

NEW

A safe, flexible and advanced technology solution for handling long and heavy objects

tyton[™]

Rubber Tyred
Gantry Crane



ElectroMech

| Solutions | Service | Satisfaction |



A safe, flexible and advanced technology solution for handling long and heavy objects

About ElectroMech

ElectroMech is a USD 60 million, multinational company in Material Handling with its global headquarters in Dubai and having a presence in 60 countries. We have manufacturing plants in UAE, Indonesia and Saudi Arabia with the Global Design & Development Centre and Asia's largest overhead crane manufacturing facility in Pune, India.

We are an innovation-led, customer-centric, technology-driven, fast-progressing global group, which offers advanced Material Handling Solutions to a wide spectrum of industries for the most challenging applications.

We are serving clients from different sectors such as automotive, railways, shipbuilding, aerospace, energy, metal, nuclear, defence, heavy engineering, process plants, construction, infrastructure warehousing and logistics.

Over the years, we have earned the trust of our customers as a reliable partner for providing solutions to their material handling challenges through our vast range of cranes. This has led us to add a new dimension to our range and we are proud to introduce 'tyton™', an Electric Rubber Tyred Gantry(RTG)Crane for the global market.

Legacy of over 4 decades

Area of 120,000sq.m

750+ employees globally

Over 15000 solutions globally

65% repeat customers





Gradeability

Up to 5%

Intact floor

Constant pressure on the floor irrespective of the amount of load lifted

Versatility

Capability of working on various surfaces

Portability

Can be easily disassembled and transported

Low cost of ownership

Low maintenance, high uptime, high productivity and low expenses on developing infrastructure

ElectroMech

20t

ElectroMech

Electrically driven

No hydraulics involved

High safety

Safe handling of long, heavy and odd-shaped objects

Reliability

High-quality equipment powered using proven technology and backed by assured service support

Turns effortlessly

Can easily negotiate turns

Flexibility

Can be operated on uneven surfaces

Robust structure

Designed for dynamic loads

About tyton™

tyton™ is an electrically driven Rubber Tyred Gantry Crane. The Rubber Tyred Gantry Crane, popularly known as RTG the world over, is a tyre-mounted gantry crane that can be moved anywhere easily across large outdoor yards or factories.

Being tyre-mounted, it does not require permanently fixed rails, which means extreme flexibility in movement across the shop or yard area.

This revolutionary equipment has been completely designed, developed and manufactured in-house by ElectroMech.



Anti-Swivel Device

Lift long loads safely & easily



Trolley & Hook Block

Sturdy design with anti-derailment guard for extra safety with added safety



Ease of access

Major components can be accessed easily for maintenance



TPMS

Tyre Pressure Monitoring System ensures that tyres are correctly inflated for safe operation



