

CROWN

TSP 1000/1500 SERIES



Let the work flow

Crown's approach to equipping our customers with a highly effective very narrow aisle (VNA) system begins with the flow: with an understanding of your work environment, load handling and desired performance goals. That's because our TSP Series VNA trucks deliver exceptional travel, lift and lower speeds – all supported by Crown's heavy-duty MonoLift mast – to achieve sustained high-performance results.



Purpose-built



Safety-focused



Operator-centric



Smarter system



Purpose-built, elevated results

You want results, so you need your systems, processes and equipment to work together. That's why at Crown, we build each VNA truck to fit the requirements of our customers' individual applications. By understanding your operational goals, facility requirements and handling preferences, as well as the weight, storage density and location of the material you need to move, we can be sure of building a VNA truck that fits your application and helps you achieve your business objectives.

Our consultative approach looks at the big picture.

To ensure that your truck or fleet meets your needs, our consultants focus on three key criteria:

- **Facilities.** This involves understanding your aisle strategy, ceiling height and floor surface specifications, rack heights, and need for high performance in challenging environments such as cold storage.
- **Load handling.** The size, weight, shape and consistency of pallet loads, along with your racking configurations, are all critical for defining the truck's specification.
- **Performance potential.** To achieve your desired results, we use simulation software to define possible scenarios and analyse the costs and benefits of each configuration.



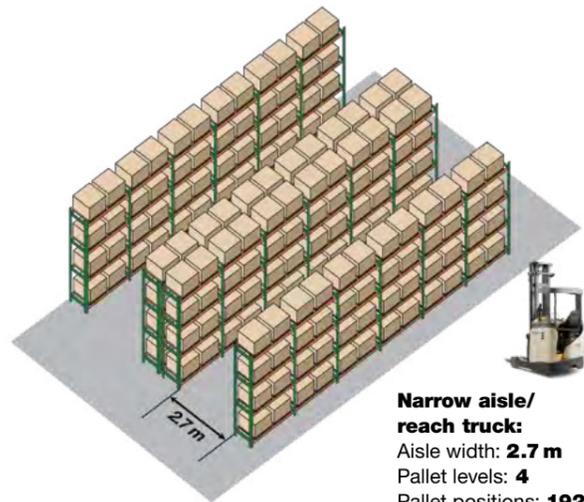
We have developed technology-based tools to help us explore very narrow aisle configurations and benefits that will increase your returns. Take, for example, Crown's exclusive TSP SureSpec software, which gives you a fast, accurate way to spec your truck and optimise your warehouse space.



Assess facility opportunities

Optimised cube utilisation is the key to success in warehousing. Thanks to Crown's long-term focus on solutions for narrow and very narrow aisles, we make every square metre count. By understanding the parameters of your facilities, we establish your operation's potential and then balance it against the realities of your application methods and load specifications.

FIXED CEILING HEIGHT IN EXISTING APPLICATIONS



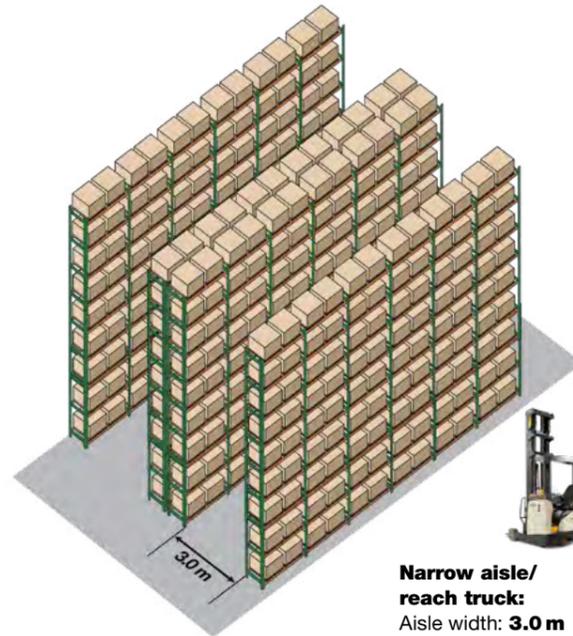
**Narrow aisle/
reach truck:**
Aisle width: **2.7 m**
Pallet levels: **4**
Pallet positions: **192**



