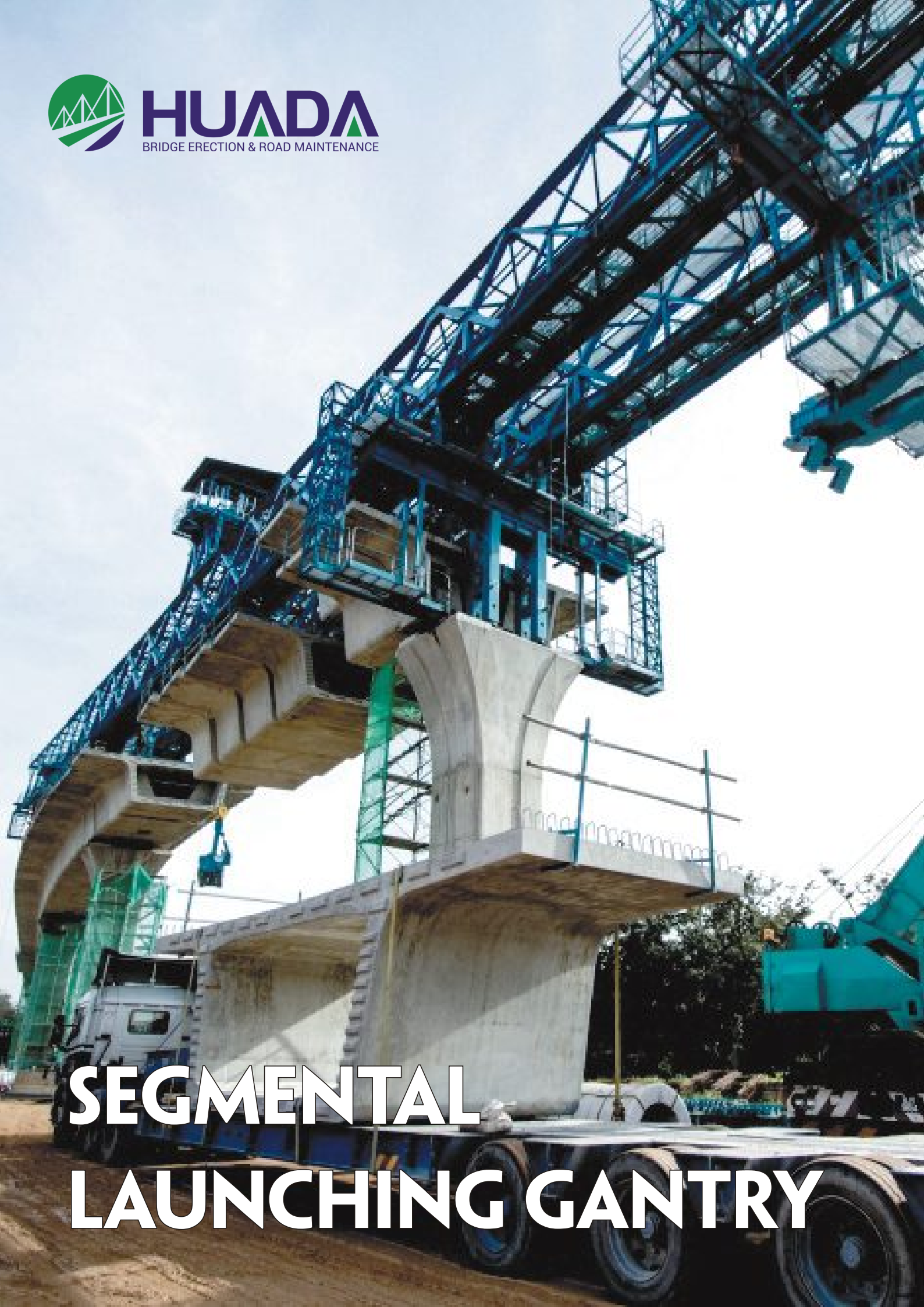
HUADA

BRIDGE ERECTION & ROAD MAINTENANCE



SEGMENTAL LAUNCHING GANTRY

Segmental Launching Gantry

Precast Segmental Method with a Segmental Launching Gantry (LG) is a very popular way used for the construction of bridges and viaducts with small curve and long span.

