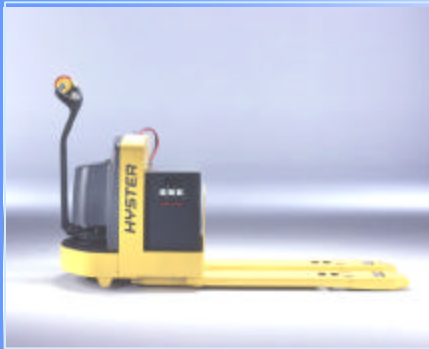




SalesTraining 2001

W60/65/80 "Z" WALKIE B60/80 "Z" WALKIE/RIDER



06/01

Hyster W60/65/80 "Z"; B60/80 "Z" motorized hand trucks are designed for performance, value and are designed and built for specific applications and industries. All drive motors are job matched and application proven for efficiency, performance and reliability. The Curtis SEPEX™ Transistor Drive Controller provides smooth, step less control of travel speeds, programmability for specific applications/performance settings, fault detection and thermal protection. All motorized hand truck components are engineered for outstanding performance and extended, low maintenance life. The easy-to-use handle, designed with advanced ergonomics, contributes to exceptional operator comfort and results in greater productivity. Hyster motorized hand trucks have engineering excellence and outstanding quality.

INTRODUCTION

The W60/65/80 "Z" Walkie motorized hand as well as the B60/80 "Z" Walkie Rider provide "best in class" for ergonomics and reliability. To help enhance the selling skills and product knowledge of your dealer sales force, we are providing this product review CD. This PowerPoint presentation includes:

- Introduction
- Product focus
- Application information
- Standard features
- Options
- Competitive review



W60/65/80 "Z"



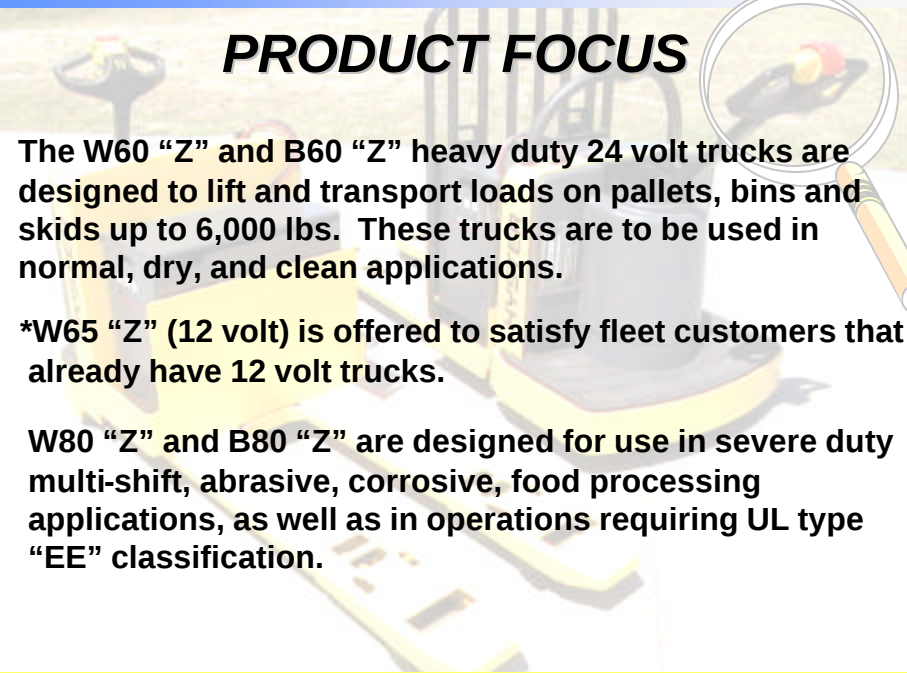
B60/80 "Z"

Introduction

The W/B "Z" Series trucks provide "best in class" for ergonomics and reliability. To help enhance the selling skills and product knowledge of your dealer sales force, we are providing this product review CD. This PowerPoint presentation on CD includes:

- Introduction
- Product focus
- Application information
- Standard features
- Options
- Competitive review

We hope this information will be a helpful sales tool. Please feel free to download this PowerPoint to as many PCs as necessary.



PRODUCT FOCUS

The W60 “Z” and B60 “Z” heavy duty 24 volt trucks are designed to lift and transport loads on pallets, bins and skids up to 6,000 lbs. These trucks are to be used in normal, dry, and clean applications.

***W65 “Z” (12 volt)** is offered to satisfy fleet customers that already have 12 volt trucks.

W80 “Z” and B80 “Z” are designed for use in severe duty multi-shift, abrasive, corrosive, food processing applications, as well as in operations requiring UL type “EE” classification.

Warehousing functions: unloading, loading / crossdocking, picking and transporting.

Target industries: General warehousing and storage, groceries and manufacturing.

The W65 “Z” 12 volt is being offered primarily to satisfy those customers who will not switch to 24 volt. 12 volt is not a growth segment. 24 volt gives better gradeability, torque, and energy consumption.

The only advantage to 12 volt has been the total cost of truck, battery and charger. Few competitors offer a 12 volt truck.

COMMON APPLICATIONS

W60/B60 "Z" 6,000 lbs.

HEAVY DUTY

- ***Grocery Stores***
 - ***Groceries, General Line***
 - ***Department Stores***
 - ***Fresh Fruits & Vegetables***
 - ***General Warehousing & Storage***
 - ***Bottled & Canned Soft Drinks***
-

Common use applications are in grocery stores, department stores, and for general warehousing & storage.

COMMON APPLICATIONS

W65 “Z” 6,500 lbs. (12V)

The W65 “Z” (12 volt) is offered to satisfy fleet customers that already have 12 volt trucks. This truck has the 8,000 lbs. chassis but has been downsized for 12V.

- ***Grocery double pallet applications***
 - ***Freezer use including applications that require multi-shift such as cross-docking and high cycle dock use***
 - ***Food processing***
-

COMMON APPLICATIONS

W80/B80 “Z” 8,000 lbs.

SEVERE DUTY
(UL type “EE” construction)

- **Grocery double pallet applications**
 - **Freezer use including applications that require multi-shift such as cross-docking and high cycle dock use**
 - **Food processing**
-

Common (8K only) applications:

(UL type “EE” construction)

- Grocery double pallet application**
- Freezer use including applications that require multi-shift such as**
 - cross- docking and high cycle dock use**
- Food processing**

TRUCK SELECTION GUIDE

Truck Type	W40XT	W45XT	W60Z	W65Z (12V)	W80Z	B60Z	W80Z
Environment (truck location)							
General Warehouse	Std	Std	Std	Std	Std	Std	Std
Cooler / Intermittent Freezer	Opt	Std	Std	Std	Std	Std	Std
Cold Storage / Freezer	Opt	Opt	Opt	Opt	Opt	Opt	Opt
Severe Freezer / Corrosion							
/ Meat Processing	N/A	N/A	N/A	Opt	Opt	N/A	Opt
UL Type "EE" Rating	N/A	N/A	N/A	Opt	Opt	N/A	Opt
Typical Duty Cycle							
Pallets per Day	30-45	45-60	60-90	90-135	90-135	135-270	270-480
Typical Single Pallet Load Wt.	2000 lbs.	2000 lbs.	3000 lbs.	3000 lbs.	3000 lbs.	3000 lbs.	3000 lbs.
Load Max	4000#	4500#	6000#	6500#	8000#	6000#	8000#
Run Length	<100 ft	<100 ft	100-500 ft	100-500 ft	100-500 ft	>500 ft	>500 ft
Shifts per Day	single	single	two	multi	multi	multi	multi
Operational Hours per Day	<5	6	9	9	12	12	12
Maximum Battery AH	195 (GNB) 180 (Std)	510 255	510	750	600	510	750
Voltage	24	12 or 24	24	12	24	24	24
Pallet Fork Length (inches)							
Single Pallet	36,42,48,54,60	36,42,48	36, 42, 48	36, 42, 48	36, 42, 48	36, 42, 48	36, 42, 48
Double Pallet	---	---	---	---	---	---	84, 93, 96
Width Across Forks (Out to Out)	20.8, 27	22,27	27	27	27	27	27 (28 dbl)

This truck selection chart illustrates the pallet truck models.

Definitions of Environmental Types:

General Warehouse - General warehousing and distribution; non-perishable foods; durable goods

Cooler / Intermittent Freezer - Produce; refrigerated perishable foods; cold rooms and/or refrigerated storage areas; intermittent use in freezers down to 0 degrees F (5 minutes or less in freezer)

Cold Storage / Freezer - Frozen meat and dairy products; frequently in and out of freezer, and/or temperatures to -15 degrees F

Severe Freezer / Corrosion / Meat Processing - Meat processing, pickling, tannery, exposure to corrosive environments such as brine.

UL EE Rating - Applications requiring UL type "EE" construction such as paints, chemicals, etc.

W60/65/80 “Z” WALKIE LOW LIFT PALLET TRUCK



Three Walkie low lift pallet trucks:

W80 “Z” 24 volt

W60 “Z” 24 volt

W65 “Z” 12 volt

W60/65/80 “Z”

Generally for applications in dry goods, or for use in a work cell.

The W60/65/80 “Z” have been field tested in the following:

- **Grocery distribution**
 - beverage
- **Retail**
 - large dept. stores
- **Manufacturing**
 - pharmaceutical case goods
 - palletized loads of newspapers
 - palletized textile products
 - palletized sheet metal

The W60/65/80 “Z” trucks were field tested at various key account locations.

Test performance results in regard to customer needs, product features and durability were very favorable.

Multiple internal durability tests were performed on the handle and the componentry with excellent results.

DIFFERENCES W60 “Z” VS. W80 “Z” ***(24 Volt)***

W80 “Z” is different than W60 “Z” in the following:

- **Traction motor** - *increased power rating (60 min.) from 1.8 to 2.5 kW*
- **Electromagnetic brake** - *increased torque rating from 12 ft-lbs. To 25 ft-lbs.*
- **Traction controller** - *increased power rating (2 min.) from 300A to 350A*
- **Hydraulic power unit** - *increased motor power from 1.25 to 1.5kW and increased pump displacement from 1.5 to 2.0 cc/rev.*
- **Load wheels** - *4 bearings per load wheel standard, dual load wheels optional. (2 bearings for 6,000 Lbs. Model).*
- **Fork frame** - *reinforcing bars added to the forks*
- **Drive tire** - *poly drive tire is standard on W80 “Z” to improve steering W60 “Z” is standard with a rubber drive tire.*
- **Battery AH capacity** – *Up to 600 AH available for 8,000 lbs. model (510 AH on 6,000 lbs. model)*

The W80 “Z” has been configured to handle higher duty cycles and has increased power, torque, and battery capacity for more demanding applications.

