



HOT TOPIC

May 2007

ARE YOU READY FOR THE NEXT LEVEL OF AC?

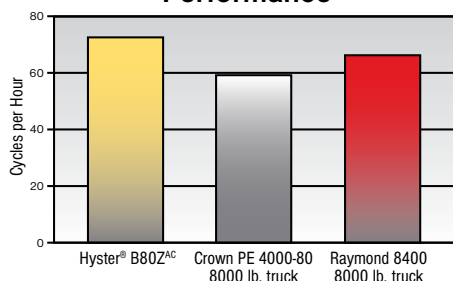
Hyster has taken **AC Power to the next level** by balancing proven knowledge with leading edge technology to produce our latest truck offerings. The **new B60Z^{AC}/B80Z^{AC} Walkie Rider and Narrow Aisle Reach N-ZR/ZDR and N-ZRS/ZDRS series** provides customers with maximum performance, superior energy efficiency and lower maintenance costs.

MAXIMUM PERFORMANCE WITH SUPERIOR ENERGY EFFICIENCY

Hyster Company's new **AC Reach and Walkie Rider trucks** are designed to have longer battery life, which translates into more loads moved before the battery must be changed. Performance is not always how fast a load can be moved, but it is also how long the truck can perform the cycle before a battery change is required.

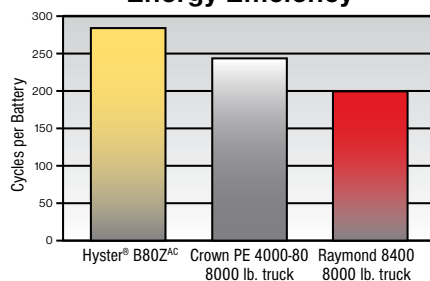
With the new B60Z^{AC} and B80Z^{AC} end control walkie rider, customers get the best performance to energy efficiency ratio. Competitive testing revealed that Hyster not only can move more loads than other manufacturers, but actually uses less energy to move them. See the charts below for test results:

Performance*



The Hyster B80Z^{AC} performs up to 27% better than other manufacturers!

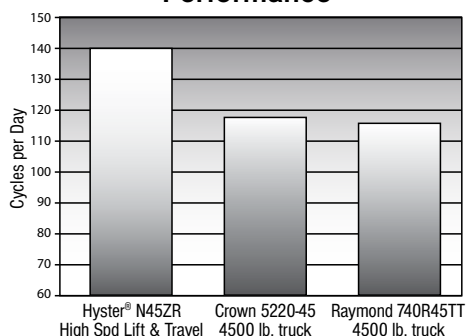
Energy Efficiency*



The Hyster B80Z^{AC} is up to 40% more efficient than other manufacturers!

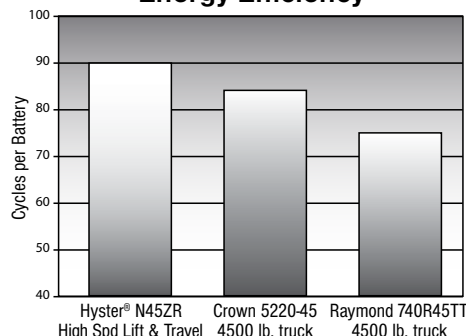
The test results on the new Hyster® N-ZR/ZDR and N-ZRS/ZDRS series are just as outstanding:

Performance**



The Hyster N45ZR performs up to 22% better than other manufacturers!

Energy Efficiency**



The Hyster N45ZR is up to 20% more efficient than other manufacturers!

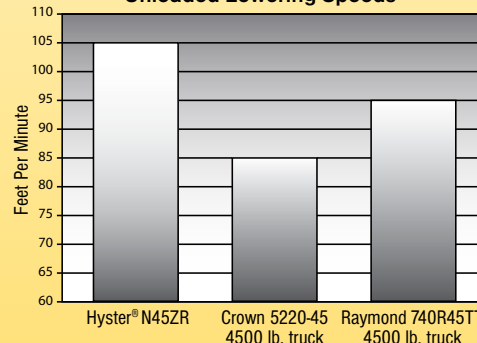


N35ZR

The N35-45ZR/N30-35ZDR Reach truck series offers a unique hydraulic system that contributes to increased performance and energy savings:

- **Powered lowering** enables the trucks to have the same lowering speeds loaded or unloaded. Typically, with other manufacturers, the unloaded lowering speeds are significantly slower than the loaded lowering speeds. Our powered lowering occurs when lowering without a load and results in lowering speeds 17% faster than the other manufacturers' standard trucks.
- Another benefit of the lowering system is the result of **regenerative lowering**. Regenerative lowering occurs when lowering with a load and puts energy back into the battery, increasing battery shift-life.

