

# The Yard **REVOLUTION** **AUTOMATED RTG**



Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

сайт: [www.kncrane.nt-rt.ru](http://www.kncrane.nt-rt.ru) || эл. почта: [ksn@nt-rt.ru](mailto:ksn@nt-rt.ru)

# AUTOMATED RTGs: A HUGE NEW





**Automated container handling is well-established in Automated RMG (ARMG) container yards around the world. The benefits of automating a container terminal operation are well-known: increased safety, greater productivity and better predictability. It's time to bring these important benefits to your RTG-based container terminal operation. Now you can factor automation into your business planning: the future of your RTG container terminal just got brighter.**

# OPTION

Join the yard revolution with Automated RTGs (ARTGs). You can use your existing yard infrastructure, including the yard surface.



This publication is for general informational purposes only. reserves the right at any time, without notice, to alter or discontinue the products and/or specifications referenced herein. This publication creates no warranty on the part of , express or implied, including but not limited to any implied warranty or merchantability or fitness for a particular purpose.

## ARTG SYSTEM OVERVIEW

# WE HAVE THE TECHNOLOGY

### Automated RTG operation is within your reach.

If you already have RTGs with Active Load Control, we offer an upgrade package that contains everything needed to move to Automated RTG operation. You don't have to make heavy investments in infrastructure. You can use your current yard, starting with one or more container stacks. If you're planning a new RTG container terminal, this is a great opportunity to build an Automated RTG operating model with us.

### THE ARTG SYSTEM COMPRISES:

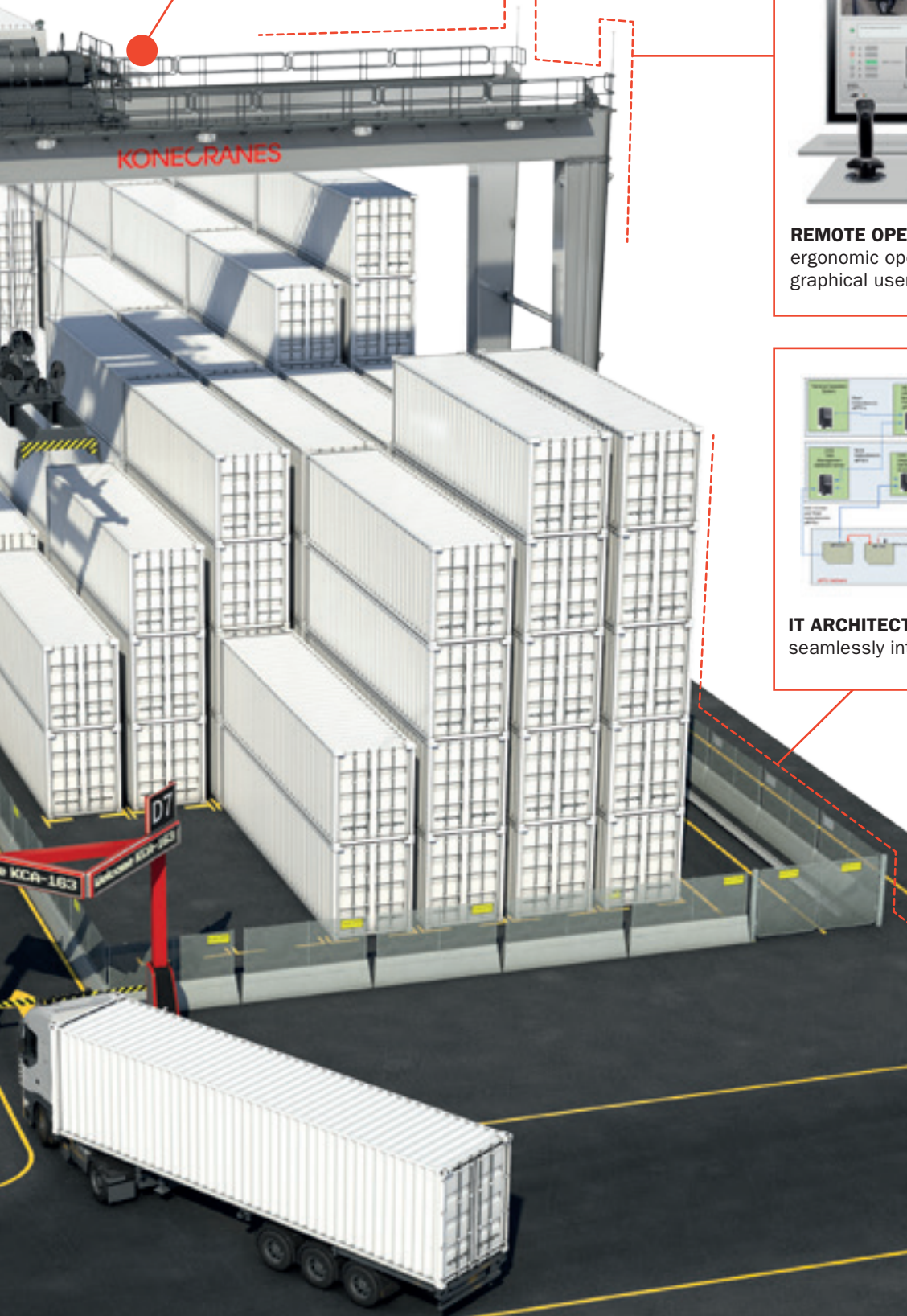
- 16-wheel RTG with Active Load Control and Autosteering
- RTG power option: one of cable reel, busbar, diesel fuel saver
- Process study of yard set-up
- Automation hardware
  - Remote Operating Station (ROS)
  - Truck guidance system (lights)
  - Intelligent gate
  - Yard infrastructure as needed
- Automation software
  - Operating system for ROS
  - IT architecture with TOS interface