Jacking Provision

For easy replacement and fixing of tyres within a short time



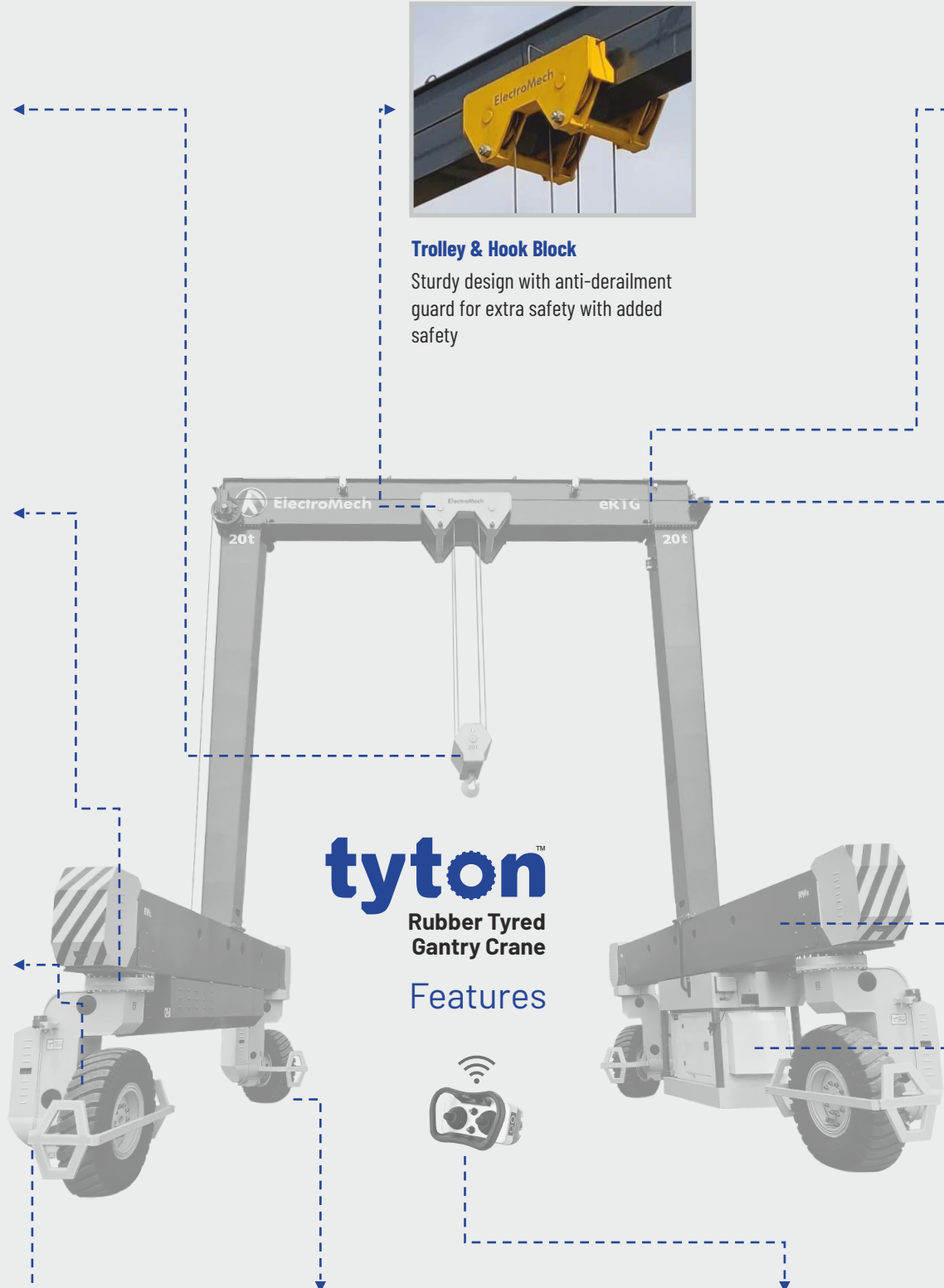
Steering of Tyres

Flexibility to move in various directions

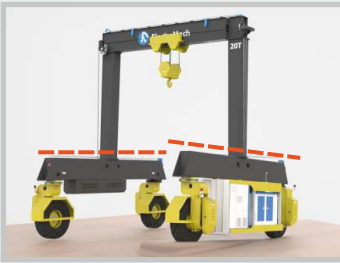


Remote-controlled

All operations are controlled via radio remote device for operators' safety and load visibility



tyton™
Rubber Tyred
Gantry Crane
Features



Structural Flexibility

Makes it possible to travel over uneven surfaces with gradient up to 5%



Travel Off-Road

Travels over Asphalt, Concrete or Dry Compacted Soil effortlessly



Touchscreen HMI Display

Monitor crane status and operating conditions seamlessly



Self Propelling

Diesel Generator or Battery Pack on crane as power source (No separate power supply required)