Performance: Faster lift speeds, faster acceleration

W60/65/80 “Z” ELECTRICAL SYSTEM

- W80 “Z” 24 volt only (A234)
- W60 “Z” 24 volt (A897)
- W65 “Z” 12 volt (A299)
- SEM Traction Control Technology
- UL type “E” Classification
- Regen braking w/ electro-mechanical service/parking brake
- Lift motor cut-out at full lift height
- Traction reversing switch
- Key switch
- Horn
- Red Anderson SB-175 battery connector
W60/80 “Z” (24V); Yellow on W60 “Z” (12V)
- Gray battery connector is optional on all models



Three Walkie trucks:

- W80 “Z” 24 volt only
- W60 “Z” 24 volt
- W65 “Z” 12 volt

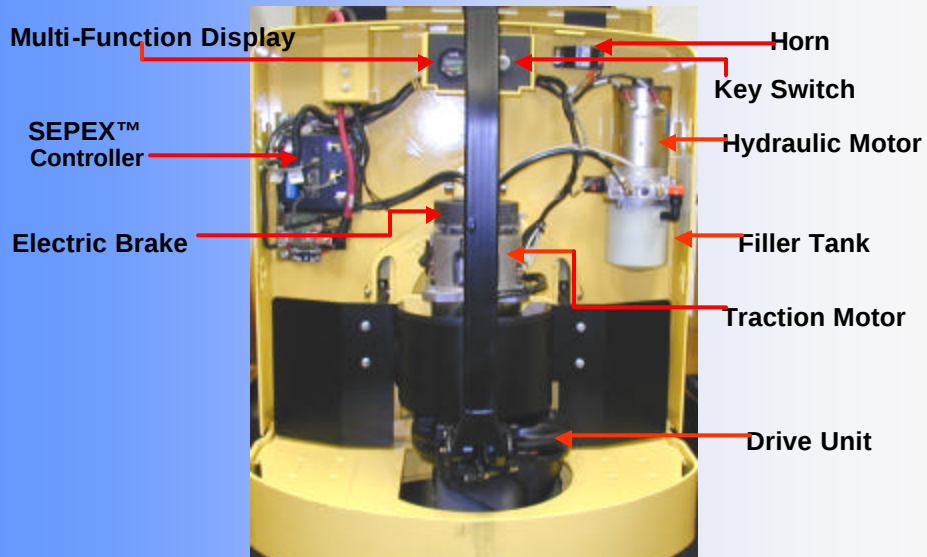
Lift Lockout

At 76% discharge of the battery, the horn will blow a short “beep” when the lift switch is depressed. The truck will still lift.

At 80% discharge, the horn will still blow a short “beep” when the lift switch is pressed, but the truck will not lift.

(More information on SEM Traction Technology to follow.)

W60/65/80 "Z" ***ELECTRICAL SYSTEM***



W60/65/80 “Z” STANDARD FEATURES



W60/65/80 “Z” standard features

W60 "Z" CAPACITY

(24 Volt)

- 6,000 lbs. - designed to move a single pallet load or two stacked pallet loads not exceeding 6,000 lbs. gross weight.



Loads must be evenly distributed over length of forks (pallets, bins, tubs, skids etc.)

No coils, rolls or drum carried between the forks. This introduces lateral loads for which the forks are not designed.

W65 “Z” CAPACITY

(12 Volt)

- 6,500 lbs. - designed to move a single pallet load or two stacked pallet loads not exceeding 6,00 lbs. gross weight.



Loads must be evenly distributed over length of forks (pallets, bins, tubs, skids etc.)

No coils, rolls or drum carried between the forks. This introduces lateral loads for which the forks are not designed.

W80 "Z" CAPACITY

(24 Volt)

- 8,000 lbs. - designed to move a single pallet load or two stacked pallet loads not exceeding 8,000 lbs. gross weight.



Same: Loads must be evenly distributed over length of forks (pallets, bins, tubs, skids etc.)

No coils, rolls or drum carried between the forks. This introduces lateral loads for which the forks are not designed.

W60/65/80 "Z" CONTROLS

(Common to 12 and 24 volt trucks)



■ FEATURE:

Bottom Mounted Handle

■ BENEFIT:

Optimizes the operating position, walking clearance behind the frame bumper, fork tip visibility, and steering effort.

(Common to 12 and 24 volt models)

The angled handgrips follow the natural angle of the wrist to help alleviate fatigue over the working day.

The angle of the handle tube was added to provide a better operating position with the new handle and improve the ergonomics of the truck.

The control handle return now uses a gas spring which replaces the torsion spring.

The gas spring provides for a much smoother and less aggressive return when it hits the stop thus applying less shock to the control handle and components.

W60/65/80 "Z"

HANDLE & CONTROLS

(Common to 12 and 24 volt trucks)

■ **FEATURE**

Direction/throttle control actuators (butterfly wings)

■ **BENEFIT**

30 degree rotation in either direction.

Provides thumb actuation in the forks trailing direction, and thumb and forefinger actuation in the forks leading direction.



Serviceability - Designed for minimal troubleshooting and repair time;

No special tools required to disassembled; only three mounting screws. All switches and actuators are sub-assembled as part of the top cover. All electronics are incorporated on one PC board in the handle. Switches for the lift and lower functions are identical which minimizes service parts.

Materials - Injection molded fiberglass impregnated composite material. This material gains strength from the hot injection molded process.

No concern with durability in cold storage environments or from direct exposure to sunlight/UV.

The Hall effect sensor measures the differences across a magnetic field to generate a proportional output – (travel direction and speed).

W60/65/80 “Z” HANDLE & CONTROLS

(Common to 12 and 24 volt trucks)

■ **FEATURE**

Hand protection

■ **BENEFIT**

The control handle is designed to keep operator's hands within the interior perimeter of the handle. The raised center section provides protection for the top of the hand and the rear wrap-around arms protect the fingers and knuckles.



FEATURE

Hand protection

BENEFIT

The control handle is designed to keep operator's hands within the interior perimeter of the handle. The raised center section provides protection for the top of the hand and the rear wrap-around arms protect the fingers and knuckles.

W60/65/80 "Z" **HANDLE & CONTROLS**

(Common to 12 and 24 volt trucks)

■ **FEATURE**

Wrap-around traction reversing actuator (belly switch)

■ **BENEFIT**

Provides a large area of contact for the operator. Horn sounds when actuated. The actuator is at the leading edge of the handle assembly and can be actuated within the full range of the handle pivot.



FEATURE

Wrap-around traction reversing actuator (belly switch)

BENEFIT

Provides a large area of contact for the operator. The actuator is at the leading edge of the handle assembly and can be actuated within the full range of the handle pivot.

The auto reversing switch (belly switch) automatically reverses the truck's direction and the horn sounds when the switch come in contact with the operator. After contact with the belly switch, the traction motor will not re-engage until the operator cycles the butterfly to neutral. The handle does not need to move to be raised or lowered to the brake-on position.

W60/65/80 "Z"

HANDLE & CONTROLS

(Common to 12 and 24 volt trucks)

■ **FEATURE**

Horn actuator for
electronic horn

■ **BENEFIT**

Centrally located on top
of the handle.
Sized to provide easy
access with either hand.



FEATURE

Horn actuator for electronic horn

BENEFIT

Centrally located on top of the handle.
Sized to provide easy access with either hand.

W60/65/80 “Z” HANDLE & CONTROLS

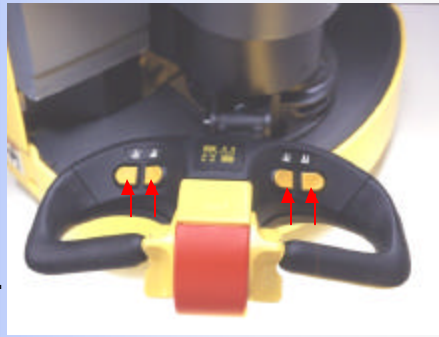
(Common to 12 and 24 volt trucks)

■ **FEATURE**

Lift & lower controls

■ **BENEFIT**

The operator can control these functions without repositioning hands. Fingertip raised controls and concave switch actuators provide tactile and intuitive use.



FEATURE

Lift & lower controls

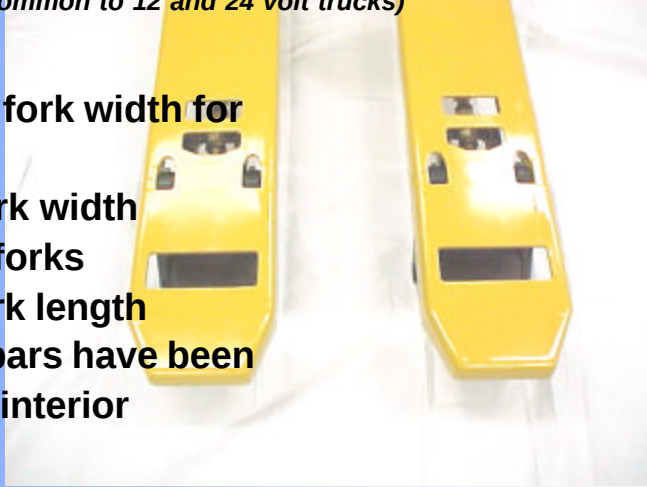
BENEFIT

The operator can control these functions without repositioning hands. Fingertip raised controls and concave switch actuators provide tactile and intuitive use.

W60/65/80 “Z” FORKS

**(Common to 12 and 24 volt trucks)*

- **9” individual fork width for stability**
- **27” overall fork width across both forks**
- **48” overall fork length**
- **Reinforcing bars have been added to the interior**



Forks:

9” individual fork width

27” overall fork width across both forks

48” overall fork length is standard

Reinforcing bars have been added to the interior of the forks.

