



TUBULAR & RISER HANDLING EQUIPMENT

Beyond Integration
Seamless Solutions™





TSC offers a full range of options across the full scope of equipment. TSC will work in partnership with the client to establish the best technical and commercial solution to meet customer requirements. Whether TSC offers a new build, upgrade, refurbishment or spares package, TSC will apply the same degree of expertise, commitment and attention to detail.

New Build

TSC provides bespoke design and manufacture of the full range of TSC Mechanical Handling equipment to meet the exacting standards of today's oil and gas industry. The design, manufacture, testing and delivery of all TSC equipment is professionally managed by a dedicated team of Project Managers and Engineers who will work in conjunction with the supply chain to ensure that all deliverables are met or exceeded.

Upgrade

Should any of your TSC equipment need to be upgraded to give greater capacity or improved performance, TSC will evaluate the situation and propose a programme to meet the timescales required and minimise downtime. TSC will support this work with a full package of documentation, certification and manuals to reflect the new, improved profile of the equipment.

Refurbishment

TSC recognises that equipment used in this harsh environment needs to be regularly checked and/or refurbished. TSC offers a full surveying service to investigate the condition of all areas of your TSC equipment and recommend an efficient course of action to replace any worn or damaged parts. This can include NDT examinations to establish the condition of critical load-bearing components.

Spares

TSC will supply spares on a supply only basis if the part can be easily replaced by the rig personnel. TSC has built extremely strong relationships with our supply chain to ensure rapid supply and reliable service.



Gantry Crane

Gantry Crane

TSC Gantry Cranes, delivering solutions for moving risers and drilling tubulars from the storage area to the catwalk or conveyor.

Key Features

- Robust design for enhanced performance, quality and safety;
- Span, height of lift and lift capacity are specific to client requirements;
- Option for fixed mast arrangement which is dedicated to riser handling or travelling masts for handling all tubulars;
- Stabilising telescopic masts to prevent load swing during operation ensuring quicker delivery and providing increase cycle rate per hour;
- Toe hooks for Riser handling;
- Range of heads available to suit other tubular diameters;
- Optional auxiliary hoists for general handling;
- Control options available. Operators cabin, Pendant or Radio Control;
- PLC controlled. Hydraulically or electrically (VFD) powered;
- Synchronised long travel drives and synchronised hoisting units;
- Integrated Hydraulic Power Unit if required. Fitted with hydraulic load sensing capability ensuring the HPU runs efficiently;
- Interlocked with Catwalk and other deck equipment to promote safe and efficient operation;
- Standard safety features including overload protection, emergency load lowering, fail to safe braking on all drives with dual braking on hoisting units, upper and lower limits, speed ramps for end of travel;
- Optional triple braking system on hoisting units Tubular Range 2-7/8" to 60".





Catwalk/Conveyor

A range of Catwalks, Conveyors and Riser Skates are available to accurately transport tubulars, from Drill Pipe to Risers and Telescopic Joists, between the handling equipment on the pipe storage area to the Drill Floor. Other drill floor equipment can also be transported to and from the Drill Floor.

Key Features

- Robust design for enhanced performance, quality and safety;
- Length of equipment to suit length of tubular to be handled, up to 90' Risers;
- Capable of transporting single tubulars or multiple tubulars of specific size on some models;
- Option for tubular feed systems mounted adjacent to the equipment. The feed systems ensure there are tubulars available for transport rather than waiting for handling equipment or deck crane supply;
- Option for Tailing Arm mounted on the front of the equipment. The tailing arm stabilises, tails and guides the tubular on Drill Floor;
- Option for Tubular Lift and Separator Arms. Ideal when using the Horizontal to Vertical Arms;
- Option for tubular raise;
- Optional auxiliary hoists for general handling;
- Control options available. Operators cabin, Drill Floor Console or Radio Control;
- Hydraulically or electrically (VFD) powered;
- Integrated Hydraulic Power Unit if required. Fitted with hydraulic load sensing capability ensuring the HPU runs efficiently;
- Interlocked with tubular handling equipment on the deck and in the derrick to promote safe and efficient operation;
- Standard safety features including overload protection, emergency load lowering, fail to safe braking on all drives with dual braking on hoisting units, upper and lower limits, speed ramps for end of travel;
- Optional triple braking system on hoisting units.

