

PRODUCT INFORMATION BULLETIN



D/C # 6

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Series Impact: D210 (Formally C210)

TO: ALL HYSTER DEALER PRINCIPALS, SALES MANAGERS, & SALES REPRESENTATIVES

FROM: PETER SIESSEL – VICE PRESIDENT, HYSTER MARKETING

SUBJ: New V30ZMD AC Controlled Man Down Turret Truck

Hyster Company is pleased to announce the new V30ZMD **AC Controlled** Man Down Turret Truck product scheduled for May 2004 production. Fueled by rapid developments in AC control technology, Hyster Company is able to provide the benefits offered through AC motors and controllers to the Man Down Turret Truck product line that has previously used DC motor/control systems.

Unaffected by the change to AC motor and controllers is the mast and attachment, which continues from the previous series. The wire guidance option is currently not available on this series. If required, please contact Jamie McNeill at 252-931-5671 or Moataz Eldib at 252-931-5673.

As we make the conversion from old to new, we wish to ensure you have the interim marketing tools for the new series. To this end, attached please find the following information. A complete set of Standard Price pages and a Turret Truck Site Survey. For your convenience, the Standard and SPED price pages are available immediately online at www.hysterusa.com. ***Please remember to refresh HERO by selecting the “completely reload tables” option in the download area of the price book thereby activating this series.***

VNA ADVANTAGE

Hyster's exclusive turret attachment allows the ultimate in high-density storage. With operating aisles as narrow as 64", the V30ZMD requires only 44% of the aisle space required to operate compared to a conventional counterbalanced truck of the same chassis size. The turret mechanism can turn to reach both sides of a narrow aisle, and most importantly can reach every pallet slot of a dead end aisle. For your convenience a turret truck site survey form is attached to this bulletin.

Recent developments in control technology have greatly enhanced the speed and torque control capabilities, as well as the efficiency and performance of AC motors and controllers. AC provides vehicle performance options that were not possible with DC control systems of the past. The traction and pump motors on these new Hyster products operate on 3-phase AC power provided by the motor controllers.

AC ADVANTAGE

- A speed sensor built into the motor bearing provides closed loop feedback to the motor controller (direction and RPM). This speed sensing allows a full range of motor speed control not currently available with the DC control system (top speed and acceleration).
- The Hyster AC traction motor is less complex than the equivalent DC motor, providing superior torque, speed capabilities, reliability, and thermal performance.
 - This directly translates to lower cost, higher reliability, and longer product life.
 - The simplicity of the new Hyster AC motor allows it to operate at lower overall temperatures than equivalent DC motors. The simplicity in design eliminates the need to service brushes, brush rigging, and motor commutators. The result is **No arcing – No sparking – No maintenance -- which**

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directly translates to lower cost, higher reliability, and longer product life. (DC motors require regular brush replacements and frequent cleaning of built up carbon as the brushes wear.)

- Similar to our current DC system, the new Hyster AC controller can directly accelerate or decelerate (regenerative brake) the traction motor in both directions. However the benefit of the AC controller is that it instantaneously switches torque from one direction to the other providing a very smooth transition between forward and reverse increasing operator productivity.

Hoist Motor

- The **standard** AC hoist motor has all the same features as the traction motor. The Hyster AC hoist motor, when controlled by the Hoist Motor Controller provides equal torque and speed performance as the transistor controlled DC Hoist Motor. As a result, energy consumption is equivalent as well.

OTHER NEW HYSTER DESIGN BENEFITS

Control System Advantages

- On board ability to adjust truck settings can be achieved to meet customer requirements (through technician password) to take advantage of enhanced levels of performance. Hyster trucks outperform other manufacturers' conventionally equipped products. **Keep in mind, whenever performance is increased, energy consumption is also increased regardless of truck manufacturer.**
- The Hyster Thermal Management System is well balanced between the thermal limits of the motors and the controls. The new Hyster AC system provides improved thermal performance over the previous DC system. Positioned up away from the floor, the AC traction and pump motor controllers are mounted in a sealed control compartment area behind the counterweight preventing external contamination. Fresh air, provided by two industrial quality fans, is moved through the compartment, transferring the heat conducted from the controls out. The fans are thermostatically controlled and do not operate until the control reaches predetermined temperature limits. In tough thermal applications, the new Hyster AC system allows the truck to continue running at a reduced power level, if necessary, rather than shutting down.
- Our new control system provides on board diagnostic capabilities in both run and non run-time scenarios resulting in minimized truck down time.

On-Demand Power Steering

The Hyster brushless power steering motor with integrated steering controller provides on demand steering for low noise and low energy consumption. This feature allows us to provide our customers with a **100% brushless** truck.

CANbus Technology

A significant advantage of this system is the reduction of wiring connections and complexity, extensive function monitoring and access to all controller parameters through single access point.

Mast and Attachment

A full range of 3-stage vista masts are available with widely spaced load rollers and fully adjustable side thrust roller bearings. The mast is trunion mounted and fixed in a vertical position allowing the operator to quickly align the forks with the rack.

The turret attachment is available in 56" and 62" widths with and without sideshift, and can be equipped with fork tilt. Hot rolled I-Beam channels with adjustable 4" rollers provide a durable and easily maintained attachment.

Brake and Back-up Lights

The brake and back up lights have been redesigned. The new brake and back up lights have been upgraded to LED lights in lieu of incandescent lights. The new LED brake and back up lights will offer the following benefits to our customers:

- LEDs are solid state and have no filaments; therefore, they are much more tolerant to vibration.
- LED life expectancy is many times longer than incandescent light bulbs.
- LEDs draw less amps than incandescent light bulbs, as much as four to five times less.
- LEDs are low profile and therefore provide limited visual obstruction and are positioned closer to the truck overhead guard...lessening the chance of inadvertent damage.

SUMMARY

The introduction of the Hyster V30ZMD AC product will advance our competitive position in the marketplace by providing improved reliability over the current DC SEM offerings. By design, this new Hyster product uses fewer components, allows for software updates that don't require hardware changes and utilize simple but durable motors with fewer wearable parts. Perhaps the most influential customer realization will be the extended service intervals through the use of the Hyster **BRUSHLESS** AC traction motor, the **BRUSHLESS** on-demand power steer motor and the **BRUSHLESS** AC hoist motor.

We are excited about the release of this very important addition to our Class II family and the many opportunities and competitive advantages this series will provide your dealership. For further detail or assistance, please contact your Regional Product Manager or the Hyster Marketing Department.

As always, we appreciate the support of our distribution network and the sales organization.

Sincere Regards,



Peter M. Siessel
Vice President of Marketing – Hyster Company

The information contained in this bulletin is for information purposes only. Hyster Company reserves the right to change the design of our products without incurring an obligation to modify previously manufactured products.