



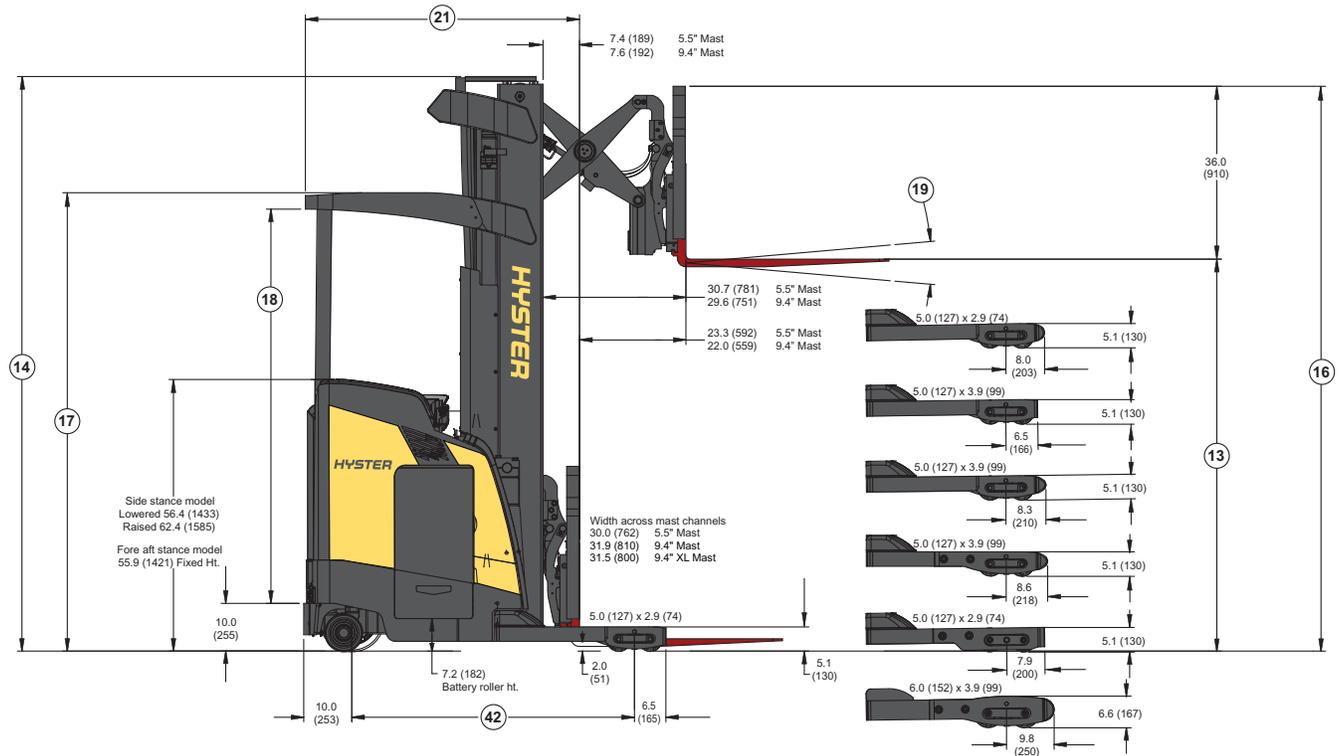
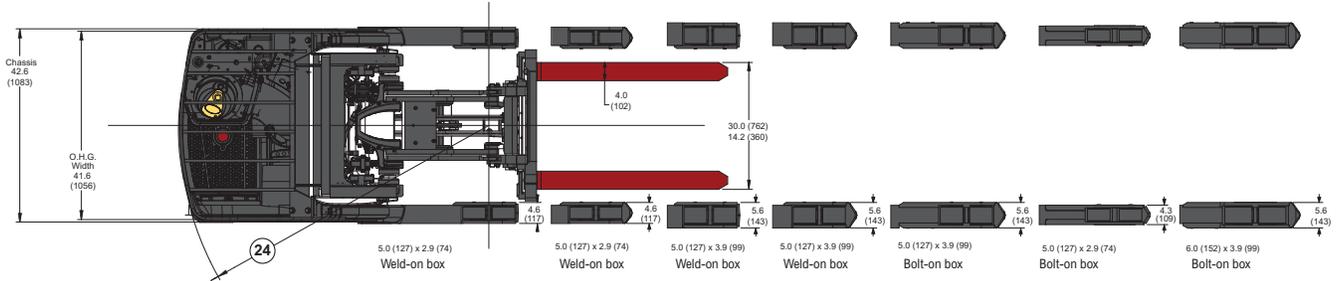
# N35-45ZR3 AND N30-35ZDR3

