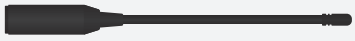
PIPEMINDER ONE CELLULAR SIGNAL GUIDE

Chamber and antenna selection can have an impact on a devices ability to achieve a reliable network connection. The following information should be considered when planning a deployment, or when struggling to achieve a network connection.

ANTENNA SELECTION

The antennas below are suitable for use with **PIPEMINDER-ONE** devices

Standard Omnidirectional



These antennas work well above ground or in chambers under composite / concrete lids. They can work under metal lids ***if*** the signal in the area is strong.

Magnetic Chamber

These are suitable for chambers where ***signal is too weak*** for a standard antenna or where ***metal lids*** are used. Magnetically mount to the top or underside of the chamber lid.

Blade

These work well in buildings or above ground but are generally ***not*** suitable for use in chambers. They include a ***length of cable*** so can be located further from the device.

CHAMBERS

- Good above ground signal is ***required*** for in-chamber signal to be achieved
- Concrete or composite lids allow better signal penetration
- Metal lids reduce the signal strength in the chamber - but ***small holes*** (>25mm diameter), normally found for lifting handles, can help with signal penetration
- Position antennas towards the top of the chamber, ***around 100mm*** from the underside of the lid - where possible, position ***near any holes*** in the chamber lid
- ***Avoid*** placing antennas within close proximity of ***large objects*** that may interfere with the signal
- The standard omnidirectional antenna is sensitive to the sides (***not the top***) so positioning it ***horizontally*** usually provides better results