Control Panel

All motions controlled through Variable Frequency Drive (VFD) & PLC

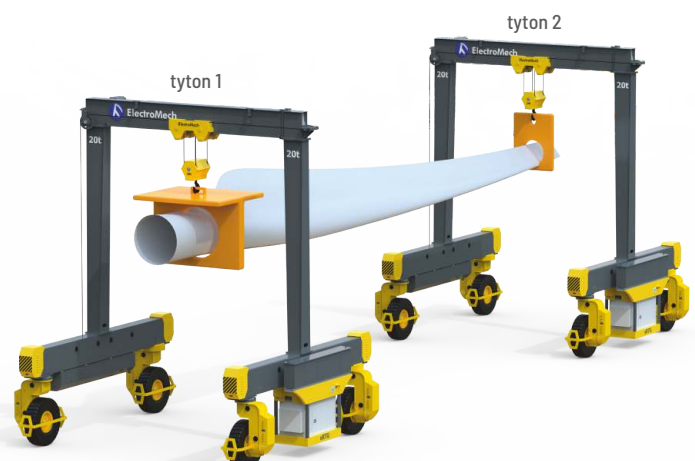
Working of tyton™ and its constructional features

tyton™ is an innovative material handling solution making lifting and handling operations safe and easy across a range of industries.

- Self-propelled equipment driven by electric motors with VFD controllers ensures optimised power consumption.
- Powered by EM Steersense – Electrically driven, electronically controlled and synchronous steering.
- Designed to operate on gradients and various other surfaces adds the all-important feature of flexibility required in material handling equipment.
- The rigid structure is designed to take dynamic loads, making it sturdier and safer.
- Components can be easily accessed for routine maintenance.
- Can be easily assembled and disassembled for quick relocation.

tyton™ is an innovative solution to move loads easily in all directions and on various surfaces. These features make it the perfect choice for industrial, infrastructure, wind energy and other sectors to competently address various load-handling challenges.

Tandem operational tyton™ cranes

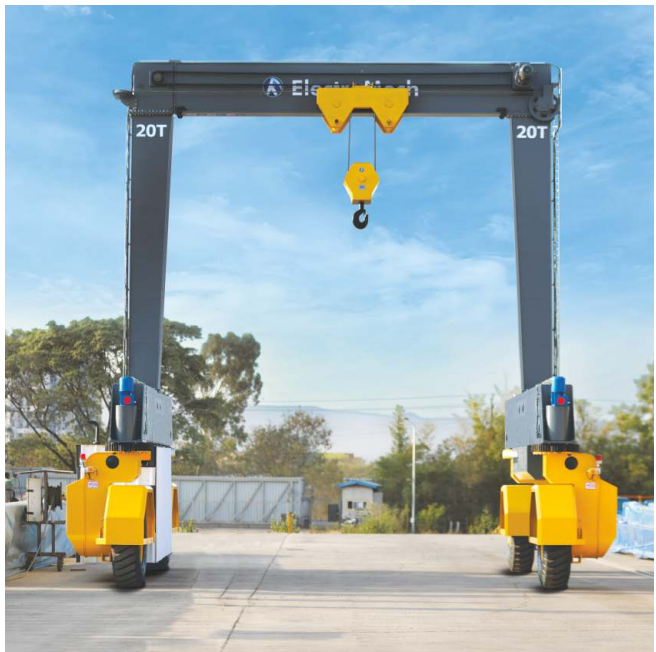


tyton™ in Action

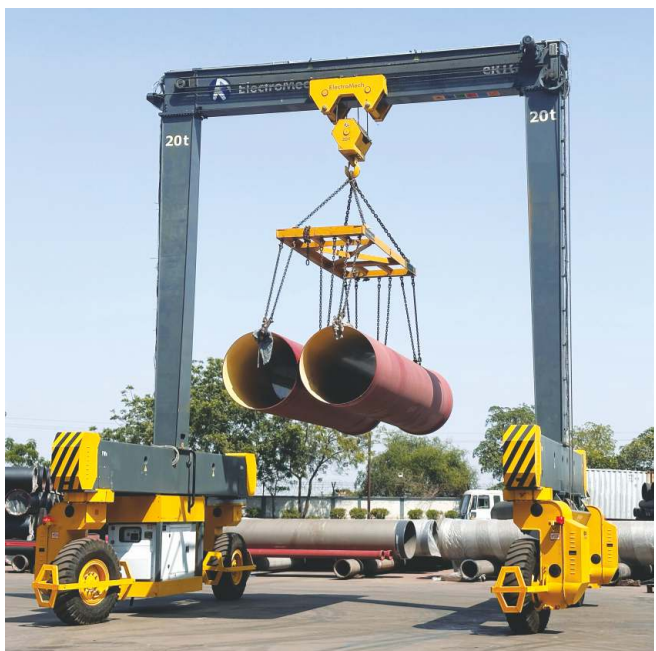
Pivoting motion using 2-wheel steering with 20t load



