

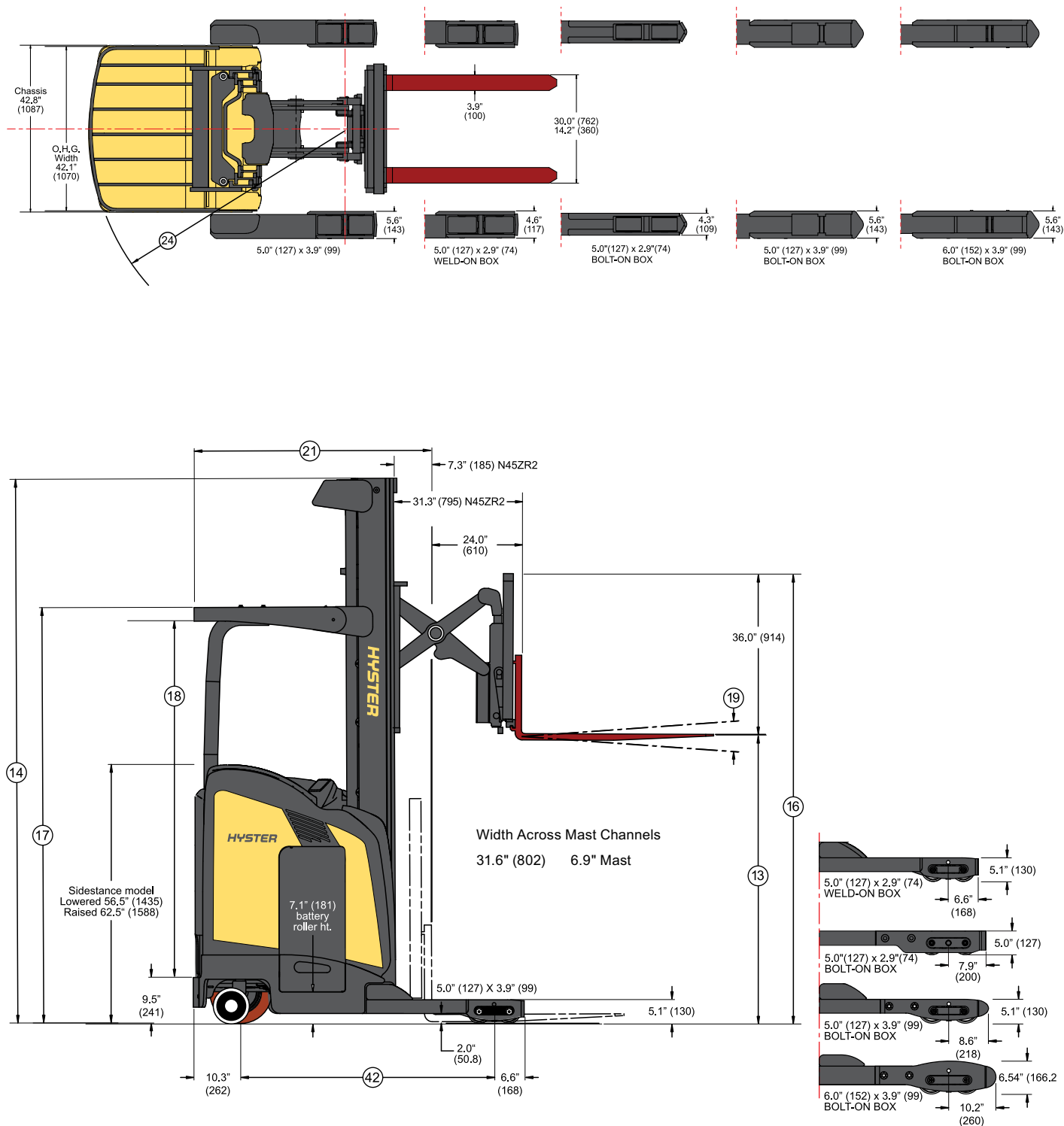


N45ZR2/ N35ZDR2

NARROW AISLE REACH TRUCK PRODUCT TECHNICAL GUIDE



N45ZR2/N35ZDR2 DIMENSIONS



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



N45ZR2 SPECIFICATIONS

N45ZR2 SPECIFICATIONS			
GENERAL	1	Manufacturer's name	Hyster
	2	Model	N45ZR2
	3	Wheel base designation ¹	SWB
	4	Rated capacity	lb (kg) 4500 (2041)
	5	Load center, distance	in (mm) 24 (610)
	6	Power type, electric, diesel, LPG	Electric - 36 volt
	7	Operator type	Stand
	8	Tire type, load/caster/drive	Poly / Poly / NDIITHANE®
	9	Wheels, number load/drive (x = driven)	4 / 2 (1x)
WT.	10	Truck weight, without battery (approximate)	lb. 5400
	12	Axle loading with assembly retracted (front / rear) ²	lb. 8400 / 3800
DIMENSIONS	13	Height, standard lift (TOF)	in (mm)
	14	Height, standard mast lowered (OALH)	in (mm)
	15	Height, freelif (TOF)	in (mm)
	16	Height, standard mast extended w/LBR	in (mm)
	17	Height, top of OHG	in (mm)
	18	Height, operator clearance	in (mm)
	19	Mast tilt angle, forward/back	degrees 3° / 4°
	20	Forks, standard (length x width x thickness)	in 1.80 x 3.9 x 42
	21	Head length to face of forks - all battery compartments ³	in See mast table
	22	Basearm OEC	in 34"- 49" (1" increments)
	23	Battery compartment size, 18.5" - (LxWxH)	in 39.0 x 18.5 x 31.5
	23	Battery compartment size, 21.5" - (LxWxH)	in 39.0 x 21.5 x 31.5
	24	Turning radius - min. Outside, 18.5" batt. compartment	in 69.90
PERFORMANCE	24	Turning radius - min. Outside, 21.5" batt. compartment	in 72.90