Segmental Launching Gantry is used for erecting Precast Segmental Bridges; for Balance Cantilever Method or Span by Span Method.

Launching Gantry can be designed as Under-slung or Overhead Model to meet the site requirements.

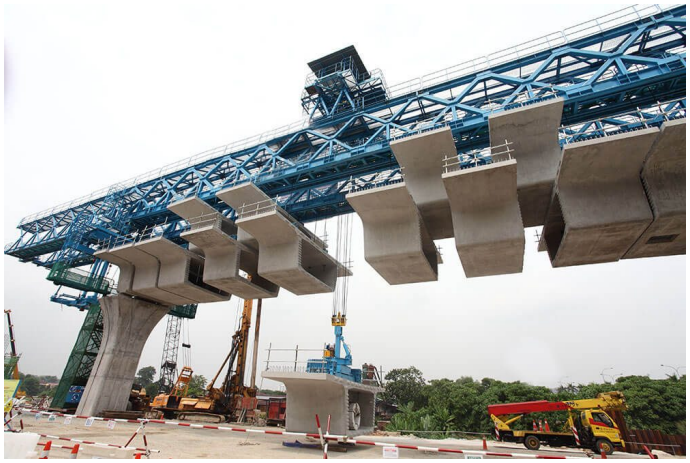
Overhead Segmental Launching Gantry

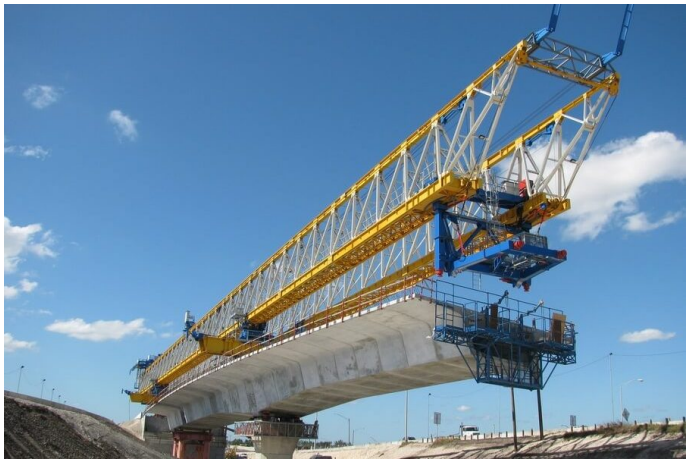
1. Our glue-as-you-go procedure is a special erection method for glued span-by-span bridges.

2. A symmetrical system allows turnaround of the LG without dismantling and re-erection.

3. Tower elements placed below the support beams allow substantial changes in the longitudinal slope.

4. Easy extension of the support beam for overhead Launching Gantries makes sideways movement of the whole system to the neighboring bridge or over existing superstructures possible.