Handling of large transformers in a storage yard



Handling of precast segments at a casting yard



Steel pipe handling

tyton[™]
Rubber Tyred
Gantry Crane

Long fabricated beam handling



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Handling of 20 feet shipping container



Steel coil handling



Valve parts handling (indoor application)

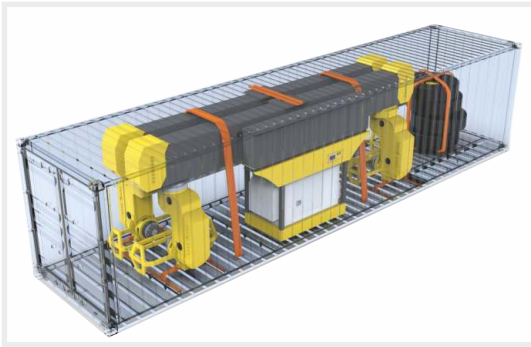
Portability

tyton™ can be easily assembled and disassembled. It is possible to completely dismantle and load the crane onto a trailer within a short duration for easy relocation. This ensures that your productivity can be maximised across multiple project sites.

tyton™ has been designed with the following considerations to simplify your work processes:

- Machinery components are located at the ground level for easy maintenance

- Structural components fit into a standard shipping container



- Plug and play wiring systems to facilitate faster setup



- Bolted joints to quickly separate structural components



- Easy to load crane components onto a standard trailer



tyton™
Rubber Tyred
Gantry Crane



Watch tyton™ in action

Technical Overview

SWL (Safe Working Load)		10t	16t	20t	32t	40t	50t	63t	80t	100t	125t	150t	200t
Design type	Single girder	✓	✓	✓	✓								
	Double girder			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Span		Customizable as per request											
HOL (Height Of Lift)		Customizable as per request											
Power source	Diesel generator	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Battery mounted on crane	●	●	●	●								
Steering	2-Wheel steering	✓	✓	✓	✓	✓	✓	✓	✓				
	4-Wheel steering	●	●	●	●	●	●	●	●	✓	✓	✓	✓
Pneumatic Rubber Tyre		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Speeds:	Long Travel	25 m/min to 40 m/min											
	Cross Travel	10 m/min to 15m/min											
	Hoisting	Up to 4 m/min											
Gradeability		Up to 5%											


● Optional equipment

Safety Features

- Hoist limit switch (Rotary)
- Cross-travel limit switches
- Trolley position sensor
- Auditory + Visual warning during motion
- Programmed motion safety interlocks
- Anti-derailment guard on CT mechanism
- Load anti-swivel device on hook
- Tyre pressure monitoring system
- Fire extinguisher
- Emergency stop at each corner
- Emergency stop on Radio Remote Control (RRC)
- Anti-drop device against tyre puncture



Convenience Features

- Radio Remote Control for operation
- Modular structure for portability
- EMote for cloud (IoT)-powered crane monitoring 
- Inbuilt jacking provision for tyre removal
- Touchscreen HMI display
- 'Plug and Play' wiring system

