

MyArch Group

LS Girder

**Your Innovative Long Span Segmental Girder
Solution Provider**

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Introduction

Step into a world of visionary innovation with the **LS Girder** brochure – an exploration into the future of construction. This brochure is your gateway to uncovering a groundbreaking solution that is redefining the very landscape of building. **LS Girder** embodies meticulous precision engineering, operational efficiency, and unwavering commitment to sustainability, all made possible through a strategic partnership spanning continents.

At the heart of this innovation is the dynamic collaboration between **MyArch Group** and our esteemed South Korean Technical Partner, **RNB ENC**. This partnership has harnessed the collective expertise and technological advancements of both entities, creating a bridge system that elevates Malaysia's infrastructure to new heights.

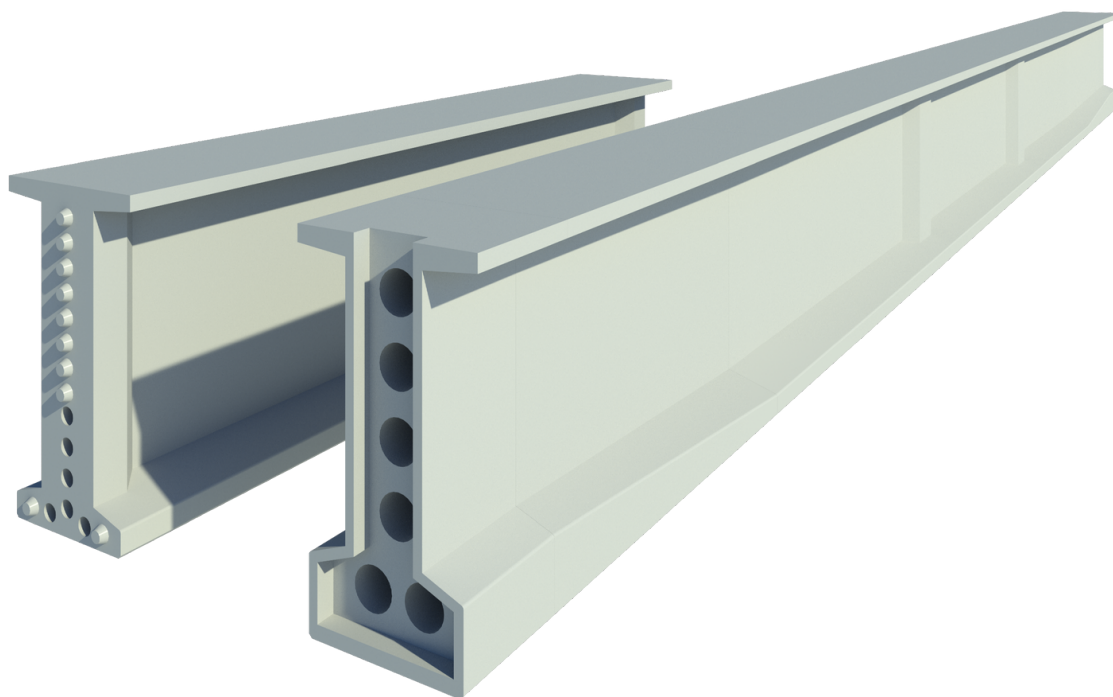
As you immerse yourself in the pages of this brochure, you'll discover that **LS Girder** is much more than a bridge-building solution – it's a testament to ingenuity, a conduit for progress. From gracefully spanning waterways with elegance to elevating highways with confidence and crafting pedestrian structures with finesse, **LS Girder** transforms conventional bridge construction into an art of seamless connectivity and enduring reliability.

Our partnership with **RNB ENC** adds a unique dimension to **LS Girder's** story. By seamlessly blending South Korean innovation with Malaysian ingenuity, we've created a bridge system that is not only advanced but also adaptive. **RNB ENC's** technical prowess and proven methodologies amplify **LS Girder's** engineering excellence, ensuring each bridge is not just a structure but a representation of our collective commitment to redefining construction norms.

