

CROWN

TSP TURRET TRUCKS



SET A NEW PACE

WITH A CROWN TSP TURRET TRUCK.

When it comes to running your warehouse, every day is a race to move more product, optimise operator productivity and maximise truck performance.

Given that no two turret truck applications are the same, and no one solution can address every application variable, there's a lot riding on the truck you choose. After all, you don't want to sacrifice truck performance or the ability to improve your bottom line performance.

To this end, Crown offers high performance turret trucks in two configurations:

- **TSP 6500 Series** for high throughput applications up to 13.5 metres
- **TSP 7000 Series** for the highest performance at heights to 17.2 metres

Crown's TSP trucks offer the speeds, capacities, energy efficiency and lift heights to match your exact application needs.

All two feature Crown's ground-breaking MonoLift™ mast and MoveControl™ seat, providing operators with the tools and confidence to perform at the highest levels.

Crown TSP Turret Trucks:
The New Standard in Throughput

Visit crown.com

See the TSP 6500/7000 Series



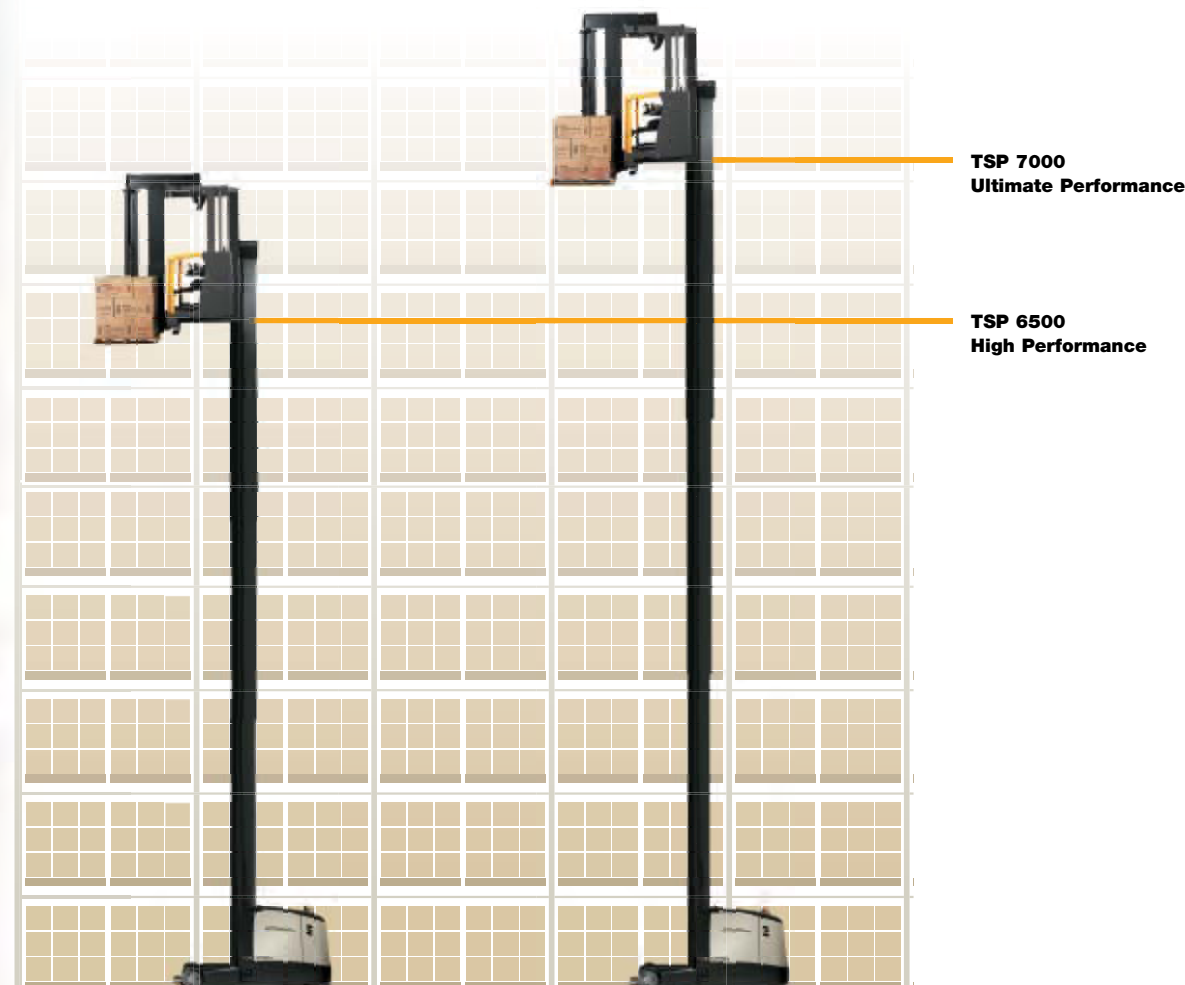
A FULL RANGE OF TURRET TRUCKS

Turret trucks must cope with some of the most demanding tasks in material handling, tasks that set the pace for every other process in the warehouse. For example, full-pallet put-away and retrieval at soaring heights, precision handling of loads of all sizes, high-level order picking, travelling long distances and transferring between aisles. Underperformance in any of these tasks can impact the whole operation.