Tubular Range

2-7/8" to 60"

HORIZONTAL PIPE HANDLING

Pipe Handlers

Pipe Handlers

A varied range of Pipe Handlers are available to satisfy the specific requirements and configuration on board any rig type. The Pipe Handlers provide accurate, quick and efficient transportation of tubulars between the pipe deck storage areas and the catwalk or conveyor.

Key Features

- Robust design for enhanced performance, quality and safety;
- Knuckle Boom and Fixed Boom options available. Slewing or rigid frame;
- Pipe Handler reach to suit client requirements;
- Lift capacity is specific to client requirements, maximum 5 tonne;
- Tubular handling options available: Griphead, Capture head, Electro-Magnets;
- Positional mapping of head position available to ensure accurate control and provide anti-collision;
- Head level facility. Levels the tubular when picked up off centre;
- Head parallel facility. The tubular remains parallel with the catwalk / conveyor and the pipe storage bays. Promotes quicker and accurate handling;
- Control options available. Drillers Cabin, Operators cabin, Radio Control or Control Console;
- Integrated Hydraulic Power Unit if required. Fitted with hydraulic load sensing capability ensuring the HPU runs efficiently;
- Interlocked with Catwalk and other deck equipment to promote safe and efficient operation;
- Standard safety features including overload protection, emergency load lowering, fail to safe braking on all drives, speed ramps for end of travel.

Tubular Range

2-7/8" to 20"



HORIZONTAL PIPE HANDLING

Tailing Arm/Guide Arm



Tailing Arm/Guide Arm

Tailing Arms and Guide Arms are mounted on the Drill Floor to tail, guide and position tubulars between V-Door, Setback and Well Centre positions without the need for manual intervention.

Key Features - Tailing Arm

- Robust design for enhanced performance, quality and safety;
- Compact unit with articulated or telescopic arm to suit Drill Floor layout and operator requirement;
- Control options available. Drillers Cabin, Drill Floor mounted Console, Radio Control or Local Control;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders.

Tubular Range

2-7/8" to 60"

Key Features – Guide Arm

- Robust design for enhanced performance, quality and safety;
- Option for mounting. Drill Floor mounted on a pedestal or mounted on a travelling Trolley;
- Slew, luff and extend functions to suit Drill Floor layout and operator requirement;
- Horizontal head facility. Ensure head is always horizontal regardless of the arm angle;
- Positional mapping of head available to ensure accurate control;
- Control options available. Drillers Cabin, Drill Floor mounted Console, Radio Control or Local Control;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders, fail to safe brakes on all drives.

Tubular Range

2-7/8" to 20"

Bridge Racker



Bridge Racker

Mounted within the derrick above the Fingerboard level, the Bridge Racker handles and guides tubulars between the Fingerboard / Setback area and Well Centre position.

Key Features

- Robust design for enhanced performance, quality and safety;
- Main bridge beam spanning the derrick mounted on runway beams;
- Griphead and racking column are slew bearing mounted to a trolley which is mounted between the bridge beams;
- Control options available. Drillers Cabin, Derrickmans Cabin or Control Station;
- Independent operation or synchronised operation with other racking arms provided;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders and fail to safe brakes on all drives.

Tubular Range

2-7/8" to 9-3/4"



Fingerboard

Mounted within the Derrick at approximately 85' above Drill Floor, the Fingerboards are capable of storing any combination of tubulars providing the space is available.

Key Features

- Robust design for enhanced performance, quality and safety;
- Individual pneumatic actuated latches provided to secure each tubular. Latches mounted on top of the Fingerboard with the pneumatic cylinders protected inside the fingers;
- Adjustable fingers available to suit tubulars;
- Control options available. Drillers Cabin or Derrickmans Cabin;
- Independent operation or synchronised operation with the racking system;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including spring return to close on the cylinders to ensure positive tubular retention.

Tubular Range

2-7/8" to 9-3/4"



VERTICAL PIPE HANDLING

Derrickmans and Assistant Driller Cabin



Derrickmans and Assistant Driller Cabin

Cabins are mounted in the derrick to provide a safe, climate controlled area for the operation of equipment.

