

State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

# Request for Quotation

AGR1223

1

ADDRESS CORRESPONDENCE TO ATTENTION OF

FRANK WHITTAKER 304-558-2316

DEPARTMENT OF AGRICULTURE

FOOD DISTRIBUTION PROGRAM 1 CEDAR LAKES DRIVE

RIPLEY, WV 25271

Ö

304-558-2221

\*308134424 01 304-776-6900 M H EQUIPMENT CO 126 LAKEVIEW DR CHARLESTON WV 25313

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State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

# Request for Quotation

SHIP

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RFQ NUMBER AGR1223

PAGE 2

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CHARLESTON WV 25313

DEPARTMENT OF AGRICULTURE

FOOD DISTRIBUTION PROGRAM 1 CEDAR LAKES DRIVE RIPLEY, WV

25271

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#### 24 VOLT NARROW-AISLE REACH TRUCK

#### GENERAL REQUIRMENTS AND/OR EQUAL;

Electric power steering Drive Wheels - 12.0"x5.5" Red Poly Grooved or Equal Load Wheels - 5.0"x3.9" Poly Articulating Tandem or Equal Overhead Guard 36" To 48" High Load Backrest Extension **Electronic Horn Key Switch** Static Discharge Strap Multi-Mode Hour Meter **Sealed Battery Rollers Battery Discharge Indicator with Lift Interrupt** Operator's Display with Alpha Numeric Messaging **Emergency Power Quick Disconnect Programmable Traction Speeds and Acceleration Control Handle with Simultaneous Hydraulic Functions** Integral Side shifter Motion Alarm Amber Strobe Light LED Mast Mounted Headlights Operator's Compartment WIII Be Designed To Allow For Side stance Operation or Equal Freezer Pack Fork Laser System Battery- Model 12-E140-19 Load Hog, 1260 Amp IIr or Equal

Bid must include delivery within ninety days to; Food Distribution Program Warehouse 4496 Cedar Lakes Road Ripley, WV 25271

Charger- Model EH3-12-1200Y Three Phase, 480 Volt or Equal

### **COST SHEET**

EQUIPMENT MAKE	MODEL	COST
HYSTER	N402R	\$ 30,921.19
Equipment must	be delivered within ninety day	s of bid being awarded

## ALL BIDS MUST INCLUDE ALL FEES FOR DELIVERY TO:

West Virginia Department of Agriculture Food Distribution Program 4496 Cedar Lakes Drive Ripley, WV 25271

## State of West Virginia

## VENDOR PREFERENCE CERTIFICATE

Certification and application\* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1.	Application is made for 2.5% resident vendor preference for the reason checked:  Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preced-
	ing the date of this certification; or, Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately
	Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one number state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2.	Application is made for 2.5% resident vendor preference for the reason checked: Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3.	Application is made for 2.5% resident vendor preference for the reason checked:  Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4.	Application is made for 5% resident vendor preference for the reason checked:  Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5.	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:  Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or.
6.	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:  Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
requir agains	r understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the ements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty st such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency to the contraction of purchase order.
By suithouthe re	bmission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and rizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid quired business taxes, provided that such information does not contain the amounts of taxes paid nor any other information and by the Tax Commissioner to be confidential.
Unde	r penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true courate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate ges during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.
Bidde	er:Signed:
Date:	Title:
*Check	k any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. AGR 1223

#### STATE OF WEST VIRGINIA Purchasing Division

### **PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

#### **DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**EXCEPTION:** The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

# WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: MH EQUIPSENT	
Authorized Signature:	Date: 4-4-12
State of	
County of <u>Unumal</u> , to-wit:	Å
Taken, subscribed, and sworn to before me this <u>U</u> day	of 100 , 20/d.
My Commission expires 1 – 2 2	
AFFIX SEAL HERE	NOTARY PUBLIC Me Marc



Purchasing Affidavit (Revised 12/15/09)



VEZDOR

State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

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### **QUESTIONS & ANSWERS FOR AGR 1223**

1. Question: Mast specifications

Answer: Triplex Mast no taller than 8.5 feet in the lowered position, must be able to reach no less than 227 inches high, single reach 24", 4000# capacity

Question: Fork specification
 Answer: 1-1/2" x4" x42" Hook Type – Standard Taper

3. Question: Width or height limitations

Answer: 101" Tall, 55"Wide this unit will be used inside a racking system these are maximum dimensions

4. Question: Does this unit run in a cold storage unit, and if so what is temperature and run time

Answer: This unit will be used in a freezer at -10 degrees, eight hours a day



April 4, 2012

WV dept. Of Agriculture RFQ# AGR1223

Due to a slight variance in specs, we have quoted 2 units.

The unit that closely matches specifications is the Hyster N40ZRS. The only variance concerns the Freezer Package, our unit only allows for operation to 0 degrees, not the specified -10 degrees.

Hyster N40ZRS	\$23,892.19
Battery	\$4,484.00
Charger	\$2,545.00
Total	\$30,921.19

To meet this specification we have also provided a quote on a Hyster N40ZR. This is a 36V unit that can operate at -40 degrees.

Hyster N40ZR	\$26,926.19
Battery	
Charger	
Total	\$33.740.10

MH Equipment is a privately held, strong dealership with 550 associates, 275 technicians and 22 locations covering territories in 9 states (Illinois, Indiana, Missouri, Iowa, Kentucky, Ohio, Pennsylvania, Missouri, and West Virginia. We have large inventories of new and used lift trucks and associated equipment, repair parts and service, and 2,000 rental lift trucks ready to meet your needs. Specifically, we have 5 technicians in the Huntington/Ironton area to respond to your service needs.

Please feel free to call me with any questions.

Tony Jones Material Handling Specialist 304-741-3576



## SALES • SERVICE • PARTS • RENTAL • FLEET • TRAINING



**Model: N40ZRS** 

**Proposal To:** 

Mr. Frank Whittaker

Quote No: 75-27438775 Date: 4/4/12 page 1







106 Circle Freeway Drive • Cincinnati, OH 45246 • 513-681-2200 • www.mhequipment.com

#### **Investment Proposal**

On behalf of MH Equipment Company (MH), thank you for the opportunity to provide the following proposal for equipment to address your material handling requirements. We look forward to reviewing specific product features and benefits as they relate to your application, as well as discussing the overall value in productivity and service that we can bring to you as your material handling partners.

#### Customer:

Dept. of Argriculture Food Dist. 1 Cedar Lakes Dr. Ripley, WV -25271

#### Quote To:

Mr. Frank Whittaker Quote No: 75-27438775 Series: A265

Model: N40ZRS

Quantity: 1

Date: 04 Apr 2012 Expires: 22 Apr 2012

#### SHIP TO:

Dept. of Argriculture Food

Dist.

1 Cedar Lakes Dr. Ripley, WV -25271



#### Highlights

Hyster N40ZRS 4000 Pound Capacity Narrow Aisle Lift Truck. Standard Features: AC Traction, Hydraulic and Steering Motors, Fully Integrated Canbus Controls, Operator Forward Stance, Low Step Height, Transistor Controller with Regenerative Braking, Fully Proportional Lift / Lower Control, Programmable Traction Speeds and Acceleration, Electric Power Steering, Automatic Field Control and Auto Deceleration, Rubber Drive Tire 12" X 5.5", Polyurethane Load Wheels-High Load Compound, Dual Articulating Polyurethane Caster Wheels, Emergency Power Disconnect, Battery Discharge Indicator with Lift Interrupt, Key Start, 36" High Load Backrest, Sealed Battery Rollers, Tilting Carriage (3 Degrees Forward, 4 Degrees Back), Padded Operator Compartment, Rear Post Operator Protection, Operator's Overhead Guard, Low Profile Anti-Fatigue Floormat, Operator's Display with Alpha Numeric Messaging, Multi-Mode Hour Meter, Control Handle with Simultaneous Hydraulic Functions, Electronic Horn, Static Discharge Strap, Operator's Manual, UL Classification E.

MAST: 101"/227"/62" (2565/5766MM) 3 Stage Full Free Lift (FFL)

CARRIAGE: Single Reach Assembly with Integral Sideshifter 24" Extend with 33.5" Wide Class II Hook Type Carriage

LOAD BACKREST EXTENSION: 36" High for 33.5" Wide Carriage

FORKS: 42" Long Class II Hook Type (1.8" x 3.9") Standard Taper 1067mm Long, (45mm x 100mm)

Quote No: 75-27438775 Date: 4/4/12 page 2

#### Highlights

BATTERY COMPARTMENT: 14.5" Medium (39.0" x 14.5" x 31.5") Battery Weight Range: 1,600 - 2,100 lbs.

BATTERY SPACER GROUP: "X" Dimension 38.0" to 38.8" Battery

BASEARM STYLE: Blunt Toe Cap

BASEARM OPEN END CLEARANCE: 34" OEC

DRIVE TIRE: 12" X 5.5" Rubber

LOAD WHEELS: 5" X 3.9" Articulating Tandem High Load Compound with Scaled Bearings

**OPERATOR CONTROLS: Sidestance** 

OPERATOR CONTROLS: Right to Left Handle Control. Side Stance Multi-Function Control Handle Orientation.

WHEEL BOX TYPE: Weld-On Box - Use with 5" X 3.9" Load Wheels

STEERING CONTROL OPTION: Automotive Steer Orientation

MONITORING SYSTEM: Standard Display Includes Performance Mode Select, Two Line LCD Text and Fault Code Readout.

VOLTAGE: 24 Volt - Includes AMP 350 Red Battery Connector, Cable Positon "B" - 16" Lead Length

UL APPROVAL: Type "E" Construction with UL Label.

APPLICATION / ENVIRONMENTAL CONSTRUCTION: Cooler / Freezer, Operating Temperature Range: 0 F to +120 F

LIGHTS: Dual Headlights 12 Volt - Mast Mounted.

VISIBLE ALARM: Amber LED Strobe - Forward and Reverse Operation

AUDIBLE ALARM: Motion Alarm - Self Adjusting, Forward and Reverse Activated 82-102dB(A)

LANGUAGE: English Operator Manual Required for units shipped to US destinations.

The Laser Line sending unit will be mounted on the carriage and project a horizontal line at the fork tips at the pallet entry level. Note: Laser Line sending unit will be removed from the truck and packaged separately for shipping. The dealer will be required to reinstall this item during the normal truck installation. \*\* The Laser turns on when the outboard cylinders engage. \*\* This cannot be combined with travel speed cutout when the forks are extended. \*\*

#### **Investment Proposal Price** Information

Price Each

Extended

**Total Selling Price** 

\$23,892.19

\$23,892.19

Terms: Net on Invoice/Lease - Order

Subject to Credit Approval

F.O.B.: Freight included in sale price. Battery and Charger listed below in options.

#### Warranty

WARRANTY:12 Months/2000 Hours Manufacturer's Full Truck Warranty 24 Months/4,000 Hours Manufacturer's Powertrain Warranty and 5 Year/10000 Hours Frame Warranty

OPTIONS AVAILAB	LE		
Initial to Add	START: KEYLESS START	Ī	74.70
Initial to Add	MONITORING SYSTEM: PREMIUM DISPLAY	1	240.70
Initial to Add	CONTROLS: SIDESTANCE W/COMFORT PACKAGE	1	307.10
Initial to Add	FORK ACCESS: FORK HEIGHT DISPLAY	1	423.30
Initial to Add	MAST LIFT LIMIT W/PUSH BUTTON OVERRIDE	1	439.90
Initial to Add	LIGHTS: OPERATOR DESKTOP LIGHT	1	207.50
Initial to Add	LIGHTS: REAR WORK LIGHT 12 VOLT	1	190.90
Initial to Add	ACCESS: OPERATOR OVERHEAD FAN	1	199.20
Initial to Add	ACCESS: LOAD WEIGHT INDICATOR	1	240.70
Initial to Add	ACCESS: 12 VOLT DC OUTPUT	1	199.20
Initial to Add	ACCESS: IMPACT SENSOR	1	448.20
Initial to Add	SECOND REAR POST ON OPERATOR SIDE	1	439.90
Initial to Add	OPERATOR SHIELD: LEXAN SHIELD	1	332.00
Initial to Add	OPERATOR COMPARTMENT REAR DOOR	1	1,352.90
Initial to Add	WIRE MESH MOUNTED ON TOP OHG	1	365.20
Initial to Add	PARTS MANUAL - CD	1	105.00
Initial to Add	Loadhog 12-140-17 Battery	ì	4,484.00
Initial to Add	Enforcer Eh3-12 Charger	1	2,545.00

Pricing in this proposal does not include Sales Tax and, as applicable, Sales Tax will be calculated and added in accordance with State Law. Tax exempt transactions require the appropriate Tax Exempt certificate to be on file with MH Equipment. Acceptable methods of payment are check or wire transfer.

Thank you again for the opportunity to address your material handling requirements. We are committed to delivering a comprehensive, competitive material handling solution for your operation's needs, and will work diligently with you to address your costs through increased productivity and maximized efficiencies. Please advise how we can be of further assistance.

Proposal	D '	T	T 62502 S2023
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Accepted By: Frank Whittaker

\_\_\_\_\_ Date \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_ Date \_\_\_\_\_\_



### SALES • SERVICE • PARTS • RENTAL • FLEET • TRAINING



Model: N40ZR

Proposal To:

Mr. Frank Whittaker

Quote No: 75-27438075 Date: 4/4/12 page 1







106 Circle Freeway Drive • Cincinnati, OH 45246 • 513-681-2200 • www.mheguipment.com

#### **Investment Proposal**

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#### Customer:

Dept. of Argriculture Food Dist. 1 Cedar Lakes Dr. Ripley, WV -25271

#### Quote To:

Mr. Frank Whittaker Quote No: 75-27438075 Series: D470 Model: N40ZR

Model: Quantity:

Date: 04 Apr 2012 Expires: 22 Apr 2012

#### SHIP TO:

Dept. of Argriculture Food

Dist.