Crown's full range of turret trucks offers standard and optional features that set a new pace: application-matched travel and lift performance, three MonoLift mast constructions, 48 or 80 Volt power, regenerative lowering, the best visibility available and controls that simplify tasks, all while reducing service and increasing uptime.

There's a Crown turret truck that's right for you.

Main Lift Speed Higher racking doesn't have to mean longer cycle times or complex location planning. Crown's range of turret trucks delivers the throughput needed for inventory flexibility at any height.



TSP 6500 Series features more powerful 48 Volt AC motors for higher performance in fast-paced applications. Energy efficiency is assured with regenerative platform lowering, resulting in longer runtime per charge. Available in 1.0, 1.25 and 1.5 ton capacities.

TSP 7000 Series features 80 Volt AC motors for unmatched performance in the toughest non-stop applications. Regenerative platform lowering and battery capacity to 72 kWh will take these 1.0, 1.25 and 1.5 ton trucks through your longest shift.

SIMPLIFY TASKS

WITH POWERFUL, VERSATILE MACHINES.

Though turret truck applications are often highly specialised, the truck you choose shouldn't be limited to one task. That's why we designed the TSP turret trucks to be flexible enough to handle a range of needs – from environmental cabs that make freezer work comfortable to special load handlers and positioners for unusual load sizes.

One source. Many solutions.

CONFINED AREAS: These highly manoeuvrable trucks can change aisles with as little as 4 metres of end-aisle clearance.



APPLICATION ADAPTABILITY

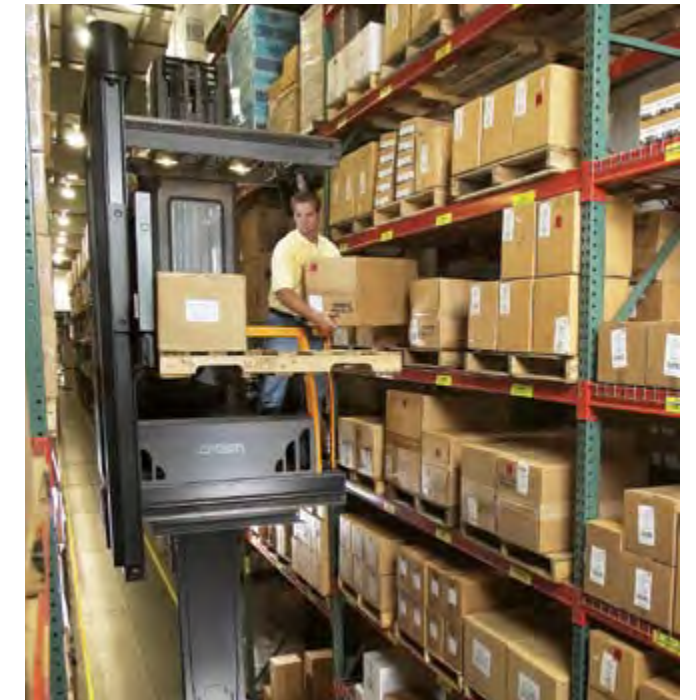
Crown TSP trucks easily accommodate a variety of application needs:



