



**Company Name** Eclipse Magnetics

**Location** Sheffield, UK

**Industry** Magnetics

**Products Supplied** Baty SM350 FT2-E

### COMPANY BACKGROUND

Based in Sheffield with offices across the world, Eclipse Magnetics manufactures a wide range of high performance magnetic materials and finished products and magnetic assemblies, including neodymium magnets, samarium cobalt magnets, ferrite magnets and alnico magnets. Extensive facilities allow Eclipse Magnetics to provide customised magnetic assemblies design and build solutions working to precise client specifications, as well as a range of over 20,000 off-the-shelf standard magnetic products which are available in stock.



### APPLICATION BACKGROUND

Bowers Group has provided Eclipse Magnetics with a Baty SM350 FT2-E Profile Projector and Fusion Software for the accurate testing of tolerances on a range of magnets and magnetic components. As leading experts in magnetic technology, Eclipse Magnetics manufactures a wide range of high performance magnetic materials, finished products, and magnetic assemblies, as well as a range of over 20,000 off-the-shelf standard magnetic products available in stock.

The Baty SM350 FT2-E Profile Projector has greatly improved Eclipse Magnetics' quality inspection capabilities. As well as checking the tolerances of stock parts, Eclipse Magnetics regularly uses the profile projector to measure fundamental components that make up liquid filters; high intensity magnetic separators used in pressurised transfer lines for the food industry. One of the components regularly tested is a collar that fits onto a length of magnetic tubing. The precision and accuracy of this collar is imperative to the secure reinforcement of this tubing, and a key factor in the effective operation of the product. Tolerances are tight, and therefore, precision measurement is key.

The Baty SM350 FT2-E Profile Projector is also used to measure magnetic blocks and disks that are used as part of OEM magnetic assemblies for a variety of industries that typically require extremely strict tolerances. Ensuring precise sizing, traceable reporting, and tolerance conformity is, therefore, imperative. Customer demand for FAIR reports has also been satisfied with the Fusion Software, delivering a traceable reporting system that offers customers evidence of tolerance parts.



Eclipse Magnetics Quality Engineer Paul Hampson said: "The Baty SM350 FT2-E Profile Projector has enabled us to measure complex shapes, radii and angles, which we have never had the capability to measure before. Although we have always been confident that our products are highly accurate and meet stated dimensions, the assurances we get from the Baty SM350 FT2-E Profile Projector allow us to provide concrete evidence to our customers. In the unlikely event that discrepancies are raised, we can produce reports to show that we have met the highest quality standards."

The accurate testing of tolerances on stock parts is a necessity for ensuring Eclipse Magnetics' high quality standards. In addition, ensuring the tight tolerances of key components that make up Eclipse Magnetics' products is not only imperative to the reliability, safety and operation of the products, it is also necessary to provide customers with assurances that quality standards are met and tolerances are proven.

The readings obtained from the Baty SM350 FT2-E enables Eclipse Magnetics to prove to customers that components are within quoted tolerances. The addition of the Fusion Software to the profile projector also enables Eclipse Magnetics to generate graphical representations and instant detailed reports showing the feature name, nominal dimension, actual, error, upper and lower limits, including a green pass or red fail label for each measured dimension in tabulated format. Geometric tolerance details can also be displayed along with a thumbnail view of the part and batch/customer information, and the entire report can be duplicated as an Excel workbook for email purposes.



**"The assurances we get from the Baty SM350 FT2-E Profile Projector allow us to provide concrete evidence to our customers"**



Paul Hampson continued: "The measurement accuracy of the profile projector is reliable and consistent. The unit is also very user friendly and requires minimal training. As a validating and checking tool it's perfect for us; the accuracy it provides and is capable of achieving is absolutely outstanding."

Eclipse Magnetics has over 100 years of experience in the design and manufacture of high performance magnetic systems, serving worldwide markets with innovative solutions such as Industrial Filtration, Foreign Body Removal, Customised Magnetic Assemblies, Lifting and Handling, Workholding, Workshop Tools and Heating System Filtration.

Eclipse Magnetics' magnets and magnetic assemblies are widely used in a wide variety of industries including automotive, food, steel, communications, aerospace and engineering, as well as in commercial office and retail premises. Eclipse Magnetics also has considerable expertise in producing magnetic assemblies for the electronics, automotive, aerospace, pumps, audio equipment, sensors and security sectors.