As you journey through these pages, you'll unveil the remarkable features, undeniable benefits, and the collaborative spirit that has driven **LS Girder's** development. It's not just about constructing bridges; it's about forging a legacy of innovation, strengthening connections, and propelling possibilities. **LS Girder** is a testament to what can be achieved when minds from different corners of the globe converge for a common vision.

Join us on this expedition through **LS Girder's** capabilities, and explore the synergy between **MyArch Group** and **RNB ENC** that's shaping the infrastructure of tomorrow. This isn't just a brochure; it's a glimpse into the future where global collaboration, innovation, and a shared commitment to excellence lay the foundation for an infrastructure landscape that knows no bounds.

Leading the Future of Bridge Engineering: **LS Girder Solution** by **MyArch** and **RNB**



In the dynamic realm of bridge engineering, the collaboration between **MyArch Group** and **RNB ENC** takes center stage, introducing the **LS Girder Solution**—a paradigm of innovation, sustainability, and operational efficiency.

The **LS Girder Solution**, meticulously crafted by combining **MyArch Group's** inventive prowess and **RNB ENC'S** technical mastery, marks a groundbreaking era in bridge construction. Seamlessly fusing cutting-edge design and advanced engineering methods, the solution stands as a testament to sustainable progress. This collaborative endeavor shatters conventional limitations, heralding a transformative wave in bridge engineering.

Tailored for diverse applications, the **LS Girder Solution**, curated by **MyArch Group** and **RNB ENC**, effortlessly blends aesthetics, functionality, and sustainability. It redefines conventional construction norms by minimizing on-site work, enhancing safety through controlled manufacturing, and significantly reducing environmental impact.

Join us in embracing a journey toward a resilient, interwoven infrastructure landscape. Discover how the LS Girder Solution, an outcome of the synergy between **MyArch Group** and **RNB ENC**, is not just shaping bridges but sculpting a greener and more sustainable future for bridge engineering.

Redefining Bridges with Cutting-Edge Innovation

A Bridge Industrial Building System

LS Girder redefines bridge construction with its innovative industrial building system. Precisely crafted **LS Girder** segments produced in a controlled factory environment minimize on-site work, ensuring efficiency and reliability while reducing uncertainties.



A Cost-Effective Solution

Experience the simplicity of **LS Girder**, a bridge construction solution that maximizes cost control. With **LS Girder** segments precisely created in a controlled factory, you'll enjoy faster construction, fewer piers, and smoother processes, all of which contribute to a cost-effective bridge-building experience.

A Solution with Minimal Maintenance

LS Girder presents an exceptional solution with minimal maintenance requirements. Engineered using G85 (high performance) concrete, renowned for its remarkable durability, LS Girder ensures an extended service life and reduced maintenance needs. This innovative choice guarantees a bridge solution that stands the test of time, providing lasting value and reliability.



Tailored LS Girder Solutions for You

Central to our approach is the dynamic collaboration between **MyArch Group** and Malaysia's foremost bridge consultants, renowned for their innovation and vast expertise. This fusion of ingenuity and pioneering spirit fuels our capacity to conceive distinct solutions. Rooted in an array of **LS Girder** designs, our offerings transcend convention. We don't merely offer products; we meticulously tailor solutions to seamlessly align with your distinctive requirements.



	Property	Symbol	Unit	Standards	LS200	LS220	LS260
Physical & Strength	Depth	H	mm	-	2000	2200	2600
	Weight	W	tons	-	100 - 125	130 - 140	150 - 180
	Span Range	S	m	-	35 - 45	45 - 50	50 - 60
	Mean Cube Compressive Strength	f_{cu}	MPa	BS EN 12390-3	85-95		
Durability	Rapid Chloride Permeability Test	RCPT	coulomb	ASTM C1202	200		
	Water Absorption Test	W_A	%	BS1881-121	1		
	Water Penetration Under Pressure	WPT	mm	BS EN 12390-8	13		

Note: For any additional inquiries or specific requirements, please don't hesitate to get in touch with a representative from MyArch Group. We take pride in our ability to customize solutions to meet unique needs, building upon the offerings mentioned above. Your vision is our priority, and we're here to craft tailored solutions that match your project's demands.



