

# DRIVE SYSTEMS FOR THE PARKING INDUSTRY

CASE STUDY: Robotic Parking Systems, Inc.







**50 Years of Service**  
 Founded in 1969, NORD has grown to a company of more than 4,000 employees worldwide.



**Global Support Network**  
 NORD's partners provide local inventory, assembly, production, technical support, and customer service.



**State-of-the-art Production Plants**  
 Specialized facilities produce gear units, motors, and VFDs for complete drive solutions from a single source.

## NORD AND ROBOTIC PARKING SYSTEMS HELP DRIVERS PUT CONVENTIONAL PARKING GARAGES IN THE REARVIEW MIRROR

Do a little research and you'll soon discover something that few people give much thought to—conventional ramp-style parking garages are, well...not too smart. Top on the list of detractors is safety. Not only do parking garages bring cars and people into uncomfortable and often dangerous proximity, but they're also an excellent place for thieves to access unattended vehicles.

## WASTE UPON WASTE

These outdated parking garages are also bad for the environment. A typical four-level, 750-space garage is responsible for creating 37 tons of tire dust and nearly four tons of brake dust each year, pollutants that make their way into groundwater, the air, and our lungs. On top of that are the millions of miles logged annually as drivers around the world cruise these roads to nowhere, spewing uncountable tons of exhaust as they go.

Royce Monteverdi, chief executive officer of Robotic Parking Systems, Inc., designed a better automated parking alternative. One of

the products he relies on to get the job done? Gearboxes from NORD DRIVESYSTEMS®. "We've been relying exclusively on NORD for our power transmission needs since 1999 and have never had a failure," he says.

## CONVENIENT VALET PARKING

Parking in a garage by Robotic Parking Systems is a simple matter of driving into a space resembling the garage in any suburban home, parking, and leaving. While you're away, the front of the garage stall opens and the floor slides forward, carrying your car into the complex, human-free structure within. There it is moved through a series of shuttles, elevators, and turntables until it reaches its assigned parking spot, all automatically. When you return hours or days later, just slide your card into another kiosk and the process is reversed, delivering your car within three minutes or less to a secure stall, facing forward, ready to go.


Not only is the process highly efficient, but there are none of the pollutants or safety concerns described earlier; no more door dings and bumper scratches from neighboring cars, no more wandering around in a dimly-lit ramp trying to remember where you parked.

## FOCUS ON THE CUSTOMER

Royce Monteverdi, chief executive officer of Florida-based Robotic Parking Systems, Inc., agrees with the notion that conventional parking garages are becoming obsolete, which is why he's spent the past 25 years designing and manufacturing a far smarter alternative: automated garages that look like the world's most massive vending machines, shuttling cars in and out of storage spaces without a human in sight, while the cars' owners go about their more important business.



*Robotic Parking Systems, Inc.*



*"We've been relying exclusively on NORD for our power transmission needs since 1999 and have never had a failure."*

*Royce Monteverdi, Robotic Parking Systems, Inc.*

## THE MORE THE MERRIER

Robotic Parking Systems isn't the only manufacturer of automated parking systems, yet Mary Lou DeWynGaert, the company's chief administrative officer, explains that theirs is much faster than competing systems and far less prone to failure. Where other automated parking garage manufacturers rely on "one, two, or maybe three" machines to move the cars into position, Robotic Parking uses a separate motor and NORD helical gear drive to perform each vertical and horizontal motion, which means there could be hundreds of such systems employed in a large parking garage.

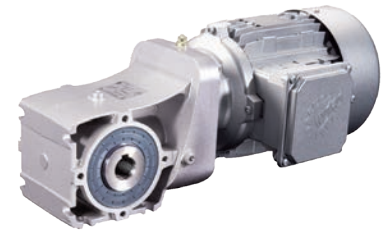
DeWynGaert says this is one reason why Robotic Parking Systems does so well with larger installations, which might have upwards of 100 cars in motion at once. The company's first system was completed in 2002, a seven-level, 314-space garage in Hoboken, New Jersey that the *New York Times* reported was the first automated parking system in the United States. Since then, Monteverdi and his team have completed many similar installations, their most recent a 2,314 space garage moving up to 425 cars per hour at the

Al Jahra Court Complex in Kuwait, the largest in the world according to the Guinness World Records.

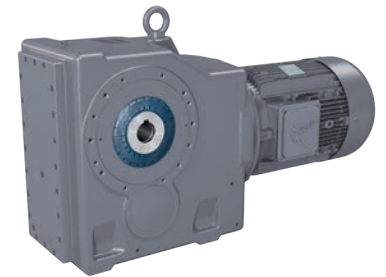
## STANDING THE TEST OF TIME

"Our operating environments are often extreme, and that's why we have equally extreme and stringent selection criteria for our mechanical and electrical components," says Monteverdi. "For example, we expect a gearbox to provide at least 40,000 hours of continuous operation. NORD has never failed us in that requirement, which is one reason we've been using their products since the company began. As a matter of fact, their helical gear drives are perhaps the champion among all our mechanical components in terms of longevity and reliability. So needless to say, we are quite happy with the NORD products we've implemented into our robotic parking facilities, and with the relationship overall. They're just a great company to work with."

## NEW COOLING SYSTEM



92.1 two-stage bevel gear units are designed to disperse heat and keep the unit cool even in warm environments.



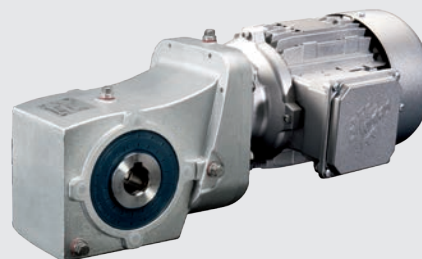
9042.1 and 9052.1 helical bevel units offer multiple mounting options along with high axial and radial load capacities.



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## FOCUS ON THE PROJECT

Ricky Negrón, district sales manager for NORD DRIVESYSTEMS, says the company's UNICASE™ design and 2-stage helical bevel gear unit lines are compact, yet provide up to 442,500 in./lbs. of torque. Their flexible, user-friendly design and ability to withstand harsh operating conditions made them a perfect choice for this parking garage application.



**NORD 93.1 SERIES  
RIGHT ANGLE BEVEL UNIT**  
QUADRILIP™ sealing provides added protection against leakage



NORD DRIVESYSTEMS provides complete solutions including gear units, motors, VFDs, and more to solve the challenges of the automation and robotics industries.



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