

A man in a dark jacket and jeans is operating a yellow and grey Jungheinrich EFG 115 electric counterbalanced truck in a warehouse. The truck is positioned in the center-right of the frame, with the operator seated on the right side. The background shows a typical warehouse environment with high ceilings and industrial equipment. The truck has 'JUNGHEINRICH' written vertically on its mast and 'EFG 115' on a blue label on the side.

# **EFG 110k – 115** **Electric 3-Wheel** **Counterbalanced** **Truck**

2,000 – 3,000 lbs. capacity

 **JUNGHEINRICH®**

# Small, Compact Design

Spacious and comfortable to operate.

Excellent performance, high efficiency and incredible maneuverability — all in one package. These are the key advantages of the Jungheinrich® rear-drive 3-wheel counterbalanced truck, the EFG 110k–115 series.

The lift truck's excellent performance and high efficiency are created through the use of Jungheinrich's microprocessor-controlled 3-phase AC technology. The EFG series is easy to maneuver due to its compact dimensions with a minimum width of only 39 inches.







# Advantages Of Jungheinrich's Proprietary 3-Phase Technology

## **Jungheinrich introduced 3-phase AC to electric trucks**

In the early 1990s, Jungheinrich applied powerful frequency converters to successfully convert direct current into 3-phase AC current — achieving this conversion in an economical way. This brought the advantages of 3-phase AC technology, such as the omission of carbon brushes and enclosure of the motor, to electric trucks. It also gave way to new application possibilities for electric counterbalanced trucks — and a significant reduction in operating costs. Today, Jungheinrich installs 3-phase AC technology in all of its warehouse products.

Jungheinrich's proprietary 3-phase alternating current (AC) technology has been tried and tested numerous times in various industries. Our 3-phase AC motors deliver a significant reduction in the number of components and working parts, as well as a more efficient, reliable and cost-effective operation.



A 3-phase AC motor is simpler in construction than a shunt-wound DC motor and can be built with a more compact design.

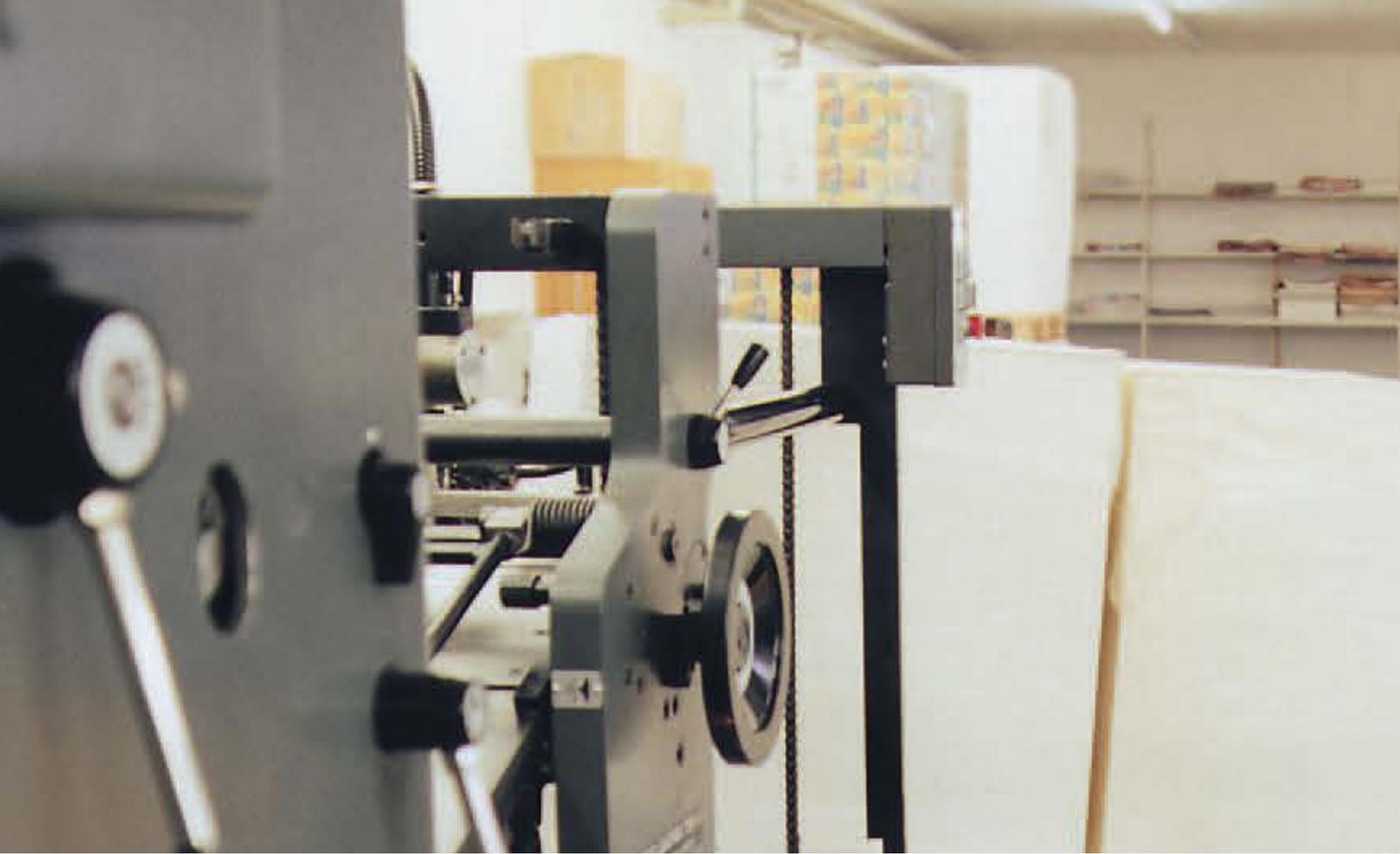
- Magnetic field buildup does not occur in the rotor, but rather in the stator.
- Current does not need to be transferred to the armature / rotor.
- Commutator and carbon brushes are not required.
- Motor operates with less heat buildup.
- Motor does not need to be ventilated on the inside.
- Motor can be enclosed for protection.