1 Cedar Lakes Dr. Ripley, WV -25271



#### Highlights

Hyster N40ZR 4000 Pound Capacity Narrow Aisle Lift Truck. Standard Features Include: AC Traction, Hydraulic and Steering Motors, Fully Integrated Canbus Controls, Operator Forward Stance, Low Step Height, Transistor Controller with Regenerative Braking, Fully Proportional Lift / Lower Control, Powered Lowering (when forks are loaded), Regenerative Lowering (When forks are loaded). Programmable Traction Speeds and Acceleration, Electric Power Steering, Polyurethane Drive Tire-12" x 5.5", Poly Load Wheels-High Load Compound, Dual Articulating Polyurethane Caster Wheels, Emergency Power Disconnect, Battery Discharge Indicator with Lift Interrupt, Key Start, 36" High LBR, Scaled Battery Rollers, Tilting Carriage (3 Degrees Forward, 4 Degrees Back), Padded Operator Compartment, Rear Post Operator Protection, Operator's Overhead Guard, Low Profile Anti-Fatigue Floormat, Operator's Display with Alpha Numeric Messaging, Multi-Mode Hour Meter, Control Handle with Simultaneous Hydraulic Functions, Electronic Horn, Static Discharge Strap, Operator's Manual, UL Classification E.

MAST: 101"/227"/62" (2565/5766MM) 3 Stage Full Free Lift (FFL)

CARRIAGE: Single Reach Assembly with Integral Sideshifter 24" Extend with 33.5" Wide Class II Hook Type Carriage

LOAD BACKREST EXTENSION: 36" High for 33.5" Wide Carriage

FORKS: 42" Long Class II Hook Type (1.8" x 3.9") Standard Taper 1067mm Long, (45mm x 100mm)

Quote No: 75-27438075 Date: 4/4/12 page 2

#### Highlights

BATTERY COMPARTMENT: 14.5" Small (39.0" x 14.5" x 31.5") Battery Weight Range: 1,600 - 2,100 lbs.

BATTERY SPACER GROUP: "X" Dimension 38.0" to 38.8" Battery Spacer parts will not be installed at the factory, instead they will be boxed and shipped with the truck.

BASEARM STYLE: Blunt Toe Cap

BASEARM OPEN END CLEARANCE: 34" OEC

DRIVE TIRE: 12" X 5.5" Red Polyurethane Grooved

LOAD WHEELS: 5" X 3.9" Articulating Tandem High Load Compound with Sealed Bearings

**OPERATOR CONTROLS: Sidestance** 

OPERATOR CONTROLS: Right to Left Handle Control. Side Stance Multi-Function Control Handle Orientation.

WHEEL BOX TYPE: Weld-On Box - Use with 5" X 3.9" Load Wheels

STEERING CONTROL OPTION: Automotive Steer Orientation

MONITORING SYSTEM: Premium Display Includes Performance Mode Select, Operator's Checklist Maintenance Reminders, Clock, and Operator Password.

VOLTAGE: 36 Volt - Includes AMP 350 Gray Battery Connector, Cable Positon "B" - 16" Lead Length

UL APPROVAL: Type "E" Construction with UL Label.

APPLICATION / ENVIRONMENTAL CONSTRUCTION: SUBZERO Freezer. Operating Temperatures -40 F to 120 F.

LIGHTS: Dual Headlights 12 Volt - Mast Mounted.

VISIBLE ALARM: Amber LED Strobe-Continuous Operation with Key-On

AUDIBLE ALARM: Motion Alarm - Self - Adjusting Forward and Reverse Activated 82-102dB(A)

LANGUAGE: English Operator Manual Required for units shipped to US destinations.

Laser Line sending unit

### Investment Proposal Price

Information

**Total Selling Price** 

Price Each \$26,926.19 Extended \$26,926.19

Terms: Net on Invoice/Lease - Order

Subject to Credit Approval

F.O.B.: Freight included in sale price. Battery and Charger priced below in

options.

#### Warranty

WARRANTY:12 Months/2000 Hours Manufacturer's Full Truck Warranty 24 Months/4,000 Hours Manufacturer's Powertrain Warranty and 5 Year/10000 Hours Frame Warranty

OPTIONS AVAILABLE		<b>美国新国际</b>
Initial to Add Loadhog 18-E140-11 Battery	1	4,448.00
Initial to Add Enforcer HF3 EH3-18 Charger	1	2,366.00

Pricing in this proposal does not include Sales Tax and, as applicable, Sales Tax will be calculated and added in accordance with State Law. Tax exempt transactions require the appropriate Tax Exempt certificate to be on file with MH Equipment. Acceptable methods of payment are check or wire transfer.

Thank you again for the opportunity to address your material handling requirements. We are committed to delivering a comprehensive, competitive material handling solution for your operation's needs, and will work diligently with you to address your costs through increased productivity and maximized efficiencies. Please advise how we can be of further assistance.

Proposal By : Tony Jones	Accepted By: Frank Whittaker	
2/3/		
Account Manager	Date 4-3-12 Customer Representative	Date



Marrow-Alsie, Single & Double Heach, AC Fower ed Elit 11 do

# N35-40ZRS/ N30ZDRS



#### PRODUCTIVITY:

- · AC hoist system maximizes lift at lower speeds
- AC traction system maximizes performance and provides seamless direction transitions
- Electric power steering, standard on all models, offers on-demand steering for maximum efficiency and minimal battery drain
- Automatic drive tire centering at start-up saves time for the operator
- Automatic brake operation applies the brake when the truck is stationary, eliminating the need for the operator to lift a leg to apply the brake
- · Optional electrically steered caster

#### **DEPENDABILITY:**

- CANbus communication system reduces wiring and electrical connections and provides real time diagnostics
- Sealed electrical connectors keep out debris and help reduce the possibility of loose connections
- O-ring face seal fittings help maximize uptime and reduce leaks
- Completely brushless AC traction and hoist motors improve reliability
- Thermal management system for all motors and controllers add protection from overheating
- Dedicated auxiliary pump and motor helps reduce demand on main hydraulic motor

#### **ERGONOMICS:**

- · Drive-Rite Design Intent
- Configuration flexibility with fore/aft and side stances available
- Large operator compartment and optimal operator position allow easy entry and exit without awkward twisting
- Low 9.6" step height helps reduce operator fatigue
- Brake pedal location and design is optimized for operator comfort
- Optional suspended floorplate cushions the operator and helps reduce stress on the operator's legs
- · Adjustable steer tiller position
- · Adjustable back with armrest
- On-demand electric power steering helps reduce operator effort

#### COST OF OPERATION:

- AC traction and hoist motors help reduce maintenance through a simpler design and the elimination of brush replacement
- Sealed load wheels bearings reduce greasing requirements
- Brushless steering and auxiliary motors reduce maintenance time and cost
- Electric brake provides parking and emergency braking capability with no need to service
- Dual articulating caster wheels promote even tire wear and minimize tire scrub

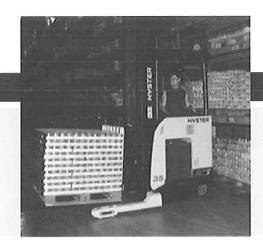
#### SERVICEABILITY:

- Daily operator checks can be performed without removing covers
- Full diagnostics are standard, easing serviceability, helping reduce troubleshooting time and vehicle downtime
- Easy access to all components for regular maintenance and repair
- Completely brushless traction, hoist and auxiliary function motors help reduce service time
- · Regenerative braking helps reduce brake wear
- · No need to remove the mast for adjustments

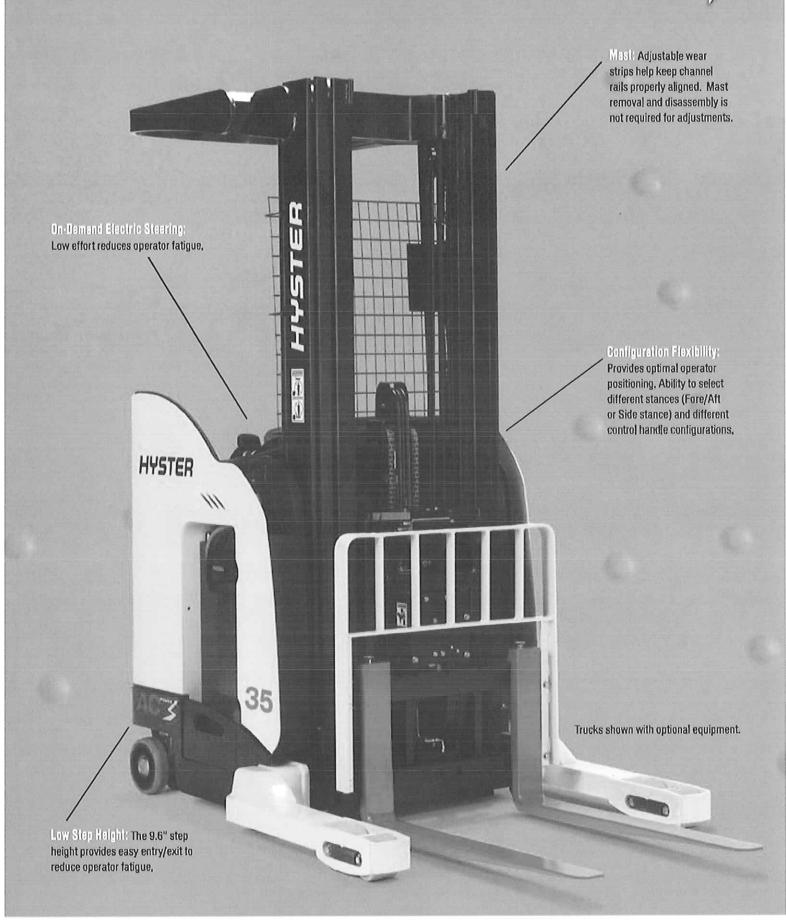
#### VERSATILITY:

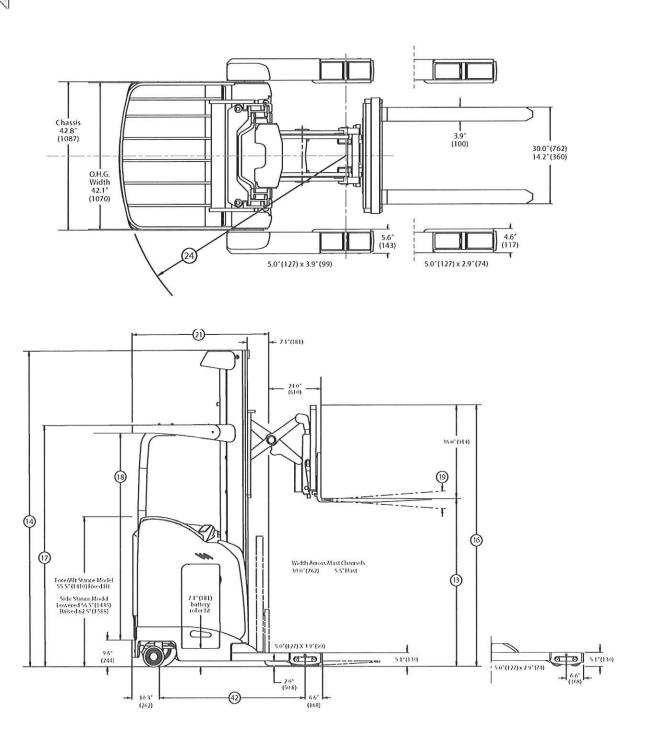
- Multiple battery compartments are available:
  - 12.5", 14.5" and 16.5" for 3,500 and 4,000 lb. models
  - 14.5" and 16.5" for 3,000 lb. models
- Four programmable vehicle modes are available for maximum speed, acceleration, deceleration and hydraulic ramping
- Multi-function control handle integrated in armrest (side stance)











Circled dimensions correspond to the line numbers on the tabulated chart inside the Technical Guide. Dimensions are in inches (millimeters).

