UPP™ Piping Detector Tape
Installation Guidelines

This document explains general guidelines for installing and detecting Pipe Detector Tape, and shows examples of a preferred as well as an alternate installation.

**UPP Detector tape serves 2 purposes:**
- To locate the buried pipe runs by using a signal generator and detector as described below.
- To act as a warning indication for digging operations near the piping.

The tape is installed below ground at 250 mm (approximately 10 inches) directly above pipe runs to indicate the position of each pipe.

**Earthing (Ground Connection)**
Both ends of the tape should be earthed when not in use. Ground the stainless steel wires that are embedded in the plastic.

![Detector Tape Preferred Installation](image)

**Note:** Detector Tape is available in 100 meter coils, part number D-TAPE.

For pipe installation, refer to the UPP Piping Installation Guide Overview.

![Figure 2: Detector Tape must be Grounded](image)

Prior to backfill, perform a continuity test on the tape to insure that the detection with a signal generation would work in the future.
Using a Chamber for Detector Tape Earthing (Grounding)
We recommend using a manway, such as Franklin Fueling System’s Probe Access Manhole 20URTATG, or an open-bottom manway such as 781-208-08. The manway should be centrally located and have an earthing rod and connections to the sump’s detector tape.

If using the open-bottom manway, the bottom can be sealed with a cold-pour sealant like CM200PF™ Polyurethane Sealant* to seal against ground water intrusion.

Detector tape should pass under any end UDC frame and be earthed (see Figure 3)
Detector tape should pass either around or under any intermediate UDC
Minimum distance of 250mm above pipe run.

An earth source must be supplied in an inspection pit for grounding the detector tape

**Figure 4: Detector Tape Installation Overview**

Preferred Installation (provides pipe detection and pre-warning for excavation)
The preferred installation places the tape over the piping and follows the dimensions shown in Figure 1.

**Figure 5: Preferred Installation of Detector Tape**

Note: In Figure 5, green detector tape is provided by Franklin Fueling Systems. Red tape is by others.

* CM200PF is a registered trademark of CM Sealants
Alternate installation (provides pipe detection)
The alternate installation will allow the piping to be located, but will not provide early warning in a digging operation.

![Figure 6: Example of Alternate Installation](image)

Using a Signal Generator
Follow the Signal Detector Instructions included with the unit.

When using a detection tool, disconnect the near end of the detectable tape from the grounding point to allow the red cable from the transmitter to be connected to the tape and the black cable from the transmitter to be connected to the grounding point.

Keep the far end of the tape grounded to give the highest signal strength. The earth spike should be as far away from the trace path as possible at a 90 degree angle.

Use the lowest frequency possible from the transmitter around 577 Hz or 8 KHz to eliminate coupling to other grounded cables.

Use the receiver to follow the path of the tape to locate the buried pipe. Follow directions included with the pipe-detection equipment.

![Figure 7: Using a Signal Generator](image)

The signal generator and detector should be locally sourced

Use the type typically used by utilities companies for locating underground cables.