Overhead Segmental Launching Gantry Main technical parameters

Item	Technical parameters and Performance requirements	Remarks
Type	Lower support type, box beam + truss guide beam	Lower support type
Span and maximum load	30m/700t	
Main girder structure	Box beam + truss guide beam, High strength bolt connection + Pin connection	Use the universal design
Suitable longitudinal slope	2%	
Suitable transverse slope	2%	
Minimum working curve radius	600m	
Lifting machine quantity and rated lifting weight	1 set of 80t rated lifting weight	Not include rotating spreader mechanism
Operation and control type	Manual electronic control, remote control	No driver room
Maximum lifting height of master (slave) hoisting crane	20m	(under rotating spreader)
Lifting speed of master (slave) hoisting crane	0-2m/min, Frequency conversion speed regulation	(rated load)
Longitudinal movement speed of main hoisting crane	0-10m/min, Frequency conversion speed regulation	(rated load)
Independently rotating angle of rotating spreader	360º	
Longitudinal moving speed of the whole machine	0-0.9m/min	Hydraulic cylinder push at interval
Transverse moving speed of the whole machine	0-0.5m/min	Hydraulic cylinder push at interval
Maximum distance of horizontal adjustment of the whole machine	±300mm	
Weight of the whole machine	About 511t+170t	
Total power of bridge erecting machine	About 100kw	Power of the whole machine
Maximum pressure of hydraulic system	25Mpa, 32MPa	
Maximum allowable wind during installation	Grade 6	
Maximum allowable wind of through hole	Grade 5	
Classification of wind resistance of the whole machine	Grade 6 during work, grade 11 during standby	
Applicable environment temperature	-15℃-+50℃	