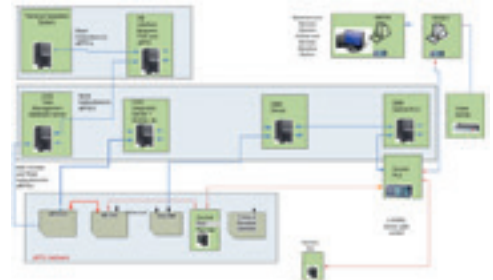
**INTELLIGENT GATE** that acts as traffic controller of the ARTG container block.



**ARTG** is based on the 16-wheel RTG, equipped with Active Load Control and Autosteering.



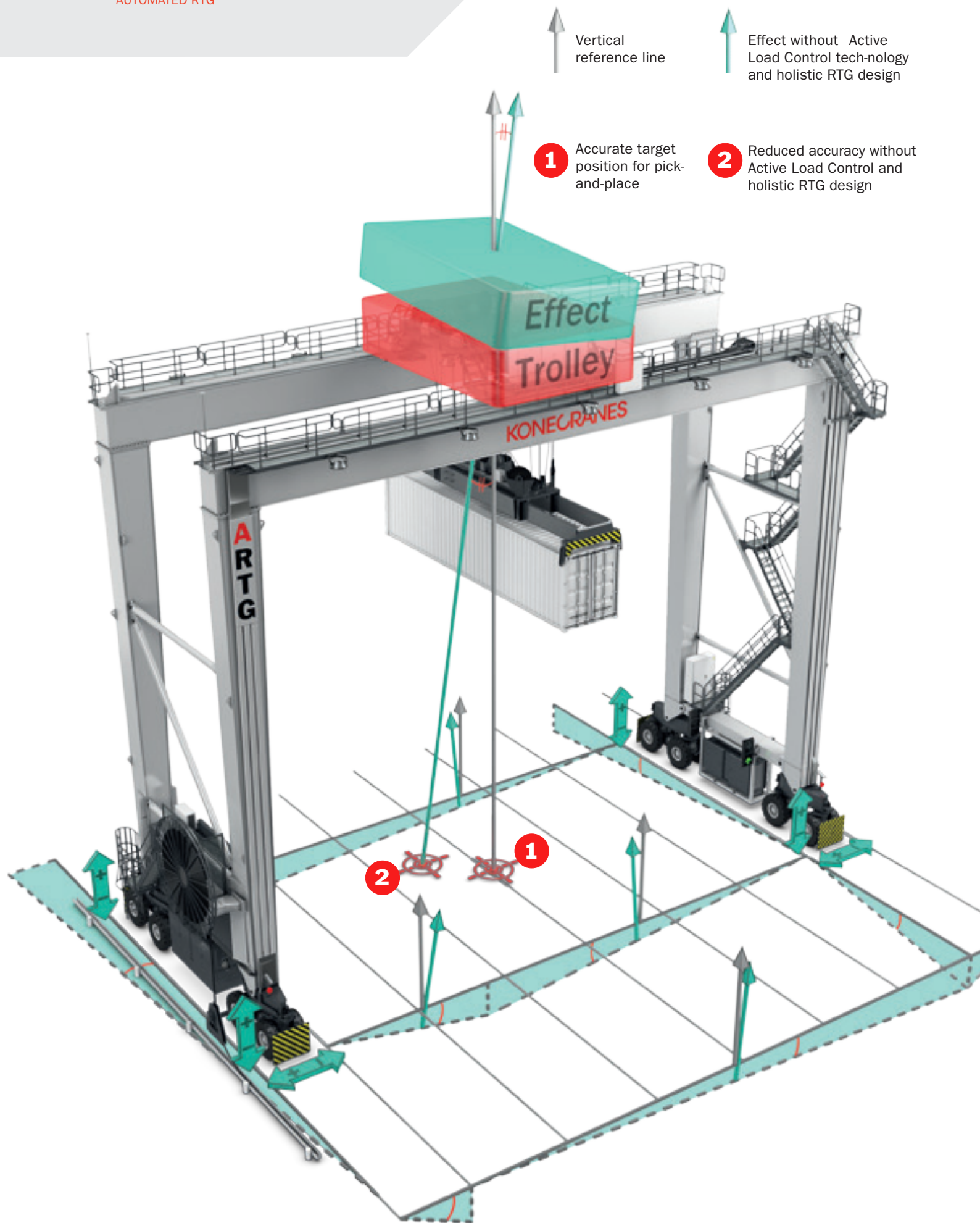
**REMOTE OPERATOR STATION (ROS)** with ergonomic operating layout and advanced graphical user interface.



**IT ARCHITECTURE** that can be seamlessly interfaced with your TOS.



**THE AUTOMATION CONTROL SYSTEM CABINET** includes all the hardware and software needed to operate the ARTG System.



# IT'S ABOUT TOLERANCE...

**Time will tell, but the RTG is probably the only RTG in the world that can be automated successfully for full-scale commercial terminal operation.