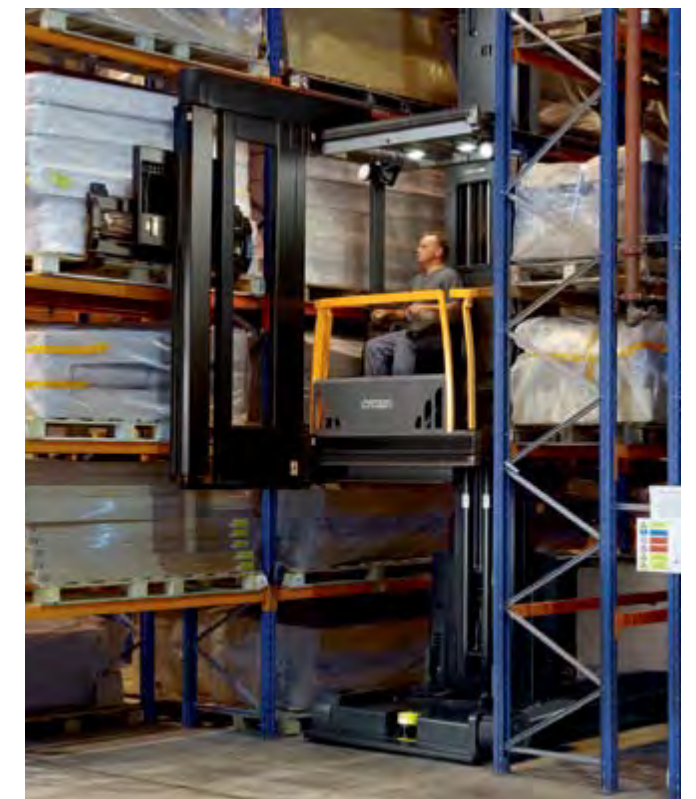
FULL PALLET HANDLING: Put-away and retrieval of full loads at extreme heights is a demanding task made simple. The unmatched stability of the MonoLift mast and precise load controls makes exact placement of heavy loads easy.



COLD STORAGE: The spacious enclosed cabin option creates a comfortable work environment in temperature extreme applications. The perfect fit cab option also provides exceptional visibility and comfort that contribute to operator productivity and shift endurance.



ORDER PICKING: Sturdy steel side gates and clear front rail reduce the need for operators to bend or lean when retrieving product from the rack or placing it on a pallet. In addition, the rails can be used to support the weight of the product as it is transferred.



LONG LOADS: Extended load handlers can manage loads such as furniture, construction materials or mattresses. The optional fork positioner helps in applications with varying pallet sizes.

GO HIGHER

WITH UNMATCHED CONFIDENCE.

To fully utilise your warehouse, you need a truck that has the backbone to reach for more. That's why Crown designed the MonoLift™ mast to go higher, be more stable and handle the non-stop pressures of turret applications.

With this breakthrough, users and managers experience the unmatched stability and flexibility of this powerful, precision-manufactured mast.

