

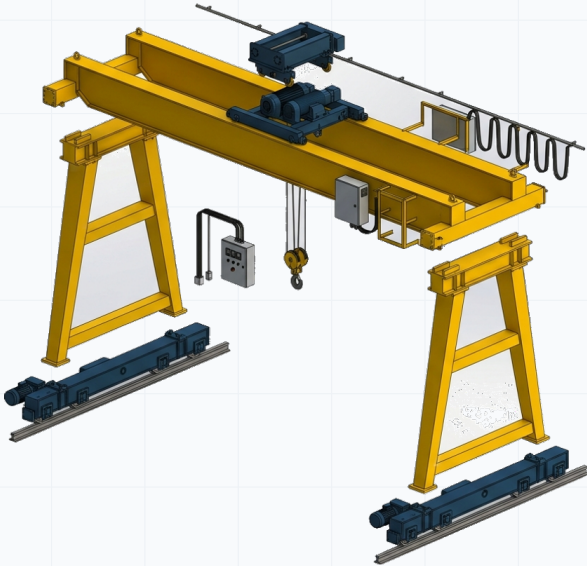
INDUSTRIAL HEAVY-DUTY EQUIPMENT

Rev 2.8 - 2026 Series

GANTRY & GOLIATH PORTAL CRANE

MODEL SERIES: INDUCT-GANTRY-GOLIATH-CRANE | DOCUMENT: TECHNICAL DATASHEET

3D ISOMETRIC ENGINEERING SCHEMATIC



Engineered & Manufactured in India by Induct Crane System Pvt. Ltd. | Standard: IS 3177 / IS 807 / FEM 2m

CAPACITY RANGE

1 Ton - 100 Tons

SPAN WIDTH

5m - 45m

LIFTING HEIGHT

6m - 24m

DUTY CLASS

FEM 2m/3m | M5-M6

EXECUTIVE OVERVIEW

Induct Crane Gantry and Goliath Cranes are self-supporting portal structures travelling on ground-level runway rails. They eliminate the requirement for expensive building columns and overhead runway steelwork, making them the optimal lifting solution for outdoor stockyards, shipyards, precast concrete yards, and heavy fabrication facilities.

1. PRODUCT OVERVIEW & DESIGN CHARACTERISTICS

Induct Crane Gantry and Goliath Cranes are self-supporting portal structures travelling on ground-level runway rails. They eliminate the requirement for expensive building columns and overhead runway steelwork, making them the optimal lifting solution for outdoor stockyards, shipyards, precast concrete yards, and heavy fabrication facilities.

TYPICAL APPLICATION & PURPOSE

Outdoor yard handling, steel slab/billet yards, precast concrete yards, rail freight handling, and shipyard fabrication.

OPERATING ENVIRONMENT

Outdoor stockyards and heavy indoor bays (-20 deg C to +60 deg C, all-weather weatherproof IP65 execution).

2. STRUCTURAL CONFIGURATIONS & ENGINEERING VARIANTS

SINGLE GIRDER GANTRY & GOLIATH

Economic A-frame portal gantry supporting an underslung hoist. Optional single or dual side cantilevers extending hook reach beyond rails.

Capacity: 1 Ton to 10 Tons | Span: 5m to 30m | Lift Height: 6m to 18m

DOUBLE GIRDER GANTRY & GOLIATH

Heavy-duty box girders with top-running crab trolley, rigid & flexible leg connection, and wind-storm safety rail clamps.

Capacity: 5 Tons to 100 Tons | Span: 5m to 45m (Plus Cantilevers) | Lift Height: 6m to 24m

3. CODIFIED DESIGN STANDARDS & COMPLIANCE

IS 3177: 1999	Code of Practice for Electric Overhead Travelling Cranes and Gantry Cranes
IS 807: 2006	Design, Manufacture, Erection and Testing of Cranes and Hoists
FEM 9.511 / 2m	Federation Europeenne de la Manutention Rules for the Design of Hoisting Appliances
ISO 4301 / M5-M6	Cranes and Lifting Appliances Classification of Duty Cycles and Mechanisms