**

16-wheel RTGs have the built-in tolerance to handle a rough yard surface in automated operation. This ability is the result of the holistic design of the RTG, which brings together an intelligent steel structure that can flex like no other, and our Active Load Control system that eliminates container sway.

## ...OF LOCAL VARIATION

**The ARTG is built to handle the technical challenges of container positioning and measurement in automated operation.**

### **TOLERATING VARIATION IN THE RUNWAY SURFACE**

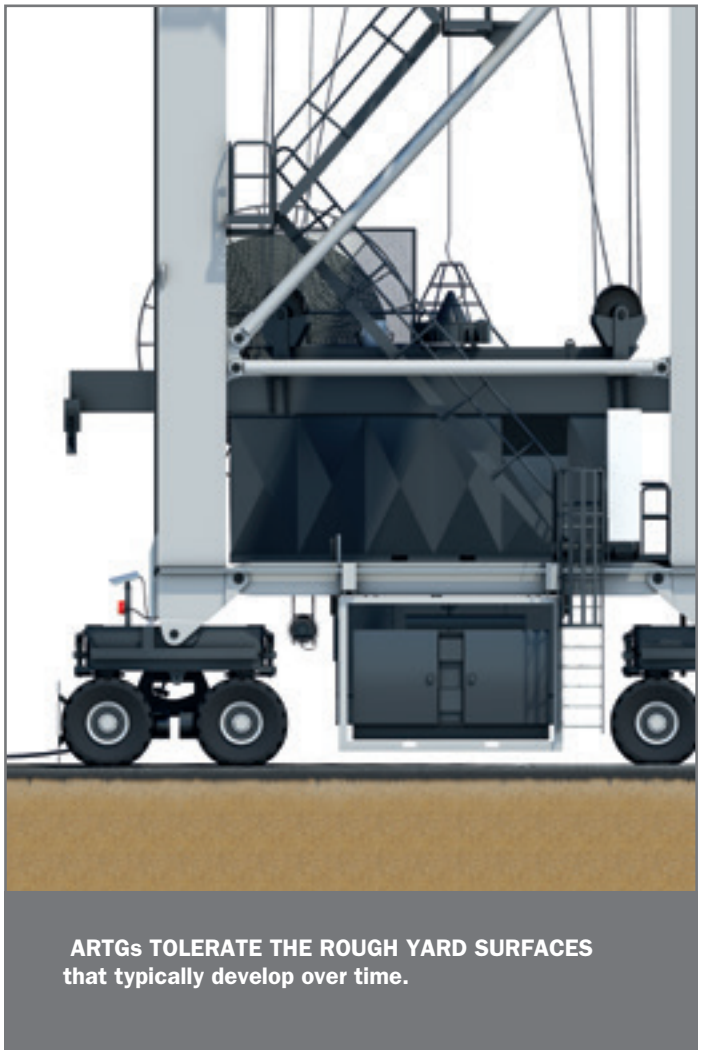
- Slope variation
- Differences in height
- Bumps and obstacles