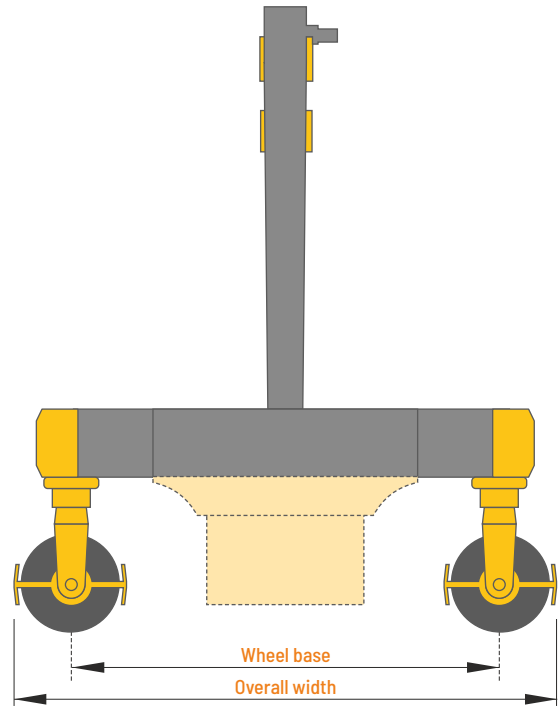
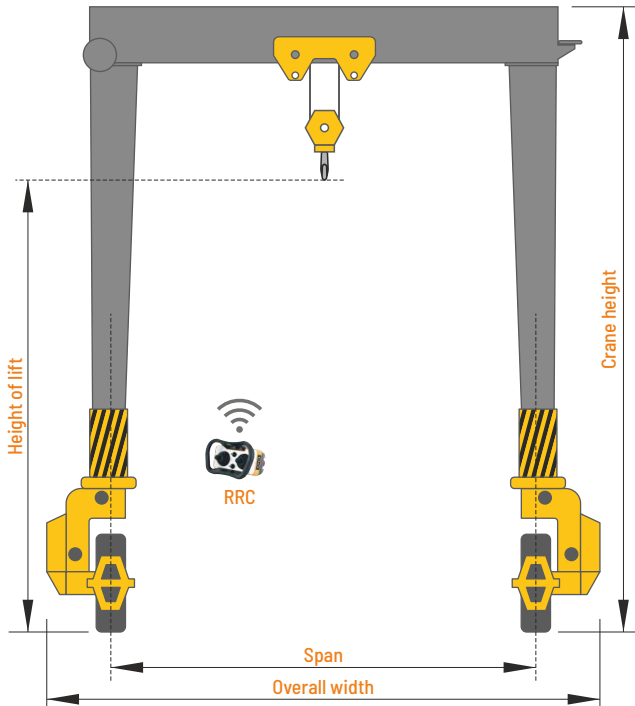
Optional Features

- Operator's cabin
- Overload protection
- Underbridge light
- Gradient control
- Camera system
- Gravity limit switch for hoist

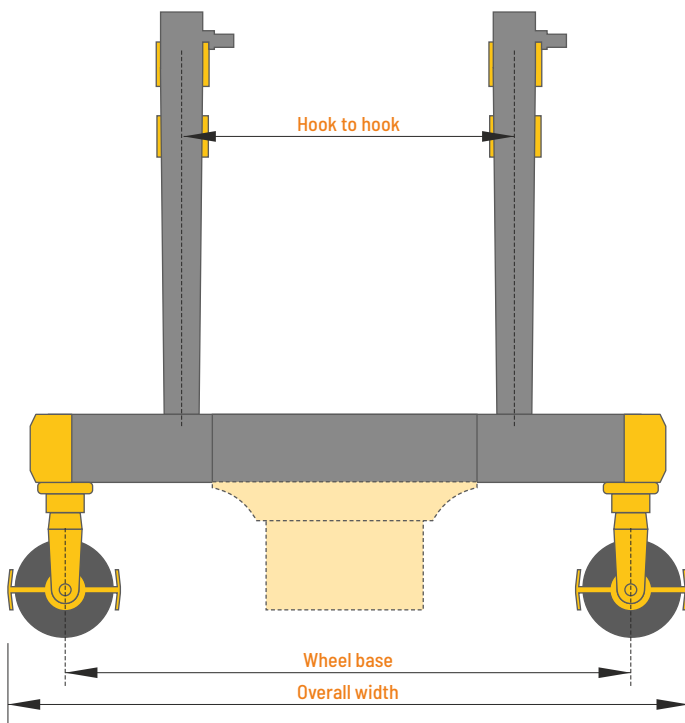


Dimensions - tyton™

Single girder design



Double girder design



tyton™
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Gantry Crane

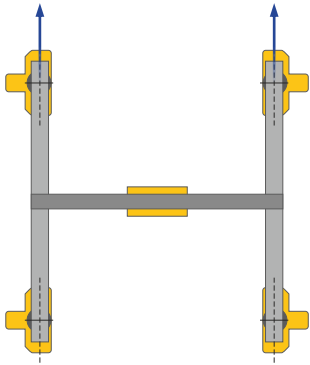


*Span & height can be customised to suit requirement.

