

Delta™ Bridge System

The long-span solution of choice



Introducing our premium, long-span modular bridging system.

The Delta™ combines the best in off-site fabrication with high-speed construction and rapid installation to provide a long-span permanent solution, ideally suited for main highways and rural roads.

Pre-engineered to superior quality, the Delta™ uses standardised, interchangeable steel components with full highway loading capability to provide a permanent, steel bridging solution which can be configured for clear spans of up to 100 metres. It can also be supplied in multiple spans, supported on intermediate piers, meaning that there is no limitation to the length it can bridge.

The Delta™ is precision-engineered and therefore quickly and easily installed, with minimal construction equipment. This offers significant advantages over more traditional solutions, such as concrete bridges, which require skilled labour and heavy-duty equipment, and necessitate long lead-times together with major on-site construction work.

The benefits offered by the Delta™ therefore ensure quick, safe and efficient project delivery, reduce project risk, and deliver substantial savings, making it the preferred long-span solution of choice for customers all over the world.

Benefits

- ✓ Suited to long clear spans of up to 100m
- ✓ Designed to suit high-fatigue, permanent applications
- ✓ Pre-engineered and modular to enable accelerated construction
- ✓ Lightweight design to minimise construction costs
- ✓ Configured for single or multiple-lane highway applications
- ✓ Features standardised components for ease and speed of assembly
- ✓ Installed using proprietary cantilever-launch or lift-in method for trouble-free installation
- ✓ Installed using minimal specialist equipment, locally-sourced, to minimise on-site works and disruption
- ✓ Hot-dip galvanised for long life with minimal maintenance requirements
- ✓ Delivered in standard ISO containers to facilitate ease of transportation and on-site storage
- ✓ Available in multi-span configurations for optimum versatility
- ✓ Installation overseen by a specialist instructor for peace of mind



Pre-engineered for permanent highway applications

Key features of the Delta™

The Delta™ Bridge System is a steel truss bridge, which is fully pre-engineered. It features an innovative connection system, which enables rapid assembly and installation, negating the need for any on-site welding or heavy cranes.

The Delta™ can be configured for a wide range of applications, and features a range of panel and chord types to suit all load, span and width requirements.

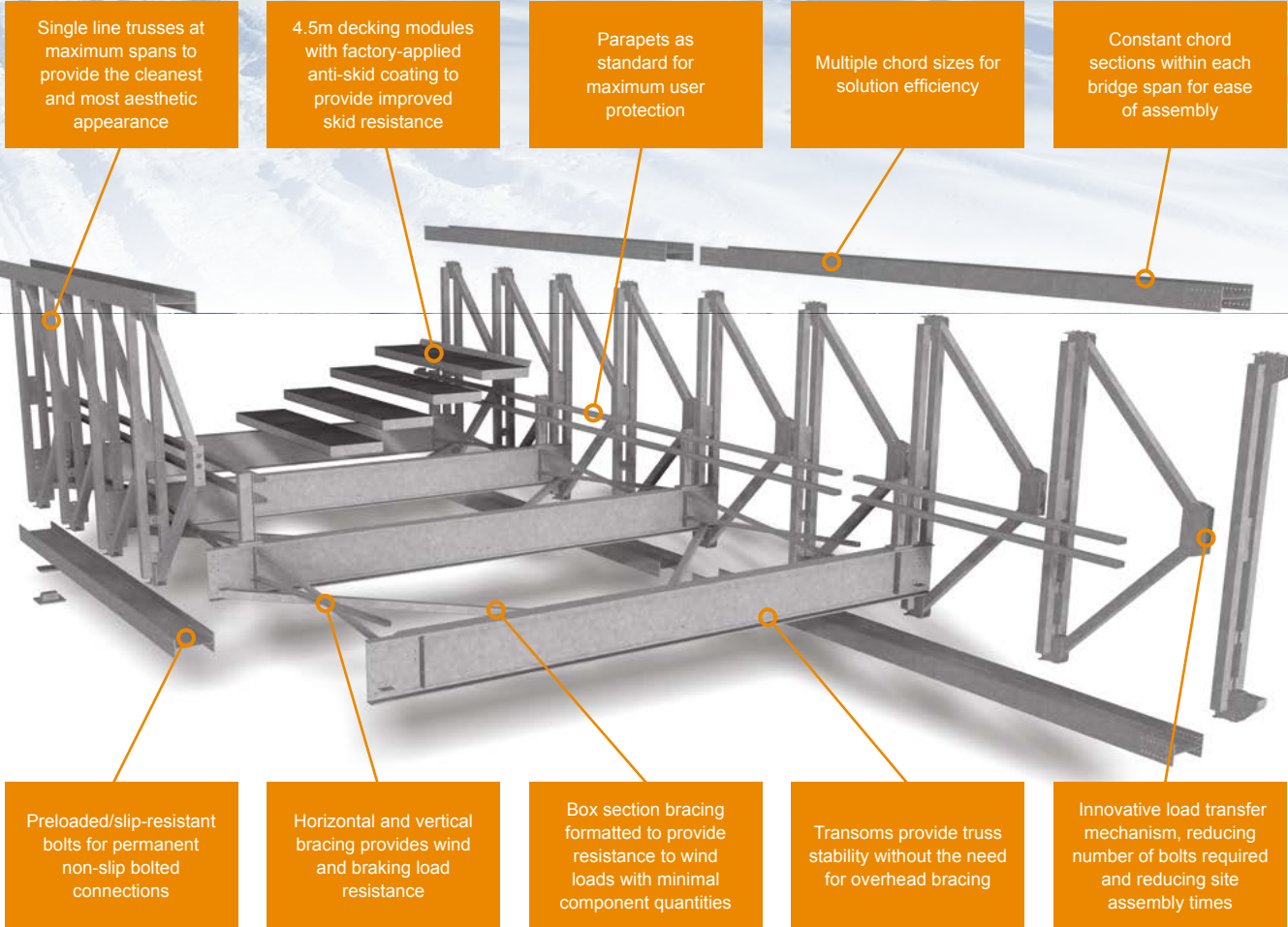
It can also accommodate a wide range of international vehicle load and parapet standards.