### **TOLERATING VARIATION IN THE STACKING AREA**

- Container bays can be at different angles to the crane
- Each container ground slot can have variations in stacking angle and height

### **TOLERATING THE RUBBER TIRES**

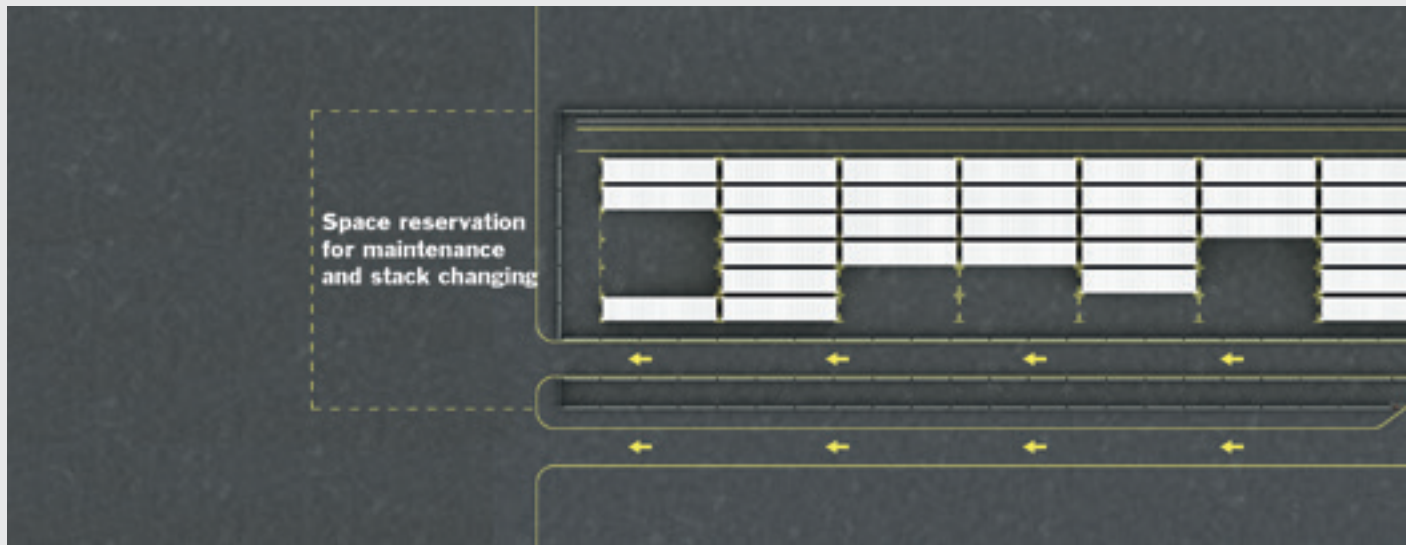
Variations in tire condition and inflation



**ARTGs TOLERATE THE ROUGH YARD SURFACES**  
that typically develop over time.



## ARTG SYSTEM FUNCTIONALITY

**HERE IS THE PROCESS**

**THE BASIC ARTG CONTAINER BLOCK LAYOUT.** ARTG block operations are side-fed. ARTG gantry movement is limited as much as possible. The truck drives to meet the ARTG for loading/unloading operations.



