# usiness Segments

# **MOBILE CRANES**

A Complete Product Lineup to Meet Global Lifting Needs



GR-600EX

#### **Product Features**

Large mobile cranes make it easy to lift heavy loads weighing tens or even hundreds of tons and to move them safely and smoothly. Safety and reliability are essential for mobile cranes operating under the challenging conditions found in mines, oil fields and other natural

resource and energy processing facilities, as well as those of large-scale urban development projects, including office building and bridge construction sites. Beyond accidents, even minor issues that result in downtime can negatively impact the customer's bottom line.

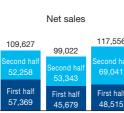
Tadano equipment is renowned for its reliability under the harshest operating conditions, ranging from the frigid cold of northern Canada to the blistering heat of the Middle East.

#### Net Sales

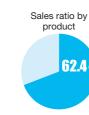
Sales in Japan stood at 42,250 million yen (110.7% of the figure for the previous year) as a result of an increase in sales of large mobile cranes, mainly new models, despite a decrease in demand.

Sales outside Japan were 75.306 million ven (123.8% of the figure for the previous year) due to an increase in sales in all regions except the Middle East, where sales declined substantially.

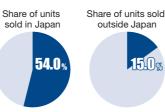
As a result, the net sales of mobile cranes amounted to 117,556 million yen (118.7% of the figure for the previous year).



FY 2017 FY 2018



Mobile cranes



sales in China by Chinese

# Interview with **Employees**



#### Development of Rough Terrain Crane GR-1000N

In September 2018 we released the GR-1000N, the largest 100-ton rough terrain crane that is allowed on public roads in Japan. With the goal of delivering products that are far superior to competing products, we made it one of our priorities to launch the product early. Despite the tight schedule, we were able to accomplish our plan thanks to the cooperation of our suppliers and all our stakeholders.

One of the major challenges we faced was weight reduction. To ensure that the total weight does not exceed 41.295 tons, the maximum allowable weight for transport on public roads in Japan, we tried to reduce weight of several components. including the boom and the superstructure. In designing the carrier frame, for which I was responsible, we optimized the basic cross section and employed high-strength materials. As a result, we were able to improve the lifting performance substantially and maintain the same weight and size as those of the conventional 70-ton class.

Since joining the company, I have gained extensive experience in the development of booms, superstructures, carrier frames, and other components for large cranes. Going forward, I hope to develop even safer and higher-quality products that will contribute to customers and society at large.



Chief, Mobile Crane

# Shoqo Seki

#### LINEUP

#### **Rough Terrain Cranes**

One of our leading product lines, these cranes represent the peak of Tadano's technical prowess, and they are often used in the construction and maintenance of the world's large-scale processing plants. They have a strong global reputation for their compact dimensions, mobility, and maneuverability in confined spaces.

They are also the leading mobile crane model in Japan and account for 91% of the total demand in Japan and 54% of that in North America.

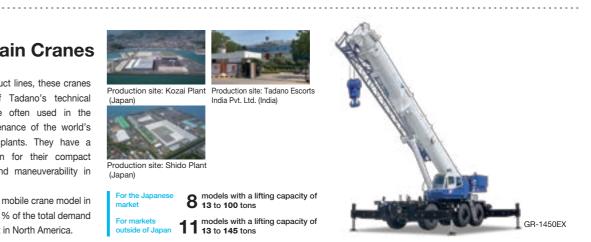






8 models with a lifting capacity of 13 to 100 tons

nodels with a lifting capacity



#### **All Terrain Cranes**

These large-capacity cranes play a crucial role in urban and infrastructure development projects, including highway and bridge construction. In addition to the capacity for long-distance driving, their special steering features offer superb maneuverability. They can easily lift loads weighing up to hundreds of tons, and their sophisticated drive concept makes them economical when traveling at highway speeds, while being mobile when navigating off-road job sites. Tadano's All Terrain Cranes account for 8% of the total demand in Japan, and 85% of that in Europe.