Shunt-wound or series-wound motor with carbon brushes and commutator



3-phase AC motor, completely enclosed, less parts to wear



# Higher Energy Efficiency With Minimal Operating Costs

## **3-phase AC Advantage 1:**

### **With greater torque, high throughput**

With Jungheinrich's proprietary 3-phase AC technology, you'll get high torque even at lower speed with no torque gaps and no speed loss. This is particularly helpful in rigorous applications. This technology also ensures dynamic travel characteristics and the highest throughput efficiency – without the usual delay when changing travel direction. A major benefit is up to 25% faster goods throughput. This means a time savings to you – or even a reduction in the number of forklifts in your fleet.

## **3-phase AC Advantage 2:**

### **Increased productivity and energy reclamation**

Does more goods throughput have to mean more power consumption? Not at Jungheinrich. We offer optimized performance efficiency and advanced regenerative braking, during which up to 20% of the energy is fed back into the battery. As a result, many of our forklifts can work up to two shifts with just one battery charge, depending on the application. The benefit to you? In many cases, you'll have no need for a large charging station or battery changing equipment.

## **3-phase AC Advantage 3:**

### **Enclosed motors**

With our electric motors enclosed per IP 54 standards, our forklifts can serve in environments where previously only internal combustion engine lift trucks could operate.



### **3-phase AC Advantage 4:**

#### **Wear-free braking**

3-phase AC technology ensures both rapid acceleration and braking. The result: the forklift's travel speed is precisely controlled by the accelerator. This allows for:

- Precise positioning.
- Dynamic acceleration.
- Consistent travel speed on ramps.
- Less brake component wear.

The benefits to you? There is no need for drivers to constantly switch their feet from accelerator to brake pedal. Also, electronic braking reduces the forklift's brake wear and lowers maintenance costs, which can easily account for 30% of the total maintenance expense, translating into savings for you.

### **3-phase AC Advantage 5:**

#### **Fewer parts to wear, less maintenance, reduced costs**

Jungheinrich's proprietary 3-phase AC motors can reduce maintenance costs: neither carbon brushes nor travel direction contactors are required. Braking causes no wear, and there's no strain on the mechanical braking system. Your benefit: you cut your operating costs over the entire life of the truck, and at the same time have a reliable, energy-saving, high-powered counterbalanced forklift truck working in your warehouse.

# More Work With Less Effort

## Start with the soloPILOT standard operating levers

The soloPILOT (standard feature) combines the functions of lifting / lowering, travel direction selection and horn in one control lever. Other functions, like forward / backward tilt, sideshifter (optional) and extra hydraulics (optional), are operated via levers ergonomically positioned next to each other.



## Everything is under control with the Comfort Display

The Comfort Display (optional) provides the operator with five individually-adjustable travel programs, each with different acceleration, top speed and braking characteristics. The informative icons warn of potential limitations, allowing operators to monitor lift truck conditions and address product concerns quickly and easily.

Additional features include:

- Digital hour meter.
- Battery discharge indicator with lift interrupt.
- Detailed text displays.