4. COMPREHENSIVE TECHNICAL SPECIFICATIONS

ENGINEERING PARAMETER	MANUFACTURING SPECIFICATION / VALUE RANGE
Lifting Capacity Range	SG: 1T - 10T DG: 5T - 100T
Span Width (m)	5m - 45m (Customized with 2m-8m Cantilever Overhangs)
Lifting Height (m)	6m - 24m (Ground to Hook High Position)
Structural Configuration	Single Girder & Double Girder Portal Gantry
Duty Classification	FEM 2m / 3m ISO M5 / M6 IS 3177 Class III, IV
Hoisting Speed	3.5 - 8.0 m/min (Dual Speed Inverter VFD)
Cross Travel Speed	5 - 20 m/min (Variable Frequency Controlled)
Long Travel Speed	10 - 30 m/min (Synchronized Ground Bogie Drives)
Power Supply Voltage	415V +-10%, 50Hz, 3-Phase AC (Cable Reeling Drum CRD)
Control System	Wireless Radio Remote, Ground Pendant & Enclosed Operator Cabin
Weather Protection	IP55/IP65 Weatherproof Enclosures with Motor Rain Canopies
Storm Clamping System	Automatic / Manual Storm Rail Clamps and Anchor Pins
Hook Block Assembly	Forged Alloy Steel Hook with Heavy-Duty Thrust Bearing
Ground Rail Profile	CR 80 / CR 100 / ISCR 100 / 52 kg/m Rail Section

5. MAJOR ENGINEERING COMPONENTS & NUMBERED BREAKDOWN

01 MAIN BOX GIRDERS Heavy-duty torsion-resistant box girders with camber and optional cantilever	02 GANTRY SUPPORTING LEGS Rigid and flexible structural A-frame box legs engineered for wind loads and
03 GROUND TRAVEL BOGIES Multi-wheel forged steel wheel bogies with rail sweeps and synchronized driv	04 CRAB / HOIST TROLLEY Heavy-duty motorized crab trolley with high-torque hoist motor, helical gear
05 CABLE REELING DRUM (CRD) Spring-loaded or motorized torque-regulated cable reeling drum for main grou	06 STORM RAIL CLAMPS Mechanical and hydraulic rail locking clamps to secure the crane against sev
07 HOOK BLOCK ASSEMBLY Forged alloy steel hook with heavy-duty thrust bearing and spring safety loc	

6. APPLICATIONS & INDUSTRIES SERVED	7. SAFETY & PROTECTION SYSTEMS
- Outdoor Steel Stockyards - Precast Concrete Yards - Marble & Granite Processing - Railway Goods & Freight Sidings - Shipbuilding & Heavy Fabrication	[+] Automatic Storm Rail Clamps & Anchor Locking Pins [+] Audible Siren with Strobe Beacon [+] Optical Anti-Collision Sensors [+] Electronic Overload Limiter [+] Track Obstacle Sweepers on All Bogies

8. ENGINEERING & PROJECT CUSTOMIZATION
- [*] Cantilever Overhangs: 2m to 8m extensions beyond track rails for truck loading and unloading.
 - [*] Anemometer Wind Speed Alarm: Automatic audio alarm and travel cutoff when wind speeds exceed set thresholds.
 - [*] Climate Controlled Operator Cabin: Air-conditioned panoramic operator cab with joystick master controllers.

9. TECHNICAL & SITE INSTALLATION NOTES
- Ground foundation track design must include concrete sleeper plinths or continuous concrete foundation beams.
 - Rail clamps must be engaged whenever the crane is left unattended or during high wind storm warnings.

REQUEST A TECHNICAL QUOTATION & GA DRAWING

Contact our application engineering team for site-specific general arrangement (GA) drawings and quotations:

RAJKOT HEAD OFFICE & MANUFACTURING

Plot No. 6, Shivam Ind. Zone 4, Lodhika GIDC, Rajkot, Gujarat - 360021

Phone: +91 92658 85265, +91 99743 43099 | Email: sales@inductcranesystem.com

NORTH INDIA SALES & SERVICE OFFICE

Unit-2, E-20, Chakeri-2 Industrial Area, Chakeri, Kanpur, Uttar Pradesh

Phone: +91 75250 29204 | Web: <https://inductcranesystem.com>

Contact our engineering team for project-specific technical requirements.