Key Features

- Robust design for enhanced performance, quality and safety;
- Insulated double skin construction from steel or stainless steel with internal lighting;
- Hinged access door with spring close;
- Anti-vibration mounting;
- Toughened, single or double glazed windows available on all sides, floor and roof to suit requirements;
- Fully adjustable ergonomic swivel chair;
- HVAC for climate control;
- Control options available. Full range from basic direct hydraulic actuation to touchscreen HMI.



VERTICAL PIPE HANDLING

Access / Stabbing System

Access / Stabbing System

Mounted in the derrick to provide personnel assistance during stabbing operation and to provide access to equipment for inspection and maintenance. A versatile range of systems with different reaches and capacities are provided.

Key Features

- Robust design for enhanced performance, quality and safety;
- Two types available: A range of slewing telescopic arms and baskets or the vertical rail mounted elevating foldable platform;
- Control options available. Dual control from local station and remote station either on Drill Floor or in Drillers Cabin;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders and fail to safe brakes on all drives;
- Complies with man-riding requirements.



Horizontal to Vertical Arm (HTV)

The function of the Horizontal to Vertical Arm is to transfer tubulars between the horizontal position from the catwalk or conveyor to the vertical position when presented into the derrick for Make-up at Well Centre or Mousehole positions. Used in conjunction with other equipment to Make-up doubles, triples or quads offline. The stands can be presented directly to Well Centre or stored in the setback area.

Key Features

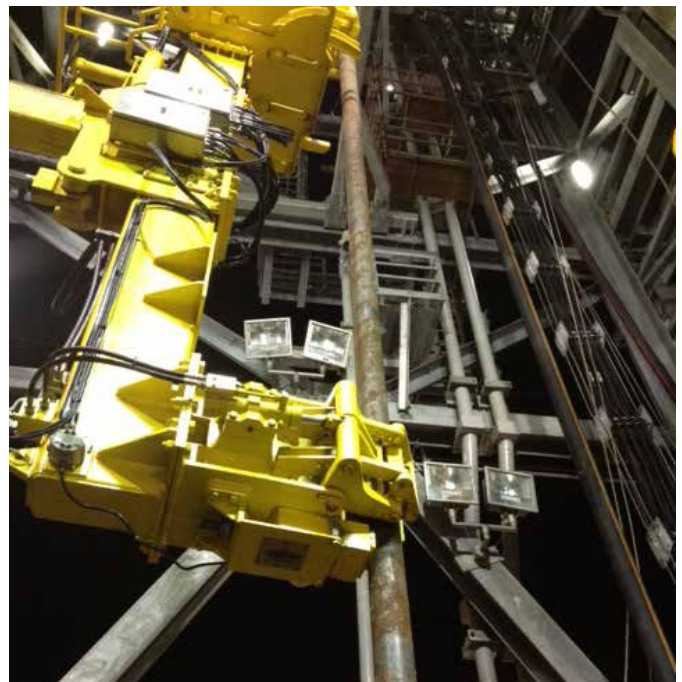
- Robust design for enhanced performance, quality and safety;
- Vertical rails supported on Drill Floor and mounted to the derrick structure;
- Vertical travel Carriage mounted between the rails, supporting the HTV Arm. Carriage travel provided by rack and pinion drive or wire rope hoist;
- Telescopic HTV Arm with reach and slew function to suit Drill Floor layout;
- Griphead spreader beam;
- Tubular Stab In function;
- Hydraulically actuated;
- Control options available. Operators cabin, Drillers Cabin, Drill Floor Console or Radio Control. Backup manual control on the HTV Arm;
- Manual and automated control modes;
- Interlocked and integrated with Drilling System Zone Management;
- Standard safety features including overload protection, emergency load lowering, fail to safe braking on all drives, speed ramps for end of travel, tubular engage sensors, load holding valves on all cylinders.

Tubular Range

2-7/8" to 20"

Capacity

10,000 kg



VERTICAL PIPE HANDLING

2-Arm Racking System

A standard 2 Arm Racking System includes a Top Racking Arm (TRA) and a Centre Racking Arm (CRA). The system handles and guides tubulars between the Setback area and Well Centre position.