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**NARROW AISLE REACH TRUCK**  
**PRODUCT TECHNICAL GUIDE**

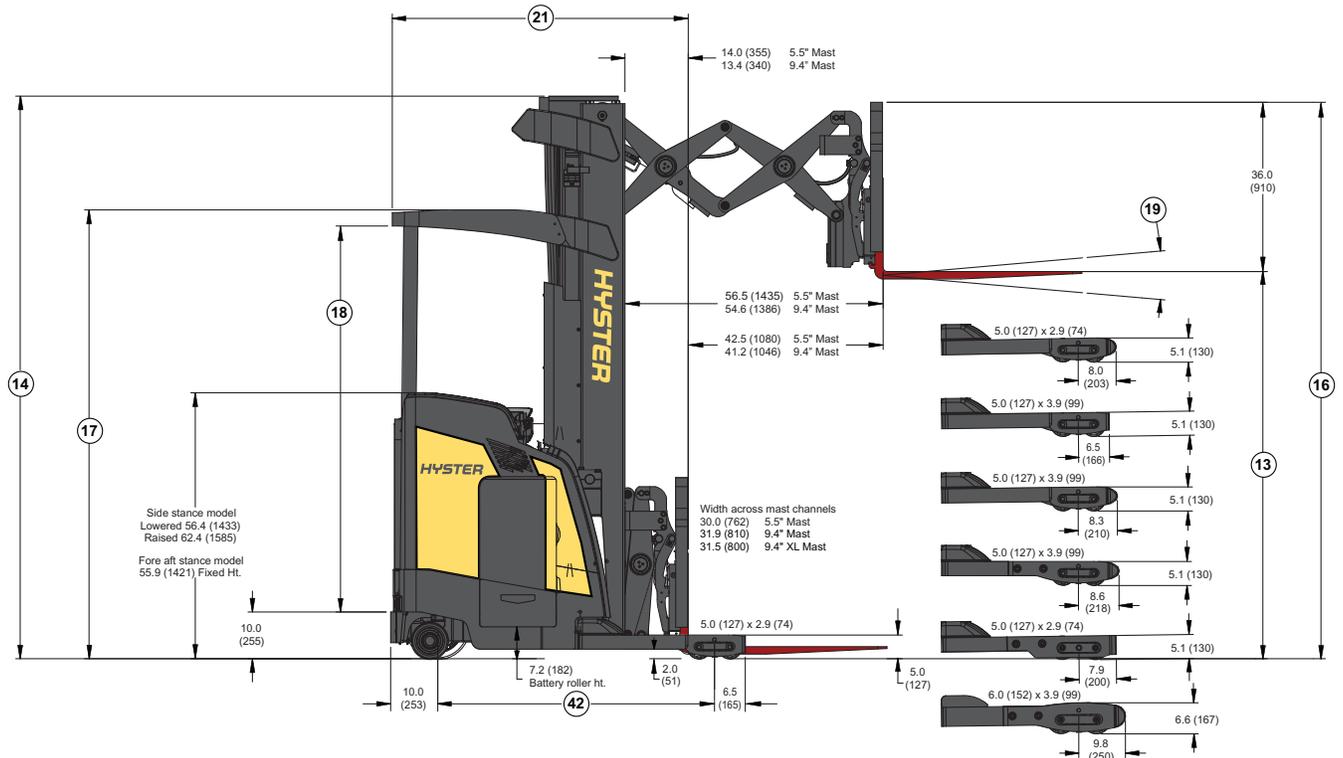
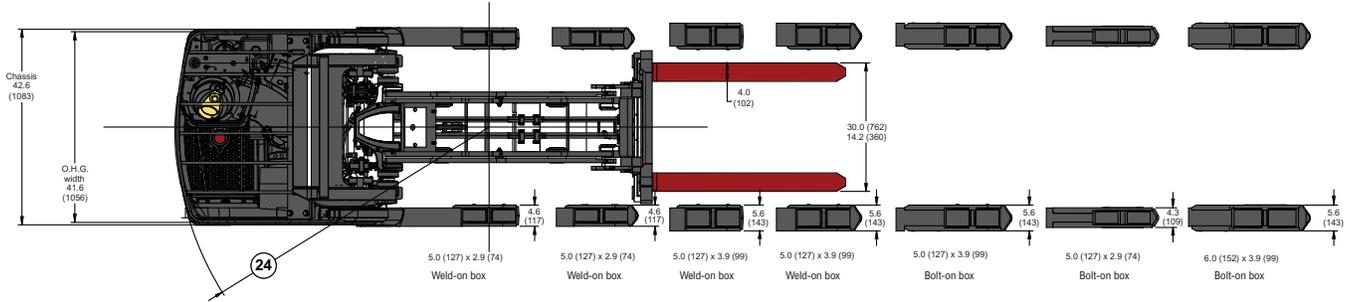