	25	Aisle width - zero clearance - Right Angle Stack	Right Angle Stack
	26	Stability - comply with ANSI	Yes
	27	Travel speed ⁴	Standard
	28	Rearward (chassis first) - empty/RL	mph 7.4/6.5
	29	Forward (forks first) - empty/RL	mph 7.4/5.8
	30	Lift Speed	Standard
	31	Empty	ft/min 130
	32	2000 lb	ft/min 98
	33	3000 lb	ft/min 90
	34	3500 lb	ft/min 84
	35	4000 lb	ft/min 78
	36	4500 lb	ft/min 74
	37	Lowering speeds, empty	ft/min 105
	38	Lowering speeds, RL	ft/min 105
WHEELS & TIRES	39	Size - front load wheels, standard	5 x 3.9
	41	Size, standard - drive tire/dual casters	13.5 x 5.5 7.9 x 2.2
	42	Wheelbase - 18.5" battery compartment	in 59.37
	42	Wheelbase - 21.5" battery compartment	in 62.36
	43	Brakes, service/parking (method of control)	Foot
	44	Brakes, service/parking (method of operation)	Spring Apply (Electric Release)
ELECTRIC	45	Battery type	Lead Acid
	46	Traction motor rating (60 minute rating)	hp (kw) 8.7 (6.5)
	47	Hoist motor rating (5 minute rating)	hp (kw) 20.7 (15.4)
	48	Traction motor control method	Transistor
	49	Hoist motor control method	Transistor
	50	Number of speeds	Infinitely Variable

¹ Short or Long Wheelbase is determined by Mast Height, LWB for 332" Max Fork Height and Below

² Static with Rated Load and Max. Wt. Battery

³ Includes integral sideshift, subtract 1" for without sideshift

⁴ Travel speed will be reduced to 6.8 / 5.8 mph (empty / rated load) with MFHs above 341" in the Rearward and Forward direction. 7.4 mph travel speed is limited to Load up to 2500 lbs.