Production site: Tadano Faun GmbH (Germany)

models with a lifting capacity of

models with a lifting capacity of



#### **Truck Cranes**

These cranes are mounted on standard or special-purpose truck carriers. In Japan, these models meet the national requirements for driving on highways, and can even serve as tow trucks in emergency situations. In other countries, they are frequently deployed for jobs requiring large-scale crane capacity, as well as high-speed travel. Their low maintenance costs make them especially popular in developing



Production site: Shido Plan (Japan)

models with a lifting capacity of

models with a lifting capacity of



# **Telescopic Boom Crawler Cranes**

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These cranes were developed to enable efficient use in various environments in vast lands of the United States, including muddy grounds. The crawler carrier's low center of gravity allows the crane to move while carrying heavy loads. These models are widely used at construction sites for tunnels, processing plants, oil tanks, and other facilities with challenging height



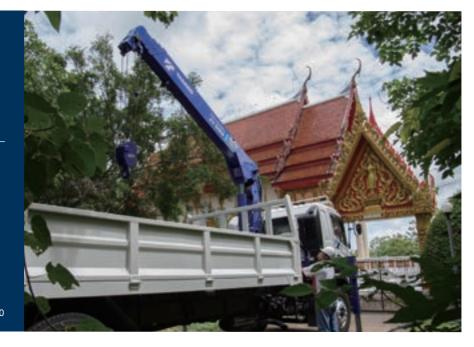
uction site: Tadano Mantis Corp. (United States)

models with a lifting capacity of de of Japan 11 models with a li



# **TRUCK LOADER CRANES**

Ease of Use and High Performance



TM-ZT500

#### **Product Features**

Truck loader cranes are among the most versatile and commonly used crane models, with applications across a wide range of industries, including shipping, landscaping, and construction. The key advantage of truck loader cranes is that their operability ensures safe, simple cargo loading, transportation, and unloading, with minimal labor. Tadano was among the earliest manufacturers to adopt LCD digital remote controls, which improve safety and efficiency by making it possible for the operator to monitor crane status during operation. We were the first in the crane industry to introduce a start/stop system to reduce engine idling, a feature that dramatically improves energy efficiency for a more environmentally friendly performance.

In addition to truck loader cranes, Tadano also manufactures special-purpose products catered to a diverse range of customer needs.

Our unique product line includes road-rail cranes, which are capable of traveling on both roads and railway tracks. Tadano is expanding its business fields in the lifting equipment industry by developing various special-purpose products that enhance operational safety and efficiency and offer solutions to society and

#### **Net Sales**

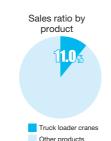
Due to a last-minute surge in demand as a result of the new regulatory requirement for safety devices and the tightening of exhaust gas regulations for small trucks, Tadano recorded 18,658 million yen in sales in the Japanese market (103.8% of the figure for the previous year).

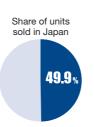
Sales in markets outside of Japan increased to 2,008 million yen (117.7% of the figure for the previous year) due to the company's efforts to expand its sales networks in Southeast Asia and the Middle Fast.

As a result, the company's net sales of truck

loader cranes amounted to 20,667 million yen (105.0% of the figure for the previous year).







# Interview with **Employees**



#### Development of the Truck Loader Crane Zest EX Series (ZX)

Adapting to the Japanese regulatory requirement for safety devices (mandatory installation of a safety device for preventing crane overload) enacted in 2018, the ZX features outstanding safety, excellent operability, and operator comfort . We introduced extensive improvements including a new layout for large parts. The new model offers enhanced stability with expanded outrigger extension. As a result, we improved the side-area work efficiency by as much as about 35% for the ZX364 model and about 20% for the ZX294 model, achieving far better performance than that of the current

Since joining the company, I have been in charge of designing hydraulic and electric components. The ZX series development project gave me the first opportunity to take part in the installation of an overload prevention device with a stopping function and in upgrading hydraulic control and electric parts. I hope to continue delivering products that will meet the expectations of our customers.