# **N35-40ZRS**

											V
1	1	Manufacturer Name		Hyster C	ompany	Hyster C	ompany	Hyster C	ompany	Hyster	Company
	2	Model		N35		N35	ZRS	N40	ZRS	N40	ZRS
183	3	Wheel Base Designation		SV	/B	SV	VB	SV	/B	S	WB
-	4	Rated Capacity	lb. (kg)	3500 (	1588)	3500 (	(1588)	4000 (	1814)	4000	(1814)
-	5	Load Center, Distance	in. (mm)	24 (	Secretary Market	24 (		24 (6	310)	24	(610)
11	6	Power Type - Electric, Diesel, LPG		Electric		Electric		Electric	24 volt	Electric	- 36 volt
100	7	Operator Type		Sta	1782/1080	Sta	and	Sta	nd	St	and
638	8	Tire Type - Load/Caster/Drive		Poly / Poly	Commission 1	Poly / Poly		Poly / Poly	/ Rubber	Poly / Pol	y / Rubber
355	9	Wheels, Number Load/Drive (x=driven)		4/2	The same of the sa	4/2		4/2			2 (1x)
313	10	Truck Weight, without Battery (approximate)	lb.	49		49		50		0.50	000
늘		nuck Weight, minor Dattery (approximate)		Front	Rear	Front	Rear	Front	Rear	Front	Rear
E	12	Axle Loading - Front/Rear with Carriage Extended **	lb.	6750	3800	6750	3800	7400	3700	7400	3700
7000	13	Height, Standard Lift (TOF)	in. (mm)	0.00	0000	0.00					4
4	14	Height, Standard mast Lowered (OALH)	in. (mm)								
183	(C)	Height, Freelift (TOF)	in. (mm)								
	15		in. (mm)	See Ma	st Table	See Ma	st Table	See Ma	st Table	See Ma	ast Table
	16	Height, Standard Mast Extended w/LBR	in. (mm)								
100	17	Height, Top of OHG									
53	18	Height, Operator Clearance	in. (mm)	3,		2	/ 4	3,	14	3	14
4	19	Mast Tilt Angle, Forward/Back	degrees°		L		.9 x 42	1.8 x 3			3.9 x 42
7,	20	Forks, Standard (Length x Width x Thickness)	in.	1.6 x 3	V 21040011.11.11		st Table	See Ma	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	5969 550	ast Table
6	21	Headlength to Face of Forks - All Battery Compartments ***	in. (mm)	See Ma	THE SECOND S.		weathersy.	1200000000	A 200	CONTRACTOR CONTRACTOR	' increments)
	22	Basearm OEC	in.	34"- 49" (1"		ACCUSE 10-2	increments)	34"- 49" (1"	www.commercial		2.5 x 31.5
	23	Battery Compartment Size, 12.5" Battery Compartment - (LxWxH)	in.	39.0 x 12	Walter Application		2.5 x 31.5	39.0 x 12	MACCOCOCOCOCO	2/2/16/20/2	4.5 x 31.5
30		Battery Compartment Size, 14.5" Battery Compartment - (LxWxH)	in.	39.0 x 14			4.5 x 31.5	39.0 x 14	100000000000000000000000000000000000000	48 1	and the same of th
		Battery Compartment Size, 16.5" Battery Compartment - (LxWxH)	in.	A A SERVICE AND A SERVICE	5.5 x 31.5		6.5 x 31.5	39.0 x 16	40000	200	6.5 x 31.5
	24	Turning Radius - minimum outside, 12.5" Battery Compartment	in.	65	W/O		.74	65			5.74
100		Turning Radius - minimum outside, 14.5" Battery Compartment	in.	65			.74	65		500	5.74
183		Turning Radius - minimum outside, 16.5" Battery Compartment	in.	67.	-0.767		7.74	67.		1041 9040	7.74
100	25	Aisle Width - Zero Clearance - Right Angle Stack	see chart	See "RA			S" Table	See "RA			AS" Table
133	26	Stability - Comply with ANSI		Ye			es	Ye		I	es .
	28	Travel Speed, Rearward (chasis first) - Empty/RL	mph	6.5	1000000	1,0 5,000	/6.5	6.5,		2.500	7/6.5
100	29	Travel Speed, Forward (forks first) - Empty/RL	mph	6.5,			/6.5	6.5,			7/6.0
12	10000	Lift Speeds, Empty	ft:/min	6			75		0	1	75
E	32	Lift Speeds, 2,000 lb.	ft./min		6		i4		6		54
100	33	Lift Speeds, 3,000 lb.	ft./min	4	3		50		3		50
in C	34	Lift Speeds, 3,500 lb.	ft/min		0		17	100	0		47
123	35	Lift Speeds, 4,000 lb.	ft./min	N,	/A	N	/A	3	8		45
	36	Lift Speeds, 4,500 lb.	ft./min	N,	/A	N	/A	N,	/A	1	N/A
100	37	Lowering Speeds, Empty	ft./min	8	5	8	35	8	5		85
38	38	Lowering Speeds, RL	ft./min	8	5	8	35	8	5	1	85
	39	Size - Front Load Wheels, Standard		5 x	3.9	5 x	3.9	5 x	3.9	5	(3.9
0	40			Drive	Caster	Drive	Caster	Drive	Caster	Drive	Caster
8	41	Size, Standard - Drive Tire/Dual Casters		12,0 x 5,5	7.9 x 2.2	12,0 x 5,5	7,9 x 2,2	12.0 x 5.5	7,9 x 2,2	12.0 x 5.5	7,9 x 2,2
e.	42	Wheelbase - 12.5" Battery Compartment	in.	55	.35	55	.35	55	.35	5	5.35
WHEELS		Wheelbase - 14.5" Battery Compartment	in.	55	.35	55	.35	55	.35	5	5.35
1		Wheelbase - 16.5" Battery Compartment	in.	57	36	57	.36	57	36	5	7.36
E	43	Brakes, Method of Control - Service/Parking		Fe	oot	F	oot	Fo	oot	F	oot
	44	Brakes, Method of Operation - Service/Parking		Spring Apply /	Electric Release	Spring Apply /	Electric Release	Spring Apply /	Electric Release	Spring Apply /	Electric Release
	45	Battery Type			Acid	1 A R MALES	d Acid	The series selections	Acid	Name of Additional	d Acid
3	46	Traction Motor Rating (60 minute rating)	hp (kw)		(5.6)		(5.6)	7.5	(5.6)	7.5	(5.6)
Car East	47	Hoist Motor Rating (5 minute rating)	hp (kw)		(11.0)		(11.0)		(11.0)		(11.0)
	48	Traction Motor Control Method		1	sistor	10000	sistor	20000	sistor	985	nsistor
ī		Hoist Motor Control Method			sistor		sistor	0.00	sistor		nsistor
	50	Number of Speeds		1	Variable	1010000	/ Variable		Variable		y Variable
	30	number of opecus		1	13110010						

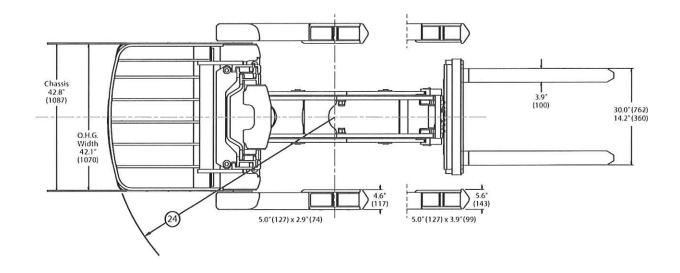
SWB = Short Wheel Base

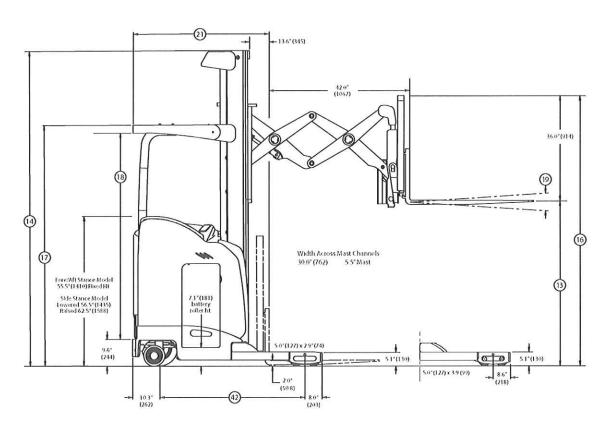
CERTIFICATION: These Hyster lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck.

NOTE: Performance specifications / ratings are for truck equipped as described under Standard Equipment in this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature and condition of the operating area. Specifications are subject to change and the proposed application should be discussed with your authorized Hyster Dealer.

<sup>\*\*</sup> Static with Rated Load and Max. Wt. Battery

<sup>\*\*\*</sup> Add 1" for Sideshift





Circled dimensions correspond to the line numbers on the tabulated chart inside the Technical Guide. Dimensions are in inches (millimeters).

# **N30ZDRS**

1	Manufacturer Name		Hyster Con	npany	Hyster Cor	npany	
2	Model		N30ZD	RS	N30ZD		
3	Wheel Base Designation		LWB		LWB		
4 5	Rated Capacity	lb. (kg)	3000 (13	361)	3000 (13	361)	
5	Load Center, Distance	in. (mm)	24 (61	0)	24 (61	0)	
6	Power Type - Electric, Diesel, LPG	l	Electric - 2	4 volt	Electric - 3	36 volt	
7	Operator Type		Stand	i	Stand	d	
8	Tire Type - Load/Caster/Drive		Poly / Poly /	Rubber	Poly / Poly /	Rubber	
9	Wheels, Number Load/Drive (x=driven)		4/2(1	x)	4/2(1	lx)	
10	Truck Weight, without Battery (approximate)	lb.	5250	)	5250	)	
11			Front	Rear	Front	Rear	
12	Axle Loading - Front/Rear with Carriage Extended **	lb.	6300	4050	6300	4050	
13	Height, Standard Lift (TOF)	in. (mm)					
14	Height, Standard mast Lowered (OALH)	in. (mm)					
15	Height, Freelift (TOF)	in. (mm)	See Mast	Table	See Mast	Table	
16	Height, Standard Mast Extended w/LBR	in. (mm)	oce mast	Table	occ mast	14010	
17	Height, Top of OHG	in. (mm)					
18	Height, Operator Clearance	in. (mm)			1000		
19	Mast Tilt Angle, Forward/Back	degrees°	3/4		3/4		
20	Forks, Standard (Length x Width x Thickness)	in.	1.6 x 3.9	x 42	1.6 x 3.9	x 42	
21	Headlength to Face of Forks - All Battery Compartments ***	in. (mm)	See Mast	Table	See Mast	Table	
22	Basearm OEC	in.	34"- 49" (1" in	crements)	34"- 49" (1" in	icrements)	
23	Battery Compartment Size, 12.5" Battery Compartment - (LxWxH)	in.	N/A		N/A		
	Battery Compartment Size, 14.5" Battery Compartment - (LxWxH)	in.	39.0 x 14.5	x 31.5	39.0 x 14.5	x 31.5	
	Battery Compartment Size, 16.5" Battery Compartment - (LxWxH)	in.	39.0 x 16.5	x 31.5	39.0 x 16.5	x 31.5	
24	Turning Radius - minimum outside, 12.5" Battery Compartment	in.	N/A		N/A		
	Turning Radius - minimum outside, 14.5" Ballery Compartment	in.	70.7	4	70.7	4	
	Turning Radius - minimum outside, 16.5" Battery Compartment	in.	72.7	4	72.7	4	
25	Aisle Width - Zero Clearance - Right Angle Stack	see chart	See "RAS"	'Table	See "RAS"	" Table	
26	Stability - Comply with ANSI		Yes		Yes		
28	Travel Speed, Rearward (chasis first) - Empty/RL	mph	6.5/6.5		6.7/6.7		
29	Travel Speed, Forward (forks first) - Empty/RL	mph	6.5/6.	.5	6.7/6	.7	
31	Lift Speeds, Empty	ft./min	60		75		
32	Lift Speeds, 2,000 lb.	ft/min	44		51		
33	Lift Speeds, 3,000 lb.	ft./min	40		47		
34	Lift Speeds, 3,500 lb.	ft./min	N/A	N/A		Ĺ	
35	Lift Speeds, 4,000 lb.	ft/min	N/A		N/A	(a	
36	Lift Speeds, 4,500 lb.	ft/min	N/A		N/A	i .	
37	Lowering Speeds, Empty	ft./min	85		85		
38	Lowering Speeds, RL	ft./min	85		85		
39	Size - Front Load Wheels, Standard		5 x 2.	.9	5 x 2	.9	
40			Drive	Caster	Drive	Caster	
41	Size, Standard - Drive Tire/Dual Casters		12,0 x 5,5	7.9 x 2.2	12,0 x 5,5	7,9 x 2,2	
42	Wheelbase - 12.5" Battery Compartment	in.	N/A		N/A	i.	
	Wheelbase - 14.5" Battery Compartment	in.	60.3		60.3	5	
	Wheelbase - 16.5" Battery Compartment	in.	62.3		62.3	6	
43	Brakes, Method of Control - Service/Parking	(Case)	Foo		Foo		
44	Brakes, Method of Operation - Service/Parking		Spring Apply / Ele		Spring Apply / El		
45	Battery Type		Lead A		Lead A		
46	Traction Motor Rating (60 minute rating)	hp (kw)	7.5 (5.		7.5 (5		
47	Hoist Motor Rating (5 minute rating)	hp (kw)	14.8 (1		14.8 (1		
48	Traction Motor Control Method	110 (411)	Transis		Transis		
ail)			Transis		Transi		
49	Hoist Motor Control Method						

LWB = Long Wheel Base

CERTIFICATION: These Hyster lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck.

NOTE: Performance specifications / ratings are for truck equipped as described under Standard Equipment in this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature and condition of the operating area. Specifications are subject to change and the proposed application should be discussed with your authorized Hyster Dealer.

<sup>\*\*</sup> Static with Rated Load and Max. Wt. Battery

		Overall Height		Overhead			Head I (Length to Fa		
Maximum Fork Ht.	Overall Lowered	(Mast Extended) Highest Point w/ 36"	Free-Lift	Guard Height	Operator	12.5", 1	4.5" B.C.	16.5'	B.C.
(TOF) in. (mm)	Height in. (mm)	Load Backrest in. (mm)	(TOF) in. (mm)	to Top in. (mm)	Clearance in. (mm)	Single Reach	Double Reach	Single Reach	Double Reach
3-STAGE F	JLL FREE-LIFT	(FFL) VISTA® MAST							
191 (4851)	87 (2210)	230 (5842)	48 (1219)	86.5 (2197)	75.3 (1913)	52.12	58.02	54.12	60.02
203 (5156)	91 (2311)	242 (6147)	52 (1321)	90.5 (2299)	79.3 (2014)	52.12	58.02	54.12	60.02
	95 (2413)	251 (6375)	56 (1422)	94.5 (2400)	83.3 (2116)	52.12	58.02	54.12	60.02
212 (5385)		222 (2772)	62 (1575)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02
212 (5385) 227 (5766)	101 (2565)	266 (6756)	02 (10/0)						
	101 (2565) 107 (2718)	266 (6756) 281 (7137)	68 (1727)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02
227 (5766)		5-0-40-0			79.8 (2027) 79.8 (2027)	52.12 52.12	58.02 <b>58.02</b>	54.12 <b>54.12</b>	60.02 <b>60.02</b>

#### **Right Angle Aisle Stacking**

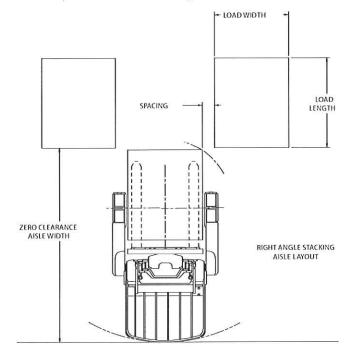
Note: These are "Zero Clearance" aisles and require an additional 6" or more to be added to provide for easier maneuvering.