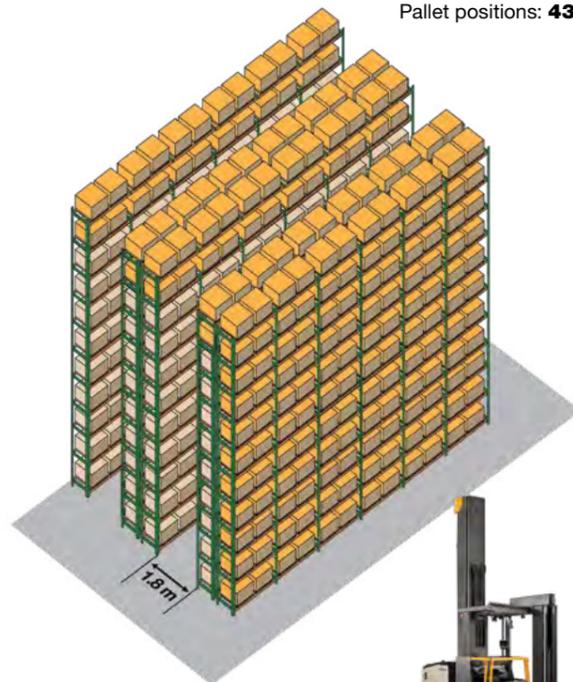
**Very narrow aisle/
TSP Series:**
Aisle width: **1.8 m**
Pallet levels: **4**
Pallet positions: **240**

**25%
MORE
PALLET
POSITIONS**

FLEXIBLE CEILING HEIGHT IN NEW-BUILD APPLICATIONS



**Narrow aisle/
reach truck:**
Aisle width: **3.0 m**
Pallet levels: **9**
Pallet positions: **432**

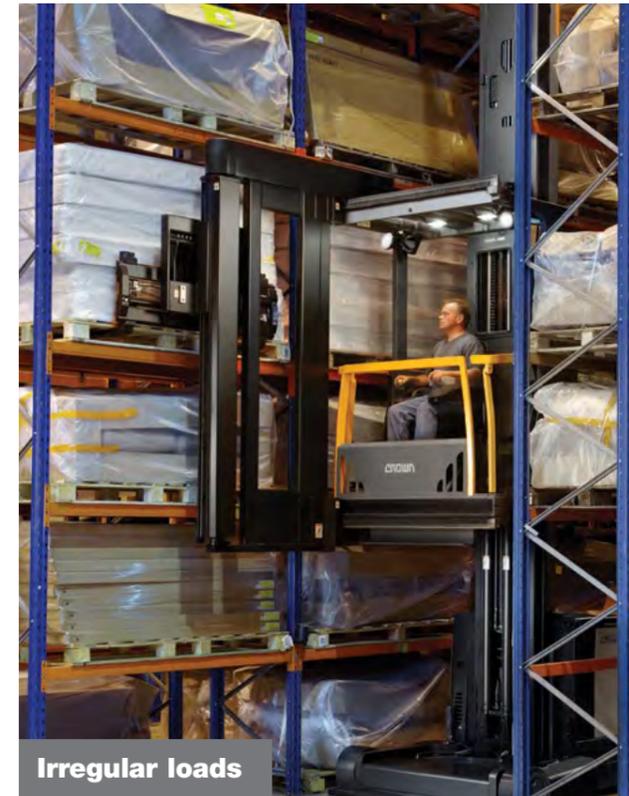


**Very narrow aisle/
TSP Series:**
Aisle width: **1.8 m**
Pallet levels: **11**
Pallet positions: **660**

**53%
MORE
PALLET
POSITIONS**

Define load-handling requirements

Once we understand your facilities, we gather information on your preferred load-handling practices. We identify the standard and optional features on Crown's TSP that will support your unique operations and help you achieve your desired results. During this phase, we consider the following factors: order picking, full-pallet picking, load type, inventory flow, racking types, and other unique requirements such as cold storage.