Key Features - Top Racking Arm (TRA)

- Robust design for enhanced performance, quality and safety;
- Trolley mounted, slewing telescopic arm to suit the Fingerboard arrangement and Well Centre reach;
- TRA Trolley runs on a support structure located within the derrick at Fingerboard level;
- Control options available: Drillers Cabin or Operators Cabin;
- Independent operation or synchronised operation with the CRA;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders and fail to safe brakes on all drives.

Tubular Range

2-7/8" to 9-3/4"

Key Features - Centre Racking Arm (CRA)

- Robust design for enhanced performance, quality and safety;
- Trolley mounted, slewing telescopic arm to suit the Fingerboard arrangement and Well Centre reach. Lift capacity 10 tonne;
- CRA Trolley runs on a support structure within the derrick at an intermediate level between Drill Floor and Fingerboard;
- Control options available. Drillers Cabin or Operators Cabin;
- Independent operation or synchronised operation with the TRA;
- Interlocked and integrated into Drilling System Zone Management;
- Standard safety features including load holding valves on cylinders and fail to safe brakes on all drives.

Tubular Range

2-7/8" to 9-3/4"



Guardian Racker (GR)

Guardian Racker (GR)

The function of the Guardian Racker is to transfer tubulars between the horizontal position from the catwalk or conveyor to the vertical position when presented into the derrick for Make-up at Well Centre or Mousehole positions. Used in conjunction with other equipment to Make-up doubles, triples or quads offline. The stands can be presented directly to Well Centre or stored in the setback area.

Key Features

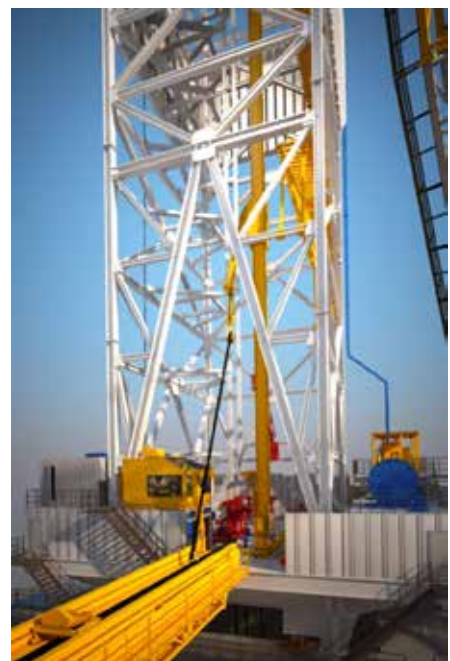
- Robust design for enhanced performance, quality and safety;
- Lower rail recessed in the drill floor to support the column weight and reduce trip hazard;
- Upper rail mounted in the derrick to guide the top of the column;
- Winch mounted on the top of the column hoisting the main arm up and down, incorporating a cylinder for make-up and break out compensation;
- Column travel provided by rack and pinion drive. Slew bearing mounted;
- Main Arm and Guide Arm with reach and retract function ,slew on column to suit Drill Floor layout;
- Griphead to grip the doubles and triples and Guidehead and to guide the lower of the tubular;
- Tubular Stab In function;
- Hydraulically actuated;
- Control options. Drillers Cabin. Backup manual control on the Guardian Racker;
- Manual and automated control modes;
- Interlocked and integrated with Drilling System Zone Management;
- Standard safety features including overload protection, emergency load lowering, fail to safe braking on all drives, speed ramps for end of travel, tubular engage sensors, load holding valves on all cylinders.

Tubular Range

Griphead and Guidehead 3-1/2" to 9-5/8" Elevator for 3-1/2" to 9-5/8"
Elevator for 10-3/4" to 20"

Capacity

10,000kg: main arm, reach 3m or 7000kg: main arm reach 4m



Mousehole

The Mousehole is Drill Floor mounted and used in conjunction with other tubular handling equipment for offline make-up and break out operations to increase operation efficiency.

Key Features

- Robust design for enhanced performance, quality and safety;
- Powered Rabbit, dropped load impact absorber, drain line;
- Tubular centralising mechanism;
- Powered or non-powered;
- Tilted or vertical mounted;
- Single or dual mousehole models;
- Fixed length or telescopic;
- Control options available. Drillers cabin or Drill Floor mounted Control Station.

Tubular Range

2-7/8" to 13-5/8"



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Hoisting Equipment

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Deck Crane

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Pumps

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