

3M™ Electronic Marking System (EMS) iD Ball Marker

Installation Instructions

1.0 Introduction

- 1.1 3M™ iD Ball Markers provide an accurate, convenient, long lasting method of marking underground facilities during construction or maintenance. They also make the job of precisely locating underground facilities easier. Other buried markers can be disturbed by backfill dirt or installed improperly so they don't stay positioned correctly. The 3M iD Ball Markers unique self-leveling design ensures the marker is in an accurate, horizontal position regardless of how it is placed into the ground. 3M iD Markers enable you to return to the exact location of the marked underground feature and ensure positive identification by reading the stored data and unique serial number in each iD Marker. Unlike surface markers such as stakes, flags or paint, the iD Ball marker cannot be inadvertently moved or worn away by weather.

2.0 Removable Identification Number Tag

- 2.1 Prior to burying the iD Marker, remove the identification number tag and attach it to “as-builts”, or facility documentation, as required by company procedure.

3.0 Writing Information to iD Markers

- 3.1 If the iD marker is intended to contain specific facility information, write the information to the iD marker prior to burying using one of the 3M™ Dynatel™ M-Series iD version locators (see list below).
- 3.2 Hold the 3M™ Dynatel™ M-Series iD Locator receiver over the top of the iD marker. The maximum distance between the marker and the locator tip during writing is 12 in. (30 cm).
- 3.3 For iD Marker writing instructions, please refer to the following Operator's Manuals: 3M™ Dynatel™ EMS-iD Locator 1420, 3M™ Dynatel™ Cable/Pipe/Fault Locator 2250M/2273M Series or 3M™ Dynatel™ Cable/Pipe/Fault Locator 2550/2573 Series.

4.0 Installing the iD Marker

- 4.1 Before placing the iD Marker over the key point of the facility, decide if a tie down procedure is necessary to keep it in place. If so, secure the iD Marker by inserting a cable tie through one, or both, tie down tabs on the iD Marker and the key point (for example, pipe, cable or splice).
- 4.2 If the key point is metallic, it is recommended that the iD Marker be separated from it by a minimum distance of 4 inches (10 cm) of clean fill dirt.
- 4.3 If the key point is non-metallic, place the iD Marker over the desired location.

IMPORTANT: The iD Ball Marker cannot reliably re-radiate the locator's signal at a depth greater than 5 feet (1.5 m). If using an E-model locator in countries following CE limitations, or equivalent, the maximum depth is 4 feet (1.2 m). This is the maximum allowable distance between iD Ball Marker and the locator tip.

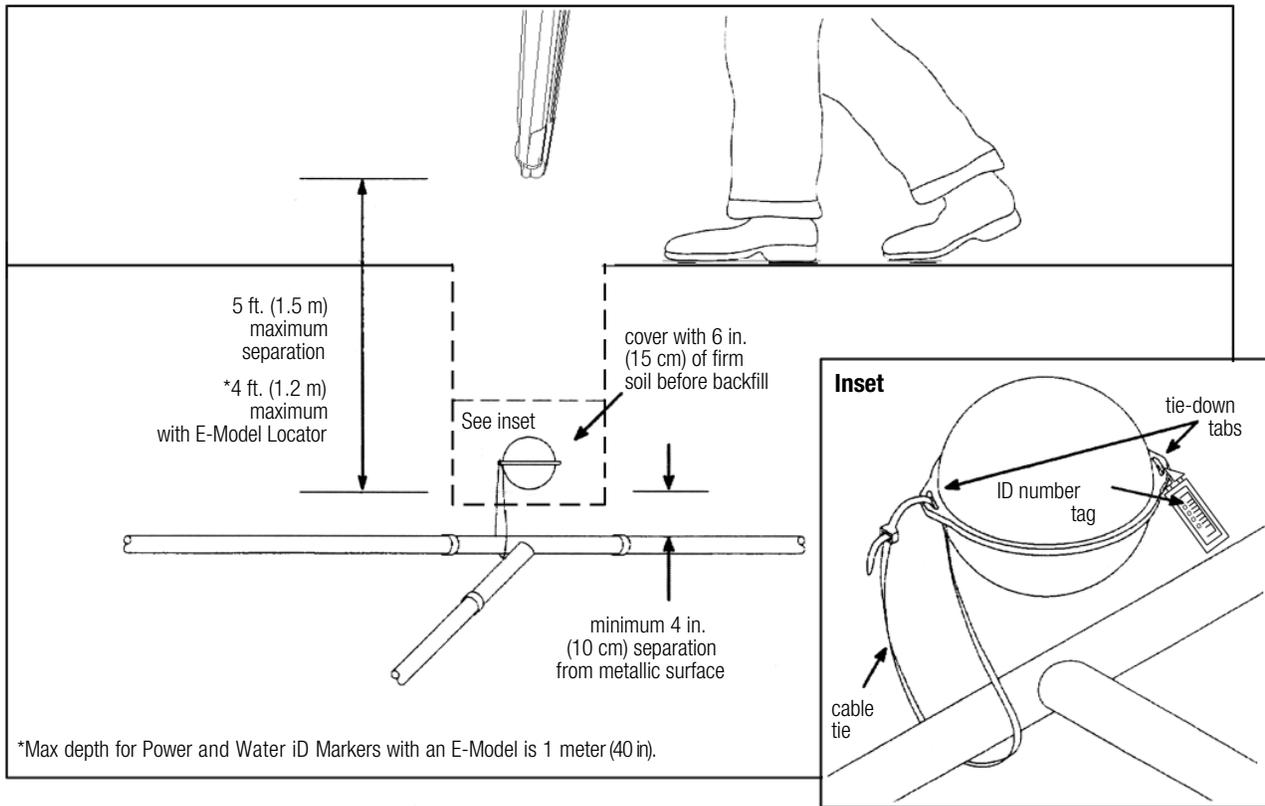
- 4.4 Hand fill at least 6 inches (15 cm) of soil over the iD Marker to prevent movement, or damage, during backfill.
- 4.5 Backfill the hole.

5.0 Specifications

Specifications

Read Depth (max)	
Locator, US-Version	5 ft (1.5 m)
Locator, E-Version	1.2 m (48 in) (Telephone, Gas, Waste Water, Communication) 1.0 m (40 in) (Power, Water)
Program Distance (max)	12 in (30 cm)
Vertical Separation from Facility (min)	4 in* (10.4 cm)
Horizontal Separation from Facility (min)	4 in* (10.4 cm)
Distance Between iD Markers (min)	3.5 ft (1.06 m)
Marker Diameter, Sphere	4 in (10.4 cm)

* Target size and material dependent. Depth estimation may be adversely affected when placing the marker above a large metallic object, such as a manhole cover. To improve depth estimation accuracy, increase the vertical separation from the metal object or perform a field test for depth accuracy.



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