Crown TSP Trucks: Reaching new heights

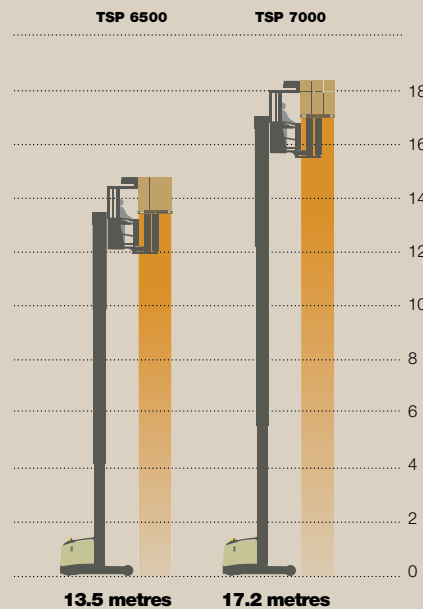


IT COMES DOWN TO THE MAST ▼

Crown's exclusive MonoLift mast makes it possible to move unprecedented capacities to impressive new heights. This results in flexibility that maximises every pallet location in your warehouse.

Crown learned years ago that turret truck applications present significant engineering challenges: extreme heights, heavy offset loads and a raised operator and platform – all while manoeuvring loads in a tight aisle only slightly wider than the truck itself. **The Crown MonoLift mast is up to the task.**

Flat ladder-style masts cannot match the torsional strength and rigidity of Crown's closed-section mast. This proven design does not require mast stabiliser bars common to other turret trucks – Crown brings powerful performance and stability to turret applications like no other.



*Maximum Height

Structural integrity. The MonoLift mast's closed-section construction features heavy steel I-beams tied together with massive cross members to minimise twisting and sway. It's the type of construction used on telescopic boom cranes with several times this lift height.

Highly Adaptive. Lift more weight at higher heights than ever before. Imagine the throughput gains and flexibility in your warehouse when you have fewer capacity constraints – placing heavier loads almost anywhere in your operation.

Capacity Utilisation

With warehouse space at a premium, especially in freezer applications, businesses need efficient solutions to maximise cube utilisation.

Turret trucks have always taken advantage of narrow aisles to maximise pallet positions. Now, with up to 17.2 metres of lift height, operations can achieve more than ever.



TAKE CONTROL

WITH UNSURPASSED ERGONOMICS AND COMFORT.

Turret truck users spend their entire shifts in the operator compartment. To make the most of every minute, their work space must be flexible, comfortable and safe. In fact, operators tell us the Crown TSP is simply the most ergonomically advanced, most comfortable turret truck in the world.

Give the TSP a test drive and you'll see what it's like to be in total control.

DRIVER'S SEAT

Crown provides unmatched flexibility and comfort with the MoveControl™ Seat. Its integrated controls and full adjustability support every operator move.

Cushioned armrests can be adjusted to a number of preset positions to meet the needs of the operator and the task at hand.



The swivel seat and backrest provide postural support, flexibility and freedom to manage any task.

Height adjustability is one more way the Crown MoveControl seat can be easily adapted to each individual operator.

110° flexibility

Verified by extensive human factors studies, the Crown TSP provides the most accommodating operator compartment. The design doesn't limit the operator position. Instead, it gives the operator the flexibility to choose the optimum position for individual comfort and control.



The four seating positions are designed to improve visibility, reduce fatigue, optimise work space and enhance control for a wide variety of tasks. Whether you're working the right or left rack face, travelling forward or backward, or manoeuvring outside the aisle, the MoveControl seat adds up to more comfort, more productivity and safer operation.

OPERATOR-CENTRIC DESIGN ▼

The operator compartment is the office of busy operators. We've maximised space and function right down to the storage compartments.

- 1. Computer controlled brakes** automatically adjust for lift height and other key variables for better control and minimal mast sway.
- 2. Integrated armrest controls** provide shift-long support and easy access to controls, unlike models that require outstretched arms for long durations.
- 3. Multiple storage compartments** provide much needed, convenient storage for tools and other operator needs.
- 4. Switch panel** is easily accessible and provides fan and light control.
- 5. MoveControl seat** allows four unique positions for optimum visibility and comfort.
- 6. Presence pedals** ensure proper operator positioning and provide large target areas for easy actuation.
- 7. Anti-fatigue floor mat** features a microcellular composition to reduce discomfort/back stresses.
- 8. Work Assist rail** provides support for the operator when building pallets in a picking application. There are no controls, terminals or other obstacles to reach over during picking operations.
- 9. Side gates** need to be lowered for operation and provide postural support for operators when order picking.