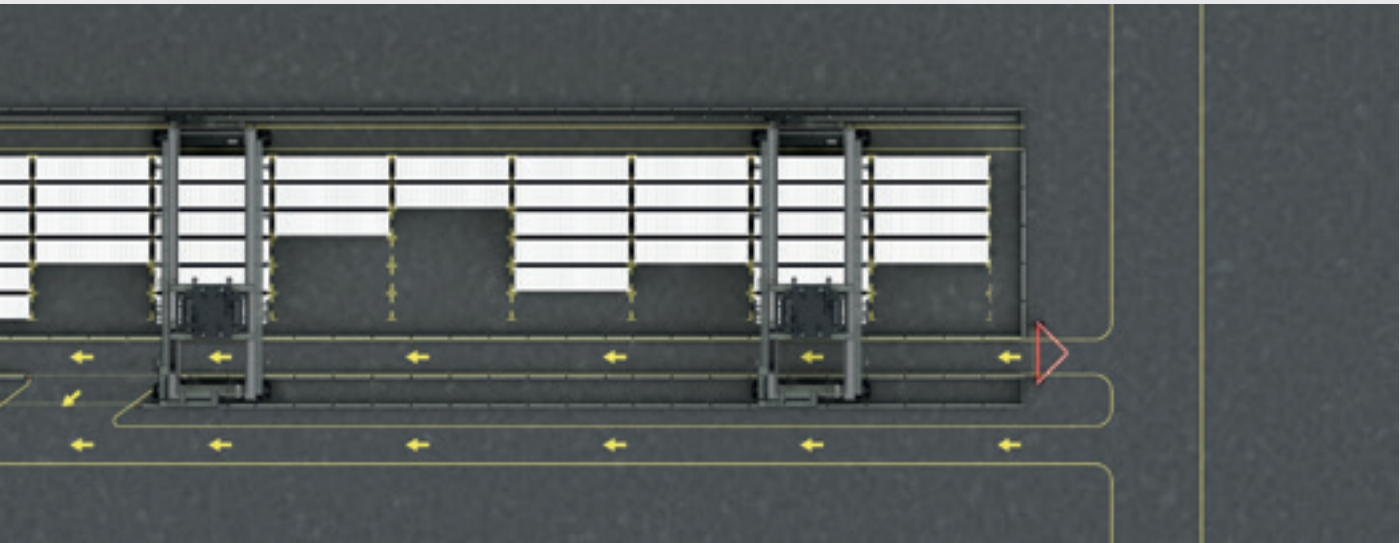
The design of truck traffic, safety fencing and gates can be terminal-specific based on a modular solution.



Stacking inside the container stack is fully automated.



**ARTG technology is field-proven in a number of important Automated RMG (ARMG) reference terminals. Our ARTG technology and operating methodology are similar to those employed in these ARMG terminals.**



Truck loading and unloading is done by the remote operator in the Remote Operating Station (ROS). One remote operator can handle up to 6 ARTGs.

# JOIN THE YARD REVOLUTION

## GANTRY TRAVELING

- Dual antenna DGPS Autosteering
- Twin base station with automatic switch-over for redundancy