Extended load handlers improve a VNA truck's versatility, making it easier to manage long and wide loads such as furniture, construction materials or mattresses. The optional fork positioner helps in applications featuring various pallet sizes.



Sturdy steel side gates and a clear front rail reduce the need for operators to bend or lean when retrieving products from racks or placing them on pallets. The rails can also be used to support the weight of a product as it is transferred to the pallet.



Our spacious, optional enclosed cabin creates a work environment that stays comfortable in extreme temperatures, keeping operators focused so they can move product. The cabin's exceptional visibility also helps operators stay productive throughout each shift.



The TSP is suitable for use in a myriad of racking configurations, such as push-back racking, deep lane storage and flow racks. Crown's specialists can assess your requirements and recommend racking solutions that will add even more storage density to your operation.

Predict performance results

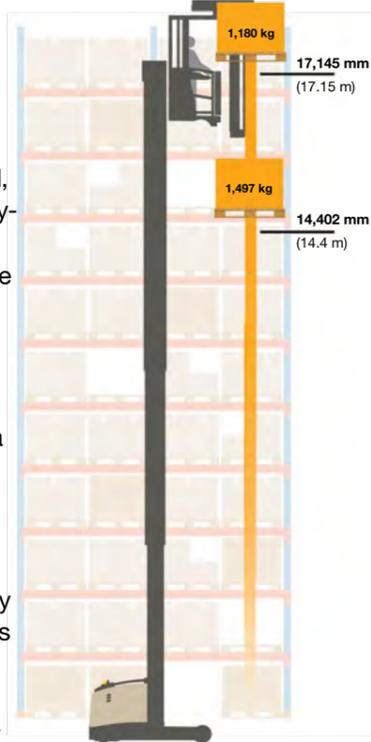
Crown deliberately designs the TSP Series to each customer's needs and specifications to deliver the targeted performance results: increased throughput, higher operator efficiency, stronger return on investment and more. It all starts with the right performance and tools.

- Crown's MonoLift mast plus high lift and travel speeds support better workflow and boost operator confidence.
- Leading battery life optimises truck availability over a full shift.
- Crown's exclusive TSP Estimator Tool helps our sales consultants and customers specify the right VNA truck solution for a given environment, application and tasks.

It starts with our mast

Crown's exclusive MonoLift mast makes it possible to move unprecedented loads to impressive heights.

- **Lift to 17,145 mm**—When operators and loads are suspended more than 17 metres or six storeys in the air, stability is key.
- **Operate from a position of strength**—Strengthened, boxed-in sections and heavy-gauge steel construction deliver powerful performance and stability.
- **Minimise twisting and swaying**—Mast design offers greater stability than a traditional dual-upright mast.
- **Boost productivity**—Simultaneous blending of the mast's main and auxiliary hydraulic functions optimises movement.
- **High capacity at height**—Lift more weight to greater heights than ever before, slotting heavier loads wherever you need them.



Boost performance

Increase operator confidence and performance with industry-leading travel/lift speeds that get loads where they need to go – easily and efficiently.

Maximum travel speed (km/h)

Higher travel speed means trucks reach pick slots quicker for an **advantage of up to 25%**.



Main lift speed (m/s)

Higher lift speeds provide an **advantage of up to 41%** over competing solutions.



In addition to industry-leading travel/lift speeds and battery performance, Crown offers state-of-the-art operator assist technology to further enhance your operation's performance, such as the Auto Positioning System and the OnTrac anti-slip traction control.

Auto Positioning System enables the TSP Series to take the most effective route to the next rack location, **increasing productivity by up to 25%**.

OnTrac anti-slip traction control reduces tyre spin during acceleration, plugging and braking, resulting in shorter stopping distances and longer tyre life in wet or dusty applications.