SMOOTH AND PRECISE

Precision is critical when moving heavy pallets six floors above the ground. That's why Crown equips operators with intuitive, blended controls that provide razor-sharp precision on demand. And because the controls move with the seat, operation is consistent and comfortable no matter which position the operator chooses.



Hand sensors in both control handles ensure the operator is in the proper position for safe operation.



Crown's multi-task controls, which offer blending of primary functions, improve productivity with their intuitive, operator-centric design.

When manoeuvring outside of aisles, the innovative steering tiller, another Crown exclusive, can be operated by fingertip or via a flip-up tiller knob.



The sloped power unit design and flexible seat positions give the operator a clear view of the aisle, improving manoeuvrability and operation in and out of the aisle.



Tasks that benefit from standing are efficiently accomplished with a seat that folds up and controls that adjust to the ideal operator height.



KEEP GOING

WITH PROVEN TECHNOLOGY AND SERVICE EASE.

Turret trucks are a major investment. So you should expect uptime and optimum performance day in and day out. That's why proven technology, steel-enforced durability, ease of access and serviceability have been design priorities for Crown that pay off for customers.

Bottom line: lowest total operating cost per hour.

DURABILITY INSIDE AND OUT ▼

One look tells you the TSP is built for long-term reliability and simplified accessibility.

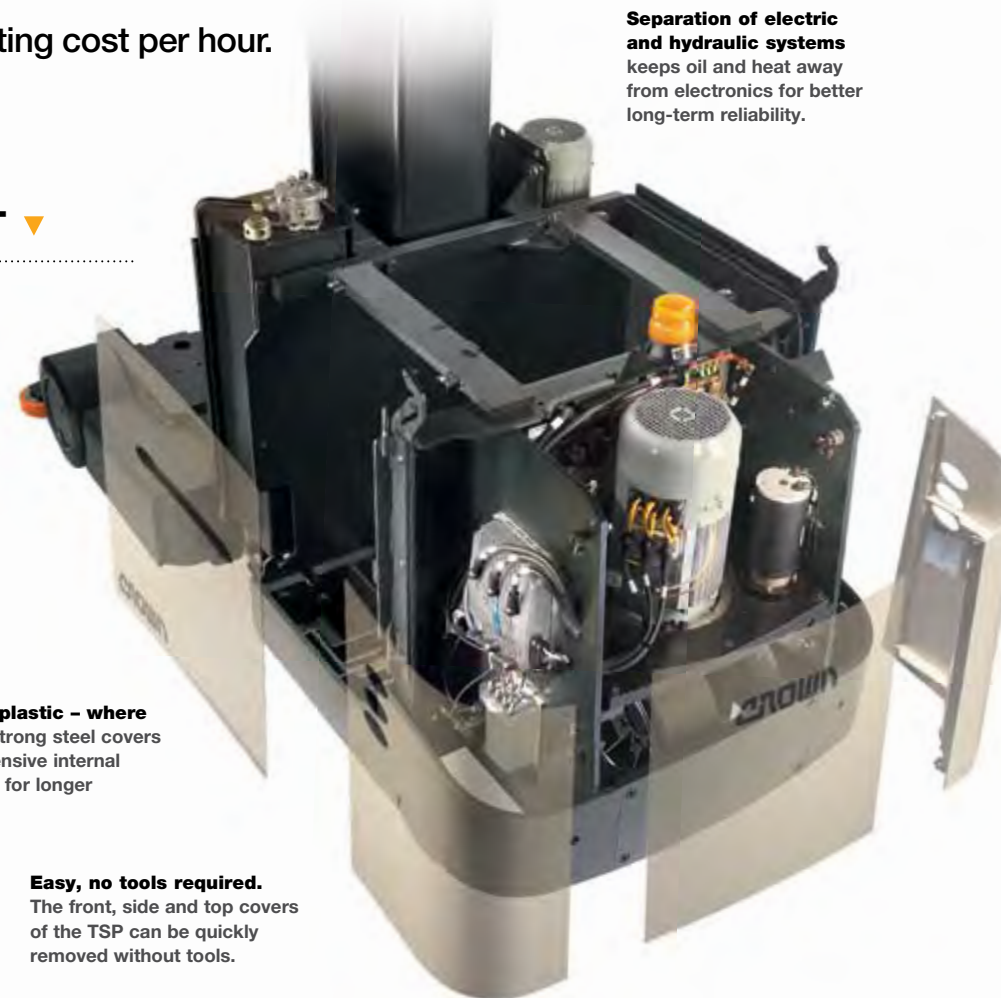
The strength of steel supports long-term truck endurance, while carefully placed components optimise access and serviceability.