N35/40ZF	is .		and the same of						
Tru	ck with 12.5	" or 14.5" Bat	tery Compart	ment and 42"	ID				
	39	3 Stage - 4" B	etween Loads	3					
	Pallet Width (Inches)								
		36	40	44	48				
Pallet	36	85	85	85	85				
Length (inches)	40	87	87	86	86				
(111011013)	44	92	91	91	90				
	48	96	96	95	95				

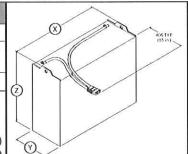
Add 2" for 16.5" Battery Compartment, Add 1" for Sideshift

V3OZDRS								
	Truck with	14.5" Battery	Compartment	and 42" ID				
		3 Stage - 4" B	etween Loads	3				
	Pallet Width (inches)							
		36	40	44	48			
Pallet	36	90	90	90	90			
Length (inches)	40	91	91	91	91			
(	44	95	94	94	93			
	48	99	99	98	98			

Add 2" for 16.5" Battery Compartment, Sideshift is Standard on Double Reach



					Battery S <sub>l</sub>	pecificati	ons				
978 885		Maxi	mum		1	Battery D	imensions	3		Minimum	Maximum
Battery Compartment	Battery	6 Hr		"X"	Max.	"Y"	Max.	"Z"	Max.	Batt. Wt.	Batt. Wt.
Size	Voltage	AH	KWH	in.	(mm)	in.	(mm)	in.	(mm)	lb. (kg)	lb. (kg)
12.5"	24	1085	25.4	38.8	(985)	12.25	(311)	31.0	(788)	1400 (635)	1900 (862)
14.5"	24	1240	29.0	38.8	(985)	14.25	(362)	31.0	(788)	1600 (726)	2100 (953)
14.5"	36	775	27,2	38,8	(985)	14,25	(362)	31,0	(788)	1600 (726)	2100 (953)
16.5"	24	1395	32.6	38.8	(985)	16.25	(413)	31.0	(788)	1850 (839)	2350 (1066
16.5"	36	930	32,6	38.8	(985)	16,25	(413)	31.0	(788)	1850 (839)	2350 (1066



Battery Compartment is designed to accommodate standard wet cell batteries with fixed lifting eyes and no cover.

Contact Applications Engineering to verify compatibility / fit when using maintenance free, covered or non-standard batteries.

Battery Connector: 24V - Red; 36V - Gray, Position "B", Lead Length 16"

Manufacturers Standard Cable Size Not to Exceed 4/0 AWG

### STANDARD EQUIPMENT

- · Fore/Aft Stance Operator Controls
- 24 Volt Battery (Includes 350 Amp Red Battery Connector)
- 91" / 203" / 52" 3 Stage Full Free Lift Mast
- Single Reach Mast (24" Extend) with 33.5" Wide Class II Hook Type Carriage (Standard on N35ZRS and N40ZRS)
- Double Reach Mast (42" Extend) with 33.5" Wide Class II Hook Type Carriage (Standard on N30ZDRS)
- Forks: 1.8" x 3.9" (45 mm x 100 mm) 42"(1067 mm) Class II Hook Type (Standard on N40ZRS)
- Forks: 1.6" x 3.9" (40 mm x 100 mm) 42" (1067 mm) Class II Hook Type (Standard on N30ZDRS and N35ZRS)
- 5" x 3.9" Poly Articulating Tandem Load Wheels High Load Compound (Standard on N35ZRS and N40ZRS)
- 5" x 2.9" Poly Articulating Tandem Load Wheels High Load Compound (Standard on N35ZRS)
- Integral Sideshift for Standard 33.5" Wide Carriage-7" Total Sideshift Travel (Standard on N30ZDRS)
- · AC Traction, Lift / Lower and Steering
- Fully Integrated CANbus Controls
- · Low Step Height
- · Transistor Controller with Regenerative Braking
- · Fully Proportional Lift/Lower Control
- · Programmable Traction Speed and Acceleration
- Electric Power Steering
- · Automatic Field Control and Auto Deceleration
- Rubber Drive Tire 12,0" x 5,5"
- . Dual Articulating Polyurethane Caster Wheels
- · Emergency Power Disconnect
- · Battery Discharge Indicator with Lift Interrupt
- · Key Start
- 36" High Load Backrest Extension
- Sealed Battery Rollers
- · Tilting Carriage (3° Fwd, 4° Back)
- · Padded Operator Compartment
- Rear Post Operator Protection
- Operator's Overhead Guard
- · Low Profile Anti-Fatigue Floormat
- · Operator's Display with Alpha Numeric Messaging
- Multi-Mode Hour Meter
- · Control Handle with Simultaneous Hydraulic Functions
- · Electronic Horn
- Static Discharge Strap
- · Operator's Manual
- · UL Classification E

### **OPTIONAL EQUIPMENT**

- Side Stance Operator Controls
- · Reverse Steering
- · Steered Caster Electric
- · Keyless Start
- · Premium Display
- 36 Volt Battery (Includes 350 Amp Gray Battery Connector)
- · Battery Stand
- · Battery Puller
- . Cooler/Freezer Construction (0° F to 120° F)
- · Various-Sized Load Wheels with Sealed Bearings
- · Tapered Basearm
- Poly Siped Drive Tires
- Lift Limits
- · Various Fork Lengths
- · Fork Height Display
- · 48" High Load Backrest Extension
- · Audible Back-up and Motion Alarms
- · Rear Operator Compartment Door
- Audible Motion Alarm
- · Visual Amber Strobe Light
- · Operator Desktop Light
- · Dual Headlight
- Rear Worklight
- · Operator Overhead Fan
- · Load Weight Display
- Reduced Travel Speed with Carriage Extended
- RF Terminal Bracket
- · RF Handheld Scanner Holder
- · Impact Monitor
- Parts Manual

# **STANDARD FEATURES AND OPTIONS**

#### CAPACITY

Model N30ZDRS: 3,000 lbs, at 24,0" (1,361 kg at 610 mm) load center, Model N35ZRS: 3,500 lbs, at 24,0" (1,588 kg at 610 mm) load center, Model N40ZRS: 4,000 lbs, at 24.0" (1,814 kg at 610 mm) load center.

#### RATED CAPACITIES ARE FOR TRUCKS EQUIPPED WITH:

- 3-Stage full free-lift (FFL) VISTA\* mast to maximum lork height of 203" (5156 mm)
- 33.5" (851 mm) wide hook-type carriage, single reach (24.0" extend) with 42.0" (1067 mm) long forks
- 33.5" (851 mm) wide hook-type carriage, double reach (42.0" extend) with 42.0" (1067 mm) long forks
- 36.0" high load backrest extension (LBE)
- 1.8" x 3.9" (45 mm x 100 mm) 42" (1067 mm) long forks [N40ZRS]
- 1.6" x 3.9" (40 mm x 100 mm) 42" (1067 mm) long forks [N35ZRS and N30ZDRS]
- 5" x 3.9" poly articulating tandem load wheels [N35ZRS and N40ZRS]
- 5" x 2,9" poly articulating tandem load wheels [N30ZDRS]

#### MASTS

Models are equipped with a 5.5" 3-stage FFL mast assembly. The mast is constructed with the nested channel VISTA® design with full-face, straight load rollers. Brass side thrust plugs allow easy mast adjustment during periodic maintenance without removal or disassembly of mast.

#### CARRIAGE

The single reach mechanisms provide 24 inches of extension. The double reach mechanisms provide 42 inches of extension. Tilt function provides 4 degrees back tilt and 3 degrees forward tilt on both carriages. Sideshift is optional on single reach mechanisms. Double reach mechanism is offered with sideshift feature, Integral sideshift allows seven total inches of sideshift and is reduced to 3 inches total with DEC less than 39 inches.

The pantograph (reach mechanism) arms are all made from one-inch thick alloy steel. The inner arm weldments have additional gusset plates for added strength and rigidity. The main pantograph phots use tapered roller bearings which provide a stiffer pivot joint. The reach mechanism hoses and wires are installed in a plastic cable carrier. The cable carrier secures wires and hose inside and provides positive routing for both, Sealed connectors are used throughout the mechanism.

#### FORKS

All fork assemblies are all hook type forks. N35ZRS and N40ZRS 1.8" x 3.9" x 36", 42", 48" (45 mm x 100 mm x 914 mm, 1067 mm, or 1219 mm)

#### N30ZDRS

1.6" x 3.9" x 36", 42", 48" (40 mm x 100 mm x 914 mm, 1067 mm, or 1219 mm)

#### **ELECTRICAL SYSTEM**

The state-of-the-art electrical system features a CANbus communication network linking all vehicle systems. The Vehicle System Manager is an electronic module with an integral microprocessor that controls input and output capabilities. The vehicle application software monitors operator inputs and vehicle performance. The software adjusts vehicle performance as needed to improve the operation of the truck.

Hand controls, which are positioned to optimize each stance configuration, include the multi-function handle, steer tiller assembly, dash display, key switch and emergency stop switch. The Fore/Alt stance multi-function handle utilizes a single pivol axis for traction control, and thumb actuated controls for lift/lower operation. The handle provides simultaneous operation of traction, lift/lower, and reach functions. Additionally, the handle is utilized in rearward travel and provides traction and horn operation.

The Side stance multi-function control handle assembly offers palm rest and large function buttons. The handle allows simultaneous operation of traction, lift/lower, and one auxiliary function.

#### STEERING SYSTEM

Electric on-demand power steering
Auto-centering at start-up
Adjustable lock to lock
Adjustable tiller force feedback
Speade sensitive power assist
Electronic adjustment of steer modes for automotive or reverse steering

#### BATTERY

The steel battery compartment provides secure storage and provides battery access / service from either side of the truck.

Equipped with corrosion resistant, ball bearing battery rollers, battery installation or removal is a quick and easy process.

#### HYDRAULIC SYSTEM

The AC hydraulic system features proportional lifting and lowering. The lift function is controlled by varying lift motor RPM, which maximizes system efficiency. By utilizing the lift motor RPM to control of flow, pressure drop in the lift hydraulic lines is minimized. The lower function is controlled by a proportional control valve which provides excellent lowering speed control.

The lift motors are highly reliable AC designs featuring a Class F insulation rating. The motors have speed and temperature sensors mounted internally. The temperature sensor protects the motor from overheating. The speed sensor provides feedback to the holst controller for precise speed control.

#### DRIVE TRAIN

The AC traction system offers excellent acceleration, deceleration or regenerative braking and seamless, smooth transitions during plugging.

The plugging function is variable according to the handle position. All deceleration is performed by regenerative braking through the vehicle control system. Regenerative braking buts vehicle kinetic energy back into battery, improving efficiency, and reducing wear on brake components. Four operator selectable drive modes are available: rabbit, battery saver, mid, and turtle, Rabbit mode provides maximum acceleration and travel speeds. The battery saver mode provides high travel speeds at reduced acceleration. Mid mode reduces travel speeds and acceleration further. Turtle mode reduces travel speed by 50% and also limits acceleration.

#### BRAKE

A spring applied, electrically released brake is standard on all models.

The brake is pre-adjusted and requires no servicing. Regenerative braking is standard. When the motor RPM reaches 200, the brake is activated.

The brake pedal mounting location is optimized for each stance allowing comfortable operation by a wide range of operators. The switch mounting locations require the operator to be within the operator compartment in normal operator position prior to enabling operation of vehicle traction and hoist systems.

#### OPERATOR COMPARTMENT

Two operator compartments are offered, Fore/Aft stance and Side stance. The operator's *Drive Rite Design Intent* compartment is ergonomically designed to provide operators with excellent visibility, efficiency and productivity.

Operator controls are positioned for optimum productivity and comfort on both Fore/Aft stance and Side stance with standard adjustable steer tiller.

Low 9.6 inch step height, combined with a wide entrance opening into the operator compartment, provides comfortable entry and exit from the truck.

Compartments have room for the operator to vary their stances and include a floating floor plate design with an ergonomically shaped floor mat for excellent ride comfort and reduced body fatigue.

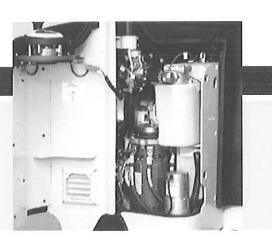
Both the brake and operator sensing switch are mounted below the floor mat, providing unobstructed entry and exit from the truck.

Operator compartments are fully padded for comfort and as a thermal insulator from drive compartment heat.

The Side stance compartment provides a large backrest pad with integral lumbar and armrest support with optional vertical adjustment for a wide range of operator heights,

Doors are intended to protect the operator from objects that may enter the operator's compartment but they may also slow the operator's egress in emergency situations. A review of the forklift's intended environment should be conducted before selecting a door as optional equipment.









FLEET SERVICES





HYSTER CAPITAL A Division of NIAHG Financial Services, Inc.

#### It's not just about the lift trucks.

Any company worth its weight knows success has just as much to do with the support before and after the sale as the sale itself. We pride ourselves on being more than just a lift truck manufacturer. Through our Dealer Network, we're also fleet managers, parts suppliers, capital procurement specialists and trainers. You'll find that when it comes to service, we do it all.