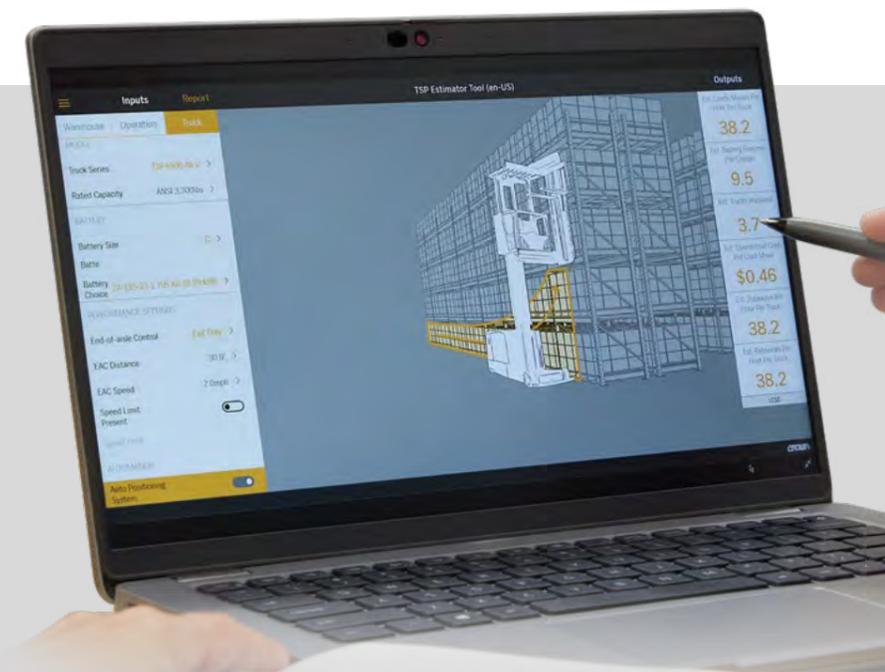
Battery power performance

To make the most of opportunity charging and complete a full shift, the size of the battery is critical. The TSP Series offers a significant charging capacity advantage when compared to competitors with the largest comparable batteries.



Crown's TSP Estimator visualises future performance

Using Crown technology, our VNA product experts consult with customers to define the best system for the job. Factoring in throughput needs, cost per hour and charging cycles, Crown will predict the optimal fleet size, runtimes and TSP Series VNA truck specifications to support your application and business needs.



Operator-centric environment

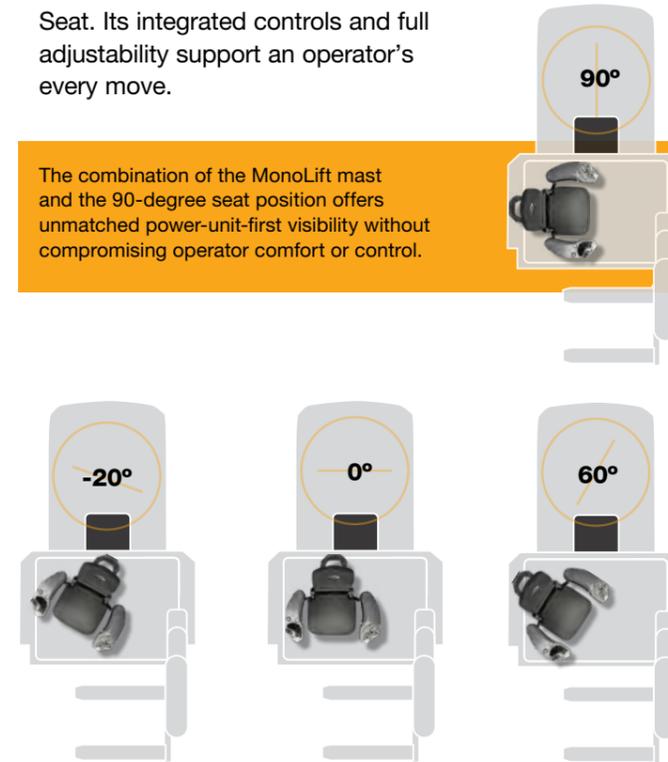
With a fully adjustable, rotating, fold-up seat plus precision controls that follow the operator (whether seated or standing), the TSP Series operator compartment adjusts to fit both operator and task. A large floorboard, front protection rail, personalised display, and multiple storage compartments and power ports complete the package.



