologies leading to the extension of oilfields, it's not surprising requests to supply retrofit solutions for our Aquasign® underwater marker range have significantly increased. Inspection and maintenance programs highlight damage to identification markings, incorrectly installed signage or an absence that needs to be rectified. In some circumstances, subcontractors have provided cheaper alternatives such as plastic nameplates that do not offer any anti-fouling properties, therefore are now obscured by marine growth and impacting subsea intervention operations.

# **Solution**

In response to the market, AQUASIGN has developed two new retrofit fixing solutions designed for ease of installation using minimal equipment and personnel. Replacement costs are also reduced as signage can be installed insitu rather than having to recover the equipment topside.

Both solutions are manufactured in-house using polycarbonate Shield<sup>TM</sup> II frames, offering an extremely tough and durable solution as well as additional protection of the Aquasign<sup>®</sup> as the sign is recessed within the framework. Polycarbonate has been independently pressure tested to 700Bar (10150psi) without any noticeable deterioration, and approved in temperatures between -51°C to +132°C.

### **Rare Earth Magnet**

The latest innovation to join the portfolio is our magnetic solution, utilising rare-earth magnets that each have a holding force in excess of 100lbs. The Aquasign® marker is supplied encased in the polycarbonate frame that also houses the 45 MGOe magnets. The complete design is customisable to each individual project, including an optional handle to ease the installation. The range is an ideal solution for deepwater operations suitable for basic ROV tooling and multiple installations. Magnets can also be used for inspection point marking, ensuring monitoring and testing can be done in the same place quickly and efficiently with clear identification.

## **Spring Clip**

Our Spring Clip solution is designed for retrofit installations onto tubular-sectioned objects such as pipes, flowlines, power cables, umbilicals and risers. The Aquasign® marker is bonded to a polycarbonate spring clip, which is manufactured to the specific circumference of the tubular to allow easy retrofit installation by ROV or diver. The clip is simply pushed over the pipe, and the neoprene liner gently grips the substrate to ensure no radial movement. The spring clip design is also customisable to each project's requirements, including the option to incorporate a magnet for additional protection.







For more information, visit the AQUASIGN Client Portal at www.aquasign.com.

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