

# Clamp Beam

Signalling



The Pandrol Clamp Beam Balise Mounting System (BMS) is used to install balises (transponders) into track securely and efficiently.

Balises are used as beacons on European Train Control Systems (ECTS) to provide data through communication with train borne receivers. Their accurate positioning and secure fitting are vital to ensure the reliability of the safety critical data they transmit.

The Clamp Beam is mounted between sleepers on ballasted or slab tracks and is retained by clamping to the feet of the running rails. Its design ensures that balises are installed in a compliant position, significantly simplifying the installation process and saving time and money. The Clamp Beam has been developed to withstand the adverse track environment and has passed rigorous approval tests. Over 40,000 have been installed worldwide.

## → TECHNICAL FEATURES

### **Compatibility**

The Clamp Beam is compatible with a range of track formations and with Siemens, Alstom, Bombardier and Hitachi balises (although it is not limited to these balise types). It can be installed onto any combination of sleeper types and directly to the rail foot.

### **Resistance**

It is shock and vibration resistant to EN50125-3. It also has high resistance to chemical and climactic changes.

### **Non-conductivity**

The Clamp Beam's non-conductive design ensures that it does not interfere with existing signalling systems.

### **Secure fastening method**

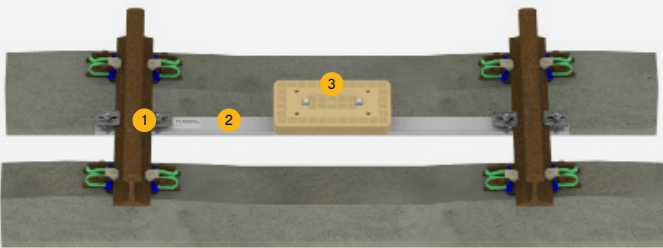
Its proven secure fastening method comprises a glass reinforced plastic (GRP) beam with stainless steel clamp components.

### **Vertical adjustment**

When installing the Clamp Beam, there is no need to modify the track or drill into concrete sleepers. It is installed using commercially available hand tools – no power tools are needed. Installation, repositioning or removal typically takes less than 10 minutes per balise.

→ ADVANTAGES /

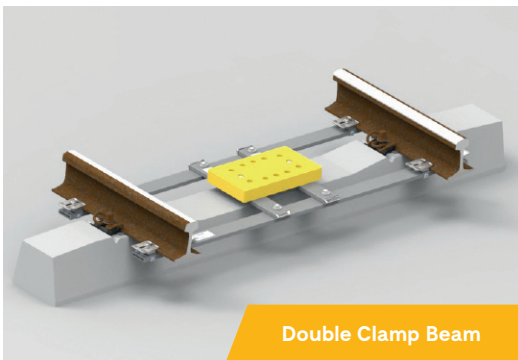
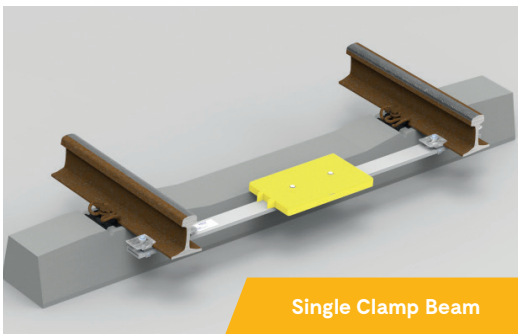
- The Clamp Beam is simpler to install, reposition and remove than other products. Eliminating the need for drilling into concrete sleepers, digging ballast and tamping saves time and reduces labour costs.
- Additional money is saved because the need for track possession during installation is eliminated or reduced.
- When balises are installed using the Clamp Beam, lifetime ownership costs incurred as a result of repositioning for verification trials and maintenance are significantly reduced.
- No specialist equipment or power tools are needed for installation. The Clamp Beam's simple, non-intrusive installation can be done using commercially available hand tools.
- It can be used in a wide variety of settings. It is compatible with a range of track formations, sleeper types and balises, and can be installed directly to the rail foot.



→ COMPONENTS /

1. Stainless Steel yoke
2. GRP beam
3. Balise Transponder (supplied and installed by customer)

→ INSTALLATION /



→ SPECIFICATIONS /

Environment Specifications		
Temperature	-40 to 55 °C	DIN EN 60068-2-1 DIN EN 60068-2-2
Temperature cycling		DIN EN 60068-2-14
Humidity	90-100 % Rh @ 55 °C	DIN EN 60068-2-14
Vibration and shock	EN50125-3-On Rail Levels	DIN EN 60068-2-64 DIN EN 60068-2-27
Fire retardancy	UL94-V0	
Electrical isolation	BS EN 13146-5:2012	

→ APPROVALS /

- Germany – EBA
- Switzerland – BAV
- Finland – RHK

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