Standing tasks are efficiently accomplished thanks to a seat that folds up, plus controls that adjust to the operator's height.

Productive from any angle
Crown provides unmatched flexibility and comfort with the MoveControl Seat. Its integrated controls and full adjustability support an operator's every move.

The combination of the MonoLift mast and the 90-degree seat position offers unmatched power-unit-first visibility without compromising operator comfort or control.



Smooth and precise

Precision is critical when moving heavy pallets six storeys above the ground. That's why the TSP Series equips operators with intuitive, blended controls that provide razor-sharp precision on demand. What's more, the controls follow the operator regardless of seat position, for an uninterrupted workflow.

- Tiller knob
- Auxiliary raise and lower
- Pivot control
- Display navigation knob



- Multi-Task Control
- Main raise and lower
- Traverse control
- Horn
- Emergency disconnect



Operator-centric experience

The Gena operating system provides operators with an intuitive, data-rich experience that's fully integrated into the lift truck architecture. Its 7" touchscreen includes customisable widgets displaying key performance metrics – such as load weight, operating time and battery charge – at a glance. As a result, operators enjoy a better day-to-day user experience, including:

- Simplified user onboarding, with prompts on safe operating practices.
- Real-time truck feedback relevant to the task in hand.
- More than 40 languages available to accommodate a diverse workforce.
- Customisable display which operators can tailor to their tasks.

Intelligence. Built in.

The intuitive Gena operating system optimises lift truck performance while providing users with real-time, actionable data.



Helping operators work smarter, safer and faster

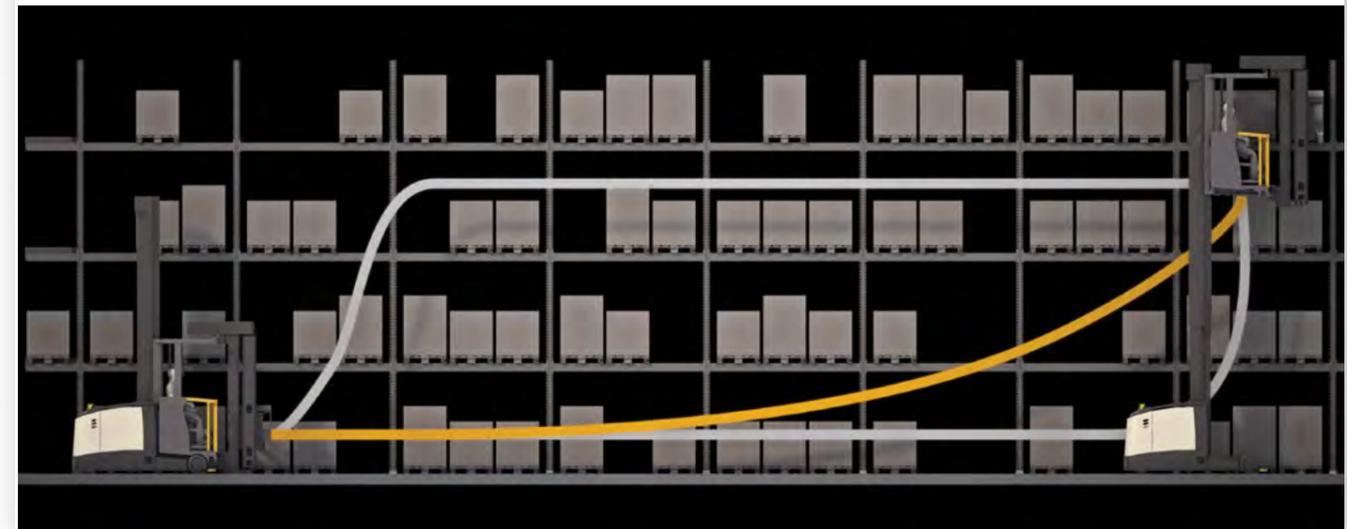
The TSP Series can be equipped with advanced operator-assist features that enable safer, more efficient operation.