Crown TSP trucks are designed to allow direct access to individual components without having to remove other components.

Steel – not plastic – where it counts. Strong steel covers protect expensive internal components for longer truck life.

Easy, no tools required. The front, side and top covers of the TSP can be quickly removed without tools.

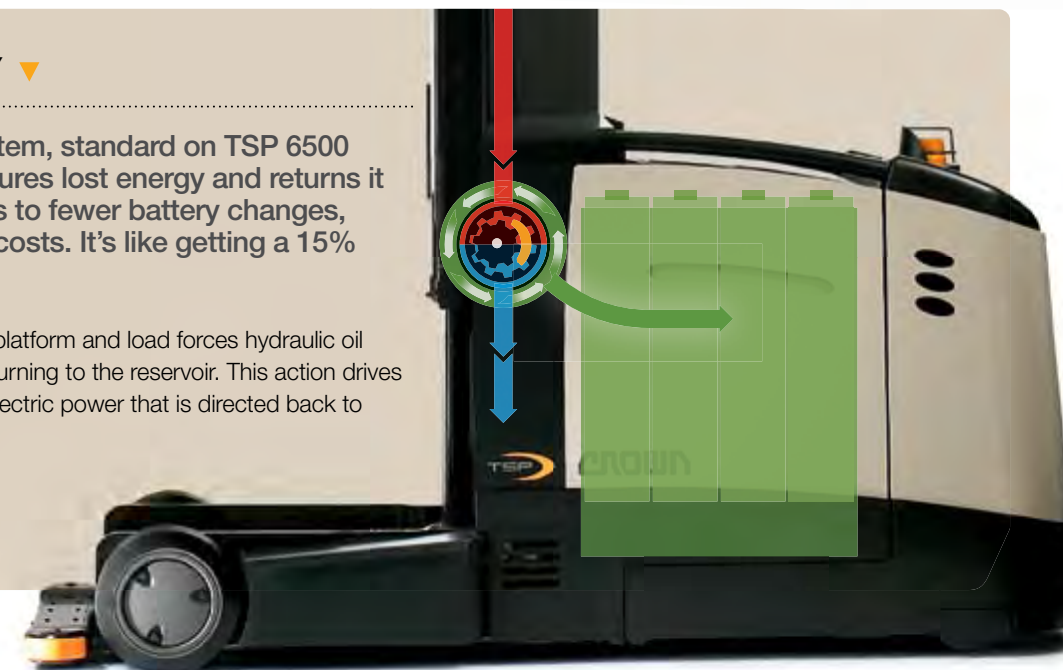
Separation of electric and hydraulic systems keeps oil and heat away from electronics for better long-term reliability.



ENERGY EFFICIENCY ▼

Crown's Regen Lower System, standard on TSP 6500 and TSP 7000 Series, captures lost energy and returns it to the battery. This equates to fewer battery changes, longer shifts and reduced costs. It's like getting a 15% bonus with every charge.

When lowering, the weight of the platform and load forces hydraulic oil back through the pump before returning to the reservoir. This action drives the motor in reverse, generating electric power that is directed back to the battery.