# N35-45ZR3 DIMENSIONS



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

# N30-35ZDR3 DIMENSIONS



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

# SPECIFICATIONS

		Hyster												
		N35ZR3		N40ZR3		N30ZDR3			N45ZR3		N35ZDR3			
GENERAL	1	Manufacturer name	Hyster											
	2	Model	N35ZR3		N40ZR3		N30ZDR3			N45ZR3		N35ZDR3		
	3	Wheel base designation <sup>1</sup>	SWB		SWB		LWB	SWB	LWB	SWB	SWB		LWB	SWB
	4	Rated capacity	lb (kg)	3500 (1588)		4000 (1814)		3000 (1361)			4500 (2041)		3500 (1588)	
	5	Load center, distance	in (mm)	24 (610)										
	6	Power type - electric, diesel, LPG	Electric - 36V											
	7	Operator type	Stand											
	8	Tire type - load/caster/drive	Poly/poly/poly											
	9	Wheels, number load/drive (x=driven)	4/2 (1x)											
WT.	10	Truck weight, without battery (approximate)	lb	5400		5400		5650			5930		6190	
	12	Axle loading with assembly retracted (front/rear) <sup>2</sup>	lb	6874 / 4375		7459 / 4290		6409 / 4589			8546 / 4228		7578 / 4458	
DIMENSIONS	13	Height, standard lift (TOF)	in (mm)	See mast table										
	14	Height, standard mast lowered (OALH)	in (mm)	See mast table										
	15	Height, freelif (TOF)	in (mm)	See mast table										
	16	Height, standard mast extended w/LBR	in (mm)	See mast table										
	17	Height, top of OHG	in (mm)	See mast table										
	18	Height, operator clearance	in (mm)	See mast table										
	19	Mast tilt angle, forward/back	degrees	3/4										
	20	Forks, standard (length x width x thickness)	in	1.60 x 3.9 x 42		1.80 x 3.9 x 42		1.60 x 3.9 x 42			1.80 x 3.9 x 42		1.60 x 3.9 x 42	
	21	Head length to face of forks - all battery compartments <sup>3</sup>	in (mm)	See mast table										
	22	Basearm OEC	in	34" - 49" (1" increments)										
	23	Battery compartment size, 14.25" - (LxWxH)		39.0 x 14.25 x 31.5		39.0 x 14.25 x 31.5		39.0 x 14.25 x 31.5			N/A		N/A	
		Battery compartment size, 16.25" - (LxWxH)	in	39.0 x 16.25 x 31.5		39.0 x 16.25 x 31.5		39.0 x 16.25 x 31.5			39.0 x 16.25 x 31.5		39.0 x 16.25 x 31.5	
		Battery compartment size, 18.25" - (LxWxH)	in	N/A		N/A		N/A			39.0 x 18.25 x 31.5		39.0 x 18.25 x 31.5	
		Battery compartment size, 18.25" - (LxWxH)	in	N/A		N/A		N/A			39.0 x 18.25 x 31.5		39.0 x 18.25 x 31.5	
		Battery compartment size, 21.25" - (LxWxH)	in	N/A		N/A		N/A			39.0 x 21.25 x 31.5		39.0 x 21.25 x 31.5	
24	Turning radius - min. Outside, 14.25" batt. compartment	in	65.6	N/A	65.6	N/A	70.6	N/A	N/A	N/A	N/A		N/A	
	Turning radius - min. Outside, 16.25" batt. compartment	in	67.6	N/A	67.6	68.5	72.6	N/A	72.6	68.5	68.5		72.6	68.5