Auto Positioning System uses a precise blend of travel and lift functions to take the most effective route to a designated rack location, enhancing the operator's expertise and increasing productivity by up to 25%. Elevate your facility with:



LEARN MORE
about our Auto Positioning System.

- Increased pick accuracy
- Increased flexibility
- Reduced training time
- Reduced operator fatigue

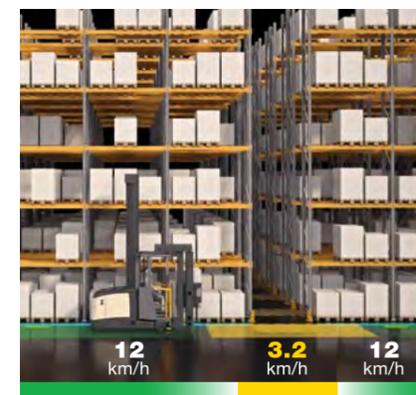


Auto Fence helps promote safety by slowing or stopping travel and limiting lift height within a very narrow aisle based on the lift truck's location.

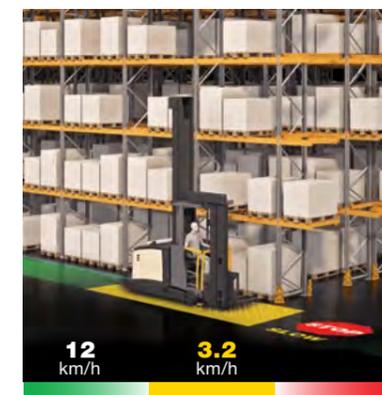


LEARN MORE
about Auto Fence features.

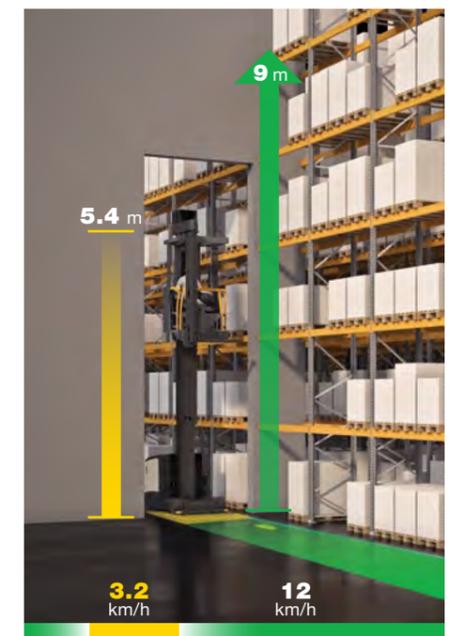
- Improved safety
- Upgradeability
- Reduced operator fatigue



Speed limits



Slow/stop



Height limits

Safety focus builds confidence

Working at height provides a whole new perspective. Built with safety in mind, TSP Series VNA trucks provide contextual guidance, help increase operator awareness, and create a safe and productive environment for operators working 17 metres in the air.

- MoveControl seat rotates for unobstructed views.
- Presence pedals on the floorboard require the operator's feet to be in the correct position before activation.
- Side gates provide postural support and assist the operator in moving product.
- The front rail protects against intrusion and offers additional support when order picking.

Capacity limit alerts

The Capacity Data Monitor provides at-a-glance details of load weights, lift heights and capacity limits. Colour-coded visuals are designed to alert operators to the current status so they stay within specified load limits.



Grey – load is below capacity and lift height limit.