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Small Crane LE Development Dept. 2 Ryosuke Sato

#### LINEUP

#### **Truck Loader Cranes**

#### Manufacturing in Japan

Tadano's truck loader cranes have gained strong popularity in Japan since the launch of the TM series in 1963. Most of our truck loader cranes are manufactured at the Tadotsu Plant in Kagawa, which

As part of its commitment to the environment, Tadano has introduced the start/stop system to reduce engine idling from its ZE600 series onwards. In 2018, the company released the new "Zest EX" series in response to the Japanese regulatory requirement for a safety device.





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#### Manufacturing outside of Japan

Tadano opened its first plant for truck loader cranes in Thailand in 2012. Our main target markets for the truck loader cranes manufactured at this plant are Southeast Asia and the Middle East. Currently, three models with a lifting capacity of 10 tons, 8 tons, and 5 tons are produced at the plant, and production models will be gradually expanded in line with market conditions. We also have a second plant in our sights depending on future shifts in demand.



Tadano (Thailand) Co., Ltd. (Thailand)

# outside of Japan

Net sales in markets

#### **Other Special-Purpose Products**

In addition to truck loader cranes, Tadano develops products that meet a broad range of lifting needs. At our Chiba Plant, we manufacture vehicle carriers (slide carriers/super self loaders) and have the leading market share in Japan. Tadano's road-rail cranes serve as railway construction vehicles that can quickly and smoothly travel to a work site by switching from tires to rail wheels at a level crossing nearby. We

also offer other equipment that can provide solutions to a wide range of challenges encountered by our customers. Among them are industrial-use vehicle carriers (self loaders), which are designed to transport heavy construction machinery, and hydraulic cranes for shipboard use (marine cranes), an essential part of marine operations.



Production site for Slide Carriers/ Super Self Loaders: Chiba Plant (Japan)

Road-Rail Cran

Hydraulic Cranes for Shipboard Use (Marine Cranes)

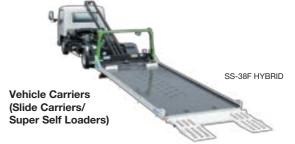
7R500MR Series

TM-ZE295DW(S)

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# **AERIAL WORK PLATFORMS**

Safety, Convenience, and **Operator Comfort** 



BT-200

#### **Product Features**

Safety, convenience, and operator comfort are key features of our aerial work platforms.

Tadano employs advanced control technologies for automated operation and improved usability. Our products are designed with environmentally friendly features that reduce engine noise,

energy consumption, and CO2 emissions. Our revolutionary Super Deck series aerial work platforms are the world's first to be equipped with our Four-Motion Control (for fore-aft, left-right, up-down, and diagonal movement) that smoothly carries the operator directly from

one point to another in any direction.

Sales ratio by

Aerial work platforms

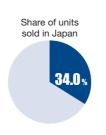
Other products

Going forward, we will serve to needs of even larger population of customers by developing our lineup of products, which we have cultivated in Japan, in markets outside of Japan.

#### **Net Sales**

Net sales of aerial work platforms stood at 18,320 million yen (74.2% of the figure for the previous year), as sales to the rental industry to meet the needs for infrastructure maintenance ran their course and sales to the electric power and engineering industry and the telecommunications industry declined.





# Interview with **Employees**



#### Unwavering commitment to quality improvement

At Tadano, we give top priority to quality from the initial stage of research and development to ensure customer satisfaction. In the event that quality issues or defects are found after product release, we strive to respond and make improvements as quickly as possible. Specifically, we have developed an internal system to ensure that quality-related information is centrally managed and shared in all stages of production, from the upstream research/development processes and production/procurement to customer sales/service, so that we can quickly conduct cause analysis and take necessary actions.