#### **Hyster Fleet Services**

As much as we'd like for your entire fleet to be Hyster, we know that's not always the case. But just because you also operate other brands doesn't mean we can't manage your lift truck maintenance and replacement plan. We can analyze your current fleet or provide summary of your fleet history and a cost-effective proposal for replacement and scheduled maintenance of all your vehicles. Once this initial review is complete, we'll continue to monitor your fleet to ensure it's performing optimally.

#### UNISOURCE™ Parts Program

In addition to providing fleet management for a variety of brands, we can also serve as your source of parts for all your lift trucks. With the Hyster UNISOURCE parts and service program, we offer approximately 2 million part number crosses for most brands of materials handling and other in-plant mobile equipment. UNISOURCE also has remanufactured parts that provide the same quality and guarantee but at a lower price. And we can deliver parts to you in less than 24 hours, any day of the week. How's that for convenience?

#### **Rental Products**

At Hyster Company, we're always looking for ways to help you keep your productivity up. Through the Hyster Dealer Network, you can access rental equipment for the times when leasing or buying isn't a practical option. Your local Hyster Dealer has access to over 14,000 units that are available for short- or long-term rental. Whether you need one truck to substitute for a vehicle that's being serviced or several lift trucks to accommodate seasonal changes in your business, we'll help you maintain output in a cost-effective manner.

#### **Hyster Capital**

We know that financing new additions to your fleet can sometimes be challenging. That's why your Hyster Dealer has a long list of ways for you to fund your purchase. We are skilled in arranging solutions for special financing requirements, taking the difficulties out of buying the equipment you need. Whether you purchase or lease a new or used lift truck, Hyster Capital offers better service and competitive rates, ensuring you receive the value you deserve.

# Special Products Engineering Department (SPED)

In a perfect world, every application could be handled with a standard lift truck. However, in the real world, different materials require different handling. That's why Hyster Company's Special Products Engineering Department works with you to customize\* your lift trucks. From strobe lights to specially made forks, SPED can provide you with the tools you require to get the job done right.

\* May be subject to an additional charge. Contact your local authorized Hyster Dealer for more information.

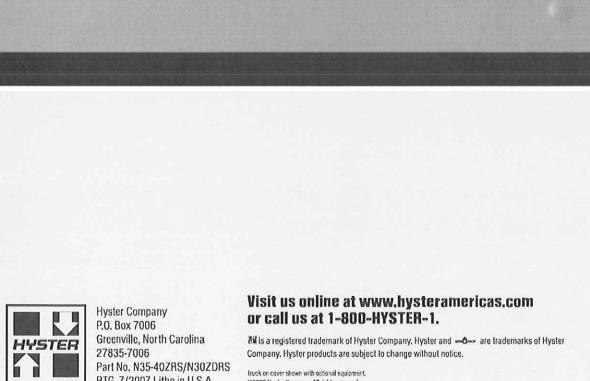
#### **Automated Warehouse Solutions**

As society's technological capabilities advance, we strive to find practical applications. One of our most recent innovations in that pursuit is our development of automated warehouse solutions. We can help you determine if your operation would benefit from this type of system, which improves inventory accuracy, warehouse productivity and safety records, as it reduces maintenance and overtime.

#### **Operator and Service Training**

Hyster Company recognizes that proper training is a key element of a profitable company. That's why your local authorized Hyster Dealer offers a training program for your lift truck operators as well as those who maintain your vehicles. Proper education in running and servicing lift trucks cuts down on the number of repairs and risk of injuries due to accidents while increasing productivity. All of our trainers are professionals with experience in materials handling.







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fruck on cover shown with optional equipment. @2006 Hyster Company, All rights reserved.





# N35-45ZR/ N30-35ZDR



#### PRODUCTIVITY:

- AC hoist system maximizes lift at lower speeds
- Dedicated auxiliary pump and motor increases speed and controllability of auxiliary functions
- AC traction system maximizes performance and provides seamless direction transitions
- Powered and regenerative lowering function maintains speeds and increases the interval between battery changes through improved efficiency
- Electric power steering, standard on all models, offers on-demand steering for maximum efficiency and minimal battery drain
- Automatic drive tire centering at start-up saves time for the operator
- Automatic brake operation applies the brake when the truck is stationary, eliminating the need for the operator to lift a leg to apply the brake
- · Optional electrically steered caster

#### COST OF OPERATION:

- AC traction and hoist motors help reduce maintenance through a simpler design and the elimination of brush replacement
- Regenerative lowering improves battery efficiency
- Sealed load wheel bearings reduce greasing requirements
- Brushless steering and auxiliary motors help reduce maintenance time and cost
- Electric brake provides parking and emergency braking capability with no need to service
- Dual articulating caster wheels promote even tire wear and minimize tire scrub

#### **DEPENDABILITY:**

- CANbus communication system reduces wiring and electrical connections and provides real time diagnostics
- Sealed electrical connectors keep out debris and help reduce the possibility of loose connections
- O-ring face seal fittings help maximize uptime and reduce leaks
- Completely brushless AC traction and hoist motors improve reliability
- Thermal management system for all motors and controllers add protection from overheating
- Dedicated auxiliary pump and motor helps reduce demand on main hydraulic motor
- Regenerative lowering helps reduce heat build-up in the hydraulic system and returns potential energy of the load to the battery

## SERVICEABILITY:

- Daily operator checks can be performed without removing covers
- Full diagnostics are standard, easing serviceability, helping reduce troubleshooting time and vehicle downtime
- Easy access to all components for regular maintenance and repair
- Completely brushless traction, hoist and auxiliary function motors help reduce service time
- · Regenerative braking helps reduce brake wear
- . No need to remove the mast for adjustments
- Optional bolt-on load wheels allow easy service of load wheels for routine changing and impact damage

#### **ERGONOMICS:**

- · Drive-Rite Design Intent
- Configuration flexibility with fore/aft stance and side stance available
- Large operator compartment and optimal operator position allow easy entry and exit without awkward twisting
- Low 9.6" step height helps reduce operator fatique
- Brake pedal location and design is optimized for operator comfort
- Suspended floorplate cushions the operator and helps reduce stress on the operator's legs
- · Adjustable steer tiller position
- · Adjustable back with armrest
- On-demand electric power steering helps reduce operator effort

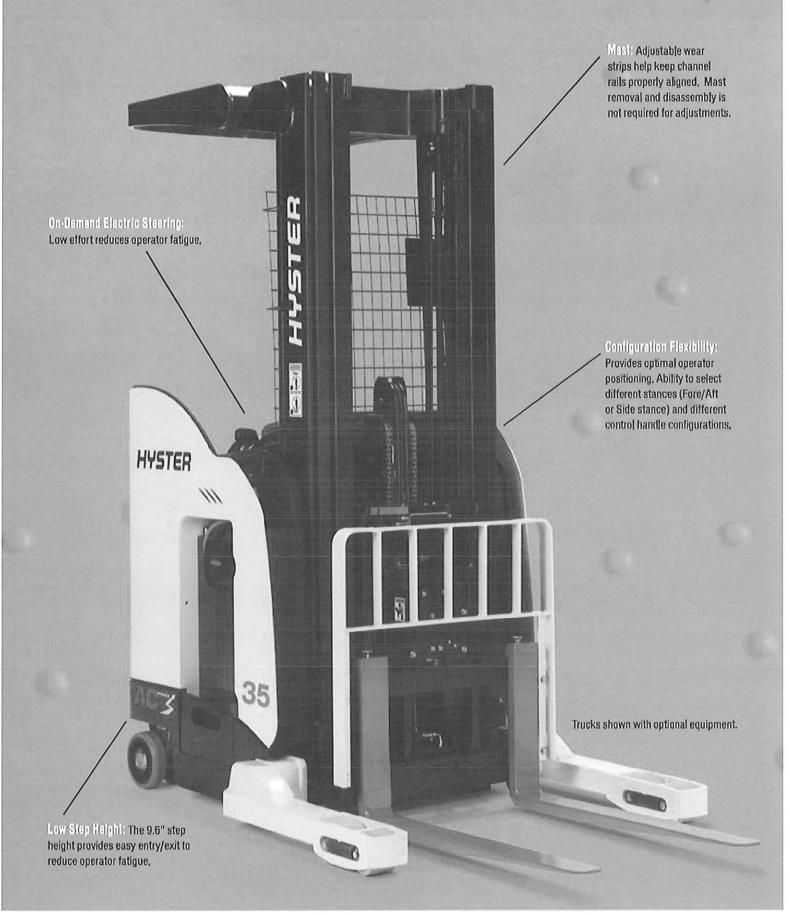
#### VERSATILITY:

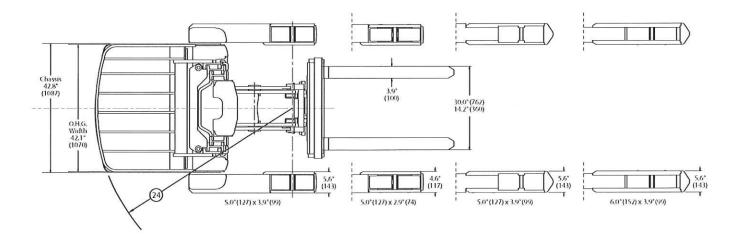
- · Three mast configurations are available:
  - 5.5" standard duty 3-stage (lift heights 191" to 272")
  - 5.5" heavy duty 3-stage (lift heights 212" to 293")
  - 6.9" 3-stage (lift heights 272" to 422")
- · Multiple battery compartments are available:
  - 14.5" and 16.5" for 3,500 and 4,000 lb. models
- 16.5", 18.5" and 21.5" for 4,500 lb. models
- Four programmable vehicle modes are available for maximum speed, acceleration, deceleration and hydraulic ramping
- Multi-function control handle integrated in armrest with fore/aft stance and side stance
- · Wide range of options available:
- Fork height display
- Load weight display
- Shelf height selector

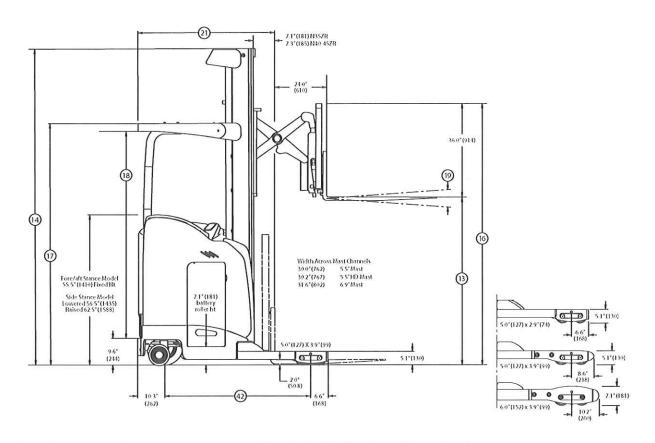












Circled dimensions correspond to the line numbers on the tabulated chart inside the Technical Guide. Dimensions are in inches (millimeters).