W60/65/80 "Z" FORKS

(Common to 12 and 24 volt trucks)

- 3.25" lowered fork height
- 6" lift for under-clearance
- 9.25" raised



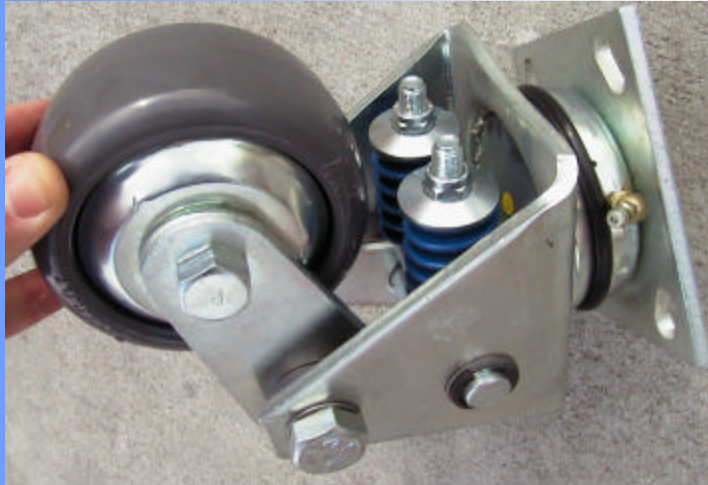
Forks:

3.25" lowered fork height

6" lift

9.25" raised

**W60/65/80 "Z"
OPTIONAL CASTER**



4" Dia. x 1.5" Wide Poly "Darcor"

4" Diameter x 1.5" Wide durable Polyurethane "Darcor" material.

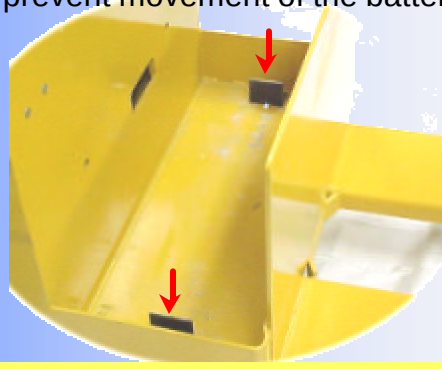
"Knee action" allows adjustment for uneven surfaces, the result is a smoother ride with better wheel floor contact.

The Darcor walkie caster has the same serviceability as the caster on the previous walkie trucks. Caster is not rebuildable.

W60 “Z” BATTERIES

(24 Volt)

- Battery compartment dimensions: 32” x 13.4” x open, battery spacers included
- **Maximum battery AH (KWH): 510 AH (11.9 KWH)**
- **Maximum battery weight: 1035 Lbs.**
- Battery spacers prevent movement of the battery



Battery retention is adjustable for the various battery lengths. If battery rollers are used, retainers are bolted to the side plates for battery retention. When the 8.8” or 8.6” wide battery is specified in the 13.0” battery box, a battery spacer kit is required.

Batteries exceeding maximum weight and AH rating will lead to premature wear and potential failure of the truck components.

W60 “Z” BATTERIES

24V 6,000 Lbs. Capacity Walkie

No. of	Cell	Plates	Capacity (6 hr rate)		“X”	“Y”	“Z”	Max.
<u>Cells</u>	<u>Size</u>	<u>per Cell</u>	<u>Amp-Hours</u>	<u>KWH</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Weight</u>
12	75	7	225	5.2	25.6”	8.8”	23.3”	536 lbs.
12	85	7	255	6	25.5”	8.6”	23.3”	590 lbs.
12	75	11	375	8.7	26.5”	13.0”	23.3”	825 lbs.
12	85	11	425	9.9	26.1”	12.8”	23.3”	865 lbs.
12	85	13	510	11.9	30.9”	13.0”	23.3”	1035 lbs.

The battery capacity, or ampere-hour rating determines the amount of available energy.

This truck does not have the same battery weight requirements to achieve counter-weighting as the previous model.

The maximum battery capacity has been established based upon the required energy to perform the described work. A battery of higher capacity carries the burden of additional weight. This added weight results in higher current draws by the motors and controller.

W65 “Z” BATTERIES

(12 Volt)

- Battery compartment dimensions: 32” x 9” x open, battery spacers included
- **Maximum battery AH (KWH): 750 AH (9.0 KWH)**
- **Maximum battery weight: 720 Lbs.**
- Battery spacers prevent movement of the battery



Battery retention is adjustable for the various battery lengths. If battery rollers are used, retainers are bolted to the side plates for battery retention.

Batteries exceeding maximum weight and AH rating will lead to premature wear and potential failure of the truck components.

W65 “Z” BATTERIES

12V 6,500 Lbs. Capacity Walkie

No. of	Cell	Plates	Capacity (6 hr rate)		“X”	“Y”	“Z”	Max.
<u>Cells</u>	<u>Size</u>	<u>per Cell</u>	<u>Amp-Hours</u>	<u>KWH</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Weight</u>
6	85	7	255	2.5	18.8”	6.8”	23.0”	305 lbs.
6	85	11	425	5	26.1”	7.7”	23.3”	436 lbs.
6	85	13	510	6	30.6”	7.7”	23.3”	511 lbs.
6	85	19	750	9	22.3”	12.9”	23.3”	720 lbs.

The battery capacity, or ampere-hour rating determines the amount of available energy.

This truck does not have the same battery weight requirements to achieve counter-weighting as the previous model.

The maximum battery capacity has been established based upon the required energy to perform the described work. A battery of higher capacity carries the burden of additional weight. This added weight results in higher current draws by the motors and controller.

W80 "Z" BATTERIES

(24 Volt)

- Battery compartment dimensions: 32" x 13.4" x open, battery spacers included (same size as 6,000)
- **Maximum battery AH (KWH): 600 AH (14.9 KWH)**
- **Maximum battery weight: 1140 Lbs.**
- Battery spacers prevent movement of the battery



Battery retention is adjustable for the various battery lengths. If battery rollers are used, retainers are bolted to the side plates for battery retention.

Batteries exceeding maximum weight and AH rating will lead to premature wear and potential failure of the truck components.

W80 “Z” BATTERIES

24V 8,000 Lbs. Capacity Walkie

No. of	Cell	Plates	Capacity (6 hr rate)		“X”	“Y”	“Z”	Max.
Cells	Size	per Cell	Amp-Hours	KWH	Dim.	Dim.	Dim.	Weight
12	75	7	225	5.2	25.6”	8.8”	23.3”	536 lbs.
12	85	7	255	6	25.5”	8.6”	23.3”	590 lbs.
12	75	11	375	8.7	26.5”	13.0”	23.3”	825 lbs.
12	85	11	425	9.9	26.1”	12.8”	23.3”	865 lbs.
12	75	13	450	10.5	30.9”	13.0”	23.3”	987 lbs.
12	85	13	510	11.9	30.9”	13.0”	23.3”	1035 lbs.
12	100	13	600	14	30.9”	13.0”	26.2”	1140 lbs.

The battery capacity, or ampere-hour rating determines the amount of available energy.

This truck does not have the same battery weight requirements to achieve counter-weighting as the previous model.

The maximum battery capacity has been established based upon the required energy to perform the described work. A battery of higher capacity carries the burden of additional weight. This added weight results in higher current draws by the motors and controller.

B60/80 “Z” WALKIE/RIDER LOW LIFT PALLET TRUCK

(24 Volt Only)



B60/80“Z” Walkie/Rider low lift pallet truck

B60 “Z”

HEAVY DUTY

Generally for applications in dry goods, or for use in a work cell. The B60 “Z” has been field tested in the following:

- Grocery distribution
 - produce cases, cartons, bins
 - grocery, produce, frozen foods, packaged goods
 - grocery merchandise
 - beef, poultry, seafood
 - beverages
- Retail
 - large dept. stores
- Manufacturing

The B60/80 “Z” were field tested at various key account locations. Test performance results in regard to customer needs, product features and durability were very favorable. Multiple internal durability test were performed on the handle and the componentry with excellent results.

B80 "Z"
SEVERE DUTY

- ***Grocery double pallet applications***
- ***Freezer use including applications that require multi-shift such as cross-docking and high cycle dock use***
- ***UL type "EE construction***
- ***Food processing***

Common (8Konly) applications:

Grocery double pallet applications

Freezer use including applications that require multi-shift such as cross-docking and high cycle dock use

UL type "EE construction

Food processing

DIFFERENCES: B60 “Z” & B80 “Z”

The B80 “Z” is different than the B60 “Z” in the following:

- **Traction motor** - *increased power rating (60 min.) from 2.5 to 2.8 kW*
- **Electromagnetic brake** - *increased torque rating from 25 ft-lbs. To 40 ft-lbs.*
- **Traction controller** - *increased power rating (2 min.) from 300A to 350A*
- **Battery AH capacity** - *750 AH available for 8,000 Lbs. model (510 for 6,000 lbs.model).*
- **Hydraulic power unit** - *increased motor power from 1.25 to 1.5kW and increased pump displacement from 1.5 to 2.0 cc/rev.*
- **Load wheels** - *4 bearings per load wheel standard, dual load wheels optional. (2 bearings for 6,000 Lbs. Model).*

(Cont.)

The B80 “Z” has been configured to handle higher duty cycles and has increased power, torque, and battery capacity for more demanding applications.