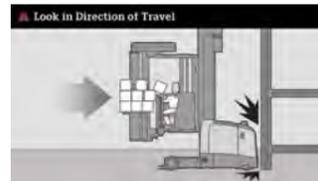
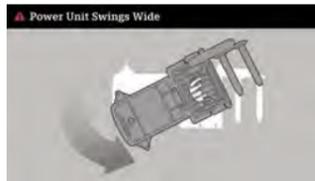
Yellow – load is approaching lift height limit.



Red – load exceeds capacity or is above lift height limit.

Safety reminders

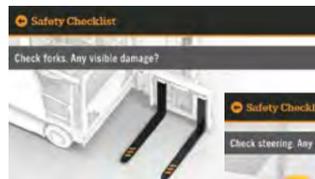
Upon login, the TSP Series displays safety messages – with visuals and text – to remind operators of their training.



Simplified InfoLink integration

The TSP 1000/1500's Gena operating system is designed to integrate easily with Crown's InfoLink Operator and Fleet Management System.* This management system provides real-time and historical operational data that reveals areas of risk and identifies areas of opportunity. InfoLink features that help encourage safe operating behaviour include:

- Access control
- Visual inspection checklist
- Impact detection and alerts
- Equipment lockout



InfoLink



*Requires InfoLink service plan



Pedestrian detection system

The optional pedestrian detection system available on the TSP Series automatically detects the presence of pedestrians and objects in the vicinity of the truck and alerts the operator. This heightened awareness of potentially hazardous situations helps the operator avoid accidents and costly damage to both equipment and facility.



Smarter system, longer uptime

VNA trucks are major investments in your operation's productivity. Optimised uptime and performance are critical. That's why Crown offers a combination of advanced technology and robust construction to deliver the serviceability and reliability required for success.

Service simplicity

- Wireless** software downloads keep trucks updated without taxing technicians.
- Easy-to-adjust settings** and return-to-factory defaults save time for technicians.
- Analyser** allows technicians to select individual system components and view all associated inputs and outputs.
- Step-by-step calibration** instructions with visuals improve technicians' efficiency and consistency.
- Easy-access** covers, panels and skirt doors can be quickly opened or removed for inspection and service.
- Separate electronic and hydraulic systems** keep oil and heat away from electronics for improved long-term reliability.



Steel where it counts
Crown's TSP Series features a heavy-duty steel frame and steel covers, combining a rock-solid foundation with robust component protection for a longer lifespan



Power up from a single source

From our expertise in power management to our complete line of V-Force energy solutions, Crown uses a systemic approach to provide everything you need to power your forklift fleet.

- Onsite evaluations
- Fleet and battery management
- Integrated solutions
- Complete support
- Batteries, chargers and accessories for lithium-ion and lead-acid batteries