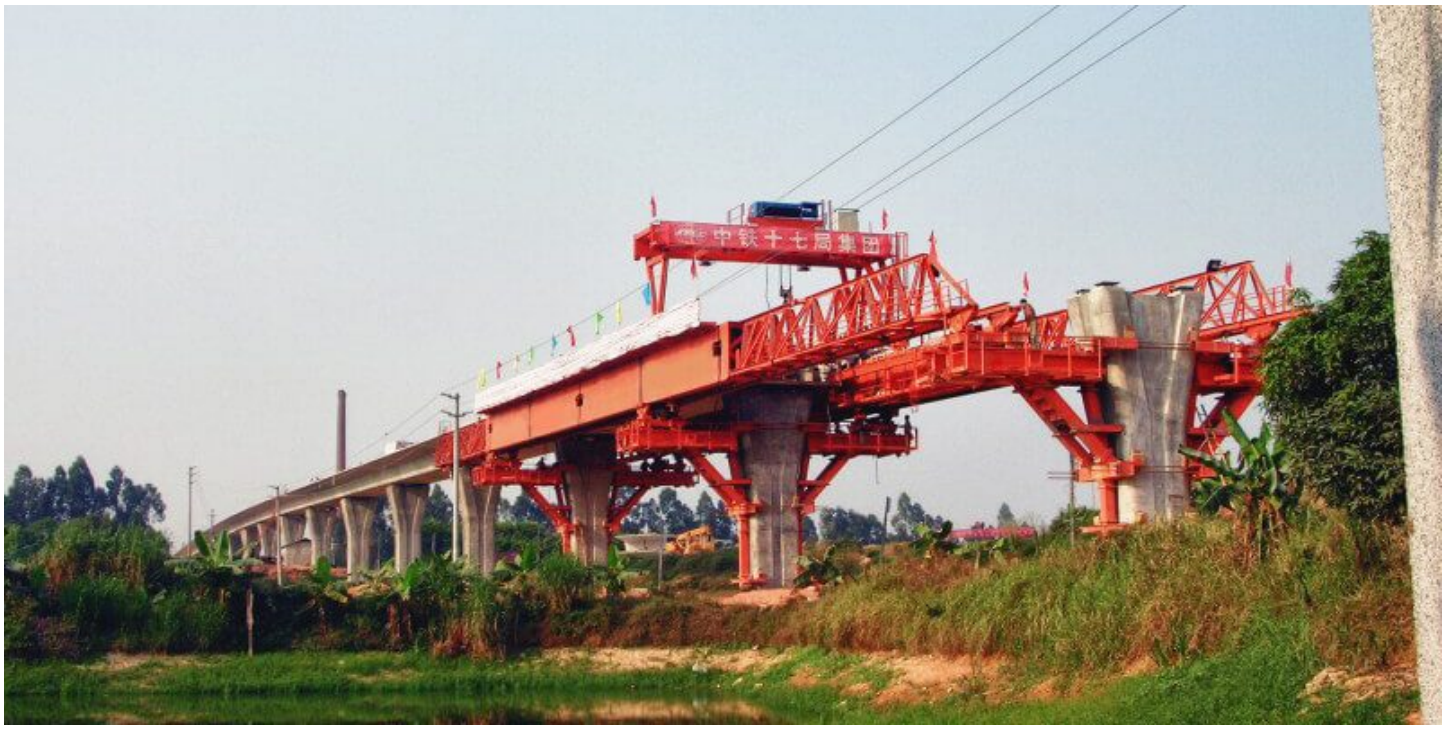
Underslung Segmental Launching Gantry

1. Independent main structures, only connected by the gantry crane, allowing transverse adjustment from single to double and even to triple track.

2. Implementation of hinges on our underslung LG has made it possible to erect spans with a horizontal radius down to 75 M.

3. The underslung hydraulic adjustment system permits the whole span to be adjusted in all directions to correct possible misalignments during erection.

4. Underslung LG consist of independent self-supporting main structures combined with advanced lifting equipment, creating an exceptionally flexible system for both the balanced cantilever and the span-by-span method.



THE METHOD AND STEPS OF INSTALLATION

The Launching Gantry (Launching Crane) is the heavy duty hoisting equipment which requires very high safety. A little negligence maybe causes serious accident, therefore, the installation of Launching Gantry must be directed or installed by professional works, and the steps are following:

1. Surveying positioning.

2. Paving rails.

3. Assemble two sides main girder symmetrically.

4. Installing front and rear connecting frame.

5. Installing front, middle and rear legs.

6. Installing lifting trolley and auxiliary trolley.

7. Hydraulic system, electrical system, operating platform and plug in power.

8. Test run and commissioning.

Type Selection Requirements

Type selection design needs to provide the bridge design drawings and other technical requirements of Client, including bottom bridge structure, upper girder design and site working environment, the main technique parameters needed to be clear:

1. Maximum segment beam lifting weight

2. Maximum suspension weight

3. Bridge span

4. Segmental block section size and lifting point position

5. Pier section size, height and bending bearing capacity

6. Deck longitudinal slope and transverse slope

7. Minimum curve

8. Type of beam feeding

Segmental Launching Gantry Project

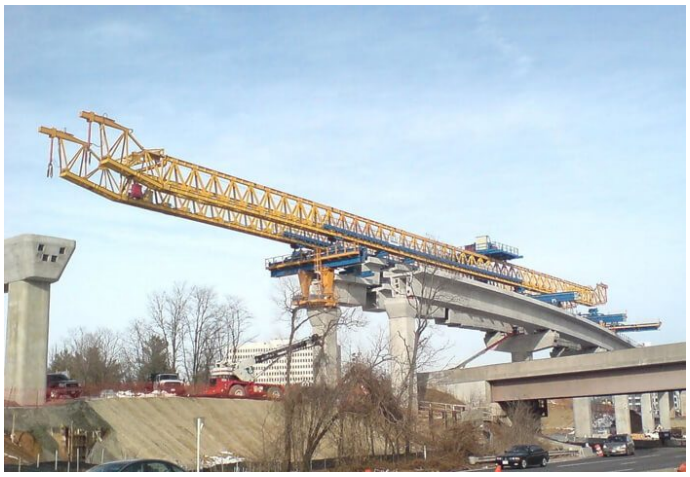
600 Ton 35 M Segment Launching Gantry with Span by Span Method

Equipment Supplied: 600 Ton Capacity Segment Launching Gantry with Span by Span Method

Main Specifications: 35 M Span, 600 Ton

Year: 2017

Segment assembly launching gantry for Viaduct Project –– Bangalore, India



PRODUCT MODEL: HD 800

span: 35 M

Lifting height of trolley: 56 M

Rated lifting capacity: 140 Ton

Max. working slope: 2%

Max. working transverse slope: 3%

Underslung Segmental Bridge Construction Machine for MRT railway

Application: Bridge Construction

Max. Lifting Load: 500T

Span: 20 M

Working grade: A5

Year: 2016

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