Performance: Faster lift speeds, faster acceleration

DIFFERENCES: B60 "Z" & B80 "Z"

The B80 "Z" is different than the B60 "Z" in the following:

- **Fork frame** - reinforcing bars added to the forks
 - **Drive Frame Chassis length** – increased 2" to accommodate 12" drive tire. B60 "Z" has a 10" rubber drive tire.
 - **Double Pallet Forks** – Offered as an option (10" individual fork width).
 - **Drive tire** - poly drive tire standard to improve steering effort
 - **Casters** – increased width of poly wheel from 1.5" to 2.5" wide
 - **Severe Freezer/Corrosion** – Option
 - **EE Construction Option** - Option
-

B60/80 “Z” ELECTRICAL SYSTEM

- Available in 24 volt only
- SEM Traction Control Technology
- UL type “E” Classification
- Regen braking w/ electromechanical service/parking brake
- Lift motor cut-out at full lift height
- Traction reversing switch
- Key switch
- Horn
- Red Anderson SB-175 battery connector (gray is optional)



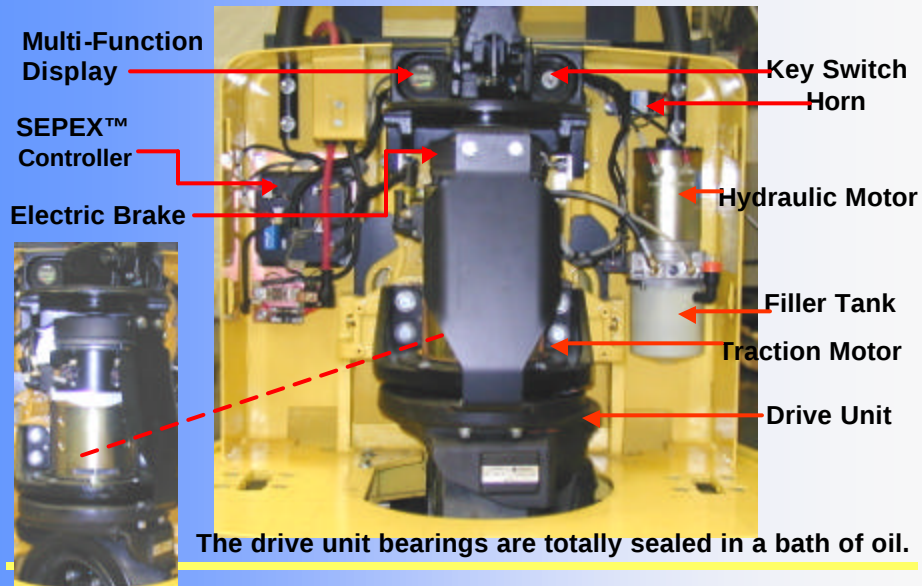
Lift Lockout

At 76% discharge of the battery, the horn will blow a short “beep” when the lift switch is depressed. The truck will still lift.

At 80% discharge, the horn will still blow a short “beep” when the lift switch is pressed, but the truck will not lift.

More information on SEM Traction Control Technology to follow

B60/80 "Z" ***ELECTRICAL SYSTEM***



The drive unit bearings are totally sealed in a bath of oil.

B60/80 “Z” STANDARD FEATURES



B60/80 “Z” standard features

B60/80 “Z”

(Common to both trucks)

■ **FEATURE**

Large operator platform

■ **BENEFIT**

- Designed to improve comfort
- 470 sq. inches of floor area for operator to stand on
- High density molded floor mat



Steady Rest



The molded floor mat is designed to reduce operator fatigue.

Mat is constructed with a “waffle” shaped backing to provide softer ride.

The mat, held in place by the drive frame bumper and the drive unit cover, can be removed for easy cleaning.

Both the molded padding on the steady rest and the floor mat are produced with a closed cell foam rubber material to ensure that the trucks meet all FDA requirements. This material also adds to operator comfort.

B60 “Z” CAPACITY

- 6,000 lbs. - designed to move a single pallet load or two stacked pallet loads not exceeding 6,000 lbs. Gross weight.



Loads must be evenly distributed over length of forks (pallets, bins, tubs, skids etc.)

No coils, rolls or drum carried between the forks. This introduces lateral loads for which the forks are not designed.

B80 “Z” CAPACITY

- **8,000 lbs. - designed to move a single pallet load or two stacked pallet loads not exceeding 8,000 lbs. gross weight.**



Same: Loads must be evenly distributed over length of forks (pallets, bins, tubs, skids etc.)

No coils, rolls or drum carried between the forks. This introduces lateral loads for which the forks are not designed.

B60/80 “Z” HANDLE & CONTROLS

(Common to both trucks)

■ **FEATURE**

Direction/throttle control
actuators (butterfly wings)

■ **BENEFIT**

Designed to accommodate
both the riding and
walking modes



FEATURE

Direction/throttle control actuators (butterfly wings)

BENEFIT

Designed to accommodate both the riding and walking modes

A “semi-rotary” actuator is designed for gripping with the thumb and index finger. Actuates similar to the Walkie.

B60/80 “Z” HANDLE & CONTROLS

(Common to both trucks)

■ **FEATURE**

Auxiliary control and padded steady rest bar.

■ **BENEFIT**

- Improved comfort and functionality.
- Provides a grab rail for the operator to use when stepping onto the platform, and provides stability when driving the truck.



FEATURE

Auxiliary control and padded steady rest bar.

BENEFIT

- Improved comfort and functionality.
- Provides a grab rail for the operator to use when stepping onto the platform, and provides stability when driving the truck.

The steady rest bar is angled to more naturally fit the angle of the hand and wrist. The bar has been covered with a molded on closed cell foam rubber material.

The high speed or “rabbit” button latches electronically requiring the operator to press and release the button. The function is reset when the direction/speed control is returned to the neutral position or the handle is returned to the brake on position.

B60/80 “Z” HANDLE & CONTROLS

(Common to both trucks)

■ **FEATURE**

Top-mounted handle

■ **BENEFIT**

Optimizes the rider operating position and helps reduce steering effort



(Coast control is lowered for coast operation)



FEATURE

Top-mounted handle

BENEFIT

Optimizes the rider operating position and helps reduce steering effort.

(Coast control is lowered for coast operation)

The Coast Control mechanism utilizes a urethane “bumper” to hold the tiller handle into the operating position. The coast control switch, actuated by rotating the coast control mechanism to the brake “off” position, activates a circuit within the traction controller limiting the maximum travel speed to the walking mode speed. **(disables the high speed function)**

W60/80 “Z”; B60/80 “Z” HANDLE & CONTROLS - DIFFERENCES

The differences is:

The B60/80 “Z” has a top mounted handle, a different shaped direction/throttle control actuator, a larger grip width, and a “Coast Control” option.



BOTTOM MOUNT HANDLE W60/80 “Z” WALKIE



**TOP MOUNT HANDLE
B60/80 “Z”
WALKIE/RIDER**

Serviceability - Designed for minimal troubleshooting and repair time; the Walkie is disassembled with only 3 screws, Walkie/Rider 5 screws with no special tools required. All switches and actuators are sub-assembled as part of the top cover. All electronics are incorporated on one PC board in the handle. Switches for the lift and lower functions are identical which minimizes service parts.

Materials - Injection molded of a fiberglass impregnated composite material. This material gains strength from the hot injection molded process.

No concern with durability in cold storage environments or from direct exposure to sunlight/UV.

Angled handgrips follow the natural angle of the wrist to help alleviate fatigue over the working day.

The angle of the handle tube (Walkie) was added to provide a better operating position with the new handle and improve the ergonomics of the truck.

The control handle return now uses a gas spring which replaces the torsion spring.

The gas spring provides for a much smoother and less “forceful” return when it hits the stop thus applying less shock to the control handle and components.

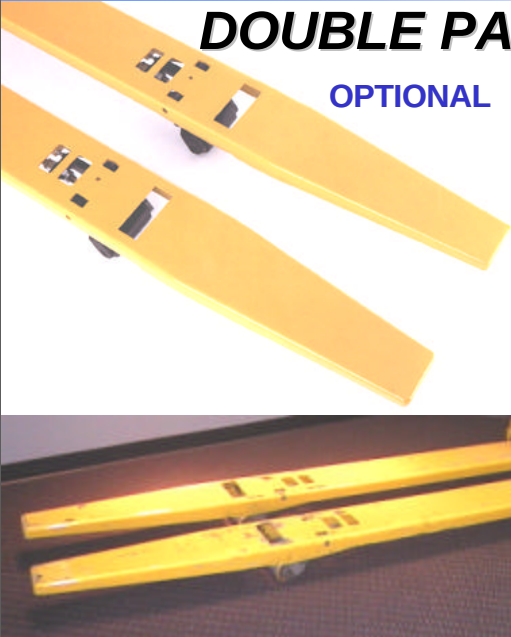
B60/80 “Z” FORKS

- 9” individual fork width for stability
- 27” overall fork width across both forks
- 48” overall fork length (optional 36”, 42”, and 60” available)
- Pallet entry/exit skids and pallet exit rollers
- Flush pallet stop
- 3.25” lowered fork height
- 6” lift for under-clearance
- B80 “Z” - reinforcing bars added to the interior of the forks.
- Optional B80 “Z” double pallet forks are 10” wide with a 28” fork spread. Available in 84, 93, and 96 inches long.



Forks:

- 9” individual fork width
- 27” overall fork width across both forks
- 48” overall fork length
- Pallet entry/exit skids and pallet exit rollers
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OPTIONAL

B80 "Z"

DOUBLE PALLET FORKS

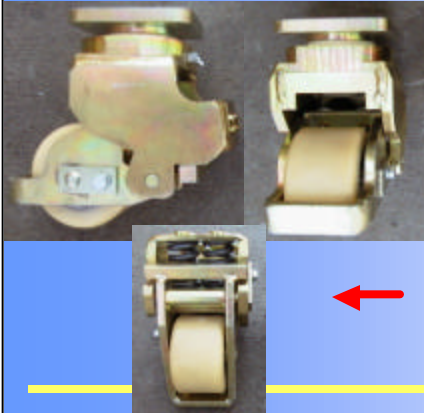
- 10" individual fork width for stability
- 28" overall fork width across both forks
- 84", 93", 96" overall fork length options
- Pallet entry/exit skids and pallet exit rollers
- Flush pallet stop
- 3.25" lowered fork height
- 6" lift for under-clearance

- 10" individual fork width for stability
- 28" overall fork width across both forks
- 84", 93", 96" overall fork length options
- Pallet entry/exit skids and pallet exit rollers
- Flush pallet stop
- 3.25" lowered fork height
- 6" lift for under-clearance

The new taper provides easier pallet entry.

B60/80 “Z” CASTERS

- Standard with 4” diameter x 2.5” wide spring loaded casters with polyurethane “Tophane” caster wheels. (Not rebuildable) →



- Optional heavy duty 4” diameter x 2.5” wide spring loaded casters with polyurethane “Vulkalon” caster wheels are available. Fully serviceable! ←

“Knee action” allows adjustment for uneven surfaces, the result is a smoother ride with better wheel floor contact.

B60 “Z” BATTERIES

- Battery compartment dimensions: 32” x 13.4” x open, battery spacers included (same size as W60 “Z”)
- Maximum battery AH (KWH): 510 AH (11.9 KWH)
- Maximum battery weight: 1035 Lbs.

(*Battery rollers are optional)



Battery retention is adjustable for the various battery lengths. If battery rollers are used, retainers are bolted to the side plates to prevent battery fore and aft movement. When the 8.8” or 8.6” wide battery is specified in the 13.0” battery box, a battery spacer kit is required.

Battery rollers are optional.

Battery rollers with both left hand and right hand extraction are optional.