## ARTG PERFORMANCE

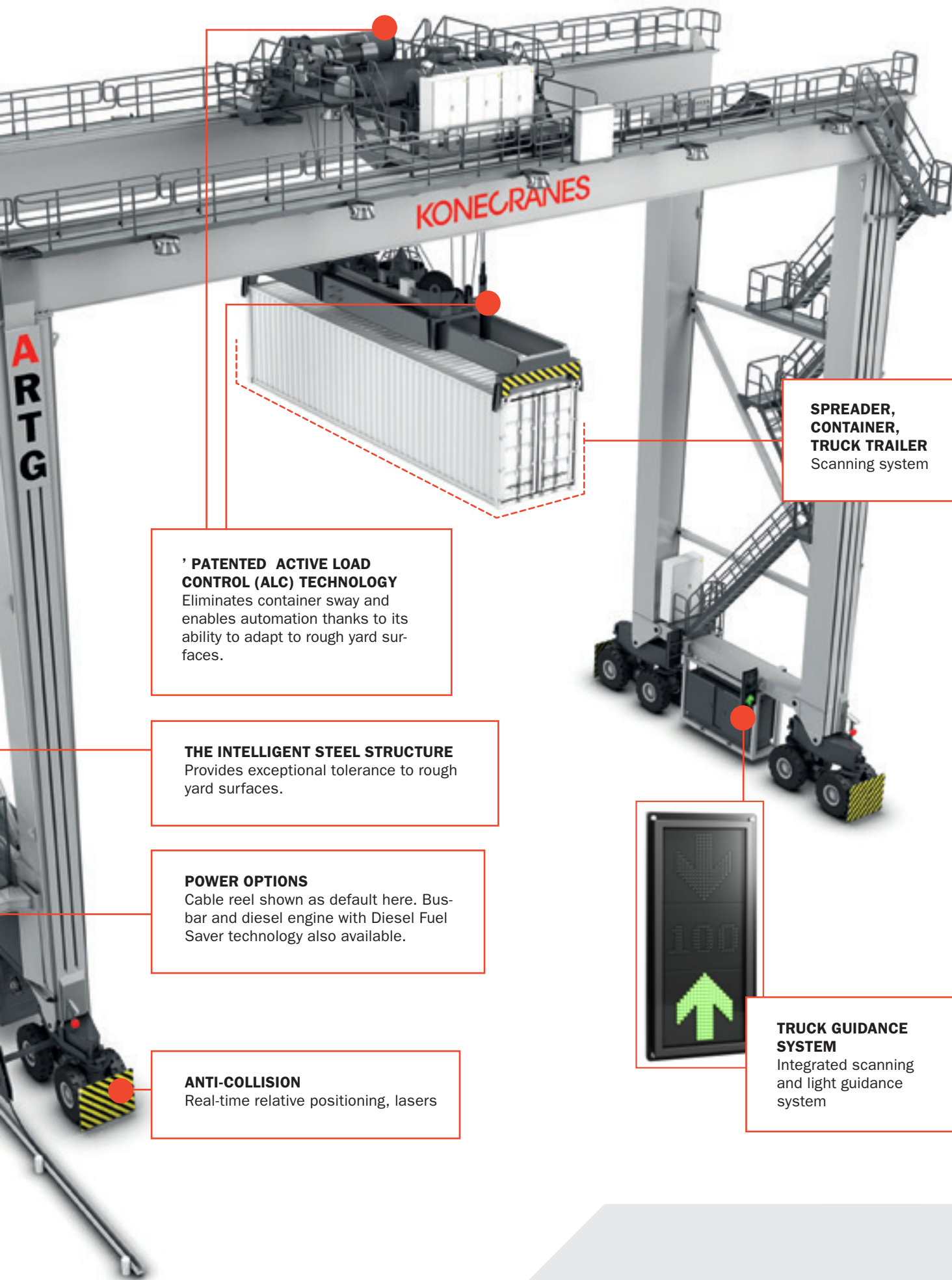
### Dimensions with max. 1 over 5 and max. 7 + truck lane, mm

Max. lifting height 1 over 5 / Max. span 7 + truck lane	18100/29500
Crane width over bogie guards/wheel spacing in bogie	12060/2100

### Max. speeds, m/min.

Hoist with 50-ton load/empty spreader	31/62
Trolley traversing standard/optional	70/76
Gantry travel with empty spreader/50-ton load	135/90





KONECRANES

**SPREADER,  
CONTAINER,  
TRUCK TRAILER**  
Scanning system

**' PATENTED ACTIVE LOAD  
CONTROL (ALC) TECHNOLOGY**

Eliminates container sway and  
enables automation thanks to its  
ability to adapt to rough yard sur-  
faces.

**THE INTELLIGENT STEEL STRUCTURE**

Provides exceptional tolerance to rough  
yard surfaces.

**POWER OPTIONS**

Cable reel shown as default here. Bus-  
bar and diesel engine with Diesel Fuel  
Saver technology also available.

**ANTI-COLLISION**

Real-time relative positioning, lasers



**TRUCK GUIDANCE  
SYSTEM**

Integrated scanning  
and light guidance  
system

Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93