	Turning radius - min. Outside, 18.25" batt. compartment	in	N/A		N/A		N/A			70.5		74.6	70.5	
	Turning radius - min. Outside, 21.25" batt. compartment	in	N/A		N/A		N/A			73.5		77.6	73.5	
	25	Aisle width - zero clearance - right angle stack	See right angle stack table											
26	Stability - comply with ANSI	YES												
PERFORMANCE	Travel speed		Standard		Optional		Standard		Optional		Standard		Optional	
	28	Rearward (chassis first) - empty/RL	mph	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	8.0/6.5 <sup>†</sup>	7.5/6.5 <sup>†</sup>	8.0/6.5 <sup>†</sup>	
	29	Forward (forks first) - empty/RL	mph	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	N/A	7.5/6.5 <sup>†</sup>	8.0/6.5 <sup>†</sup>	7.5/6.5 <sup>†</sup>	8.0/6.5 <sup>†</sup>	
	Lift speed <sup>4</sup>		Standard		Optional		Standard		Optional		Standard		Optional	
	31	Empty	ft/min	130	N/A	130	150	130	150	130	150	175	130	150
	31a	1,000 lb	ft/min	110	N/A	110	133	110	133	110	133	150	135	150
	32	2,000 lb	ft/min	95	N/A	95	115	95	115	95	115	130	120	130
	33	3,000 lb	ft/min	78	N/A	78	100	78	100	78	100	115	103	115
	34	3,500 lb	ft/min	75	N/A	75	87	N/A	N/A	87	105	95	95	
	35	4,000 lb	ft/min	N/A	N/A	70	83	N/A	N/A	83	100	N/A	N/A	
	36	4,500 lb	ft/min	N/A	N/A	N/A	N/A	N/A	N/A	80	95	N/A	N/A	
	37	Lowering speeds, empty <sup>4</sup>	ft/min	110	N/A	110	140	110	140	140	160 <sup>††</sup>	140	160 <sup>††</sup>	
	38	Lowering speeds, RL <sup>4</sup>	ft/min	110	N/A	110	140	110	140	140	160 <sup>††</sup>	140	160 <sup>††</sup>	
	39	Size - front load wheels, standard	5 x 3.9		5 x 3.9		5 x 2.9			5 x 3.9		5 x 2.9		
	41	Size, standard - drive tire/dual casters	13.5 x 5.5 / 7.9 x 2.2											
WHEELS & TIRES	42	Wheelbase - 14.25" battery compartment	in	55.6	N/A	55.6	N/A	60.6	N/A	N/A	N/A	N/A		
		Wheelbase - 16.25" battery compartment	in	57.6	N/A	57.6	58.5	62.6	N/A	62.6	58.5	58.5	62.6	58.5
		Wheelbase - 18.25" battery compartment	in	N/A		N/A		N/A			60.5		64.6	60.5
		Wheelbase - 21.25" battery compartment	in	N/A		N/A		N/A			63.5		67.6	63.5
		43	Brakes, service/parking (method of control)	Foot/auto										
44	Brakes, service/parking (method of operation)	Regen/spring apply (electric release)												
ELECTRIC	45	Battery type	Lead acid   Thin Plate Pure Lead <sup>5</sup>   Lithium-ion <sup>5</sup>											
	46	Traction motor rating (60 minute rating)	hp (kw)	8.9 (6.6)										
	47	Hoist motor rating (5 minute rating)	hp (kw)	29.2 (21.8)										
	48	Traction motor control method	Transistor											
	49	Hoist motor control method	Transistor											
	50	Number of speeds	Infinitely variable											