B60 "Z" BATTERIES

			24V 6,000 Lbs. Capacity Walkie/Rider					
No. of	Cell	Plates	Capacity (6 hr. Rate)		"X"	"Y"	"Z"	Max.
<u>Cells</u>	<u>Size</u>	<u>per Cell</u>	<u>Amp-Hours</u>	<u>KWH</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Weight</u>
12	75	7	225	5.2	25.6"	8.8"	23.3"	536 lbs.
12	85	7	225	6.0	25.5"	8.6"	23.3"	590 lbs.
12	75	11	375	8.7	26.5"	13.0"	23.3"	825 lbs.
12	85	11	425	9.9	26.1"	12.8"	23.3"	865 lbs.
12	75	13	450	10.5	30.9"	13.0"	23.3"	987 lbs.
*12	85	13	510	11.9	30.9"	13.0"	23.3"	1035 lbs.
* Maximum Amp-Hour Rating								

The battery capacity, or ampere-hour rating determines the amount of available energy.

The maximum battery capacity has been established based upon the required energy to perform the described work. A battery of higher capacity carries the burden of additional weight. This added weight results in higher current draws by the motors and controller which results in excessive heat and shorter service life of the components.

B80 “Z” BATTERIES

- Battery compartment dimensions: 32” x 13.4” x open, battery spacers included (same size as W80 “Z”)
- Maximum battery AH (KWH): 750 AH (17.3 KWH)
- Maximum battery weight: 1425 Lbs.



(*Battery rollers are optional)

Battery retention is adjustable for the various battery lengths. If battery rollers are used, retainers are bolted to the side plates to prevent battery fore and aft movement. When the 8.8” or 8.6” wide battery is specified in the 13.0” battery box, a battery spacer kit is required.

Battery rollers are optional.

B80 “Z” BATTERIES

24V, 8000 Lbs. Capacity Walkie/Rider

No. of	Cell	Plates	Capacity (6 hr rate)		“X”	“Y”	“Z”	Max.
<u>Cells</u>	<u>Size</u>	<u>per Cell</u>	<u>Amp-Hours</u>	<u>KWH</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Dim.</u>	<u>Weight</u>
12	75	7	225	5.2	25.6”	8.8”	23.3”	536 lbs.
12	85	7	255	6	25.5”	8.6”	23.3”	590 lbs.
12	75	11	375	8.7	26.5”	13.0”	23.3”	825 lbs.
12	85	11	425	9.9	26.1”	12.8”	23.3”	865 lbs.
12	75	13	450	10.5	30.9”	13.0”	23.3”	987 lbs.
12	85	13	510	11.9	30.9”	13.0”	23.3”	1035 lbs.
12	100	13	600	14	30.9”	13.0”	26.2”	1140 lbs.
*12	125	13	750	17.6	30.9”	13.0”	31.0”	1450 lbs.

* Maximum Amp-Hour Rating

The battery capacity, or ampere-hour rating determines the amount of available energy.

The maximum battery capacity has been established based upon the required energy to perform the described work. A battery of higher capacity carries the burden of additional weight. This added weight results in higher current draws by the motors and controller.

***FEATURES COMMON TO
W60/65/80 “Z” & B60/80 “Z”***

Features common to W60/65/80 “Z” and B60/80 “Z”

NEW STYLE PIVOTING BACKREST(Optional)

W60/65/80 "Z"; B60/80 "Z"

- Secure grip handles
- No additional fork length needed
- Design eliminates rattling
- 48" and 60" pivoting backrest used with optional battery rollers is optimal for frequent battery changes.



The load backrest will only accommodate the recommended batteries on battery rollers. It cannot be used as a skid adapter due to lowered angle. The new style pivoting backrest is optional.

SEM TRACTION CONTROL TECHNOLOGY

- **Separately Excited Motors provide improved speed and torque control throughout the range of operation, which improves productivity.**
 - **The forward and reverse direction contactors have been replaced by separate traction motor armature and field controller.**
 - **Regenerative braking**
-

Hyster Company's SEM transistorized drive controller gives smooth, stepless acceleration and infinitely variable speed control. Designed around one of the latest advances in semiconductors, the controller allows the truck to be more energy-efficient than conventional systems.

SEM provides improved speed and torque control throughout the range of operation, which improves productivity.

The forward and reverse direction contactors have been replaced by separate traction motor armature and field controllers.

Regenerative braking benefits – returns energy to the battery and reduces brake wear as compared to resistor or series transistor controllers.

SEM TRACTION CONTROL TECHNOLOGY

INTREGAL HOIST CONTROL

- The hydraulic pump motor is controlled electronically, replacing the traditional contactor which is a high maintenance item.
- Solid-state control eliminates high current associated with contactors and extends service life of the pump motor.

INTREGAL HOIST CONTROL

The hydraulic pump motor is controlled electronically, replacing the traditional contactor which is a high maintenance item.

Solid-state control eliminates high current associated with contactors and extends service life of the pump motor.

Current sensing is utilized in the controller to sense the end-of-stroke for the lift cylinder and turns off the pump motor.

Integrating this feature eliminates the need for a lift limit switch.

A lift interrupt is standard in order to limit the lift function in the event that the battery is depleted beyond 80%.

SEM TRACTION CONTROL TECHNOLOGY CONTROL HANDLE SERIAL COMMUNICATION

- By the use of serial communications, the number of wire conductors at the control handle pivot and steering connection has been reduced from 13-wire, (18 awg) to 4-wire, (24 awg) shielded.

Benefit: Reduces flex at pivot point of handle, less likely for failure

- less service
- improved reliability

CONTROL HANDLE SERIAL COMMUNICATION

The number of wire conductors at the control handle pivot and steering connection has been reduced by the use of serial communications.

The communication link between the control handle and the traction controller is a 6-wire shielded, jacketed cable.

Benefit: Reduces flex at pivot point of handle, less likely for failure

- less service
- improved reliability

SEM TRACTION CONTROL TECHNOLOGY

AUXILIARY DRIVERS

- **Outputs from controller for operating accessories (drivers) are included for the horn and electromechanical parking/service brake.**
-

AUXILIARY DRIVERS

Output drivers are included for the horn and electromechanical parking/service brake.

OPTIONAL DISPLAY (W60/65/80 "Z", B60/80 "Z")

■ FEATURE

A single, multi function display is offered as an option.

■ BENEFIT

It provides battery state of charge indication, truck hours, fault codes message and lift interrupt warning.

Clip added to keep pick tickets organized (W60/65/80 "Z")



FEATURE

A single, multi function display is offered as an option.

BENEFIT

It provides battery state of charge indication, truck hours, fault codes message and lift interrupt warning.

*A plug is inserted when the display option is not ordered.

BDI and Hour Meter - both the battery discharge indicator and hour meter calculations are performed by the traction controller. The signal is transmitted to the gauge (optional) for display.

The hours are registered in the controller rather than the gauge ensuring that the actual truck hours are always displayed.

(With the exception of a controller replacement, where hours start back at zero).

A special display is used with the freezer package that has a heater built into the display.

MASTER DRIVE UNIT

- New stationary motor design eliminates rotating or flexing power cables from the traction motor to the traction controller.



This design offers several benefits:

1. Stationary traction motor - eliminates the problem with rotating or flexing power cables from the traction motor to the traction controller.
2. Integrated pinion with a splined motor to Master Drive Unit coupling -
 - a) the support bearings and pinion are integral to the MDU eliminating the potential of damaging the gears when assembling the motor to the MDU.
 - b) by integrating the pinion, the gear mesh can be better controlled resulting in a quieter MDU.
 - c) the splined coupling allows for quick removal and installation of the traction motor.
3. Integral steel bearings - this new design utilizes tapered roller bearings which are internal to the MDU therefore sealed from environmental conditions; these bearings are lubricated by the MDU gear oil, thus periodic lubrication is not required.
4. Drive axle string guard - a string guard has been added to reduce the potential for drive axle bearing seal damage due to shrink-wrap or banding tape, however, periodic removal of this debris is required as the string guard cannot prevent damage to the seal.

BRAKES

- Electromechanical parking brake is electrically released and spring applied.



W60 "Z"



B60 "Z"

Electromechanical parking brake is electrically released and spring applied.

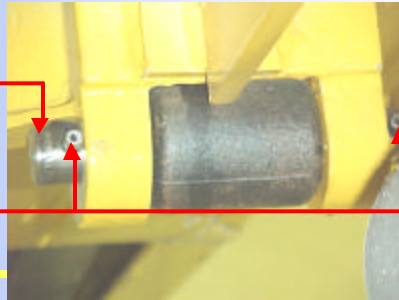
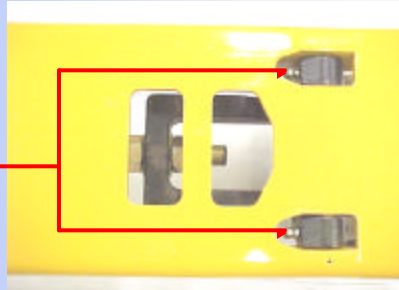
Regenerative braking is the primary method of stopping the truck, in lieu of applying the service brake. The traction motor will retard, or decelerate the truck when the throttle is returned to the neutral position. This is adjustable and can be turned off by a Hyster qualified technician.

The brake is released by lowering the control handle to the operating position and selecting a direction with the direction/throttle control.

The brake is applied if the handle is raised vertically or lowered horizontally, or when a traction control fault occurs.