1 Man	nufacturer Name		Hyster Co	mpany	Hyster Co	ompany	Hyster Co	-50
2 Mode	del		N35		N40.	360%	N45	
3 Whee	eel Base Designation		SW	В	SW	B	SW	B
4 Rate	ed Capacity	lb. (kg)	3500 (	1588)	4000 (	1814)	4500 (	2041)
5 Load	d Center, Distance	in. (mm)	24 (6	10)	24 (6	10)	24 (6	610)
6 Power	ver Type - Electric, Diesel, LPG	82	Electric -	36 volt	Electric -	36 volt	Electric -	36 volt
7 Open	rator Type		Sta	nd	Sta	nd	Sta	nd
8 Tire	Type - Load/Caster/Drive		Poly / Pol	y / Poly	Poly / Pol	ly / Poly	Poly / Po	ly / Poly
	eels, Number Load/Drive (x=driven)		4/2	(1x)	4/2	(1x)	4/2	(1x)
TO SHARE	k Weight, without Battery (approximate)	lb.	495		500		540	00
11	,,,,,,		Front	Rear	Front	Rear	Front	Rear
12 Axle	Loading - Front/Rear with Assemble Retracted **	lb.	6750	3800	7400	3700	8400	3800
13 Heigh	ght, Standard Lift (TOF)	in, (mm)						
14 Heigh	ght, Standard Mast Lowered (OALH)	in. (mm)				19		
15 Heigh	ght, Freelift (TOF)	in, (mm)	o 11		C 14	a T. U.	Castle	of Toblo
THE STATE OF THE PARTY OF THE P	pht, Standard Mast Extended w/LBR	in. (mm)	See Mas	t lable	See Mas	st lable	See Mas	st rante
	ght, Top of OHG	in. (mm)						
	pht, Operator Clearance	in. (mm)						
	st Tilt Angle, Forward/Back	degrees°	3/	4	3/	4	3/	4
Section 1	ks. Standard (Length x Width x Thickness)	in.	1.6 x 3.		1.8 x 3.		1.6 x 3.	
	idlength to Face of Forks - All Battery Compartments ***	in, (mm)	See Mas		See Mas	Accessorian	See Mas	
Name of the last o	earm OEC	in.	34"- 49" (1"		34"- 49" (1"		34"- 49" (1"	
I MANAGEMENT	tery Compartment Size, 14.5" Battery Compartment - (LxWxH)	in.	39.0 x 14		39.0 x 14	newscars and a second	N/	1,00
		1	39.0 x 16		39.0 x 16	A STATE OF THE PARTY OF T	39.0 x 16	
	tery Compartment Size, 16.5" Battery Compartment - (LxWxH)	in.			N/.		39.0 x 18	
2 Common Section 1	tery Compartment Size, 18.5" Battery Compartment - (LxWxH)	in.	N/		10000		39.0 x 21	
	tery Compartment Size, 21.5" Battery Compartment - (LxWxH)	in.	N/		N/		39.0 x 21	
The same of	ning Radius - minimum outside, 14.5" Battery Compartment	in.	65.		65.			
	ning Radius - minimum outside, 16.5" Battery Compartment	in.	67.1		67.		67.	
The second second	ning Radius - minimum outside, 18.5" Battery Compartment	in.	N/		N/		69.	
Turni	ning Radius - minimum outside, 21.5" Battery Compartment	in.	N/		N/		72.	
-0.00	e Width - Zero Clearance - Right Angle Stack	see chart	See "RAS		See "RAS		See "RA	
	bility - Comply with ANSI		Ye		Ye		Ye	
27 Trave	vel Speed		Standard	Optional	Standard	Optional	Standard	Optional
28 Rear	rward (chassis first) - Empty/RL	mph	7.4/6.5	N/A	7.4/6.5	N/A	7.4/6.5 †	8.0/6.5
29 Forw	ward (forks first) - Empty/RL	mph	7.4/6.5	N/A	7.4/6.0	N/A	7.4/5.81	8.0/5.8
30 Lift S	Speed		Standard	Optional	Standard	Optional	Standard	Optional
31 Emp	pty	ft/min	100	N/A	100	114	114	130
32 2,00	00 lb.	ft./min	75	N/A	75	86	86	98
33 3,00	00 lb.	ft/min	69	N/A	69	78	78	90
1	00 lb.	ft./min	64	N/A	64	72	72	84
The second second	00 lb.	ft/min	N/A	N/A	60	68	68	78
Parameter 1	00 lb.	ft./min	N/A	N/A	N/A	N/A	65	74
The second second	vering Speeds, Empty	ft/min	9:		9:		10	)5
Section 1	vering Speeds, RL	ft./min	9!		9:		10	)5
CONTRACT OF THE PARTY OF THE PA	e - Front Load Wheels, Standard	,	5x		5x		5 x	3.9
40	, Troncesau Tricopy Quantum		Drive	Caster	Drive	Caster	Drive	Caster
41 Size.	e, Standard - Drive Tire/Dual Casters		12.0 x 5.5	7.9 x 2.2	12.0 x 5.5	7.9 x 2.2	13.5 x 5.5	7.9 x 2.2
42 111	eelbase - 14.5" Battery Compartment	in	55.		55.		N/	
	A SANCTON MICHOEL	in.	57.		57.		57.	
Whe	eelbase - 16.5" Battery Compartment	in.					59.	
Whe	eelbase - 18.5" Battery Compartment	in.	N/		N/		62.	
The same of the sa	eelbase - 21.5" Battery Compartment	in.	N/		N/			
THE REAL PROPERTY.	kes, Method of Control - Service/Parking		F0		Fo		Fo	
	kes, Method of Operation - Service/Parking		Spring Apply / E		Spring Apply / E		Spring Apply / E	
THE REAL PROPERTY.	tery Type		Lead		Lead		Lead	F
46 Trac	ction Motor Rating (60 minute rating)	hp (kw)	7.5 (	5.6)	7.5 (		7.5 (5.6)	8.7 (6.5)
47 Hois	st Motor Rating (5 minute rating)	hp (kw)	14.8 (	11.0)	14.8 (11.0)	18.0 (13.4)	18.0 (13.4)	20.7 (15.4
1 48 Trac	ction Motor Control Method		Trans	istor	Trans	sistor	Trans	sistor
49 Hois	st Motor Control Method		Trans	istor	Trans	istor	Trans	sistor
Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is	mber of Speeds		Infinitely	Variable	Infinitely	Variable	Infinitely	Variable

<sup>\*\*</sup> Static with Rated Load and Max. Wt. Battery

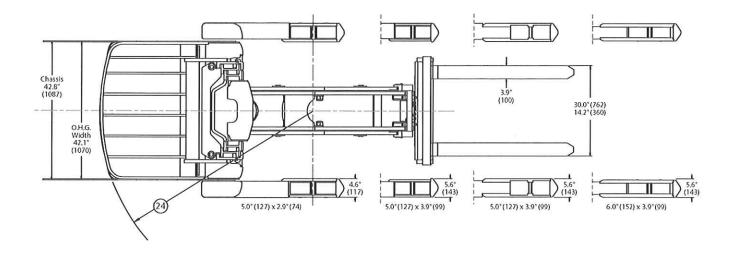
CERTIFICATION: These Hyster lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck.

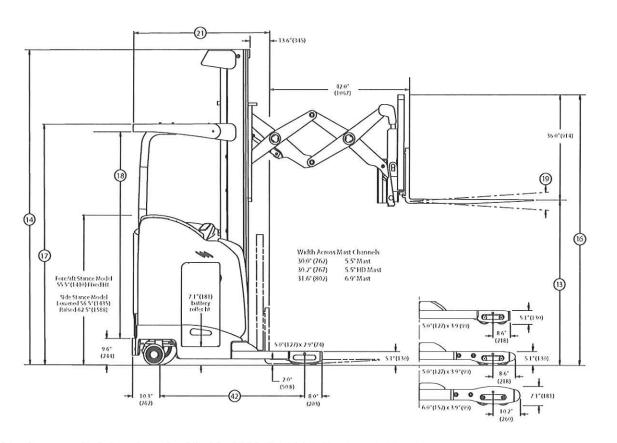
NOTE: Performance specifications / ratings are for truck equipped as described under Standard Equipment in this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature and condition of the operating area. Specifications are subject to change and the proposed application should be discussed with your authorized Hyster Dealer.

<sup>\*\*\*</sup> Add 1" for Sideshift

<sup>&</sup>lt;sup>1</sup> Travel Speed will be reduced to 6.8 / 5.8 (Empty / Rated Load) with MFHs above 341" in the Rearward and Forward direction. 8.0 mph travel speed is limited to Load up to 2500 lbs. SWB = Short Wheel Base; LWB = Long Wheel Base







Circled dimensions correspond to the line numbers on the tabulated chart inside the Technical Guide. Dimensions are in inches (millimeters),

# N30-35ZDR

1 Manufacturer Name		Hyster C	ompany	Hyster Co	ompany
2 Model		N30	ZDR	N352	OR.
3 Wheel Base Designation*		LWB	SWB	LWB	SWB
4 Rated Capacity	lb. (kg)	3000 (	1361)	3500 (	1588)
5 Load Center, Distance	in, (mm)	24 (6		24 (6	10)
6 Power Type - Electric, Diesel, LPG		Electric	1997 a	Electric -	
7 Operator Type		Sta		Sta	
		Poly / Po	- Same of	Poly / Pol	
9 Wheels, Number Load/Drive (x=driven)		4/2	(PO137) NEDWOOD	4/2	
Truck Weight, without Battery (approximate)	lb.	5250	N/A	5250	N/A
1 Annual Man and Annual Annual Annual Annual		Front	Rear	Front	Rear
2 Axle Loading - Front/Rear with Assemble Retracted **	lb.	6300	4050	6700	4250
Height, Standard Lift (TDF)	in. (mm)		,		
4 Height, Standard Mast Lowered (OALH)	in. (mm)				
Height, Freelift (TOF)	in, (mm)	Coolin	t Table	See Mas	t Tabla
6 Height, Standard Mast Extended w/LBR	in. (mm)	See Ma	st laule	See Mas	t laule
7 Height, Top of OHG	in. (mm)				
8 Height, Operator Clearance	in. (mm)				
9 Mast Tilt Angle, Forward/Back	degrees°	3/	4	3/	4
0 Forks, Standard (Length x Width x Thickness)	in.	1.8 x 3.	AX age	1.6 x 3.	
1 Headlength to Face of Forks - All Battery Compartments		See Ma		See Mas	
	in, (mm)				
2 Basearm OEC	in.	34"- 49" (1"		34"- 49" (1" )	
Battery Compartment Size, 14.5" Battery Compartment - (LxWxH)	in,	39.0 x 14	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	N/.	
Battery Compartment Size, 16.5" Battery Compartment - (LxWxH)	in.	39.0 x 16	NB3000000000000000000000000000000000000	39.0 x 16.	
Battery Compartment Size, 18.5" Battery Compartment - (LxWxH)	in.	N/	A	39.0 x 18	
Battery Compartment Size, 21.5" Battery Compartment - (LxWxH)	in.	N/	A	39.0 x 21.	5 x 31,5
Turning Radius - minimum outside, 14.5" Battery Compartment	in.	70.74	N/A	N/	A
Turning Radius - minimum outside, 16.5" Battery Compartment	in.	72.74	N/A	72,90	67.90
Turning Radius - minimum outside, 18.5" Battery Compartment	in.	N/	A	74.90	69.90
Turning Radius - minimum outside, 21.5" Battery Compartment	in.	N/	A	77.90	72.90
5 Aisle Width - Zero Clearance - Right Angle Stack	see chart	See "RA	THE CONTRACTOR OF THE CONTRACT	See "RAS	S" Table
6 Stability - Comply with ANSI		Ye	Articular and	Ye	
7 Travel Speed		Standard	Optional	Standard	Optional
8 Rearward (chassis first) - Empty/RL	moh	7.4/6.8 †	N/A	7.4/6.8†	8.0/6.8 <sup>†</sup>
	mph	and the same of th		7.4/6.51	8.0/6.5 †
9 Forward (forks first) - Empty/RL	mph	7.4/6.8 †	N/A	250 miles	200
0 Lift Speed		Standard	Optional	Standard	Optional
1 Empty	ft/min	100	114	114	130
2 2,000 lb.	ft./min	71	82	82	93
3 3,000 lb.	ft/min	65	73	73	85
4 3,500 lb.	ft./min	N/A	N/A	70	N/A
5 4,000 lb.	ft./min	N/A	N/A	N/A	N/A
6 4,500 lb.	ft./min	N/A	N/A	N/A	N/A
7 Lowering Speeds, Empty	ft/min	9	6.3000	10	
8 Lowering Speeds, RL	ft./min	9		10	
9 Size - Front Load Wheels, Standard		5 x	NO.	5x:	
0		Drive	Caster	Drive	Caster
1 Size, Standard - Drive Tire/Dual Casters		12.0 x 5.5	7.9 x 2.2	13.5 x 5.5	7.9 x 2.2
1 3 PK (1975) 1 PK (1975) 1 SA		Control Control (Control Control Contr	A discount service .	10000000000000	
Wheelbase - 14.5" Battery Compartment	in.	60.35	N/A	N/A	
Wheelbase - 16.5" Battery Compartment	in.	62.36	N/A	62.36	57.36
Wheelbase - 18.5" Battery Compartment	in.	N/		64.37	59.37
Wheelbase - 21.5" Battery Compartment	in.	N/		67.36	62.36
Brakes, Method of Control - Service/Parking		Fo	ot	For	ot
Brakes, Method of Operation - Service/Parking		Spring Apply / E	lectric Release	Spring Apply / E	lectric Release
5 Battery Type		Lead	Acid	Lead	Acid
6 Traction Motor Rating (60 minute rating)	hp (kw)	7.5 (	5.6)	7.5 (5.6)	8.7 (6.5)
7 Hoist Motor Rating (5 minute rating)	hp (kw)	14.8 (11.0)	18.0 (13.4)	18.0 (13.4)	20.7 (15.4)
8 Traction Motor Control Method		Trans	7 1949 COOPER HARVING	Trans	
9 Hoist Motor Control Method		Trans		Trans	
THE STATE OF THE INCHES	1 1		Variable	Infinitely	

<sup>\*</sup> Short or Long Wheelbase is determined by Mast Height

CERTIFICATION: These Hyster lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part II ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck.

<sup>\*\*</sup> Static with Rated Load and Max. Wt. Battery

<sup>&</sup>lt;sup>1</sup> Travel Speed will be reduced to 6.8 / 5.8 (Empty / Rated Load) with MFHs above 341" in the Rearward and Forward direction. 8.0 mph travel speed is limited to Load up to 2500 lbs. SWB = Short Wheel Base (with mast over 332" MFH); LWB = Long Wheel Base

		Overall Height		Overhead		He	ad Length (Leng	gth to Face of Forks)		
Maximum	Overall	(Mast Extended)	Free-Lift	Guard Height	Operator	14.5	" B.C.	16.5	' B.C.	
Fork Ht. (TOF) in. (mm)	Lowered Height in. (mm)	Highest Point w/ 36" Load Backrest in. (mm)	(TOF) in. (mm)	to Top in. (mm)	Clearance in. (mm)	Single Reach	Double Reach	Single Reach	Double Reach	
3-STAGE FU	JLL FREE-LIFT	(FFL) VISTA® MAST								
191 (4851)	87 (2210)	230 (5842)	48 (1219)	86.5 (2197)	75.3 (1913)	52.12	58.02	54.12	60.02	
203 (5156)	91 (2311)	242 (6147)	52 (1321)	90.5 (2299)	79,3 (2014)	52.12	58,02	54.12	60,02	
212 (5385)	95 (2413)	251 (6375)	56 (1422)	94.5 (2400)	83.3 (2116)	52.12	58.02	54.12	60.02	
227 (5766)	101 (2565)	266 (6756)	62 (1575)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02	
242 (6147)	107 (2718)	281 (7137)	68 (1727)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02	
251 (6375)	110 (2794)	290 (7366)	71 (1803)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02	
272 (6909)	119 (3023)	311 (7899)	80 (2032)	91 (2311)	79.8 (2027)	52.12	58.02	54.12	60.02	