<sup>1</sup> Short or long wheelbase is for double reach only. LWB for double reach masts 332" and below

<sup>2</sup> Static with rated load and max. wt. battery

<sup>3</sup> Includes integral sideshift, subtract 1" for without sideshift

<sup>4</sup> Lift and lower speeds reduced for UL<sup>††</sup> EE

<sup>5</sup> Optional with Hyster Power Collect<sup>™</sup>

<sup>†</sup> Travel speed will be reduced to 7.5 / 6.5 mph (empty/rated load) with MFHs above 341" in the forks trailing direction. Travel speed will be reduced to 7.0 / 6.0 mph (empty/rated load) with MFHs above 341" in the forks leading direction. Rated load (RL) travel speeds start at 1,500 lb and greater

<sup>††</sup> High speed lowering and high speed lift are separate options

SWB = Short Wheel Base; LWB = Long Wheel Base

**CERTIFICATION:** Hyster lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture.

**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 Company Dealer.

# MAST DIMENSIONS

## N35-40ZR3 & N30ZDR3 MAST DIMENSIONS (5.5" STANDARD)

Overall lowered height	Max. fork height (TOF)	Free-lift (TOF)	Overall height (mast extended) highest point w/36" LBR	Overhead guard height to top	Operator Clearance	Head length (length to face of forks)			
						14.25"		16.25"	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	Single reach	Double reach	Single reach	Double reach
<b>3-STAGE FULL FREE-LIFT (FFL) VISTA™ MAST</b>									
87 (2,210)	191 (4,851)	48 (1,219)	230 (5,842)	87 (2,212)	74.3 (1,887)	52.16	57.83	54.21	59.88
91 (2,311)	203 (5,156)	52 (1,321)	242 (6,147)	91 (2,314)	78.3 (1,989)	52.16	57.83	54.21	59.88
95 (2,413)	212 (5,385)	56 (1,422)	251 (6,375)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
101 (2,565)	227 (5,766)	62 (1,575)	266 (6,756)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
107 (2,718)	242 (6,147)	68 (1,727)	281 (7,137)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
110 (2,794)	251 (6,375)	71 (1,803)	290 (7,366)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
119 (3,023)	272 (6,909)	80 (2,032)	311 (7,899)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
125 (3,175)	287 (7,290)	86 (2,184)	325 (8,255)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88
131 (3,327)	302 (7,671)	92 (2,337)	340 (8,636)	95 (2,416)	82.3 (2,090)	52.16	57.83	54.21	59.88