Unloaded Lowering Speeds**



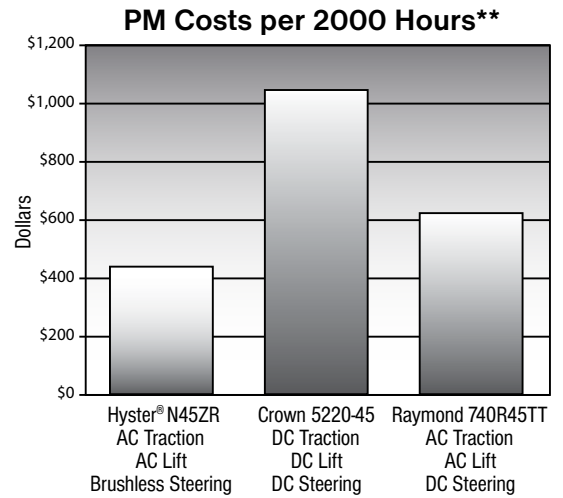
LOWER MAINTENANCE COSTS

The Hyster N35-45ZR/N30-35ZDR and N35-40ZRS/N30ZDRS are now **100% brushless!** This series offers AC traction, AC lift, brushless steer, and significantly fewer components for maximum performance and battery efficiency:

The **brushless AC traction motor** has no brushes to maintain, or commutators to wear reducing maintenance costs while increasing reliability. Traction performance is maximized and provides seamless direction transitions.

The simpler design of the **brushless AC hoist motor** eliminates brushes, reducing maintenance costs and increasing uptime. The AC hoist motor also maximizes lift performance.

The **brushless steer motor** is a variable electric on-demand steer system, which means steering is only activated when requested. This results in less battery usage and longer battery life. Variable steering provides steering proportional to input. These features minimize energy consumption.



	HYSTER N45ZR	CROWN 5220-45		RAYMOND 740R45TT	
	AC Traction AC Lift Brushless Steering	DC Traction DC Lift DC Steering w/Brushes	AC Traction DC Lift DC Steering w/Brushes	AC Traction DC Lift DC Steering w/Brushes	AC Traction AC Lift DC Steering w/Brushes
CONTACTORS	1	2	2	3	3
MOTOR BRUSHES	0	12	8	8	4
PERIODIC MAINTENANCE	500 hrs	250 hrs	250 hrs	500 hrs	500 hrs

THE HYSTER® AC ADVANTAGE

Hyster is able to provide all of these outstanding results due to a total system approach to AC technology.

While many manufacturers offer AC motor technology, there's a lot more that goes into designing a high-performing, energy efficient AC powered lift truck than simply sticking an AC motor into a previously DC powered truck. It's more than a motor — it's a total system design. It's all about proven components, customized software and expert system integration:

- **Proven Components:** Hyster increases performance and reliability by installing proven components and control systems that can be used in a wide range of applications.
- **Customized Software:** Hyster uses sophisticated, proprietary software that can be specifically customized to maximize the performance of truck systems.
- **Expert System Integration:** Hyster takes their leading edge components and software and uses expert system integration to optimize the truck performance to energy efficiency ratio.

As a result of a total system approach to AC technology, Hyster offers a truck with high performance, high energy efficiency and lower maintenance costs, **taking Hyster customers to the Next Level of AC.**

THE AC POWER ADVANTAGE

Brushless AC Technology equals lower cost, higher reliability, and longer product life.

- **Eliminates costs and downtime associated with motor brush cleaning, checks, and replacements.**
- **Eliminates commutator and its related parts and service costs.**
- **Offers precise speed control with excellent acceleration.**
- **Truck programmability allows higher performance.**
- **Eliminates pause when changing directions to significantly increase performance.**
- **Maintains consistent speed regardless of load or battery discharge level.**
- **AC transistor hydraulic control enables precise load handling with greater efficiency and less noise.**

* Results with Extended Shift Off. For more information on test results, see the "Hyster AC Powered End Control Walkie/Rider Trucks: B60ZAC, B80ZAC MMST."

** Results with Extended Shift Off. For more information on test results, see the "Hyster AC Powered Narrow Aisle Single and Double Reach Trucks: N35-40ZRS/N30ZDRS. N35-45ZR/N30-35ZDR MMST."