- Key features of the system include:
- ✓ Clear spans up to 100m
 - ✓ 4.5m module length
 - ✓ 4.2m (extra wide), 7.35m (2 lane) or 10.5m (3 lane) carriageways
 - ✓ Optional 1m or 1.5m pedestrian walkways
 - ✓ Optional bespoke safety infill system (SmartEdge™) for walkways
 - ✓ Vehicle parapets as standard
 - ✓ Full highway load-carrying capability
 - ✓ Full-scale tested
 - ✓ Pre-cambered to remove dead load deflection
 - ✓ Proprietary steel decking system featuring pre-loaded/slip resistant bolts
 - ✓ Factory-applied anti-skid or site-applied asphalt-surfacing
 - ✓ Steel sub-grades suitable for cold climate applications (AASHTO Zone 3)
 - ✓ Seismically robust

The Delta™ can be configured to suit extremes of temperature, high windloads, and seismic requirements, as well as special load requirements, making it a superior, safe and highly-versatile long-span solution.

Key design features include lightweight construction, an innovative connection system and a high-performance proprietary steel decking system, all of which deliver outstanding safety and structural integrity.

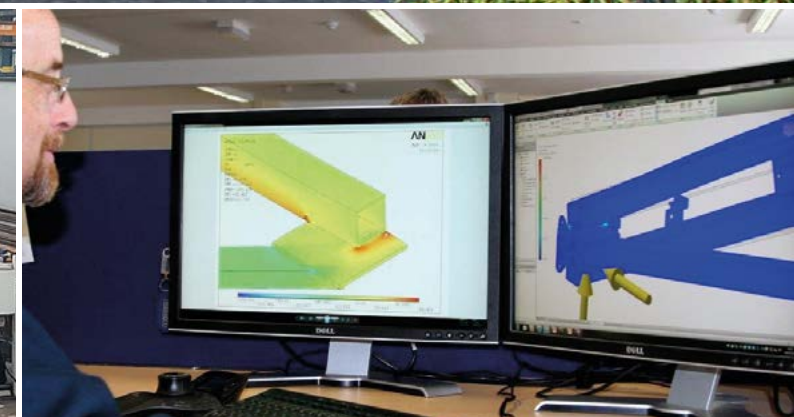
The Delta™ system also benefits from a positive camber, resulting in superb aesthetics and performance.



Expertly manufactured to world-class standards

Mabey Bridge leads the way in long-span modular bridging. We have unparalleled expertise in long-span bridge design, test and manufacture, and vast international experience in the construction and installation of long-span bridging projects, world-wide.

The Delta™ harnesses years of innovative product development, such as modular steel decks, anti-skid surfacing, and the use of high quality materials, to create a premium bridging system, which delivers outstanding safety, reliability and structural integrity, making us the long-span solution-provider of choice.



Digitally designed

Mabey Bridge's products are digitally-designed and engineered. Design accuracy informs our manufacturing processes, ensuring lean, cost-efficient and safe manufacture to tight project timescales. We use the latest digital tools and technologies, including Augmented Reality, Virtual Reality and BIM, to provide our customers with a unique, collaborative 3D design experience which is world-leading and the most intelligently integrated in the modular bridging industry today.