		Overall Height		Overhead			Head Ler	ngth (Leng	th to Face	of Forks)	
Maximum	Overall	(Mast Extended)	Free-Lift	Guard Height	Operator	16.5	B.C.	18.5	" B.C.	21.5'	" B.C.
Fork Ht. (TOF) in. (mm)	Lowered Height in. (mm)	Highest Point w/ 36" Load Backrest in. (mm)	(TOF) in. (mm)	to Top in. (mm)	Clearance in. (mm)	Single Reach	Double Reach	Single Reach	Double Reach	Single Reach	Double Reach
3-STAGE FU	JLL FREE-LIFT	(FFL) VISTA® MAST									
212 (5385)	95 (2413)	251 (6375)	56 (1422)	94.5 (2400)	83.3 (2116)	57.47	63.38	59.47	65.38	62.47	68.38
224 (5690)	101 (2565)	263 (6680)	62 (1575)	91 (2311)	79.8 (2027)	57.47	63.38	59.47	65.38	62.47	68.38
239 (6071)	107 (2718)	278 (7061)	68 (1727)	91 (2311)	79.8 (2027)	57.47	63.38	59.47	65.38	62.47	68.38
245 (6223)	110 (2794)	284 (7214)	71 (1803)	91 (2311)	79,8 (2027)	57,47	63,38	59,47	65,38	62.47	68,38
266 (6756)	119 (3023)	305 (7747)	80 (2032)	91 (2311)	79.8 (2027)	57.47	63.38	59.47	65.38	62.47	68.38
278 (7061)	125 (3175)	317 (8052)	86 (2184)	91 (2311)	79.8 (2027)	57.47	63.38	59.47	65.38	62.47	68.38
293 (7442)	131 (3327)	332 (8433)	92 (2337)	91 (2311)	79.8 (2027)	57.47	63.38	59.47	65.38	62.47	68.38

		Overall Height		Overhead			Head Ler	igth (Leng	th to Face o	of Forks)	
Maximum	Overall	(Mast Extended)	Front lift	Guard	Operator	16.5	" B.C.	18.5	" B.C.	21.5'	" B.C.
Fork Ht. (TOF) In. (mm)	Lowered Height in. (mm)	Highest Point w/ 36" Load Backrest in. (mm)	Free-Lift (TOF) in. (mm)	Height to Top in. (mm)	Operator Clearance in. (mm)	Single Reach	Double Reach	Single Reach	Double Reach	Single Reach	Double Reach
3-STAGE F	JLL FREE-LIF	T (FFL) VISTA® MAST									
272 (6909)	119 (3023)	311 (7899)	80 (2032)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62,59	68.50
287 (7290)	125 (3175)	326 (8280)	86 (2184)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
302 (7671)	131 (3327)	341 (8661)	92 (2337)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
320 (8128)	138 (3505)	359 (9119)	99 (2515)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
332 (8433)	143 (3632)	371 (9423)	104 (2642)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
341 (8661)	146 (3708)	380 (9652)	107 (2718)	91 (2311)	79.8 (2027)	57,59	63,50	59.60	65,50	62.59	68,50
368 (9347)	157 (3988)	407 (10338)	118 (2997)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
401 (10185)	170 (4318)	440 (11176)	131 (3327)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50
422 (10719)	179 (4547)	461 (11709)	140 (3556)	91 (2311)	79.8 (2027)	57.59	63.50	59.60	65.50	62.59	68.50

#### **Right Angle Aisle Stacking**

Note: These are "Zero Clearance" aisles and require an additional 6" or more to be added to provide for easier maneuvering.

N35/40ZF	1				
	Truck with	14.5" Battery	Compartmen	t and 42" ID	
		3 Stage - 4" B	etween Loads	s	
		Pall	let Width (incl	hes)	
		36	40	44	48
Pallet	36	85	85	85	85
Length (inches)	40	87	87	86	86
()	44	92	91	91	90
	48	96	96	95	95

Add 2" for 16.5" Battery Compartment Add 1" for Sideshift

N45ZR								
	Truck with	16.5" Battery	Compartmen	t and 42" ID				
		3 Stage - 4" B	etween Load	S				
	Pallet Width (inches)							
		36	40	44	48			
Pallet	36	88	88	87	87			
Length (inches)	40	93	92	92	91			
(	44	97	97	96	96			
	48	102	101	101	100			

Add 2" for 18.5" Battery Compartment Add 5" for 21.5" Battery Compartment Add 1" for Sideshift

N3OZDR							
	Truck with	14.5" Battery	Compartment	and 42" ID			
		3 Stage - 4" B	etween Loads	S			
	Pallet Width (inches)						
		36	40	44	48		
Pallet	36	90	90	90	90		
Length (inches)	40	91	91	91	91		
()	44	95	94	94	93		
	48	99	99	98	98		

Add 2" for 16.5" Battery Compartment Sideshift is Standard on Double Reach

	of easier maneuvering.	
	+ LOAD W	TIDTH →
	SPACING	LOAD LENGTH
ZERO CLEARANCE AISLE WIDTH		RIGHT ANGLE STACKING AISLE LAYOUT

	Truck with	16.5" Battery	Compartment	and 42" ID				
		3 Stage - 4" B	etween Loads	3				
	Pallet Width (inches)							
		36	40	44	48			
Pallet	36	92	91	91	91			
Length (inches)	40	96	96	95	94			
(	44	101	100	100	99			
	48	105	105	104	104			

Add 2" for 18.5" Battery Compartment Add 5" for 21.5" Battery Compartment Sideshift is Standard on Double Reach

Battery and	d Gompa	rime	nt Spe	cifica	tions							
					Battery S	pecificati	ons					
		Maxi	Maximum Ba				Battery Dimensions				Maximum	
Battery Compartment	Battery	Rattory	6 Hr	Rate	"X"	Max.	"ү"	Max.	"Z"	Max.	Batt. Wt.	Batt. Wt.
Size	Voltage	AH	KWH	in.	(mm)	in.	(mm)	in.	(mm)	lb. (kg)	lb. (kg)	
14.5"	36	775	27.2	38.8	(985)	14.25	(362)	31.0	(788)	1600 (726)	2100 (953)	
16.5"	36	930	32.6	38.8	(985)	16.25	(413)	31.0	(788)	1850 (839)	2350 (1066)	
18.5"	36	1085	38.1	38.8	(985)	18.25	(464)	31.0	(788)	2200 (998)	2800 (1270)	
21.5"	36	1240	43.5	38.8	(985)	21.25	(540)	31.0	(788)	2500 (1134)	3100 (1406)	

25 TF (15:0)

Battery Compartment is designed to accommodate standard wet cell batteries with fixed lifting eyes and no cover.

Contact Applications Engineering to verify compatibility / fit when using maintenance free, covered or non-standard batteries.

Battery Connector: 24V - Red; 36V - Gray, Position 'B', Lead Length 16"

Manufacturers Standard Cable Size Not to Exceed 4/0 AWG

### 10

## STANDARD FEATURES AND OPTIONS

### STANDARD EQUIPMENT

- . Fore / Aft Stance Operator Controls
- 36 Volt Battery (Includes 350 Amp Gray Battery Connector)
- 91" / 203" / 52" 3 Stage Full Free Lift Mast (Standard on N30ZDR, N35ZR and N40ZR)
- 95" / 212" / 56" 3 Stage Full Free Lift Mast (Standard on N35ZDR and N45ZR)
- Single Reach Mast (24" Extend) with 33.5" Wide Class II Hook Type Carriage (Standard on N35-45ZR)
- Double Reach (42" Extend) with 33.5" Wide Class II Hook Type Carriage (Standard on N30-35ZDR)
- · Integral Sideshift with 7" Travel (Standard on N30-35ZDR)
- Forks: 1.6" x 3.9" x 42" (40 mm x 100 mm) Class II Hook Type (Standard on N35ZR and N30-35ZDR)
- Forks: 1.8" x 3.9" x 42" (45 mm x 100 mm) Class II Hook Type (Standard on N40ZR and N45ZR)
- 5" x 3.9" Poly Articulating Tandem Load Wheels High Load Compound (Standard on N35-45ZR)
- 5" x 2.9" Poly Articulating Tandem Load Wheels High Load Compound (Standard on N30-35ZDR)
- · AC Traction, Lift / Lower and Steering
- · Fully Integrated CANbus Controls
- · Low Step Height
- · Transistor Controller with Regenerative Braking
- Power Lowering
- Programmable Traction Speed and Acceleration
- . Electric Power Steering
- Polyurethane Drive Tire 12.0" x 5.5" (Standard on N30ZDR, N35ZR, and N40ZR)
- Polyurethane Drive Tire 13.5" x 5.5" (Standard on N35ZDR and N45ZR)
- · Dual Articulating Polyurethane Caster Wheels
- · Emergency Power Disconnect
- · Battery Discharge Indicator with Lift Interrupt
- · Key Start
- 36" High Load Backrest Extension
- · Sealed Battery Rollers
- · Tilting Carriage (3° Fwd, 4° Back)
- · Padded Operator Compartment
- · Rear Post Operator Protection
- · Operator's Overhead Guard
- · Low Profile Anti-Fatigue Floormat
- · Operator's Display with Alpha Numeric Messaging
- · Multi-Mode Hour Meter
- · Control Handle with Simultaneous Hydraulic Functions
- · Electronic Horn
- Static Discharge Strap
- · Operator's Manual
- · UL Classification E

### OPTIONAL EQUIPMENT

- · Side Stance Operator Controls
- · Reverse Steering
- · Steered Caster Electric
- · Keyless Start
- Premium Display (Includes Performance Mode Select, Operator's Checklist, Maintenance Reminders, Clock, Operator Password)
- · Battery Stand
- · Battery Puller
- Cooler/Freezer Construction (Operating Temperatures 0° F to 120° F)
- subZERO Freezer Construction (Operating Temperatures -40° F to 120° F)
- subZERO Freezer with Heated Floor (Operating Temperatures -40° F to 120° F)
- · UL Classification EE
- · Load Wheels with Greasable Bearings
- . Bolt-on Wheel Box for use with 5" x 3.9" and 6" x 3.9" Load Wheels
- Tapered Basearm (N35-45ZR)
- · Poly Siped Drive Tires
- · Poly X-Groove Drive Tires
- · Various Fork Lengths
- · Auto Fork Leveling
- · Fork Height Display
- Fork Camera
- Fork Laser Level Line
- · Shelf Height Selector
- · 48" High Load Backrest Extension
- · Rear Operator Compartment Door
- · Back-up and Motion Alarm
- · Amber Strobe Light
- · Operator Desktop Light
- · Dual Headlight
- · Rear Worklight
- · High Speed Lift and Travel
- · Operator Overhead Fan
- · Load Weight Display
- · Reduced Travel Speed with Carriage Extended
- · RF Terminal Bracket
- RF Handheld Scanner Holder
- Impact Monitor
- · Parts Manual

# STANDARD FEATURES AND OPTIONS

#### CAPACITY

Model N30ZDR: 3,000 lbs, at 24,0" (1,361 kg at 610 mm) load center Model N35ZDR: 3,500 lbs, at 24,0" (1,588 kg at 610 mm) load center

[Shuttle/Transport applications up to 24" Maximum Fork Height] 3,000 lbs, at 24.0" (1,361 kg at 610 mm) load center [Abova 24" Maximum Fork Height]

Model N35ZR: 3,500 lbs. at 24.0" (1,588 kg at 610 mm) load center Model N40ZR: 4,000 lbs. at 24.0" (1,814 kg at 610 mm) load center Model N45ZR: 4,500 lbs. at 24.0" (2,041 kg at 610 mm) load center

#### RATED CAPACITIES ARE FOR TRUCKS EQUIPPED WITH:

- 3-Stage full free-lift (FFL) VISTA<sup>6</sup> mast to maximum fork height of 203" (5156 mm) [N30ZDR, N35ZR and N40ZR] and 212" (5385 mm) [N35ZDR and N45ZR]
- 33.5" (851 mm) wide hook-type carriage, single reach (24.0" extend) with 42.0" (1067 mm) long forks
- 33.5" (851 mm) wide hook-type carriage, double reach (42.0" extend) with 42.0" (1067 mm) long forks
- · 36,0" high load backrest extension (LBE)
- 1.8" x 3.9" (45 mm x 100 mm) 42" (1067 mm) long forks [N40ZR and N45ZR]
- 1.6" x 3.9" (40 mm x 100 mm) 42" (1067 mm) long forks [N35ZR, N30ZDR and N35ZDR]
- 5" x 3.9" poly articulating tandem load wheels [N35ZR, N40ZR and N45ZR]
- 5" x 2.9" poly articulating tandem load wheels [N30ZDR and N35ZDR]

#### MASTS

Models are equipped with a 5.5" 3-stage FFL mast assembly. The mast is constructed with the nested channel VISTA® design with full-face, straight load rollers. Brass side thrust plugs allow easy mast adjustment during periodic maintenance without removal or disassembly of mast.

#### CARRIAGE

The single reach mechanisms provide 24 inches of extension. The double reach mechanisms provide 42 inches of extension. Tilt function provides 4 degrees back tilt and 3 degrees forward till on both carriages, Sideshift is optional on single reach mechanisms. Double reach mechanism is offered with sideshift feature. Integral sideshift allows seven total inches of sideshift and is reduced to 3 inches total with OEC less than 39 inches.

The pantograph (reach mechanism) arms are all made from one-inch thick alloy steel. The inner arm weldments have additional gussel plates for added strength and rigidity. The main pantograph phots use tapered roller bearings which provide a stiffer phot joint. The reach mechanism hoses and wires are installed in a plastic cable carrier. The cable carrier secures wires and hose inside and provides positive routing for both. Sealed connectors are used throughout the mechanism.

#### FORKS

All fork assemblies are all hook type forks.

N40ZR and N45ZR 1.8"x 3.9" x 36", 42", 48" (45 mm x 100 mm x 914 mm, 1067 mm, or 1219 mm)

N35ZR, N30ZDR and N35ZDR 1.6" x 3.9" x 36", 42", 48" (40 mm x 100 mm x 914 mm, 1067 mm, or 1219 mm)

#### **ELECTRICAL SYSTEM**

The state-of-the-art electrical system features a CANbus communication network finking all vehicle systems. The Vehicle System Manager is an electronic module with an integral microprocessor that controls input and output capabilities. The vehicle application software monitors operator inputs and vehicle performance. The software adjusts vehicle performance as needed to improve the operation of the truck.