LIFT LINKAGE SYSTEM

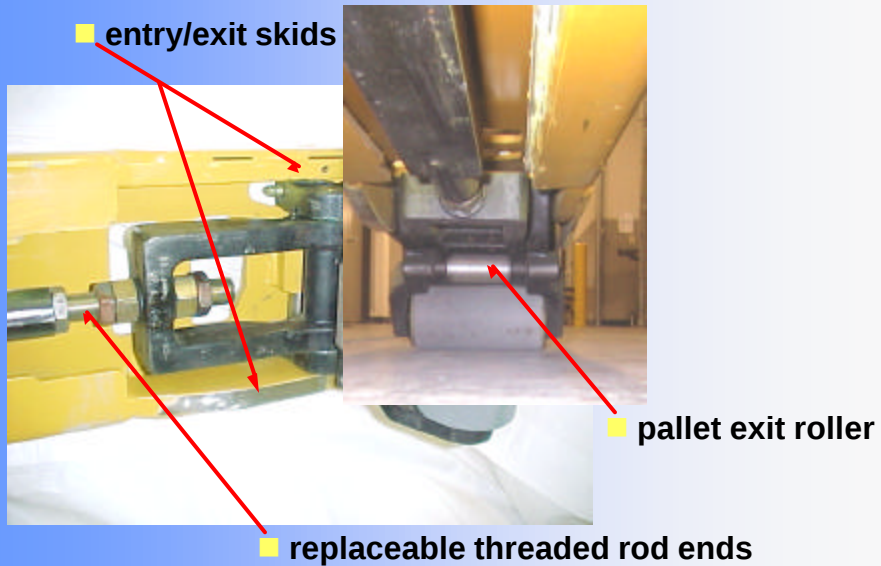
- Lift Linkage Pivots all have bushings with lubrication points which are accessible from the top.
- All lift linkage pins are turned, polished and ground cold rolled steel with electroless nickel plating which provides corrosion protection.
- All lift linkage pins are retained by zinc plated spiral pins.



Lift Linkage Pivots all have bushings with lubrication points.
All lift linkage pins are turned, polished and ground cold rolled steel with electro less nickel plating which provides corrosion protection.
(Electro less nickel plating prevents freezing of lift linkage pins in cold storage environments).

All lift linkage pins are retained by zinc plated spiral pins.

LIFT LINKAGE SYSTEM



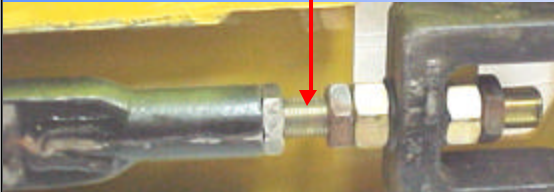
The lift linkage is adjustable from the top.

The threaded rod ends are replaceable. They are designed to be the “fuse” in the system in the event that damage occurs to the pull rod assemblies, reducing the replacement cost.

LIFT LINKAGE SYSTEM

■ Pull Rods:

- Two piece construction:
1-welded 1" x 2" flat bar and
adapter, replaceable threaded
rod ends.



- The pull rods are adjustable to
compensate for bushing and load
wheel wear.



Pull Rods:

- Two piece construction:
1-welded 1" x 2" flat bar and adapter, and replaceable
threaded rod ends.

The pull rods are adjustable to compensate for load wheel and bushing wear.

FRAME

- ✓ The welded frame design of plate and bar with steel castings used in high stress areas has been stress tested, resulting in superior rigidity and frame integrity.

W60/80 "Z"; B60/80 "Z" **DRIVE TIRES**

	<u>W60Z</u>	<u>W65Z</u>	<u>W80Z</u>	<u>B60Z</u>	<u>B80Z</u>
10" x 5" Rubber	STD	STD	OPT	OPT	NA
10" x 5" Poly	OPT	OPT	STD	STD	NA
12" x 4.5" Poly	NA	NA	NA	NA	STD
12" x 4.5" Siped Poly	NA	NA	NA	NA	OPT

STD (Standard) OPT (Optional) NA (Not Available)



Drive axle string guard is included to prevent damage to axle bearing seal!

Drive axle string guard - a string guard has been added to reduce the potential for drive axle bearing seal damage due to shrink-wrap or banding tape, however, periodic removal of this debris is required as the string guard cannot prevent damage to the seal.

The 12" x 4.5" Poly tire affords an efficient steer effort.

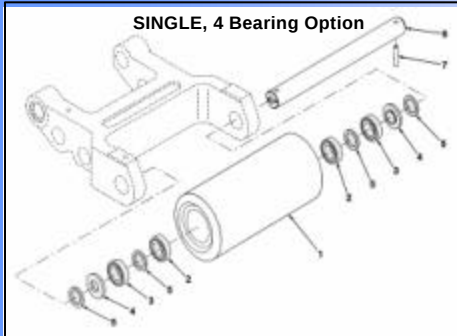
W60/65/80 "Z", B60/080 "Z" LOAD WHEELS

- 3.25" diameter x 6.5" wide
- Single poly load wheels
- "Knock-out" axle on load wheels
- Optional 3.25" x 3.25" dual load wheels are available

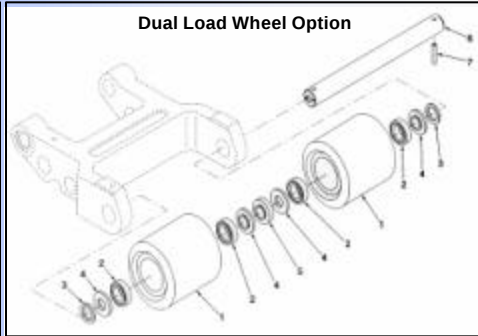


- 3.25" diameter x 6.5" wide:
 - W60/65 "Z" (12V) and B60 "Z" have 2 bearings/wheel
 - W80/B80 "Z" have 4 bearings/wheel
- Single poly load wheels
- "Knock-out" axle on load wheels
- Optional 3.25" x 3.25" dual load wheels are available

W60/65/80 “Z”, B60/80 “Z” LOAD WHEELS



ITEM	DESCRIPTION	NO. REQUIRED
1	Load Wheel - 4 Bearing	2
2	Bearing Ball	4
3	Bearing Ball	4
4	Bearing	4
5	Washer	8
6	Shaft	2
7	Pin	6



ITEM	DESCRIPTION	NO. REQUIRED
	Load Wheel - Dual	2
1	Load Wheel	4
2	Bearing Ball	8
3	Washer	4
4	Bearing	8
5	Spacer	2
6	Shaft	2
7	Pin	6

The 3.25” Dia. x 6.5” single with 4 bearings per wheel is standard on the W80 “Z” and B80 “Z”. (Optional on W60/65 “Z” and B60 “Z”).

Dual load wheels are optional on all.

PALLET ENTRY & EXIT

- Re-designed fork profile to ease pallet entry & exit.
- Fork nose top profile has been tapered to ease exiting.



Re-designed fork profile eases pallet entry & exit.

Fork nose top profile has been tapered to ease exiting.

Primarily for entering and exiting the last pallet in the trailer.

PALLET ENTRY & EXIT



- Pallet exit guide roller width increased and moved closer to load wheel. The pallet fork lifts up and over pallet bottom boards when exiting.

Pallet exit guide roller width increased and moved closer to load wheel. The pallet fork lifts up and over pallet bottom boards when exiting.

W60/65/80 “Z”, B60/80 “Z”

- **FEATURE**

Flush pallet stop

- **BENEFIT**

Provides proper load wheel placement to avoid breaking bottom boards on the pallet. Decreases the risk of product damage.



FEATURE

Flush pallet stop

BENEFIT

Provides proper load wheel placement to avoid breaking bottom boards on the pallet. Decreases the risk of product damage.

DRIVE UNIT COVER

- Soft flexible material that improves durability.
- Clip added to keep pick tickets organized. (W60/65/80 “Z”)
- “snap fit” fastening with new spring clips.



The W “Z” and B “Z” motorized hand trucks are designed for easy access to vital components. Inspection and replacement is simplified thereby increasing productivity.

The technique for fastening the cover to the truck has been re-designed. Instead of screws, spring clips are used to retain the cover so that the cover just snaps into place.

Cover material has been changed to an engineered thermoplastic elastomer to improve durability.

This material meets all UL flammability requirements.

For the Walkie models, a clip-board clip and area are provided for holding pick tickets, delivery reports, etc.

The operator’s manual and storage tray are attached to the drive unit for all models.



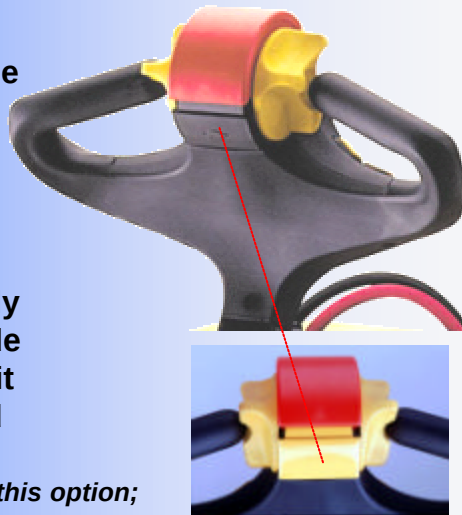
OTHER AVAILABLE OPTIONS

Other available options

CREEP SPEED CONTROL (OPTIONAL FOR W60/65/80)

- “Turtle Speed” allows the operator to override the brake and maneuver the truck in tight areas without lowering the control handle.
- *Yellow button centrally located on the backside of the control handle, it can be easily operated with either thumb.

**Button is yellow if truck has this option;
A black blank is in place if not.*



“Turtle Speed” allows the operator to override the brake and maneuver the truck in tight areas without lowering the control handle.

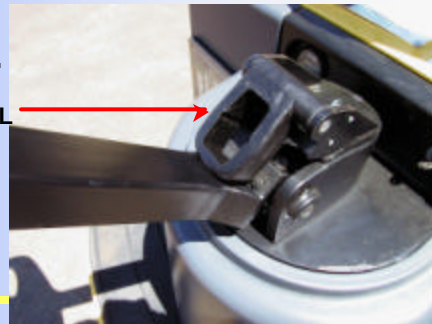
The yellow button is centrally located on the backside of the control handle, it can be easily operated with either thumb. Press the button and rotate the throttle to get turtle speed.

Angled handgrips follow the natural angle of the wrist to help alleviate fatigue over the working day.

The angle of the handle tube was added to provide a better operating position with the new handle and improve the ergonomics of the truck.

SIDE GLIDE/COAST CONTROL PACKAGE (OPTIONAL FOR B60/80 "Z" ONLY)

- Hyster Company's Side Glide feature combined with coast control increases picking productivity by making travel between pick locations easier.



Most B60/80's are used in operations where product is picked in case quantities. An operator travels to many different product locations picking the number of cases required and placing them on pallets carried by the B60/80 "Z".

This feature will increase their picking rate.

The Coast Control feature eliminates the need for the operator to pull the handle down each time to move the B60/80 "Z". This reduced time and effort which makes the operator more productive.

While the truck is coasting, the operator walks parallel to the pick location, retrieves the load and meets the truck to deposit his picked merchandise. This approach improves their productivity.

Side Glide was designed to enhance Coast Control. When distances between pick locations are short, walking is easier than entering and exiting the B60/80 "Z".