Disclaimer: The information provided above is accurate to the best of our knowledge and understanding at the time of writing. However, it's important to recognize that the accuracy, completeness, and relevance of this information may be subject to changes due to unforeseen circumstances, developments, or factors beyond our control and initial expectations.

Application

Introducing the **LS Girder** Solution – a revolution in infrastructure. Elevating roadways, waterway crossings, elevated highways, and pedestrian structures, it encapsulates innovation, sustainability, and reliability in a single solution. Join us in reshaping the future with **LS Girder**.



Road & Highway Waterway Crossing

LS Girder redefines road and highway waterway crossings. Its design eliminates the need for a middle span, making it perfect for spanning wide rivers. This innovation simplifies construction, improves water flow, and provides a cost-effective bridge-building solution.



Elevated Highway

LS Girder is exceptionally well-suited for urban highway construction, especially in areas where space for in-situ bridge girder fabrication is restricted. Its capability to minimize the need for piers enhances design adaptability, rendering it an optimal solution for constructing elevated highways in urban environments.



Pedestrian Structure

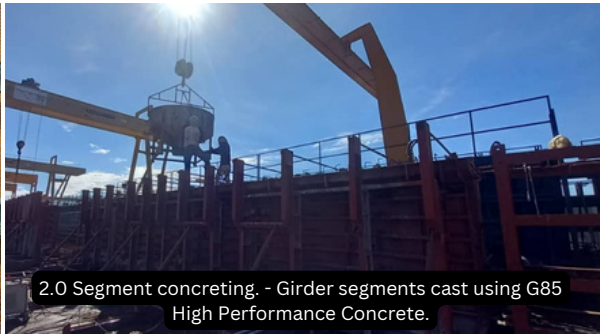
LS Girder presents an innovative alternative for crafting long-span pedestrian bridges, providing an alternative to conventional steel structures. Its standout features include heightened durability and reduced maintenance demands compared to steel, positioning it as a superb choice for creating enduring long-span pedestrian bridge solutions.

LS GIRDER CRAFTING PROCESS

The crafting process of **LS Girder** is an intricate endeavor that demands precision, advanced technology, and specialized tools and equipment. MyArch Group has successfully embraced this challenge, incorporating technology transfer from RNB Korea. With unwavering commitment, we meticulously adhere to every essential step, ensuring that the outcome is a product of the highest quality and accuracy.



1.0 Reinforcement installation - Rebar cage and tendon ducting installation takes place at the casting yard.



2.0 Segment concreting. - Girder segments cast using G85 High Performance Concrete.



3.0 Transported to the construction site - Segments transported to site via experienced transport team.



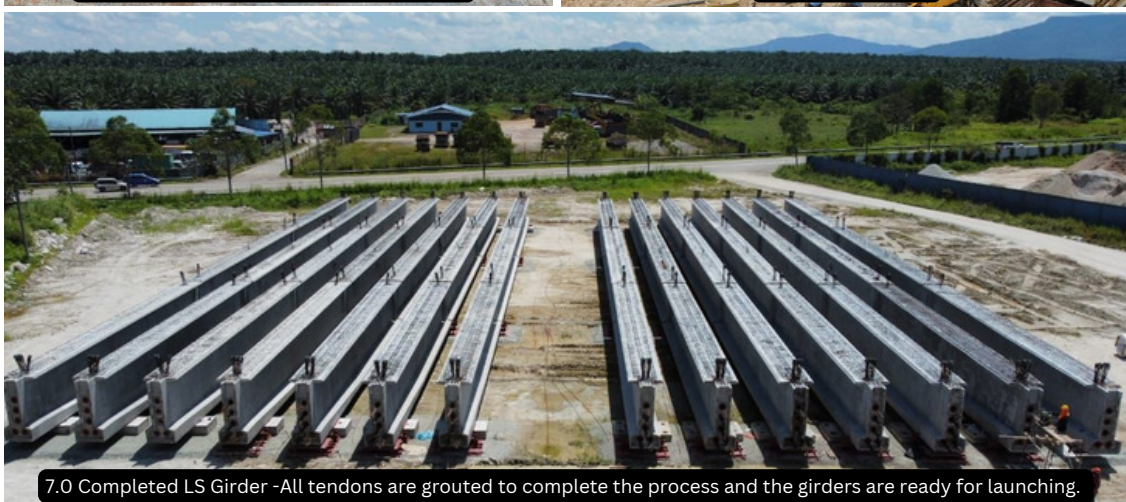
4.0 Setting up the assembly table - The most crucial aspect of the entire process, entrusted to the expertise of the MyArch Team.