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## Precise Handling Made Easy

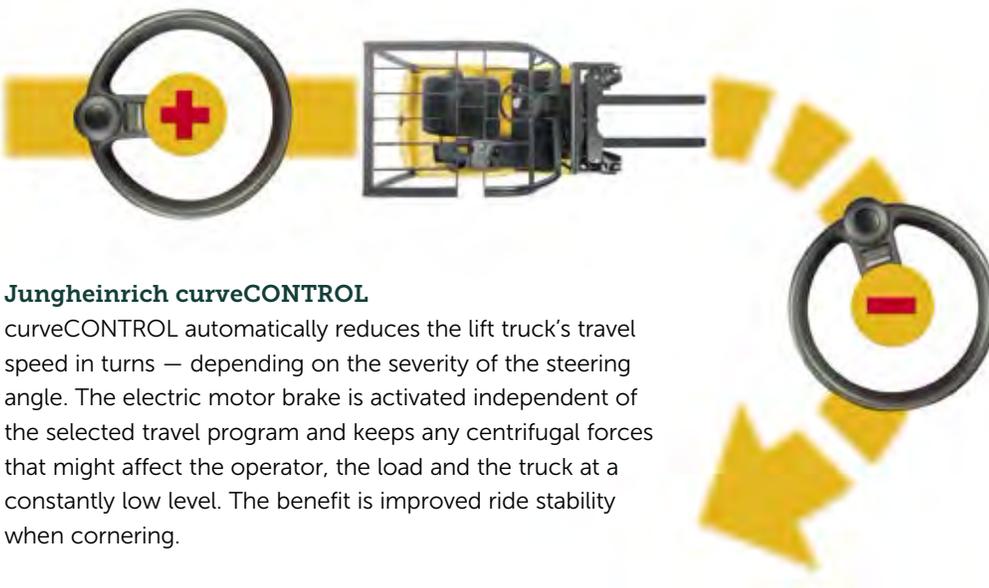
### **Simple battery maintenance**

A one-piece battery cover allows for quick and direct access to the battery without the need for separate side panels.

### **Precise steering**

Low steering, lever operating forces and a familiar automotive pedal layout ensure a productive operation. Enclosed AC motors enable smooth acceleration, while making the EFG 110k-115 series suitable for a variety of applications.





**Jungheinrich curveCONTROL**

curveCONTROL automatically reduces the lift truck's travel speed in turns — depending on the severity of the steering angle. The electric motor brake is activated independent of the selected travel program and keeps any centrifugal forces that might affect the operator, the load and the truck at a constantly low level. The benefit is improved ride stability when cornering.

# More Performance And Efficiency.

## Excellent maneuverability

Designed with rear-wheel drive, the compact EFG 1 series of lift trucks can turn and pivot within its own length, providing excellent performance and maneuverability in confined work areas.

## Extremely maintenance-friendly

The EFG 110k–115 series, with service intervals up to 500 hours, is designed for easy maintenance, while regular service check-ups ensure long-term cost savings.

## Visibility through the mast

The lift cylinder arrangement behind the slim-profile mast, along with a split fork carriage, provides excellent visibility to the forks or load when lifting or lowering the mast.



82.3 inches



77.6 inches

## Comfortably high overhead guard

At a height of 82.3 inches, the EFG 1 series provides plenty of headroom. A 77.6-inch, lowered height version of the forklift is also available and is designed for use in container applications.



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EFG 110



# Who Is Jungheinrich? Your Trusted Partner For More Than 60 Years.

## **Founded by Dr. Jungheinrich in 1953**

Jungheinrich, the leader in system technology in Europe, offers a comprehensive product range of material handling equipment and rack systems as well as services for complete intralogistics.

Jungheinrich has evolved from a producer of material handling equipment to a manufacturing logistics service provider.

## **How does the company rank?**

Jungheinrich has progressed from its early beginnings to one of the world's leading suppliers of:

- industrial trucks
- warehousing technology
- material flow technology

Jungheinrich is also one of the world's largest forklift suppliers. This growth is substantially due to the company's strict adherence to top quality design and technological innovation – as evidenced by its proprietary AC motor and controller technology, as well as a host of productivity and ergonomic enhancements.

