



The ACR System™

A whole new level
of performance.

RAYMOND
Above. And beyond.®

www.raymondcorp.com

The *Raymond ACR System™* delivers more uptime, fewer battery changes, lower maintenance costs, and helps you move more product faster.

Only *Raymond* lift trucks can offer the proven *ACR System* incorporating all the benefits of AC technology. The *ACR System* lets you change batteries less frequently and do less maintenance, which increases truck uptime.

AC motors have at least 10% higher operating efficiency than DC motors. This benefits you in two ways. Unlike DC-powered trucks that lose performance as batteries discharge, trucks with the *ACR System* maintain a high level of performance throughout the battery cycle. This extends the truck's peak performance longer into the shift and lets operators move more pallets per battery charge.

“You’re only as good as your truck.”

The *ACR System* delivers longer battery life, which lets you move more pallets per battery charge. It has fewer components, so you'll reduce parts costs. And it gives your operators quicker acceleration and smoother direction changes to move more product faster. Bottom line: You'll get more work done and spend less on your lift trucks.

We are the first in North America to successfully introduce AC technology for electric lift trucks in narrow aisle applications. The *ACR System* is now accepted as the cost-effective improvement over DC systems.

“20% increase in runtime per battery charge.”

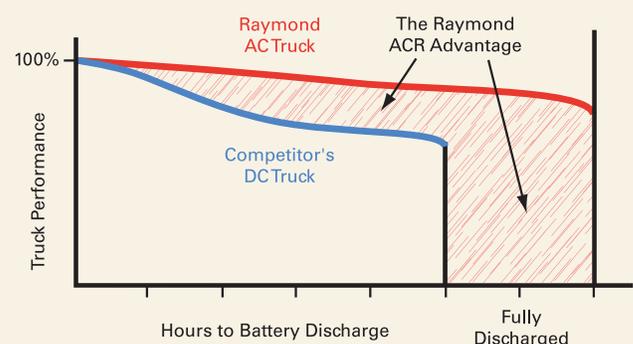
The *Raymond ACR System* means fewer battery changes. With the *ACR System*, trucks use fewer amps per cycle, so you'll save on batteries, chargers and downtime. AC motors deliver more runtime per battery charge, so operators will change batteries less often. In most applications, trucks equipped with the *ACR System* are getting a full shift out of a single battery charge.

You'll also see cost savings because you can use smaller, less expensive batteries than a DC-powered truck in a similar application. And with the extended use you get from each of these smaller batteries, you reduce the number of batteries and chargers you need to keep on hand, and spend less time recharging.

Bottom Line:

- Fewer battery changes means less downtime and higher truck utilization rates
- Extended battery performance means moving more pallets per battery charge
- Costs are reduced with less wasted labor and fewer, smaller batteries

Performance as Battery Discharges







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Store Dry

Store Dry

Store Dry

Paper Napkins

Paper Napkins

Paper Napkins

24 NOV
652
3DB0A 12

Contents: 6,000 Arby's Nap
Weight: 31 LBS

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Store Dry

Paper Napkins

Contents: 6,000
Weight: 31 LBS

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Lower ownership costs.

The *ACR System* can significantly lower your ownership costs. Compared to DC-powered trucks, trucks equipped with the *ACR System* have lower maintenance and parts costs, fewer and less frequent maintenance needs, increased battery performance, better control and acceleration, and superior truck utilization rates. All of these factors improve your bottom line.

Simplify maintenance. With the *ACR System*, the entire truck is engineered to simplify maintenance and eliminate failure-prone parts, which means that it needs less maintenance than a DC truck.

So maintenance and repair are easier, faster and considerably less costly with AC motors than with DC motors.

DC brushes and commutators are the highest wear items. Motor brushes have to be changed regularly and cause messy carbon dust that needs regular cleaning to prevent build up in the motor compartment. Replacing or adjusting a commutator is a labor-intensive process that requires disassembling and rebuilding the motor.

The *ACR System* runs cooler. Trucks equipped with the *ACR System* run cooler than DC-powered trucks, which reduces heat-related parts failures and results in reduced maintenance and lower parts costs. In a DC motor, brushes and commutators cause excess heat that

“Maintenance costs, downtime and spare parts requirements are reduced.”

AC motors have no wearable parts. Unlike DC motors, AC motors have no brushes, spring sets or commutators. In fact, AC motors only have a stator and a rotor.

decreases the life of some parts such as wires, brakes and bearings.

The *ACR System* provides on-board, self-checking capabilities for regulating motor performance. This ongoing monitoring minimizes downtime by making it simpler to troubleshoot problems and improve the truck’s reliability.

Annual Maintenance Comparison

DC Motors	AC Motors
Parts <ul style="list-style-type: none">• Brush Sets• Spring Sets• Commutators	Parts <ul style="list-style-type: none">• No Brush Sets• No Spring Sets• No Commutators
Labor <ul style="list-style-type: none">• Monthly Cleaning• Removing Carbon Dust• Monthly Brush Inspections• Replacing Brushes & Springs• Servicing Commutators	Labor <ul style="list-style-type: none">• No Monthly Cleaning• No Carbon Dust• No Brushes• No Brushes & Springs• No Commutators

Bottom Line:

- *ACR System*-equipped trucks spend less time being serviced and more time moving pallets
- Parts and labor costs are reduced

Move more product faster.

Storing and retrieving materials involves a lot of stops, turns and accelerations. The *ACR System* maximizes the efficiency of this process by providing quicker acceleration, smoother direction changes and better load handling.

The truck accelerates faster, so operators get up to top speed faster. DC trucks experience a time delay when changing speed or direction, a delay that is most noticeable when the operator plugs to a stop and reverses direction. *ACR System*-equipped trucks don't have this delay, so they respond instantly to acceleration,

12% more pallets per hour.

A "big box" retailer's new distribution center is using *Raymond* trucks equipped with the *ACR System* for the first time. The higher acceleration rates of the *Raymond* trucks have allowed them to move 12 percent more pallets per hour. Thanks to improved energy efficiency and reduced downtime associated with the *ACR System*, they also anticipate getting 20 percent more lifts per battery charge.

"We are going to be able to get the job done faster."

stops and direction changes. The truck's instant response improves the operator's control of the load, making pallet positioning more precise. This precision is especially important when handling loads at higher elevations. With improved acceleration and control, operators of AC lift trucks can shave seconds off each cycle. Considering the number of cycles that are completed by each operator, each day, each year, that adds up to a lot of additional productivity that a DC lift truck can't provide.

Put the proven *ACR System* to work for you.

With an *ACR System*-equipped truck, you can reduce downtime, reduce your ownership costs, and move more product faster. For more details about this innovative system, contact your *Raymond* Dealer today.

To locate your nearest *Raymond* Dealer, visit www.raymondcorp.com or call 1-800-235-7200.

Bottom Line:

- Faster acceleration lets operators move pallets more quickly
- Better control of the load reduces positioning time and decreases the likelihood of product damage





Sal



7612

Gauze Sponges
2 in. x 2 in. x 8 in.



Due to continuous product improvement, specifications are subject to change without notice or obligation.
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