

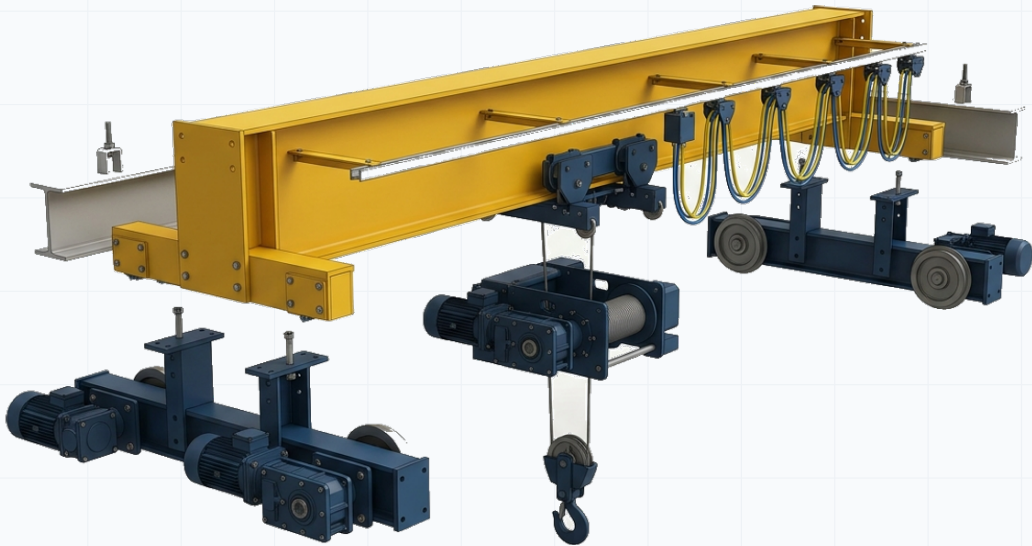
INDUSTRIAL HEAVY-DUTY EQUIPMENT

Rev 2.5 - 2026 Series

UNDER SLUNG OVERHEAD CRANE

MODEL SERIES: INDUCT-UNDER-SLUNG-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

500 kg - 10 Tons

SPAN WIDTH

3m - 25m

LIFTING HEIGHT

6m - 12m

DUTY CLASS

FEM 2m | ISO M5

EXECUTIVE OVERVIEW

Induct Crane Under Slung Cranes are suspended directly from existing ceiling roof trusses or overhead I-beam runway tracks. This suspended design eliminates the need for floor-mounted support columns, maximizes usable factory floor space, and allows the hoist to achieve exceptionally close side-hook approaches near plant walls.

1. PRODUCT OVERVIEW & DESIGN CHARACTERISTICS

Induct Crane Under Slung Cranes are suspended directly from existing ceiling roof trusses or overhead I-beam runway tracks. This suspended design eliminates the need for floor-mounted support columns, maximizes usable factory floor space, and allows the hoist to achieve exceptionally close side-hook approaches near plant walls.

TYPICAL APPLICATION & PURPOSE

Overhead lifting in facilities without floor columns, assembly halls, aerospace bays, and production lines with roof suspension.

OPERATING ENVIRONMENT

Light to medium industrial plants, cleanrooms, assembly facilities, and aircraft maintenance hangars.

2. STRUCTURAL CONFIGURATIONS & ENGINEERING VARIANTS

SINGLE GIRDER UNDER SLUNG CRANE

Rolled beam or welded box girder suspended from bottom flanges of runway beams. Maximizes floor clearance and side-hook reach.

Capacity: 500 kg to 10 Tons | Span: 3m to 25m | Lift Height: 6m to 12m

DOUBLE GIRDER UNDER SLUNG CRANE

Twin suspended girders providing enhanced rigidity and higher lifting capacity while suspended from roof trusses.

Capacity: 5 Tons to 15 Tons | Span: 5m to 20m | Lift Height: 6m to 12m

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: 500 kg - 10T DG: 5T - 15T
Span Width (m)	3m - 25m (Engineered to Building Roof Truss Centers)
Lifting Height (m)	6m - 12m (Under-Beam Clearance)
Structural Configuration	Roof-Suspended Single & Double Girder
Duty Classification	FEM 2m ISO M5 IS 3177 Class II, III
Hoisting Speed	4.0 / 0.7 m/min (Dual Speed Inverter Controlled)
Cross Travel Speed	5 - 20 m/min (VFD Variable Speed)
Long Travel Speed	10 - 25 m/min (Smooth Soft-Start VFD)
Power Supply Voltage	415V +-10%, 50Hz, 3-Phase AC
Control System	Pendant Push-Button & Wireless Radio Remote Control
Runway Beam Profile	Standard I-Beams / Monorail Tracks Suspended from Roof Trusses
Wheel Flange Profile	Forged Steel Tapered Flange Wheels with Anti-Drop Lugs
Hook Block Assembly	Forged Alloy Steel Hook with 360 deg Swivel Rotation
Side Hook Approach	Minimal Side Approach Distance (< 400 mm) to Plant Walls

5. MAJOR ENGINEERING COMPONENTS & NUMBERED BREAKDOWN

01 UNDER-SLUNG MAIN GIRDER Rolled beam or welded box girder equipped with suspension brackets attached	02 SUSPENDED END CARRIAGES Articulated carriage frames running on bottom flanges of runway beams with s
03 UNDER-FLANGE TRAVEL WHEELS Hardened steel wheels with sealed precision bearings and integral anti-drop	04 HOIST & TROLLEY Low-headroom wire rope hoist or heavy-duty electric chain hoist delivering m
05 RUNWAY HANGERS Flexible articulated roof suspension hangers compensating for roof truss def	06 ELECTRICAL SYSTEM Enclosed electrical panel, festoon flat cables on C-rail tracks, and emergen
07 HOOK BLOCK ASSEMBLY Forged alloy steel hook with safety latch and 360-degree rotation.	

6. APPLICATIONS & INDUSTRIES SERVED	7. SAFETY & PROTECTION SYSTEMS
- Low Headroom Factory Buildings - Electronics & Precision Engineering - Aircraft & Aerospace Hangars - Automotive Parts Manufacturing - Cleanroom Environments	[+] Wheel Anti-Drop Safety Lugs and Derailment Stops [+] Electronic Overload Protection Limiter [+] Dual Upper / Lower Hoisting Limit Switches [+] Runway Travel End Buffers & Electrical Stops [+] Emergency Stop Push Button

8. ENGINEERING & PROJECT CUSTOMIZATION

- [*] Interlock Transfer Systems: Enables trolley to transfer between adjacent crane bridges or monorail spurs.
- [*] Multi-Bay Suspensions: 3-point or 4-point runway beam suspension spanning across wide building bays.
- [*] Stainless Steel / Cleanroom Package: Food-grade lubricant, stainless steel chains/ropes, and smooth enclosures.

9. TECHNICAL & SITE INSTALLATION NOTES

- Roof structure load verification is recommended to ensure trusses withstand total dynamic wheel reactions.
- Articulated hanger assemblies prevent binding when roof trusses deflect under snow or wind loads.

REQUEST A TECHNICAL QUOTATION & GA DRAWING

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

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Contact our engineering team for project-specific technical requirements.