



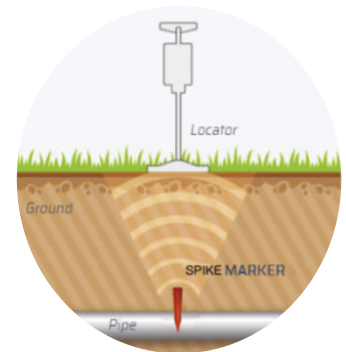
Spike Marker

Spike markers are a compact variety of “electronic resonant marker” similar in operation to Tempo’s “Omni-Marker” products. They work with a special “detector” that “pings” the soil with key frequencies and listens for any resonant response at that frequency. Spike markers provide a more compact form that can be used in slightly different applications. Where “Omni-Markers” contain a self-leveling assembly these are sometimes too large to use in certain applications. A small narrow marker is often needed.

Spike markers are 86mm long in standard form and can be simply placed alongside or “attached to” a buried “utility”. Though there are some key things to keep in mind.

DO

- Place markers above or to the side of key points in utility networks (Tees, splices, valves, and at regular intervals along runs).
- Securely attach markers to the service if there is a chance of future disturbance; SM-FIX is ideal to achieve this on ducts up to 2” (50 mm) diameter.
- The Spike Marker works best when mounted vertically normally detectable to more than one metre deep. But should they be horizontal then they are typically detectable to 0.6 m (2 ft).
- For near-surface applications, the markers can be pushed into the soil as a trench is backfilled or placed directly into softer soil from above whilst following a horizontal drilling operation.
- Expect Spike markers to withstand the same conditions as your buried service; they are made of HDPE (high density polyethylene) and can therefore withstand similar conditions. Treat them with the same respect as plastic splice enclosures or fusion joints.



DO NOT

- **Do NOT:** Strike or hammer the Spike Marker. They may be pushed into soft soil or sand during backfill but never directly hit. They are tightly shut, sealed and impervious to moisture; severe impacts can damage or crack the plastic enclosure.
- **Do NOT:** Place the Spike Marker directly alongside high temperature (>60°C) utilities.
- **Do NOT:** Place the Spike Marker directly alongside metallic pipes or large cables or similar. If marking such services, place the markers 100 mm (4”) to the side or above the service. Placing an electromagnetic marker near metal items causes detuning and reduces working range.
- **Do NOT:** Place electronic resonant markers below “metal lids” (e.g. steel or cast iron) or dense reinforcing bar. These will “screen” the magnetic field and reduce or prevent detection.
- **Do NOT:** Place markers closer together than approximately 300mm (0.33% of their depth, whichever larger) or it will be difficult to pinpoint them when locating.