5.0 Unloading & Assembly - Segments are unloaded, assembled, and aligned on-site for joining.



6.0 Prestress to Joint - Post-tensioning is applied to join the segments together



7.0 Completed LS Girder - All tendons are grouted to complete the process and the girders are ready for launching.

Project References



Menggantikan Jambatan Kayu Jalan Air Kuning, Tg Tualang, Perak, Tengah

LS Girder redefines road and highway waterway crossings. Its design eliminates the need for a middle span, making it perfect for spanning wide rivers. This innovation simplifies construction, improves water flow, and provides a cost-effective bridge-building solution.



The Proposed Tg Bin Industrial Park at Tg Bin, Pontian, Johor - Construction of Access Road Connecting to Sungai Pulai Bridge

This project innovatively constructs two river bridges using 60m Span **LS Girders**, eliminating intermediate piers for speed and eco-friendliness. This successful approach improves cost-efficiency and structural integrity, marking a significant advancement in bridge construction techniques.



Kota Bharu - Kuala Krai Highway Package 2B

KBKK Package 2B is an outstanding project that expertly tackled obstacles posed by the pandemic. Using segmental construction of **LS Girders**, it effectively managed labour shortages and health concerns, optimizing efficiency while prioritizing safety. This success highlights adaptability and the superiority of **LS Girder** in overcoming challenges.



Central Spine Road Package 4D

In CSR4D, a project dedicated to community development, segmental construction of LS Girder emerged as a successful solution during the pandemic. This synergy effectively addressed labour shortages and safety concerns while showcasing the cost-effective prowess of **LS Girder** in overhead bridge construction.



Central Spine Road Package 4C

CSR4C's Bridge 11 redefines river crossings with a 60m span **LS Girders**. Without intermediate piers, construction flows smoothly, preserving the river. Spanning 280m across 5 sections, all ingeniously using **LS Girders**, this innovative method prioritizes efficiency and environmental preservation.

Project References



Kota Bharu - Kuala Krai Highway Package 2C3A

In Kota Bharu - Kuala Krai Highway Package 2C3A, three bridges are planned, each utilizing **LS Girders** with advantageous options. This approach offers longer spans and adopts the segmental bridge IBS system. This combination of **LS Girders**, longer spans, and the segmental approach enhances structural integrity while promoting efficient construction and reducing environmental impact.



Central Spine Road Package 2B

In the face of challenges, CSR2B turned to LS Girder as a proposed solution. The proven **LS Girder** Segmental Bridge emerged as an optimal choice, effectively overcoming obstacles. The successful launch of these girders validated their effectiveness in addressing site challenges and implementing a reliable solution.



Menaiktaraf Jalan Tuju Dan Membina Jambatan Seri Bayas

The road upgrade and Seri Bayas Bridge project incorporated **LS Girder** design, which proved to be an excellent choice. The adoption of **LS Girders** demonstrated their effectiveness and suitability for the project, enhancing both the road and bridge construction aspects.



Menaiktaraf Jambatan Kota Tinggi "Bypass" DI Laluan FT003, Kota Tinggi, Johor

The Kota Tinggi Bypass project stands out as a substantial **LS Girder** endeavor, featuring 42 nos of 56.5m **LS Girders** employed as approach bridges. This innovative approach significantly increases the bridge span while expediting construction timelines. Notably cost-effective, this method showcases the project's commitment to efficient and resource-efficient infrastructure development.



