

## DDS - Dual Downhole System Data Sheet

The Dual Downhole System (DDS) consists of two geophone receivers, both fitted with a minimum of 3 geophone elements, separated by a fixed distance. When deriving interval velocities the receiver geometry is extremely important. A fixed receiver separation reduces geometry and trigger errors which can be an issues when using two independent downhole geophones.



*Dual Downhole System (DDS) with two 3 component geophones separated with a 2m interval.*

To aid orientate the receivers a fluxgate magnetic compass is installed in the casing of the low receiver. The heading of the receiver is then reported on a LCD screen fitted in the hub of the cable reel. The pneumatic air line and signal cables are integrated within a jacketed Kevlar weave allowing the tool to be easily deployed by hand. The Kevlar weave also prevents the cable from stretching.

Each receiver is supported against the borehole side wall by a pneumatic bladder. The pneumatic system is adequate for exploration depths of 100m and the air bladders will inflate to fill a 75mm diameter borehole. In larger diameter boreholes spacers can be fitted to the DDS receivers.

The stainless steel receiver casing is sealed to allow the tool to operate in dry or water filled boreholes.

### Product Dimensions

| Physical          | Dimensions (L x W x H) | Weight |
|-------------------|------------------------|--------|
| (instrument only) | 55cm x 50cm x 50cm     | 32kg   |

### Technical Specifications

**Natural sensor frequency:** 15Hz

|                                |                              |
|--------------------------------|------------------------------|
| <b>Sensor arrangement:</b>     | Tri-axial                    |
| <b>Operational depth:</b>      | 100m                         |
| <b>Number of stations:</b>     | 2                            |
| <b>Station interval:</b>       | 2                            |
| <b>Station length:</b>         | 620mm                        |
| <b>Station diameter:</b>       | 65mm                         |
| <b>Station weight:</b>         | 2.5kg                        |
| <b>Cable weight per metre:</b> | 145g                         |
| <b>Cable strength:</b>         | 2150N                        |
| <b>Borehole diameter:</b>      | 75mm                         |
| <b>Clamping system:</b>        | Inflatable bladder           |
| <b>Orientation:</b>            | Magnetic compass (+/-2.5°)   |
| <b>Seismograph:</b>            | Any (requires adapter cable) |