## N40-45ZR3 & N30-35ZDR3 MAST DIMENSIONS (9.4" PREMIUM)

Overall lowered ht.	Max. fork height (TOF)	Free-lift (TOF)	Overall height (mast extended) highest point w/36" LBR	Overhead guard height to top	Operator clearance	Head length (length to face of forks)					
						16.25"		18.25"		21.25"	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	Single reach	Double reach	Single reach	Double reach	Single reach	Double reach
<b>3-STAGE FULL FREE-LIFT (FFL) VISTA™ MAST</b>											
95 (2,413)	210 (5,334)	59 (1,509)	246 (6,248)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
107 (2,718)	241 (6,121)	71 (1,814)	277 (7,036)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
110 (2,794)	250 (6,350)	74 (1,890)	286 (7,264)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
119 (3,023)	272 (6,909)	83 (2,118)	308 (7,823)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
125 (3,175)	287 (7,290)	89 (2,271)	323 (8,204)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
131 (3,327)	302 (7,671)	95 (2,423)	338 (8,585)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
140 (3,556)	321 (8,153)	104 (2,652)	357 (9,068)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
143 (3,632)	332 (8,433)	107 (2,728)	368 (9,347)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
149 (3,785)	341 (8,661)	113 (2,880)	377 (9,576)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91

## N40-45ZR3 & N30-35ZDR3 MAST DIMENSIONS (9.4" XL PREMIUM)\*

Overall lowered ht.	Max. fork height (TOF)	Free-lift (TOF)	Overall height (mast extended) highest point w/36" LBR	Overhead guard height to top	Operator clearance	Head length (length to face of forks)					
						16.25"		18.25"		21.25"	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	Single reach	Double reach	Single reach	Double reach	Single reach	Double reach
<b>3-STAGE FULL FREE-LIFT (FFL) VISTA™ MAST</b>											
157 (3,988)	368 (9,347)	121 (3,084)	404 (10,262)	95 (2,416)	82.3 (2,090)	57.20	62.91	59.17	64.92	62.12	67.91
170 (4,318)	401 (10,185)	134 (3,414)	437 (11,100)	95 (2,416)	82.3 (2,090)	-	-	59.17	64.92	62.12	67.91
179 (4,547)	422 (10,719)	143 (3,642)	458 (11,633)	95 (2,416)	82.3 (2,090)	-	-	59.17	64.92	62.12	67.91
188 (4,775)	444 (11,278)	152 (3,871)	480 (12,192)	95 (2,416)	82.3 (2,090)	-	-	59.17	64.92	62.12	67.91

\* N40ZR3 and N30ZDR3 only available in 16.25" battery compartment  
N45ZR3 and N35ZDR3 available in 16.25", 18.25" and 21.25" battery compartments

# SPECIFICATIONS

N35/40ZR3 (5.5" MAST)					
14.25" battery compartment and 42" ID					
3-stage - 4" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	85	85	85	85
	40"	87	87	86	86
	44"	92	91	91	90
48"	96	96	95	95	

Subtract 1" for without sideshift  
Add 2" for 16.25" battery compartment

N40ZR3 (9.4" MAST)					
16.25" battery compartment and 42" ID					
3-stage - 4" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	88	88	88	88
	40"	92	92	91	91
	44"	97	96	96	96
48"	101	101	100	100	

Subtract 1" for without sideshift

N45ZR3 (9.4" MAST)					
16.25" battery compartment and 42" ID					
3-stage - 4" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	88	88	88	88
	40"	92	92	91	91
	44"	97	96	96	96
48"	101	101	100	100	

Subtract 1" for without sideshift  
Add 2" for 18.25" battery compartment  
Add 5" for 21.25" battery compartment

N30ZDR3 (5.5" MAST)					
14.25" Battery compartment and 42" ID					
3-stage - 6" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	87	86	86	86
	40"	91	90	90	89
	44"	96	95	95	94
48"	100	100	99	99	

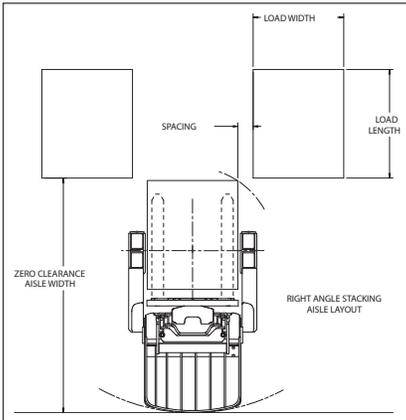
Sideshift is standard on double reach  
Add 2" for 16.25" battery compartment