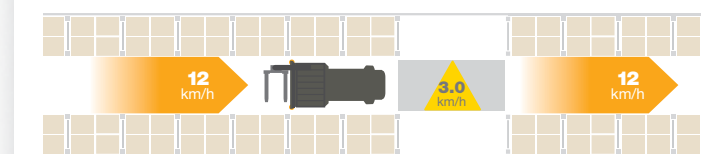
PERFORMANCE TO OPTIMISE EVERY CYCLE ▼

Crown's Automation Technologies, available on TSP 6500 and 7000, communicate with floor installed RFID tags to pinpoint the location of the truck in the facility and adjust its operation as defined by the programme.

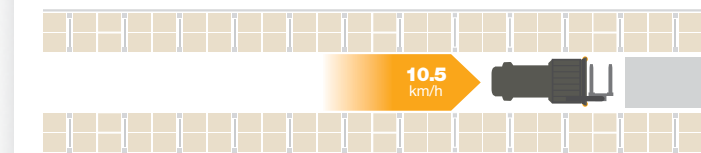
Auto Fence can be used to control truck operation near a hazard or where greater caution is required. This consistent application of safe operating rules can reduce the risk of damage or injury.

Auto Fence is a programmable "virtual fence" that can be used to control truck operation. Areas within an aisle are catalogued in the system according to allowable lift height, travel speed and other factors. The truck continuously monitors its exact location and the system implements any programmed restrictions or controls.

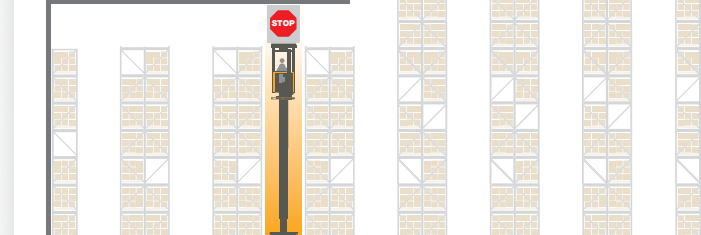
Automatic Speed Limits



Automatic Slow/Stop

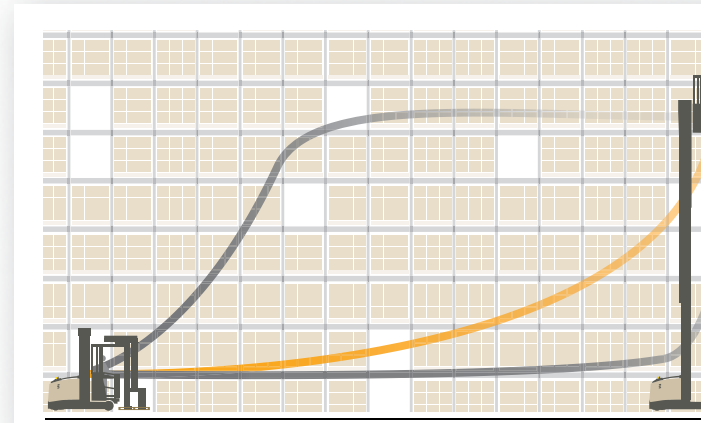


Automatic Height Limits



Auto Positioning System (APS) can increase productivity by automating travel and lift functions for the most efficient path between the truck and its destination. The resulting improvement in productivity can reach as high as 25%.

APS allows the operator to complete a task operation with just one control handle movement. Upon receiving a task destination, either by manual entry or directly from a Warehouse Management System, the truck travels and elevates to the exact pallet location in the most time-efficient motion.



LEADING-EDGE TOOLS ▼

Access to accurate, real-time information increases the efficiency and effectiveness of your operations.

InfoLink®, the robust wireless data management solution from Crown, gives decision makers intuitive dashboards summarising key operator and fleet statistics including battery usage, impact history, truck utilisation, service needs and more. It also identifies opportunities for corrective action via laptop or other mobile devices.

As a result, managers are fully armed to tackle problems and tap into emerging opportunities as they occur for more efficiency and better cost control.

InfoLink®





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