For example, in FY 2018 we were able to reduce the number of complaints for aerial work platforms received in the early post-delivery period for the second consecutive year by 27.7% from the previous fiscal year. While we still face many challenges ahead, we will strive to determine the root causes of problems, quickly and smoothly share information, and collaborate across departments so that we can prevent problems from occurring and recurring. Through the concerted efforts of the entire Group, we will continue to take on new challenges to deliver outstanding quality to ensure customer satisfaction.

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Assistant Manager

Eiji Azuma

#### LINEUP

# Skyboy

Tadano's Skyboy is a standard aerial work platform series with a platform capacity of two workers. The truck-mounted type features outstanding maneuverability and easy site-to-site transportation. Equipped with special rubber tires that prevent road surface damage, the self-propelled type can perform continuous on-site operations and demonstrates power especially for construction works such as shipbuilding.



For electrical construction (truck-mounted type)

For telecommunication construction (truck-mounted type)





For general construction (truck-mounted type)

**Hyper Deck** 

For general and shipbuilding construction (self-propelled type)

#### **Super Deck**

Featuring a large deck area with a maximum loading capacity of 1,000 kg, our Super Deck series is highly effective for loading equipment and materials. Its unique Four-Motion Control (for fore-aft, left-right, updown, and diagonal movement) delivers superb operability and enables efficient operations at a broad range of work sites.



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Tadano's Hyper Deck series allows operators to reach as high as 40 meters above the ground. A unique control system delivers outstanding operability, enabling smooth approach to the target point. Our Hyper Deck series offers effective support for a variety of operations at very high places over extensive areas.

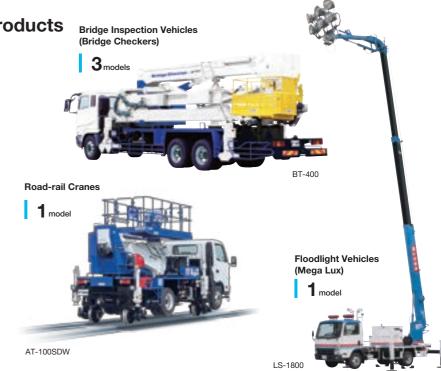


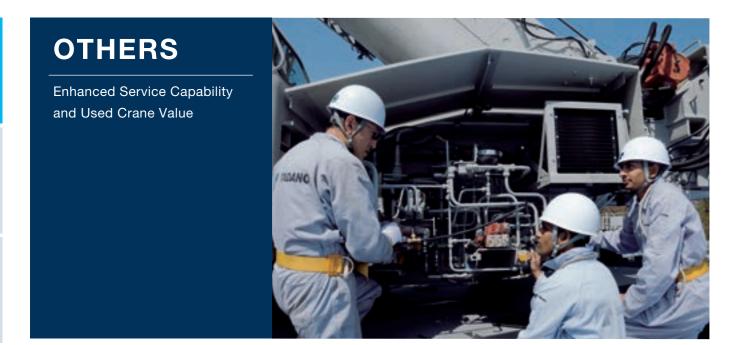
# **Other Special-Purpose Products**

Tadano's aerial work platforms meet a diverse range of customer needs. Its lineup includes bridge inspection vehicles (Bridge Checkers); floodlight vehicles (Mega Lux) for use during disaster recovery work, nighttime construction, and nighttime events; road-rail cranes that serve as railway construction vehicles, and many more. Tadano is expanding its business fields in the lifting equipment industry by developing various products that enhance operational safety and efficiency and offer solutions to society and customers.