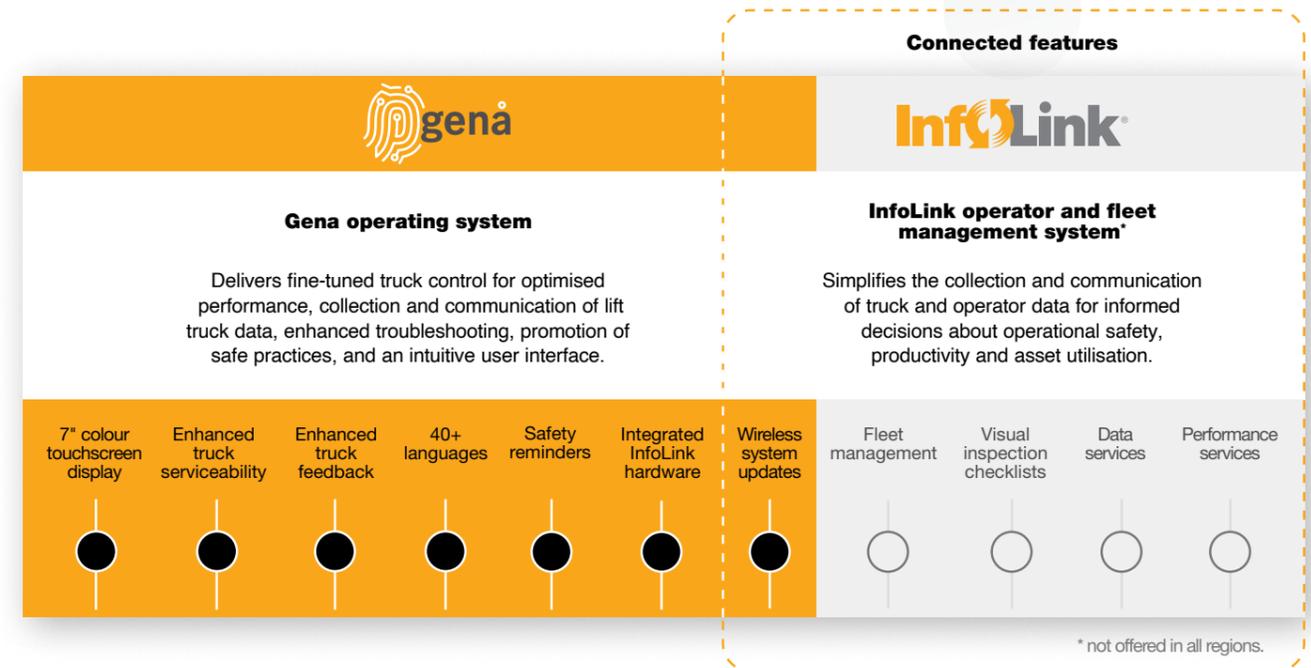


“Crown technology is simple and intuitive, which helps keep our trucks on the shopfloor.”

Connect to achieve more

Crown Connected Solutions provide real-time, actionable data to stakeholders charged with achieving and maintaining gains in productivity, safety and utilisation.

Thanks to the Gená operating system, the TSP Series comes with connected features as standard, plus options for additional features through Crown's InfoLink operator and fleet management system.



Crown's proven support network

Crown's extensive service network of technicians, supported by high parts availability, can provide the maintenance and training you need to fully leverage your investment.



Safety and training

Our comprehensive training programmes for operators, supervisors and technicians – and even pedestrians – can help support your efforts to provide a safe, productive work environment. Offered locally, our Demonstrated Performance (DP) TrainSafe Train-the-Trainer programme can provide your organisation with tools for training new operators efficiently using your own resources. At our Regional Training Centres, DP Service Technician Training goes above and beyond traditional classroom training, allowing participants to work on lift trucks under instructors' supervision.



Forklift maintenance and repair

Crown's Integrity Service System keeps your forklifts running – regardless of brand. From time and material through to complete maintenance, our Integrity Service System offers a variety of service plans to suit your needs in efficient, cost-effective ways. Our well-stocked, GPS-dispatched service vans help ensure your service technician arrives with the right part at the right time.

Put the TSP Series to work for you
Contact your local Crown dealer for a demonstration.

Visit crown.com
See the TSP Series

ecologic

Clean Environment. Smart Business.

Printed on elemental chlorine-free,
sustainably forested paper.

CROWN

You can count on Crown to build lift trucks designed for safe operation, but that's only part of the safety equation. Crown encourages safe operating practices through ongoing operator training, safety-focused supervision, maintenance and a safe working environment. Go to crown.com and view our safety section to learn more.

Crown Gabelstapler GmbH & Co. KG

Philipp-Hauck-Str. 12
85622 Feldkirchen, Germany

Tel +49 (0)89-93002-0

Fax +49 (0)89-93002-133

crown.com

Because Crown is continually improving its products, specifications are subject to change without notice.

Crown, the Crown logo, the colour beige, Gena, the Momentum Mark, MonoLift, Work Assist, InfoLink, OnTrac, Demonstrated Performance, DP TrainSafe, Integrity Service System, SureSpec, V-Force and the ecologic logo are trademarks of Crown Equipment Corporation in the United States and other countries.

Copyright 2023 Crown Equipment Corporation
TSP 1000/1500 BROCH GB 01/23, 10 – M01231-006-00
Printed in Germany