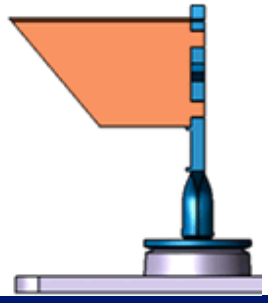
RAIL EDM TARGET



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The EDM Target - Introduction

The EDM Target system is an innovative product design which offers safety and efficiency gains for engineers working in the rail industry. The features of the EDM system benefit engineers by providing a simple to use, durable and high accuracy system at a reduced cost.

What is the EDM Target system ?

The target comprises of five components as can be seen in the image on the right. The components are:

- **Base Plate** — Fixes EDM Target system to rail and when applied with approved adhesive, will securely adhere to any surface, wet or dry.
- **Target (or flag)** — Provides a high quality reflective surface which can be easily targeted by the EDM system. The target has twelve directional settings so the flag can be positioned and repositioned to face any direction without disturbing the base.
- **Hood** — Reduces glare from light source other than EDM and protects surface of prism from rain and debris prolonging the efficient operating life of the target.
- **Wedge** — Snaps into the base plate and positions the prism at the optimum reflective angle on high canted rail. The same mechanism is used to improve the accuracy of acute angle close proximity readings.
- **Plug** — Should a site lay dormant for a long period, the flags and prisms are removed and the plug applied. This protects the base plate from damage and fowling indefinitely. A site can the be reopened at any time without additional effort - **The Plug is optional.**

Construction Materials and Detail

The EDM Target system has undergone rigorous product development and testing procedures and as a result each element is constructed from the most appropriate material for the task. Throughout the product attention to detail

and innovation along with a pragmatic approach resulting form first hand experience of the rail engineering industry have informed the development of the component parts.

The base plate is made of a semi-porous polymer, which is light, easy to use and very durable. It's design includes eighteen holes which allows the adhesive to move through and over the base, greatly increasing adhesion. This prevents movement and avoids unnecessary re-fitting of targets.

The target has a section designed for an engineer to add a code or reference (as shown in the image on the right). This reduces errors during both setting-out and general operations. In the event of damage to the target the flag is easily detachable from the base plate. This eliminates the need for staff to reposition and re-secure the target to the rail. Staff can then continue to use their existing base readings, which cuts down on the need for temporary possessions (T2s).

Components

The flag:

Made of the same material, clips easily, and securely into the base plate. If the target is damaged a new flag can be easily clipped into the existing base plate eliminating the need to recalculate your base readings.

The flag prism:

The renowned M3 LDP 3971, giving you the highest level of reflectivity ensuring the most accurate readings possible in all conditions. In addition the prism is 28mm2 which is much bigger than other market offerings. They come already printed with crosshairs and are plastic backed to eliminate corrosion; a deficiency in other metallic backed targets which gradually loose reflectively.

The wedge: Snaps into the base plate and positions the prism at the optimum reflective angle on high canted rail. The same mechanism is use to improve the accuracy of acute angle close proximity readings. The two images on the left show and the one below illustrate the types of settings that can be achieved using the wedge and the adjustable positioning of the flag on the base plate.

The hood:

Designed to reduce the amount of fowling on the prism. It also stops rain distorting readings. Over the course of a contract the hood produces significant savings by reducing cleaning requirements by 70%. This also reduces the

need for T2s. The Hood is highly recommended for TBM and long distance readings where reducing the amount of distortion, reflection and refraction caused by moisture and fowling is vital.

Compatibility is maximized in our system. The target has marks on the flag that enable the use of manual targeting laser levels. The day glow yellow colour of our target helps the operator to locate the targets.

Safety is a key consideration and one of the driving forces behind the development of the EDM Target system even down to the Day-Glo bright colour and high visibility of the targets also help to prevent them from becoming a tripping hazard.

Using the EDM Target System

The EDM Target system is easy and safe to use. It can be applied in any condition and adapted to meet the requirements of the track and the environment in the location concerned.

Step One — The base plate is affixed to the rail using approved adhesive and positioned on the wedge where necessary.

Step Two — The target or flag is attached to the base plate in one of the sets of slots appropriate for the angle from which readings will be taken.

Step Three — The hood is positioned around the target to shield the target prism and protect it from fouling.

A Safer System of Work

The image to the right shows engineers taking CANT readings whilst standing in the 4-foot during a T12 possession in the traditional fashion. In this scenario the engineers would be working in a green zone with all the extra manpower that this system requires.

Despite the industry standard safety procedures it is still safer for workers to be at least ten feet from the rail.

In the image to the left an engineer can be seen taking the same readings whilst the line is in use without inhibiting rail traffic. The target allows all track monitoring work to be undertaken in a position of safety with the minimum amount of disruption and far fewer staff involved in the process.

Of course, In situations where monitoring of electrified rail is required, risk is increased and an even greater care is required from all involved. The system reduces risk with the quick and easy installation of the targets. This accompanied by an extremely low maintenance schedule produces a far safer system of work.

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