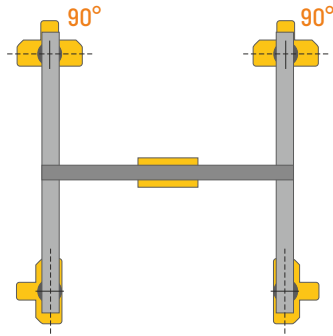
Powered by EM Steersense

Independent, Synchronized, Variable Steering Control

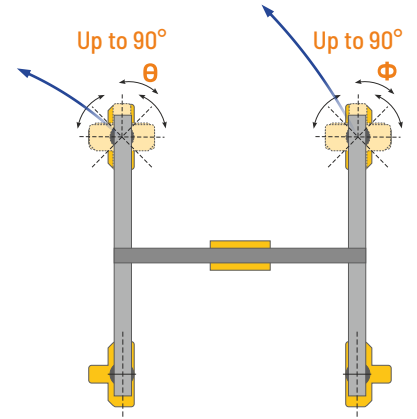
2 - Wheel Steering (2WS)



Straight line movement

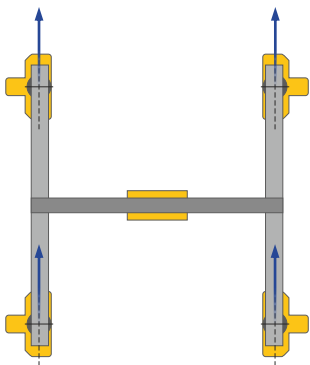


P Parking position

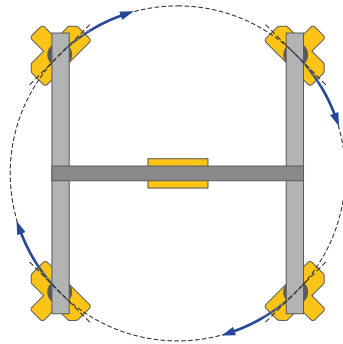


Taking a turn at any variable radius with its Steering Geometry Intelligence

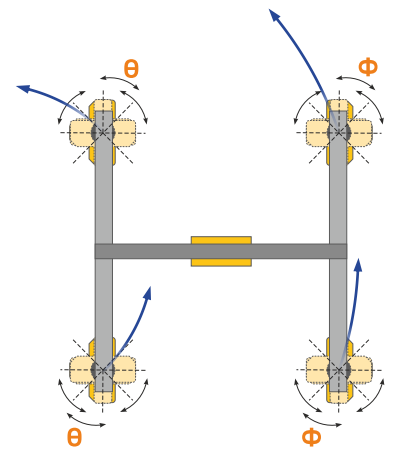
4 - Wheel Steering (4WS)



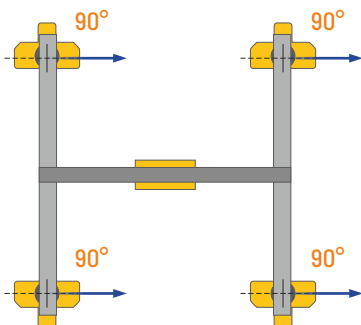
Straight line movement



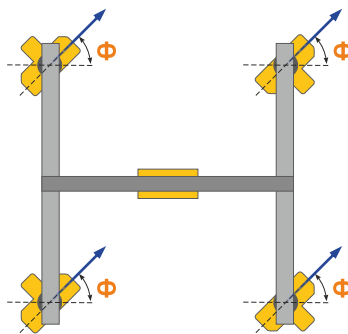
Polar movement (carousel)



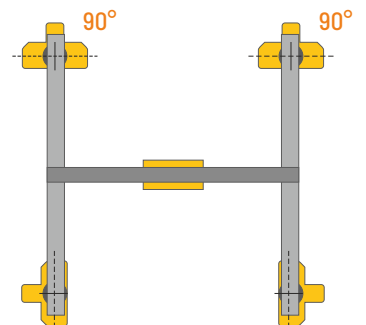
Taking a turn at any variable radius with its Steering Geometry Intelligence