Hand controls, which are positioned to optimize each stance configuration, include the multi-function handle, steer tiller assembly, dash display, key switch and emergency stop switch. The Fore/Aft Stance multi-function handle utilizes a single pivot axis for traction control, and thumb actuated controls for lift/lower operation. The handle provides simultaneous operation of traction, lift/lower, and reach functions. Additionally, the handle is utilized in rearward travel and provides traction and horn operation.

The Side Stance multi-function control handle assembly offers palm rest and large function buttons. The handle allows simultaneous operation of fraction, lift/lower, and one auxiliary function.

#### STEERING SYSTEM

Electric on-demand power steering
Auto-centering at start-up
Adjustable lock to lock
Adjustable tiller force feedback
Speed sensitive power assist
Electronic adjustment of steer modes for automotive or reverse
steering

#### BATTERY

The steel battery compartment provides secure storage and provides battery access / service from either side of the truck.

Equipped with corrosion resistant, ball bearing battery rollers, battery installation or removal is a quick and easy process.

#### HYDRAULIC SYSTEM

The AC hydraulic system features proportional lifting and lowering. The lift function is controlled by varying lift motor RPM, which maximizes system efficiency. By utilizing the lift motor RPM to control oil flow, pressure drop in the lift hydraulic lines is minimized. The lower function is controlled by a proportional control valve which provides excellent lowering speed control.

The lift motors are highly reliable AC designs featuring a Class F insulation rating. The motors have speed and temperature sensors mounted internally. The temperature sensor protects the motor from werheating. The speed sensor provides feedback to the hoist controller for precise seeed control.

#### DRIVE TRAIN

The AC traction system offers excellent acceleration, deceleration or regenerative braking and seamless, smooth transitions during plugging.

The plugging function is variable according to the handle position. All deceleration is performed by regenerative braking through the vehicle control system. Regenerative braking puts vehicle kinetic energy back into battery, improving efficiency, and reducing wear on brake components. Four operator selectable drive modes are available: rabbit, battery saver, mid, and turtle. Rabbit mode provides maximum acceleration and travel speeds. The battery saver mode provides high travel speeds at reduced acceleration. Mid mode reduces travel speeds and acceleration further. Turtle mode reduces travel speed by 50% and also limits acceleration.

#### BRAKE

A spring applied, electrically released brake is standard on all models.

The brake is pre-adjusted and requires no servicing. Regenerative braking is standard. When the motor RPM reaches 200, the brake is activated.

The brake pedal mounting location is optimized for each stance allowing comfortable operation by a wide range of operators. The switch mounting locations require the operator to be within the operator compartment in normal operator position prior to enabling operation of vehicle traction and hoist systems.

#### **OPERATOR COMPARTMENT**

Two operator compartments are offered, Fore/Aft Stance and Side Stance. The operator's Drive Rite Design Intent compartment is ergonomically designed to provide operators with excellent visibility, efficiency and productivity.

Operator controls are positioned for optimum productivity and comfort on both Fore/All Stance and Side Stance with standard adjustable stop tiller.

Low 9.6 inch step height, combined with a wide entrance opening into the operator compartment, provides comfortable entry and exit from the truck.

Compartments have room for the operator to vary their stances and include a floating floor plate design with an ergonomically shaped floor mat for excellent ride comfort and reduced body fatigue.

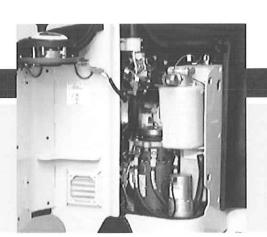
Both the brake and operator sensing switch are mounted below the floor mat, providing unobstructed entry and exit from the truck.

Operator compartments are fully padded for comfort and as a thermal insulator from drive compartment heat.

The Side Stance compartment provides a large backrest pad with integral lumbar and armrest support with optional vertical adjustment for a wide range of operator heights.

Doors are intended to protect the operator from objects that may enter the operator's compartment but they may also slow the operator's egress in emergency situations. A review of the forkilft's intended environment should be conducted before selecting a door as optional equipment.







#### It's not just about the lift trucks.

Any company worth its weight knows success has just as much to do with the support before and after the sale as the sale itself. We pride ourselves on being more than just a lift truck manufacturer. Through our Dealer Network, we're also fleet managers, parts suppliers, capital procurement specialists and trainers. You'll find that when it comes to service, we do it all.

#### **Hyster Fleet Services**

As much as we'd like for your entire fleet to be Hyster, we know that's not always the case. But just because you also operate other brands doesn't mean we can't manage your lift truck maintenance and replacement plan. We can analyze your current fleet or provide summary of your fleet history and a cost-effective proposal for replacement and scheduled maintenance of all your vehicles. Once this initial review is complete, we'll continue to monitor your fleet to ensure it's performing optimally.

#### UNISOURCE™ Parts Program

In addition to providing fleet management for a variety of brands, we can also serve as your source of parts for all your lift trucks. With the Hyster UNISOURCE parts and service program, we offer approximately 2 million part number crosses for most brands of materials handling and other in-plant mobile equipment. UNISOURCE also has remanufactured parts that provide the same quality and guarantee but at a lower price. And we can deliver parts to you in less than 24 hours, any day of the week. How's that for convenience?

#### **Rental Products**

At Hyster Company, we're always looking for ways to help you keep your productivity up. Through the Hyster Dealer Network, you can access rental equipment for the times when leasing or buying isn't a practical option. Your local Hyster Dealer has access to over 14,000 units that are available for shortor long-term rental. Whether you need one truck to substitute for a vehicle that's being serviced or several lift trucks to accommodate seasonal changes in your business, we'll help you maintain output in a cost-effective manner.

#### **Hyster Capital**

We know that financing new additions to your fleet can sometimes be challenging. That's why your Hyster Dealer has a long list of ways for you to fund your purchase. We are skilled in arranging solutions for special financing requirements, taking the difficulties out of buying the equipment you need. Whether you purchase or lease a new or used lift truck, Hyster Capital offers better service and competitive rates, ensuring you receive the value you deserve.

#### Special Products Engineering Department (SPED)

In a perfect world, every application could be handled with a standard lift truck. However, in the real world, different materials require different handling. That's why Hyster Company's Special Products Engineering Department works with you to customize\* your lift trucks. From strobe lights to specially made forks, SPED can provide you with the tools you require to get the job done right.

\* May be subject to an additional charge. Contact your local authorized Hyster Dealer for more information.

#### **Automated Warehouse Solutions**

As society's technological capabilities advance, we strive to find practical applications. One of our most recent innovations in that pursuit is our development of automated warehouse solutions. We can help you determine if your operation would benefit from this type of system, which improves inventory accuracy, warehouse productivity and safety records, as it reduces maintenance and overtime.

#### **Operator and Service Training**

Hyster Company recognizes that proper training is a key element of a profitable company. That's why your local authorized Hyster Dealer offers a training program for your lift truck operators as well as those who maintain your vehicles. Proper education in running and servicing lift trucks cuts down on the number of repairs and risk of injuries due to accidents while increasing productivity. All of our trainers are professionals with experience in materials handling.











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Hyster Company P.O. Box 7006 Greenville, North Carolina 27835-7006 Part No. N35-45ZR/N30-35ZDR BTG 7/2007 Litho in U.S.A.

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## **N35ZR HIGHLIFT SHEETS**



# CAPACITY IS IN POUNDS @ 24 INCH LOAD CENTER EQUIPPED WITH 42" FORKS & SINGLE REACH CARRIAGE RATINGS ARE PROVIDED FOR BOTH STANDARD CARRIAGE AND WITH INTEGRAL SIDESHIFTER

36 Volt

14.5" Battery Compartment

Minimum Battery Weight - 1500 LBS.

			CAPACIT	Y@MFH	LIFT HEIGHT WITH MAX CAPACITY LOAD				
O.E.C.	OALH	MFH	w/o SS	INTEGRAL SS	w/o	SS	INTEGRAL S	IDESHIFTER	
	0,12,1		LOAD	LOAD	LIFT	LOAD	LIFT	LOAD	
				LOAD	CENTERED	HEIGHT	LOAD	HEIGHT	CENTERED
	87.0	191.0	3500	3500	191.0	3500	191.0	3500	
1	91.0	203.0	3500	3500	203.0	3500	203.0	3500	
1	95.0	212.0	3500	3500	212.0	3500	212.0	3500	
34"	101.0	227.0	3500	3500	227.0	3500	227.0	3500	
	107.0	242.0	3500	3400	242.0	3500	240.0	3500	
1	110.0	251.0	3250	3150	242.0	3500	240.0	3500	
	119.0	272.0	2650	2600	241.0	3500	240.0	3500	
	87.0	191.0	3500	3500	191.0	3500	191.0	3500	
	91.0	203.0	3500	3500	203.0	3500	203.0	3500	
	95.0	212.0	3500	3500	212.0	3500	212.0	3500	
38"	101.0	227.0	3500	3500	227.0	3500	227.0	3500	
	107.0	242.0	3500	3500	242.0	3500	242.0	3500	
	110.0	251.0	3500	3500	251.0	3500	251.0	3500	
	119.0	272.0	3150	3100	261.0	3500	259.0	3500	
	87.0	191.0	3500	3500	191.0	3500	191.0	3500	
	91.0	203.0	3500	3500	203.0	3500	203.0	3500	
	95.0	212.0	3500	3500	212.0	3500	212.0	3500	
41"	101.0	227.0	3500	3500	227.0	3500	227.0	3500	
	107.0	242.0	3500	3500	242.0	3500	242.0	3500	
	110.0	251.0	3500	3500	251.0	3500	251.0	3500	
	119.0	272.0	3500	3400	272.0	3500	262.0	3500	
	87.0	191.0	3500	3500	191.0	3500	191.0	3500	
	91.0	203.0	3500	3500	203.0	3500	203.0	3500	
	95.0	212.0	3500	3500	212.0	3500	212.0	3500	
42"	101.0	227.0	3500	3500	227.0	3500	227.0	3500	
	107.0	242.0	3500	3500	242.0	3500	242.0	3500	
	110.0	251.0	3500	3500	251.0	3500	251.0	3500	
	119.0	272.0	3500	3400	272.0	3500	262.0	3500	

#### NOTES:

Above capacities are with Standard 5" x 3.9" load wheels and basearms.

Capacities are for standard "E" U.L. truck. Contact Applications Engineering for capacity on "EE" U.L. truck. Contact Applications Engineering if you have any questions about the information above, or about a specific truck configuration.



## **N35ZR HIGHLIFT SHEETS**



# CAPACITY IS IN POUNDS @ 24 INCH LOAD CENTER EQUIPPED WITH 42" FORKS & SINGLE REACH CARRIAGE RATINGS ARE PROVIDED FOR BOTH STANDARD CARRIAGE AND WITH INTEGRAL SIDESHIFTER

36 Volt

16.5" Battery Compartment

Minimum Battery Weight - 1700 LBS.

			CAPACIT	Y @ MFH	LIFT HEIGHT WITH MAX CAPACITY LOAD					
O.E.C.	OALH	MFH	w/o SS	INTEGRAL SS	w/o	SS	INTEGRAL S	IDESHIFTER		
15/2/2004/2004	150,050,0		LOAD	LOAD	LIFT	LOAD	LIFT	LOAD		
			LOAD	CENTERED	HEIGHT	LOAD	HEIGHT	CENTERED		
	87.0	191.0	3500	3500	191.0	3500	191.0	3500		
	91.0	203.0	3500	3500	203.0	3500	203.0	3500		
	95.0	212.0	3500	3500	212.0	3500	212.0	3500		
34"	101.0	227.0	3500	3500	227.0	3500	227.0	3500		
	107.0	242.0	3500	3500	242.0	3500	242.0	3500		
	110.0	251.0	3350	3300	246.0	3500	244.0	3500		
	119.0	272.0	2800	2750	245.0	3500	245.0	3500		
ĺ	87.0	191.0	3500	3500	191.0	3500	191.0	3500		
	91.0	203.0	3500	3500	203.0	3500	203.0	3500		
	95.0	212.0	3500	3500	212.0	3500	212.0	3500		
38"	101.0	227.0	3500	3500	227.0	3500	227.0	3500		
	107.0	242.0	3500	3500	242.0	3500	242.0	3500		
	110.0	251.0	3500	3500	251.0	3500	251.0	3500		
	119.0	272.0	3300	3250	265.0	3500	263.0	3500		
	87.0	191.0	3500	3500	191.0	3500	191.0	3500		
	91.0	203.0	3500	3500	203.0	3500	203.0	3500		
	95.0	212.0	3500	3500	212.0	3500	212.0	3500		
41"	101.0	227.0	3500	3500	227.0	3500	227.0	3500		
	107.0	242.0	3500	3500	242.0	3500	242.0	3500		
	110.0	251.0	3500	3500	251.0	3500	251.0	3500		
	119.0	272.0	3500	3400	272.0	3500	262.0	3500		
	87.0	191.0	3500	3500	191.0	3500	191.0	3500		
1	91.0	203.0	3500	3500	203.0	3500	203.0	3500		
	95.0	212.0	3500	3500	212.0	3500	212.0	3500		
42"	101.0	227.0	3500	3500	227.0	3500	227.0	3500		
	107.0	242.0	3500	3500	242.0	3500	242.0	3500		
	110.0	251.0	3500	3500	251.0	3500	251.0	3500		
	119.0	272.0	3500	3400	272.0	3500	262.0	3500		

#### NOTES:

Above capacities are with Standard 5" x 3.9" load wheels and basearms..

Capacities are for standard "E" U.L. truck. Contact Applications Engineering for capacity on "EE" U.L. truck. Contact Applications Engineering if you have any questions about the information above, or about a specific truck configuration.