Side Glide makes walking along side the B60/80 "Z" in coast mode more convenient for the operator. The operator can maneuver the B60/80 "Z" in the forward direction (load trailing) at a preset rate of speed by simply pressing the inside button on the hand guard with his finger.

Operators commonly use Side Guide to get the B60/80 "Z" moving and then release it to coast to a stop in front of the next pick location.

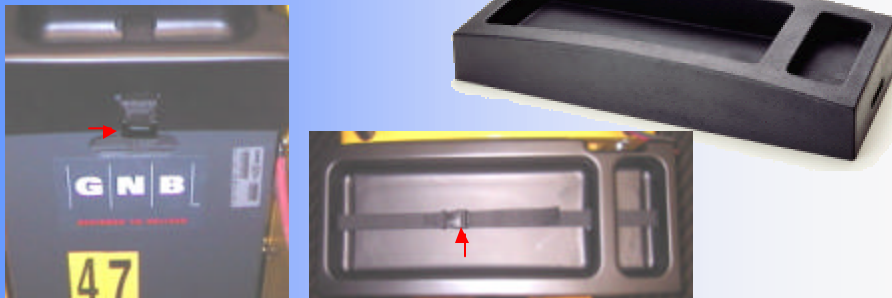
Complies with ANSI B56.1-2000

On trucks equipped with a coasting system, the speed cannot exceed normal walking speed which is approximately 3.5 MPH when the system is activated.

OPTIONAL CONVENIENCE TRAY

(Available on W60/65/80 "Z" and B60/80 "Z" trucks)

- Tray mounts to the optional load backrest for trucks ordered with a load backrest.
- For trucks ordered without a load backrest it mounts the top of the battery with a strap and hooks onto the battery lifting slots.



OPTIONAL BATTERY CONVENIENCE TRAY

(Available on W60/65/80 "Z" and B60/80 "Z" trucks)

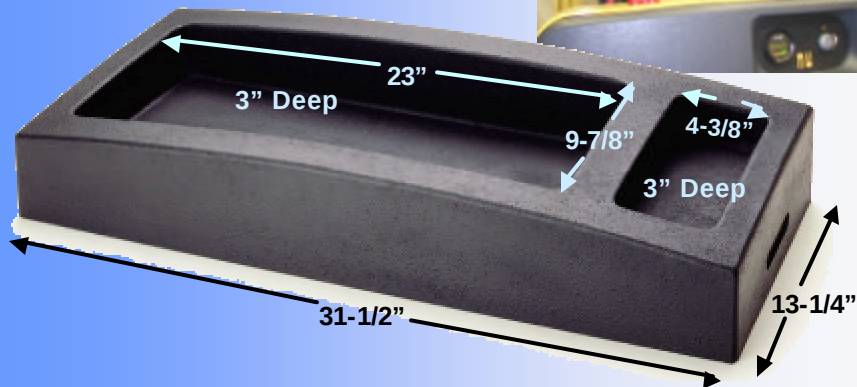
Tray mounts to the optional load backrest for trucks ordered with a load backrest.

For trucks ordered without a load backrest it mounts to the top of the battery with a strap and hooks onto the battery lifting slots.

Intended use is to hold pens, pencils, clipboard and a roll of plastic wrap. Not intended for heavy items.

OPTIONAL CONVENIENCE TRAY

- Tray mounts to the optional load backrest for trucks ordered with a load backrest.



Intended use for tray is to hold pens, pencils, clipboard and a roll of plastic wrap. Not intended for heavy items.

COLD STORAGE

W60/65/80 "Z" & B60/80 "Z"

- ☐ **Cooler / Intermittent Freezer** - Produce; refrigerated perishable foods; cold rooms and/or refrigerated storage areas; intermittent use in freezers of 0 degrees F (5 minutes or less in freezer). *Standard*
- ☐ **Cold Storage / Freezer** - Frozen meat and dairy products; frequently in and out of freezer, and/or temperatures to -20 degrees F. *Optional*
- ☐ **Severe Freezer Corrosion / Meat Processing** - Meat processing, pickling, tannery, exposure to acids, bleaches. *Optional only on W65 "Z", W80 "Z", & B80 "Z"*

Temperatures and situations warrant which package is needed.

The 3 cold storage options include the following:

Cooler/Intermittent Freezer: Standard equipment.

Cold Storage/Freezer:

- 1: Sealed circuit board in tiller handle.
- 2: All exposed electrical connections sprayed with protective coating.
- 3: Low temperature hydraulic oil.

Severe Freezer Corrosion/Meat Processing:

- 1: Sealed circuit board in tiller handle.
- 2: All exposed electrical connections sprayed with protective coating.
- 3: Low temperature hydraulic oil.
- 4: Low temperature gear oil.
- 5: Enclosed electrical system control panel.
- 6: Enclosed Traction motor.
- 7: Enclosed Park brake.

W60/65/80 "Z" OPTIONS

	Hyster W60 "Z"	Hyster W65 "Z" 12V	Hyster W80 "Z"
Environmental Packages:			
Cold Storage / Freezer Construction	O	O	O
Severe Freezer Corrosion / Food Processing Const.	NA	O	O
UL Type "EE" Construction	NA	O	O
Electrical:			
12V SEPEX Traction Control	NA	S	NA
24V SEPEX Traction Control	S	NA	S
Multi-function Display with Hour meter and BDI	O	O	O
"Turtle" tiller switch	O	O	O
Coast control with Pick Assist/Side Glide	NA	NA	NA
Red SB175 Battery Connector (24V)	S	NA	S
Yellow SB175 Battery Connector (12V)	NA	S	NA
Gray SB175 Battery Connector	O	O	O
Battery Compartment:			
9" x 32" x open	O	S	NA
13.4" x 32" x open	S	O	S
Pallet Forks:			
27" OAW x 36" L	O	O	O
27" OAW x 42" L	O	O	O
27" OAW x 60" L	O	O	O
28" OAW x 84" L Alligator Forks	NA	NA	NA
28" OAW x 93" L Alligator Forks	NA	NA	NA
28" OAW x 96" L Alligator Forks	NA	NA	NA

O = Optional S = Standard NA = Not Available

W60/65/80 "Z" OPTIONS CONT.

	Hyster W60 "Z"	Hyster W65 "Z" 12V	Hyster W80 "Z"
Load Wheels:			
3.25" Dia. x 6.5" Single with 2 Bearings / Wheel	S	S	O
3.25" Dia. x 6.5" Single with 4 Bearings / Wheel	O	O	S
3.25" Dia. x 3.25" Dual with 2 Bearings / Wheel	O	O	O
Drive Tires:			
10" x 5" Rubber	S	S	O
10" x 5" Poly	O	O	S
12" x 5" Sped Poly	NA	NA	NA
Casters:			
4" Dia. x 1.5" wide poly wheel	O	O	O
4" Dia. x 2.5" wide poly wheel	NA	NA	NA
Heavy-Duty with 4" Dia. x 2.5" wide poly wheel	NA	NA	NA
Load Backrest:			
48" high Pivoting	O	O	O
60" high Pivoting	O	O	O
Battery Rollers:			
	O	O	O
Convenience Tray:			
Battery mounted	O	O	O
Load backrest mounted	O	O	O
Misc:			
Parts Manual	O	O	O
Export Prep.	O	O	O

O = Optional S = Standard NA = Not Available

B60/80 "Z" OPTIONS

	Hyster B60 "Z"	Hyster B80 "Z"
Environmental Packages:		
Cold Storage / Freezer Construction	O	O
Corrosion / Food Processing Construction	NA	O
UL Type "EE" Construction	NA	O
Electrical:		
12V SEPEX Traction Control	NA	NA
24V SEPEX Traction Control	S	S
Multi-function Display with Hour meter and BDI	O	O
"Turtle" tiller switch	NA	NA
Coast control with Pick Assist/Side Glide	O	O
Red SB175 Battery Connector (24V)	S	S
Yellow SB175 Battery Connector (12V)	NA	NA
Gray SB175 Battery Connector	S	S
Battery Compartment:		
9" x 32" x open	S	NA
13.4" x 32" x open	O	S
Pallet Forks:		
27" OAW x 36" L	O	O
27" OAW x 42" L	O	O
27" OAW x 60" L	O	O
28" OAW x 84" L Double Pallet Forks	NA	O
28" OAW x 93" L Double Pallet Forks	NA	O
28" OAW x 96" L Double Pallet Forks	NA	O

O = Optional S = Standard NA = Not Available

B60/80 "Z" OPTIONS CONT.

	Hyster B60 "Z"	Hyster B80 "Z"
Load Wheels:		
3.25" Dia. x 6.5" Single with 2 Bearings / Wheel	S	O
3.25" Dia. x 6.5" Single with 4 Bearings / Wheel	O	S
3.25" Dia. x 3.25" Dual with 2 Bearings / Wheel	O	O
Drive Tires:		
10" x 5" Rubber	O	NA
10" x 5" poly	S	NA
12" x 5" Poly	NA	S
12" x 5" Siped Poly	NA	O
Casters:		
4" Dia. x 1.5" wide poly wheel	NA	NA
4" Dia. x 2.5" wide poly wheel	S	S
Heavy-Duty with 4" Dia. x 2.5" wide poly wheel	O	O
Load Backrest:		
48" high Pivoting	O	O
60" high Pivoting	O	O
Battery Rollers:	O	O
Convenience Tray:		
Battery mounted	O	O
Load backrest mounted	O	O
Misc:		
Parts Manual	O	O

O = Optional S = Standard NA = Not Available

COMPETITION W60 "Z"