90° movement (perpendicular direction)



Diagonal movement (crab)



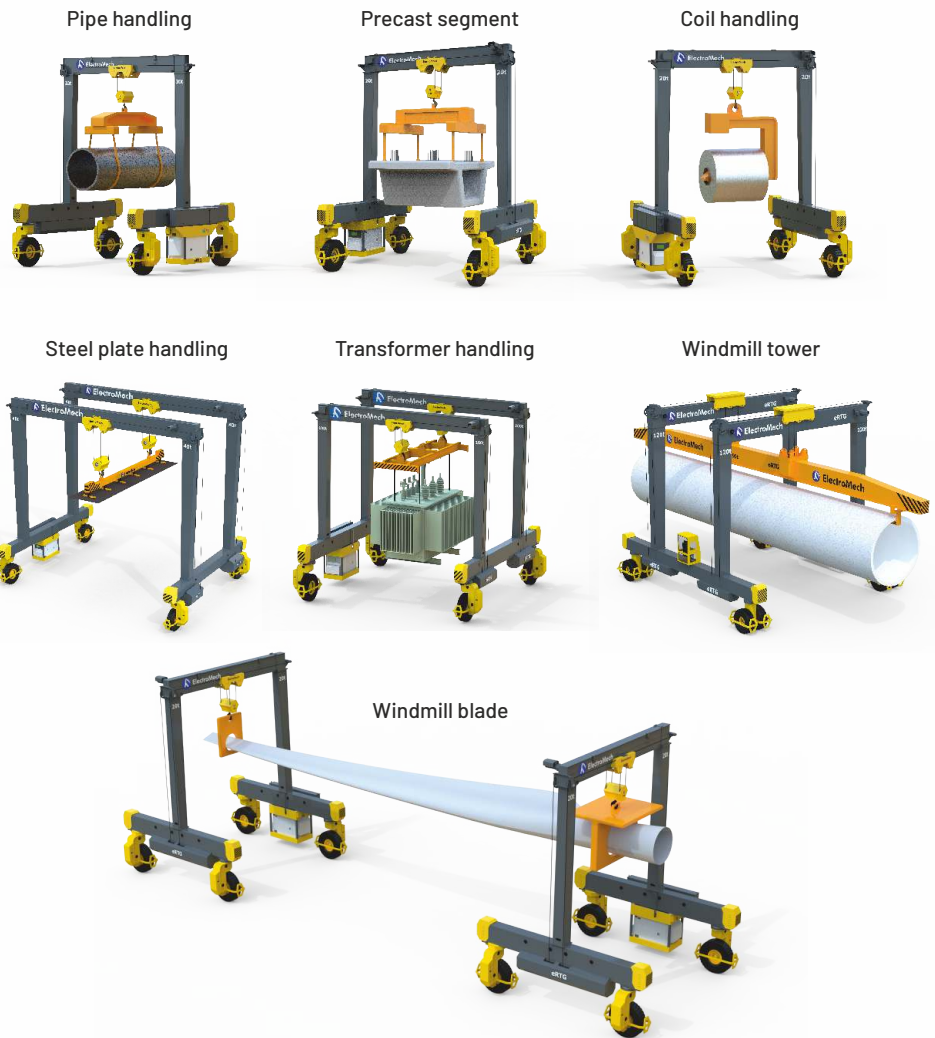
P Parking position

Sectors that can benefit by using tyton™

tyton™ is an ideal choice for various infrastructure construction projects where flexibility in material handling is important. It can be used to handle various objects, such as precast segments, pipes, concrete slabs, steel structures, transformers, containers, etc.

Besides construction projects, tyton™ is useful in several other industries. For example, in the wind energy sector, tyton™ is ideal for handling tower sections, wind blades and turbines. In the process equipment manufacturing industry, tyton™ is helpful in transporting equipment to storage yards and further loading it on to the trailers.

It is also useful where the terrain is not suitable to install gantry cranes or where temporary facilities are being used.



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