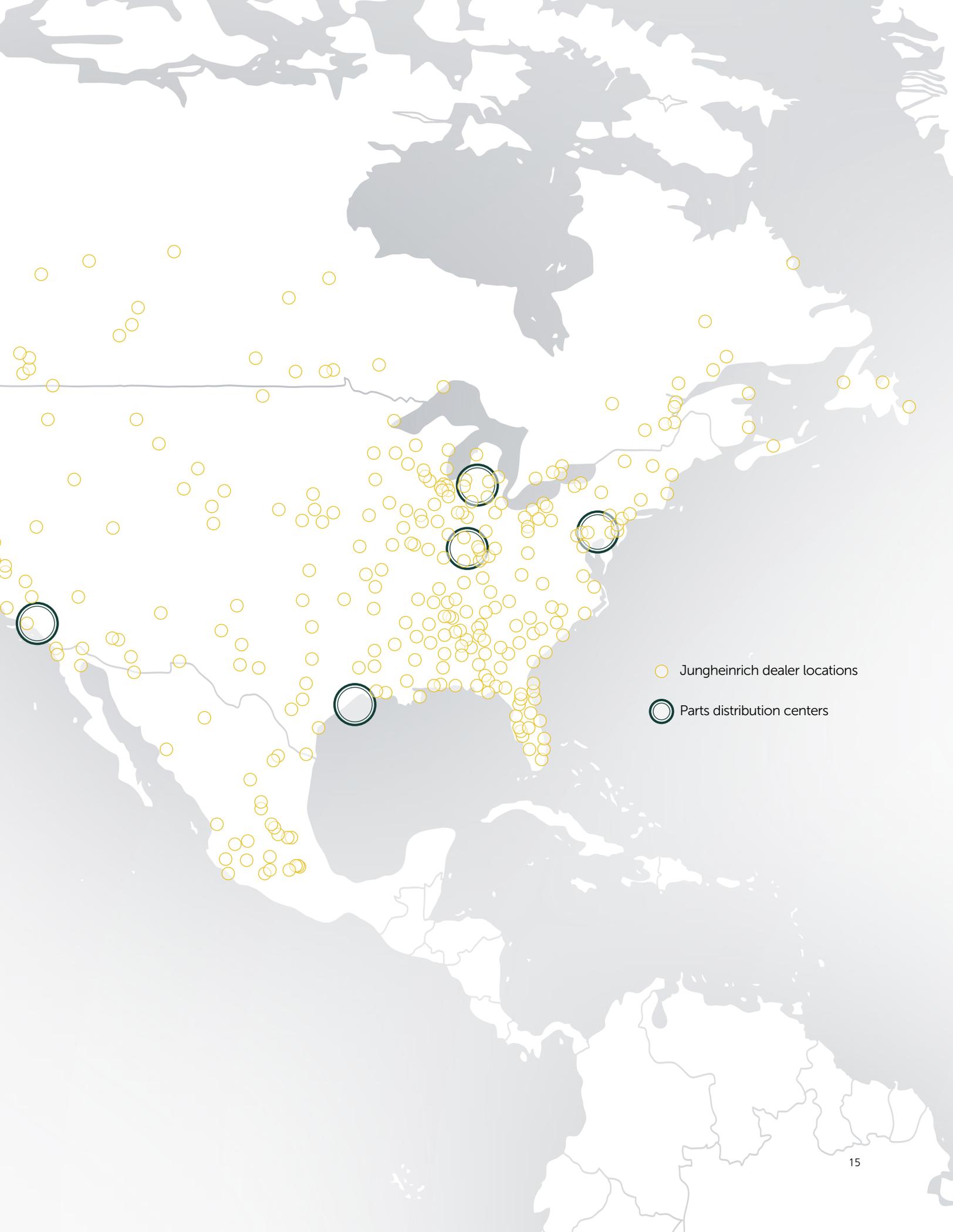
## **Local support throughout North America**

Jungheinrich has strategically-located service support centers and more than 330 dealer / service facilities throughout the U.S., Canada and Mexico.

## **Parts when you need them**

Jungheinrich's Parts Fast or Parts Free Guarantee ensures next-business-day delivery by 5:00 PM of all Jungheinrich parts in the United States, or they're free, including freight. For customers in Canada and Mexico, the guarantee ensures shipping of parts within 24 hours from the time the order was placed by the dealer. See your local Jungheinrich dealer for program details.

\*Orders must be placed through your local dealer by 5:00 p.m. Eastern Standard Time, and you must advise the dealer at the time of order that the part is to be expedited under the terms of the guarantee. There are some exclusions, including parts over 100 lbs and paint, chemicals or lubricants that require special handling. Ask your dealer for a full list of terms and conditions for the Parts Fast or Parts Free Guarantee. Programs may be subject to change without notice and may vary by region. Please ask your local Jungheinrich dealer for complete terms and conditions.



○ Jungheinrich dealer locations

⊙ Parts distribution centers



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