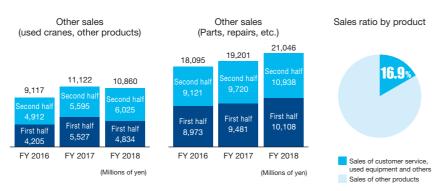
Production site: Takamatsu Plant (Japan)





#### **Net Sales**

Sales of customer support (CS) (e.g., product repairs and parts sales), used equipment and others rose to a record high 31,907 million yen (105.2% of the figure for the previous year), as a result of the company's enhanced efforts in the stock business.



# Becoming a Manufacturer with Four Synergistic Strengths

Tadano aims to be a manufacturer with four synergistic strengths consisting of product competitiveness, product quality, service capability (including parts), and used crane value. In addition to enhancing the competitiveness and quality of our new products, we are working to ensure the long



service life of our products by strengthening our service capability (including parts) and maintaining and enhancing used crane value. One of the initiatives aimed at enhancing products' life cycle value is the supply of maintenance parts. The Tadano Global Parts Center in Kobe, the Group's parts supply hub, stocks over 70,000 items and some 1 million component pieces. Leveraging its proximity to an international port and an international airport, the Global Parts Center achieves a drastic reduction in delivery time for both domestic and international destinations. The six parts centers located across Japan achieve the fastest possible parts shipment in collaboration with the Global Parts Center and play a key role in minimizing product downtime by stocking products that are in high demand in each service area based on our many years

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of experience. In August 2018, Tadano relocated and expanded its Hokkaido Parts Center, and in November of the same year the company launched a parts center in Singapore. Tadano seeks to further shorten delivery time in Japan and beyond.

Tadano is also committed to the recycling business. By offering upgrades for our special-purpose products, adjustments and repairs for components, repairs of structures including crane frame cracks, and replacements for production discontinued parts, we minimize downtime and keep repair costs down for our customers while maximizing product life and maintaining value. These efforts are gradually yielding results and are contributing to the outstanding reputation of our used equipment.

#### **Delivering Outstanding Customer Service**

Crane downtime leads directly to business losses for customers. That's why Tadano strives to deliver outstanding service that meets and exceeds customer expectations. Tadano's Customer Support (CS) Division makes it its mission to deliver outstanding service to ensure operational safety for our customers and to maximize our product value. To this end, we focus on three areas: before-sales services, after-sales services, and safety training.

We aim to minimize product downtime and accidents arising from inadequate maintenance by promoting our before-sales services, including the customers, service contractors, and Tadano to share information on maintenance status and repair history using Hello-Net, and the Tadano Engine Care Package, which specializes in the maintenance of advanced engines (currently available only in Japan). Our after-sales services are built on a service network of 345 authorized service contractors and 937 authorized service personnel across Japan, in addition to 10 branches and 23 sales offices. Our global service network spans the entire world and includes direct service as well as service provided by

Tadano Maintenance Package, which allows our

over 100 distributors. Along with our efforts to enhance this network, we are working to improve service quality. By holding on-site technical seminars outside of Japan and also implementing systematic training at the state-of-the-art training center on the premises of our head office, we are fostering service personnel in and outside Japan. Furthermore, Tadano devotes its efforts to preventing accidents at jobsites through initiatives such as the safety training conducted in February 2018 using virtual reality.







Safety training using virtual reality

# Hello-Net Keeps Our Customers and Our CS Division Connected to Cranes in the Field

Using communication satellites and mobile devices, Hello-Net makes it easy to ascertain the operating status of a crane in real time. This enables a proactive approach to service through which we can identify early signs of trouble and provide advance maintenance. We are making progress in installing Hello-Net as standard equipment, chiefly on cranes designed for use on rough terrain crane. Hello-Net is currently used with approximately 11,700 cranes in Japan and 5,400 cranes outside of Japan. We are also expanding this system for use with all terrain cranes and aerial work platforms.



#### Other Products

Tadano's lifters enable the safe and efficient transportation and installation of heavy machinery in special worksites such as indoor facilities, cleanrooms, and tunnels not accessible for mobile cranes and overhead cranes







All Terrain Crane Mounting / Removal Lifter