Kota Bharu - Kuala Krai Highway Package 3B

In Kota Bharu - Kuala Krai Highway Package 3B, the proposal involves the implementation of **LS Girder** for two bridges. This approach offers the advantage of a Bridge Industrialized Building System (IBS), ensuring enhanced quality and effectiveness. By reducing the need for middle piers in river crossings, the **LS Girder** solution improves river flow dynamics, contributing to both structural and environmental benefits.

Project References



Central Spine Road Package 1A

Central Spine Road Package 1A envisions the construction of 6 bridges using LS Girder, embracing an innovative segmental bridge solution. This approach not only enhances cost-effectiveness, but also prioritizes environmental friendliness. The project's strategic choice reflects a commitment to both efficient construction methods and sustainable infrastructure development.



Membina Dan Menyiapkan Jalan Persimpangan FT29/FT32 Sehingga Laluan FT27, Daerah Sepang, Selangor

The decision to replace another long span with **LS Girder** has proven to be both cost-effective and practical. The effectiveness of LS Girder in providing a viable alternative underscores its position as a preferred choice in the market, aligning with the project's economic and functional objectives.



KBKK - Bukit Tiu ke Berangan Mek Nab

The contractor chose **LS Girder** for the bridge solution due to its multifaceted advantages. These include cost-effectiveness, streamlined construction, structural integrity, and enhanced efficiency. Its proven track record further cemented its selection as the best option for the project.



Central Spine Road Package 1C

This photo showcases the contractor's strategic choice to use MYARCH Group's LS Girder in their project, focusing on its cost-effectiveness and quality. Known for its superior engineering and durability, the LS Girder ensures high-quality construction. Its design also offers significant time savings due to ease of installation, reflecting the contractor's commitment to efficiency and excellence with MYARCH Group's innovative solutions.



Central Spine Road Sertik Ke Persimpangan Lebuhraya Pantai Timur

This image illustrates the contractor's choice of MYARCH Group's LS Girder for its blend of cost-efficiency and quality. Celebrated for its durable engineering, the LS Girder assures excellent results. Its design streamlines installation, reducing construction time significantly. This reflects the contractor's commitment to efficient, high-quality construction using MYARCH Group's innovative solutions.

OUR EXPERTS

GREAT TEAMWORK



Ir. HAJI HASMI BIN AHMAD

Ir. Haji Hasmi Bin Ahmad, a seasoned civil engineer whose extensive involvement in Malaysia's highway construction landscape, notably within the Public Works Department's highway division, has left an enduring legacy. His hands-on experience, unwavering dedication, and pivotal role from planning to execution have indelibly shaped the nation's highway construction. His reputation is synonymous with excellence, encapsulating his profound impact on Malaysia's highway development.

KIM, KYUNGWON

Kim, a visionary with a Master's degree in Bridge Engineering and an impressive nearly 30 years of mastery in bridge design. His legacy is adorned with remarkable achievements, including the iconic elevated viaducts of Taiwan's High-Speed Railway. As a driving force, Kim spearheaded the evolution of Long-Span Segmental Girders and Low-Height Girders, seamlessly transforming them into commercial successes in Korea. With unparalleled expertise, Kim has orchestrated an array of projects, consistently delivering excellence and cultivating an outstanding legacy of accomplishments.



PARK, YOUNG HUN

Park, a dynamic professional armed with a Master of Science in Civil and Structural Engineering from a prestigious Korean institution. His extensive hands-on experience in designing long-span segmental girders positions him as a seasoned leader in fabricating and assembling precast girders for bridge projects. Park's career journey is a tapestry of skill refinement in project execution, girder launching, and an unwavering commitment to meticulous quality control. Infused with a fervor for delivering exceptional outcomes, Park proves invaluable to any team, infusing each project with a remarkable level of expertise and unwavering dedication.



Thank You

We'd love to hear from you! Whether you have a question about our products, want to collaborate with us, or just want to say hello, please don't hesitate to reach out. Fill out the contact form below and we'll get back to you as soon as possible. Thank you for your interest in LS Girder Solution.

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