Responsibly sourced

All our structural components are manufactured using certified, 100% recyclable, high-grade steel and are hot-dip galvanised to international standards to create a robust product which can endure the severest of environments, with low-maintenance requirements through-life.

Robotically manufactured

Mabey Bridge is accredited to international standards ISO9001 and 14001 and our products are all robotically manufactured to tight tolerances in-house. This ensures the highest quality of manufacture and repeatability, and guarantees rapid, trouble-free assembly and installation on-site. We also utilise proprietary in-house processes to provide a premium quality of anti-skid deck surface on our bridges.

Full-scale tested

All Mabey Bridge's products are engineered to deliver the highest levels of safety. We utilise in-house full-scale testing facilities, Finite Element Analysis and sophisticated inspection techniques to test complete bridges. We also test individual components, in order to verify design calculations and fatigue characteristics, to prove the structural integrity of our products.

Enabling quick, safe, efficient installation

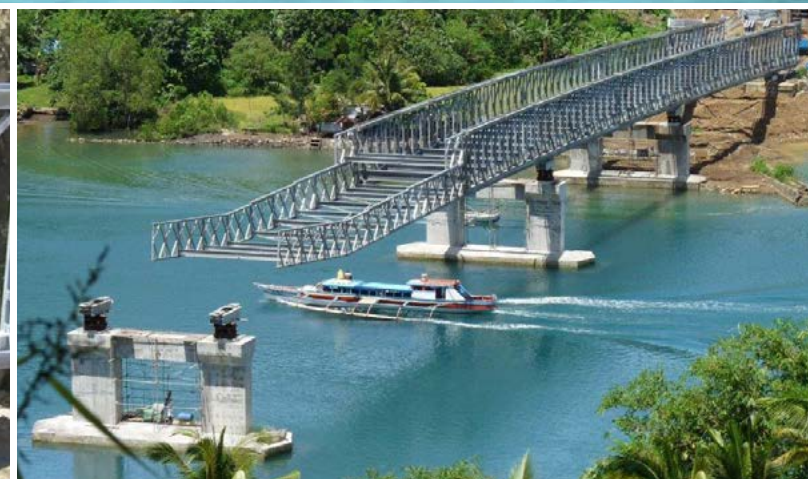


The Delta™ has been engineered to enable trouble-free installation over wide wet and dry gaps. Delivered containerised onto site, the bridge components are manoeuvred using light plant, and construction of the final bridge is easy – the units just bolt into place.

The system has been carefully designed to accommodate a custom launch system, including rollers, as well as a re-usable launch nose. These launch components enable the assembled structure to be smoothly launched into place using the cantilever method; the bridge is assembled on one side of the gap and pushed out across the gap until it reaches the far side.

The Delta™ is a light superstructure and spans can also be craned into place, dependent on the application. Furthermore, spans can be combined to construct a multi-span bridge, which is particularly beneficial for long-span projects in difficult or remote applications..

Mabey Bridge's expertise goes far beyond design and manufacture. We pride ourselves on the comprehensive bridge installation advice we offer our customers in support of their project to ensure their bridge installation is rapid, safe and trouble-free; our qualified bridge installation advisors are experts in site reconnaissance, planning, logistics, infrastructure development and installation, and have overseen the installation of thousands of bridges worldwide.





Bruhman, Canada



Sula, Philippines



Swat, Pakistan



Luinha, Angola



Caroni, Trinidad and Tobago



Quezon Aliaga, Philippines

For multiple applications worldwide

The Delta™ Bridge System is a superior bridging solution which has been supplied to numerous customers all over the world, from Canada to Chile and from the Philippines to Pakistan and beyond. It is ideally suited to main highway and rural road applications, and is the long-span solution of choice for regional and national road authorities, and other customers, worldwide.



About Mabey Bridge

Mabey Bridge is a leading international provider of high-quality modular steel bridging solutions. We specialise in rapid-build, pre-engineered modular steel bridges to enable accelerated bridge construction and improve connectivity in urban and rural areas. We also deliver bridging solutions for the transport, construction, oil and gas, and mining sectors, as well as for specialist military applications, humanitarian emergencies and disaster relief.

Mabey Bridge, (an Acrow Group company), is based in Gloucestershire, UK and has supplied modular bridging solutions to over 150 countries worldwide.



an Acrow Company

**Mabey Bridge, Unit 9, Lydney Harbour Estate
Lydney, Gloucestershire GL15 4EJ, United Kingdom**
Office: +44 (0)1291 623 801 Email: mail@mabeybridge.com
www.mabeybridge.com