N30ZDR3 (9.4" MAST)					
16.25" Battery compartment and 42" ID					
3-stage - 6" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	92	91	91	90
	40"	96	96	95	95
	44"	101	100	100	99
48"	105	105	104	104	

Sideshift is standard on double reach

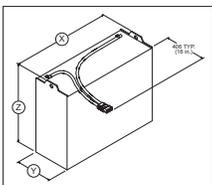
N35ZDR3 (9.4" MAST)					
16.25" Battery compartment and 42" ID					
3-stage - 6" between loads					
Pallet length (inches)	Pallet width (inches)				
		36"	40"	44"	48"
	36"	92	91	91	90
	40"	96	96	95	95
	44"	101	100	100	99
48"	105	105	104	104	

Sideshift is standard on double reach  
Add 2" for 18.25" battery compartment  
Add 5" for 21.25" battery compartment



Note: These are "Zero Clearance" aisles and require an additional 6" to 12" to be added to provide for easier maneuvering.

BATTERY AND COMPARTMENT SPECIFICATIONS																						
Battery compartment size	Battery voltage	N35ZR3	N40ZR3	N30ZDR3	N45ZR3	N35ZDR3	Maximum 6 hr rate		Battery compartment dimensions						Battery dimensions						Min. batt. wt.	Max. batt. wt.
									"X" Max.		"Y" Max.		"Z" Max.		"X" Max.		"Y" Max.		"Z" Max.			
							ah	kwh	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)
14.25"	36	X	X	X	N/A	N/A	775	27.2	39.0	990	14.25	362	31.5	800	38.8	985	14	356	31	788	1600 (726)	2100 (953)
16.25"	36	X	X	X	X	X	930	32.6	39.0	990	16.25	413	31.5	800	38.8	985	16	406	31	788	1850 (839)	2350(1066)
18.25"	36	N/A	N/A	N/A	X	X	1085	38.1	39.0	990	18.25	464	31.5	800	38.8	985	18	457	31	788	2200 (998)	2800 (1270)
21.25"	36	N/A	N/A	N/A	X	X	1240	43.5	39.0	990	21.25	540	31.5	800	38.8	985	21	533	31	788	2500 (1134)	3100 (1406)



Battery connector: 36v - gray; position "B", lead length 16"

Manufacturers standard cable size not to exceed 4/0 AWG

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.

# FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
36-volt battery (includes 350 amp gray battery connector)	x	
AC traction, lift/lower and steering	x	
Transistor controller with regenerative braking	x	
Electric power steering	x	
4 independent fully programmable performance modes - programmable traction speed and acceleration	x	
Load transport position		x
Fork camera (requires 9.4" mast)		x
Laser level line		x
High speed lift (N40ZR3, N30ZDR3)		x
High speed lift/travel (N45ZR3, N35ZDR3)		x
High speed lower (requires high speed lift/travel)		x
Shelf height selector		x
Return to set tilt		x
Return to center sideshifting		x
Load weight display		x
Fork height display		x
Speed sensitive steering		x
DRIVE	STD	OPT
5" x 3.9" poly articulating tandem load wheels - high load compound (std on N35-45ZR3)	x	
5" x 2.9" poly articulating tandem load wheels - high load compound (std on N30-35ZDR3)	x	
Dual articulating polyurethane caster wheels	x	
XL-AC™ drive tire – 13.5" x 5.5"	x	
Steered caster		x
Various sizes of load wheels		x
Various drive tire compounds		x
Tapered load wheel boxes		x
Bolt-on load wheel boxes		x
LIFT	STD	OPT
91"/203"/52"–(5.5") 3-stage FFL mast (N35-40ZR3, N30ZDR3)	x	
95"/210"/59"– (9.4") 3-stage FFL mast (N45ZR3, N35ZDR3)	x	
Tilting carriage (3° fwd, 4° back)	x	
Single reach mast with 33.5" wide Class II with integral sideshift (hook type carriage) (std on N35-45ZR3)	x	
Double reach mast with 33.5" wide Class II with integral sideshift (hook type carriage) (std on N30-35ZDR3)	x	
36" high load backrest extension	x	
Lift limit		x
48" high load backrest extension		x
Single reach mast without integral sideshift for standard 33.5" wide carriage		x
(9.4") 3-stage full free lift mast (N40ZR3, N30ZDR3)	x	
Various mast heights for 5.5" and 9.4" masts	x	
HANDLING	STD	OPT
Forks: 1.8" x 3.9" (45 mm x 100 mm) 42"(1067 mm) – Class II, hook type (std on N40-45ZR3)	x	
Forks: 1.6" x 3.9" (40 mm x 100 mm) 42" (1067 mm) – Class II, hook type (std on N30-35ZDR3 and N35ZR3)	x	
Fully proportional lift/lower control	x	
Control handle with simultaneous hydraulic functions	x	
Slack chain detection	x	
Reduced travel speed with carriage extended		x
Various fork lengths		x
ERGONOMICS	STD	OPT
Operator sensing system	x	
Cushion ride floor	x	
Low profile anti-fatigue floormat	x	