Walkie	Walkie								
Company		Hyster	Hyster	Crown		Raymond	Nissan	Prime-Mover	Clark
Models		W60	W60 "Z"	PW3510-60	PW3520-60	111 TM	WPN-60	RMX65	PWD30
Ergonomics	Tiller Handle Mounting	Bottom	Bottom	Top	Top	Top	Bottom	Mid	Bottom
	Tiller Grip Orientation	Horizontal	20 deg.	Horizontal	Horizontal	10 deg.	Horizontal	8 deg.	Horizontal
	Tiller Direction/Speed Contr	Flip Lever	Butterfly	Twist Grip	Rotary Grip	B'fly&RotGr	Butterfly	Butterfly	B'fly&RotGr
Manueverability	Tiller Pull-down Effort								
	at Up Position	12 lbs	4.5 lbs.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	at Operating Position	9 lbs	4.5 lbs.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	Frame Height (Visibility)	34.5	34.7	Not Avail.	Not Avail.	31.25	33.6	32.3	32.39
	Turning Radius - forks lower	72.4	75.2	71.06	76.29	69.6	71.5	75.6	74.3
	Turning Radius - forks raise	67.3	70.4	66.56	71.79	65	66.25	71.4	70.7
	Head Length	31.7	34.4	30.44	35.69	29.15	34.1	35.4	33.88
	Chassis Width	32.6	32.6	34	34	32.5	32.5	34.1	32
	Chassis Length	79.4	82.2	78.19	83.44	77.1	82.1	83	81.51
	Wheelbase - forks raised	59.4	61.0	56.38	61.62	56.4	62.5	61.6	63.09
Performance	Wheelbase - forks lowered	64.5	65.7	60.88	66.12	61	67	65.8	67.3
	Advertised capacity	6000	6000	6000	6000	6000	6000	6500	6000
	Truck Weight (less battery)	1032	1022	1342	1342	1058	1020	1350	1004
	Voltage	24	24	12	24	24	24	24	24
	Min. Battery/Max. Battery	542/940	660/845	400/540	815/1400	Not Avail.	800/1550	Min: 400	821/1461
Note:	Max Amp Hours	840	750	660	600	Not Avail.	750	660	Not Avail.
	Travel Speed - empty	3.7	3.7	3.3	3.4	3.9	3.2	3.7	4
	Travel Speed - 6000# Load	2.3	2.6	2.4	2.8	2.6	1.9	2.6	2.8
All lengths are in inches.									
All weights are in pounds.									
48" fork lengths were used.									

Frame height visibility is measured from the floor to the top of the cowl.

The lower the cowl height, the easier it is to see the fork tips while operating the truck.

COMPETITION W80 "Z"

Company		Hyster	Hyster	Crown	Prime-Mover	Linde	Clark
Models		W80	W80 "Z"	PW3520-80	RMX80	EW80	PWD36
Ergonomics	Tiller Handle Mounting	Bottom	Bottom	Top	Mid	Top	Bottom
	Tiller Grip Orientation	Horizontal	20 deg.	Horizontal	8 deg.	Horizontal	Horizontal
	Tiller Direction/Speed Control	Flip Lever	Butterfly	Rotary Grip	Butterfly	Butterfly	B'fly&RotGrp
	Tiller Pull-down Effort						
	at Up Position	12 lbs	4.5 lbs.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	at Operating Position	9 lbs	4.5 lbs.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	Frame Height (Visibility)	34.5	34.7	Not Avail.	32.3	Not Avail.	32.39
	Turning Radius - forks lowered	72.4	75.2	76.29	75.6	75.6	75
	Turning Radius - forks raised	67.3	70.4	71.79	71.4	71.7	71
	Head Length	31.7	34.4	35.69	34.5	35.9	34.13
Manueverability	Chassis Width	32.6	32.6	34	34.1	31.5	32
	Chassis Length	79.4	82.2	83.44	83	93.8	81.76
	Wheelbase - forks raised	59.4	61.0	61.62	61.6	62.8	63.39
	Wheelbase - forks lowered	64.5	65.7	66.12	65.8	66.8	67.6
	Advertised capacity	8000	8000	8000	8000	8000	8000
	Truck Weight (less battery)	1032	930	1377	1350	1040	1154
Performance	Voltage	24	24	24	24	24	24
	Min. Battery/Max. Battery	542/940	500/1150	815/1400	Min: 400	Min: 900	821/1461
	Max Amp Hours	840	600	600	660	510	Not Avail.
	Travel Speed - empty	3.7	3.7	3.4	3.7	3.8	4
	Travel Speed - 8000# Load	2.2	2.5	2.6	2.4	2.6	2.5

Note: Raymond has no 8,000 lb. Walkie

COMPETITION B60 "Z"

Walkie Rider	Walkie Rider								
Company		Hyster	Hyster	Crown		Raymond	Nissan	Prime-Mover	Clark
Models		B60	B60 "Z"	PE3520-60	PE3540-60	112 TM	WRPN-60	HMX65	HWD30
	Tiller Handle Mounting	Top	Top	Top	Top	Top	Bottom	Mid	Top
Ergonomics	Tiller Grip Orientation	Horizontal	10 deg.	Horizontal	Horizontal	10 deg.	Horizontal	8 deg.	Horizontal
	Tiller Direction/Speed Contr	Flip Lever	Butterfly	Rotary Grip	Rotary Grip	3'fly&RotGr	Butterfly	Butterfly	3'fly&RotGr
	Tiller Pull-down Effort								
	at Up Position	4.5 lbs.	4.5 lbs.	Not Avail.	Not Avail.		Not Avail.	Not Avail.	Not Avail.
	at Operating Position	4.5 lbs.	4.5 lbs.	Not Avail.	Not Avail.		Not Avail.	Not Avail.	Not Avail.
	Frame Height (Visibility)	34.5	34.79	Not Avail.	Not Avail.	31.25	33.6	32.3	32.39
	Turning Radius - forks lower	79.6	80.3	83.88	83.88	81.13	82.5	81.8	78.9
	Turning Radius - forks raise	75.2	75.6	79.38	79.38	76.63	78	77.7	74.9
	Head Length	39.1	39.6	43.2	43.2	40.95	40.7	40.5	38.5
Manueverability	Chassis Width	36	36.9	36	36	36	32.5	37.4	36
	Chassis Length	86.8	87.3	90.94	90.94	88.9	88.7	88.1	86.13
	Wheelbase - forks raised	59.4	61.0	61.62	61.62	60.3	62.5	61.6	63.09
	Wheelbase - forks lowered	64.5	65.7	66.12	66.12	64.8	66.9	65.8	67.3
	Advertised capacity	6000	6000	6000	6000	6000	6000	6500	6000
	Truck Weight (less battery)	1150	1348	1528	1528	1234	1270	1450	1109
Performance	Voltage	24	24	24	24	24	24	24	24
	Min. Battery/Max. Battery	613/940	660/990	975/1500	975/1500	Not Avail.	800/1550	Min: 400	821/1461
	Max Amp Hours	840	750	930	930	Not Avail.	750	660	Not Avail.
	Travel Speed - empty	8.6	8.2	6.1	7.5	Not Avail.	6.5	8	7.7
	Travel Speed - 6000# Load	4.8	5.6	4.5	5.7	Not Avail.	4.8	6	4.9
Note:									
	All lengths are in inches.								
	All weights are in pounds.								
	48" fork lengths were used.								

Frame height visibility is measured from the floor to the top of the cowl.

The lower the cowl height, the easier it is to see the fork tips while operating the truck.

*With the Walkie/Rider, it is only an issue when the truck is operated as a Walkie.

COMPETITION B80 "Z"

Company		Hyster	Hyster	Crown		Raymond	Prime-Mover	Linde	Clark
Models		B80Z	B80	PE3520-80	PE3540-80	112 TM**	HMX80	EW80	HWD36
	Tiller Handle Mounting	Top	Top	Top	Top	Top	Mid	Top	Top
Ergonomics	Tiller Grip Orientation	10 deg.	Horizontal	Horizontal	Horizontal	10 deg.	8 deg.	Horizontal	Horizontal
	Tiller Direction/Speed Control	Butterfly	Rotary Grip	Rotary Grip	Rotary Grip	B'fly&RotGrp	Butterfly	Butterfly	B'fly&RotGrp
	Tiller Pull-down Effort								
	at Up Position	4.5 lbs.		Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	at Operating Position	4.5 lbs.		Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.
	Frame Height (Visibility)	34.79	34.5	Not Avail.	Not Avail.	40.75	32.3	Not Avail.	32.39
	Turning Radius - forks lowered	77.7	79.6	83.88	83.88	104	85.2	82.8	79.2
	Turning Radius - forks raised	82.4	75.2	79.38	79.38	99.5	81	78.9	75.2
	Head Length	41.6	39.1	43.2	43.2	42.95	40.5	43.1	38.5
Manueverability	Chassis Width	36.9	36	36	36	36	37.4	36	36
	Chassis Length	89.3	86.8	90.94	90.94	139	88.1	91.1	86.13
	Platform step height	9.5	9.4	9.88	9.88	9.5	9.1	8.09	8.5
	Wheelbase - forks raised	63.0	59.4	61.62	61.62	87.5	61.6	62.8	63.39
	Wheelbase - forks lowered	67.7	64.5	66.12	66.12	92	65.8	66.7	67.6
	Advertised capacity	8000	8000	8000	8000	8000	8000	8000	8000
	Truck Weight (less battery)	T.B.D.	1150	1563	1563	1450	1450	1190	1269
Performance	Voltage	24	24	24	24	24	24	24	24
	Min. Battery/Max. Battery	500/1450	613/940	975/1500	975/1500	1400/1900	Min: 400	Min: 900	821/1461
	Max Amp Hours	750	840	930	930	750	660	510 Recomd	Not Avail.
	Travel Speed - empty	8.5	8.6	6.1	7.5	8.8	8	7.5	7.7
	Travel Speed - 8000# Load	6	4.4	4.3	5.3	6.2	5	5.5	4.5

SUMMARY

Hyster Company's W60/65/80 "Z" Walkie and B60/80 "Z" Walkie Rider trucks provide "best in class" for ergonomics and reliability.

- 
- | | |
|--|----------------------------------|
| ✓ <i>Product Focus</i> | ✓ <i>Master Drive Unit</i> |
| ✓ <i>Common Applications</i> | ✓ <i>Brakes</i> |
| ✓ <i>Differences / Truck Selection</i> | ✓ <i>Lift Linkage System</i> |
| ✓ <i>Handle and Controls</i> | ✓ <i>Drive Tires</i> |
| ✓ <i>Forks</i> | ✓ <i>Load Wheels</i> |
| ✓ <i>Batteries</i> | ✓ <i>Pallet Entry & Exit</i> |
| ✓ <i>Electrical System</i> | ✓ <i>Drive Unit Cover</i> |
| ✓ <i>Casters</i> | ✓ <i>Options</i> |
| ✓ <i>Common Features</i> | ✓ <i>Cold Storage</i> |
| ✓ <i>Separately Exited Motors</i> | ✓ <i>Competition</i> |

Hyster Company's Walkie and Walkie Rider trucks provide "best in class" for ergonomics and reliability.