Precast Advanced Track Ltd
next generation slab track technology

PCAT Heavy Rail Slab
PCAT Rail Slab

Precast Advanced Track Ltd (PCAT) is a British company offering an innovative range of slab track systems for the 21st Century, combining safe and rapid construction methods, with reduced maintenance requirements for lowest whole life cost.

Design Features

The distinctive edge beam profiles of PCAT slabs provide a high modulus, stiff, yet light weight structure. This reduces concrete costs and carbon impact whilst making handling simpler and safer for rapid construction. The integral drainage ducts allow management of surface water, whilst service ducts keep cables secure. The unique PCAT jointing method allows rapid construction without in situ concrete, and enables slabs to be lifted or replaced easily.

Concrete Technology

PCAT modular slabs are manufactured from high strength concrete reinforced with macro synthetic fibres, eliminating stray current leakage issues and improving durability.

Applications

- Track Lowering
- Tunnels and Underground
- Track Renewal & Replacement
- Switches & Crossovers
- Poor Ground Conditions
- Upgrading Ballasted Track

PCAT Systems Incorporate:

- Precision precast slabs
- Unique post tensioning system
- Containment upstands
- Integrated alignment of slabs

- Fine adjustments in the fittings
- Integrated drainage
- Secure cable ducts

- Fast but safe mechanised construction
- High quality off site modular manufacture
- 120 year design life
- Low maintenance, maximising track capacity
The construction of PCAT Rail slabs means there are opportunities for ducts and drainage channels to be incorporated into the slabs without detriment to the long term performance of the slab. This means features such as drainage can be incorporated, diverting water to suitable points and avoiding it soaking into the ground below the track. In addition, longitudinal large diameter ducts in the upstands can be used for cabling, reducing the risk of cable theft.

PCAT Rail slab track system is designed to remove the cost and disruption of repetitive maintenance of ballasted track, reducing costs and ensuring that lines remain operational for greater periods. In addition, it is the only slab track system that allows subsequent access to the track foundation should it be exceptionally required over the long term. The PCAT jointing system allows for slabs to be quickly disconnected, removed and replaced with minimal disruption.

PCAT Systems
There are PCAT solutions for:
- Heavy Rail
- High Speed Rail
- Underground
- Tram Train
- Light Rail
- Ultra Light Rail

Services & Security
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