ERGONOMICS (continued)	STD	OPT
Adjustable armrest and backrest (sidestance operator controls only)	x	
Steer tiller position adjustment	x	
Low step height	x	
Padded operator compartment	x	
5" smart display: color touchscreen	x	
Intelligent Ride™ floor (full suspension floor)		x
7" smart display: color touchscreen		x
Operator overhead fan		x
Dual LED headlights		x
Rear LED worklight		x
Operator LED desktop light		x
OPERATION	STD	OPT
Standard construction	x	
UL Classification E	x	
Sidestance operator controls	x	
Key switch start	x	
Wire mesh mast guard	x	
Automotive steering	x	
2 USB ports	x	
Static strap	x	
Electronic horn	x	
Sealed battery rollers	x	
Operator's overhead guard	x	
Rear post operator protection	x	
Power disconnect button	x	
Forward stance with aft operator control handle		x
Reverse steering		x
Clear mast guard		x
Keyless start		x
Rotary joystick (standard for cooler/freezer)		x
Battery gate interlock		x
Cooler/freezer construction (0°F to 120°F) with rubber floormat		x
SubZero freezer construction (operating temperatures -40°F to 120°F) with rubber floormat		x
SubZero freezer with heated floor and control handle (operating temperatures -40°F to 120°F) with anti-slip floorplate covering		x
UL Classification EE		x
Open End Clearance (OEC) - 34" to 49" in 1" Increments		x
Audible back-up and motion alarms		x
Visible amber strobe light - continuous activated		x
Impact monitor		x
Blue LED spotlights		x
RF terminal bracket		x
RF handheld scanner holder		x
12-volt DC auxiliary power supply		x
Wire mesh on top overhead guard		x
Rear operator compartment door (SPED)		x
Hyster Tracker™		x
Hyster Reaction™		x
SUPPLEMENTAL	STD	OPT
12 month/unlimited hours full truck warranty	x	
36 month/6,000 hour powertrain warranty	x	
Lifetime frame warranty	x	
Operating manual	x	
ENERGY SYSTEM	STD	OPT
Lead acid	x	
Hyster Power Collect™		x

<sup>1</sup> 5.5" mast sideshift includes 7" travel (3.5" each side). Sideshift travel will be reduced to 3" total (1.5" each side) when Outtrigger ID is less than 39".  
9.4" mast sideshift includes 8" travel (4" each side). Sideshift travel will be reduced to 4" total (2" each side) when Outtrigger ID is less than 39".

<sup>2</sup> 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. Available only through Hyster® SPED Engineering.



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