N35ZDR2 SPECIFICATIONS				
GENERAL	1	Manufacturer's name	Hyster	
	2	Model	N35ZDR2	
	3	Wheel base designation ¹	LWB	SWB
	4	Rated capacity	3500 (1588)	
	5	Load center, distance	24 (610)	
	6	Power type, electric, diesel, LPG	Electric - 36 volt	
	7	Operator type	Stand	
	8	Tire type, load/caster/drive	Poly / Poly / NDIITHANE®	
	9	Wheels, number load/drive (x = driven)	4 / 2 (1x)	
WT.	10	Truck weight, without battery (approximate)	lb.	5650
	12	Axle loading with assembly retracted (front / rear) ²	lb.	6700 / 4250
DIMENSIONS	13	Height, standard lift (TOF)	in (mm)	See mast table
	14	Height, standard mast lowered (OALH)	in (mm)	
	15	Height, freelif (TOF)	in (mm)	
	16	Height, standard mast extended w/LBR	in (mm)	
	17	Height, top of OHG	in (mm)	
	18	Height, operator clearance	in (mm)	
	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
	21	Head length to face of forks - all battery compartments ³	in	See mast table
	22	Basearm OEC	in	34"- 49" (1" increments)
	23	Battery compartment size, 18.5" - (LxWxH)	in	39.0 x 18.5 x 31.5
	23	Battery compartment size, 21.5" - (LxWxH)	in	39.0 x 21.5 x 31.5
PERFORMANCE	24	Turning radius - min. Outside, 18.5" batt. compartment	in	74.90
	24	Turning radius - min. Outside, 21.5" batt. compartment	in	77.90
	25	Aisle width - zero clearance - Right Angle Stack		Right Angle Stack
	26	Stability - comply with ANSI		Yes
	27	Travel speed ⁴		Standard
	28	Rearward (chassis first) - empty/RL	mph	7.4/6.8
	29	Forward (forks first) - empty/RL	mph	7.4/6.5
	30	Lift Speed		Standard
	31	Empty	ft/min	130
	32	2000 lb	ft/min	93
	33	3000 lb	ft/min	85
	34	3500 lb	ft/min	79
	35	4000 lb	ft/min	N/A
	36	4500 lb	ft/min	N/A
	37	Lowering speeds, empty	ft/min	105
	38	Lowering speeds, RL	ft/min	105
WHEELS & TIRES	39	Size - front load wheels, standard		5 x 2.9
	41	Size, standard - drive tire/dual casters		13.5 x 5.5
	42	Wheelbase - 18.5" battery compartment	in	64.37
	42	Wheelbase - 21.5" battery compartment	in	67.36
	43	Brakes, service/parking (method of control)		Foot
ELECTRIC	44	Brakes, service/parking (method of operation)		Spring Apply (Electric Release)
	45	Battery type		Lead Acid
	46	Traction motor rating (60 minute rating)	hp (kw)	8.7 (6.5)
	47	Hoist motor rating (5 minute rating)	hp (kw)	20.7 (15.4)
	48	Traction motor control method		Transistor
	49	Hoist motor control method		Transistor
	50	Number of speeds		Infinitely Variable

¹ Short or Long Wheelbase is determined by Mast Height, LWB for 332" Max Fork Height and Below

² Static with Rated Load and Max. Wt. Battery

³ Includes integral sideshift, subtract 1" for without sideshift

⁴ Travel speed will be reduced to 6.8 / 5.8 mph (empty / rated load) with MFHs above 341" in the Rearward and Forward direction. 7.4 mph travel speed is limited to Load up to 2500 lbs.

N45ZR2/N35ZDR2 SPECIFICATIONS

N45ZR2/N35ZDR2 MAST DIMENSIONS (6.9" MAST)

Max. Fork Height (TOF)	Overall Lowered Ht.	Overall Height (Mast Extended) Highest Point w/36" LBR	Free-Lift (TOF)	Overhead Guard Height to Top	Operator Clearance	Head Length (Length to Face of Forks)			
						18.5" B.C.		21.5" B.C.	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	Single Reach	Double Reach	Single Reach	Double Reach
3-STAGE FULL FREE-LIFT (FFL) VISTA™ MAST									
272 (6909)	119 (3023)	311 (7899)	80 (2032)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
287 (7290)	125 (3175)	326 (8280)	86 (2184)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
302 (7671)	131 (3327)	341 (8661)	92 (2337)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
320 (8128)	138 (3505)	359 (9119)	99 (2515)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
332 (8433)	143 (3632)	371 (9423)	104 (2642)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
341 (8661)	146 (3708)	380 (9652)	107 (2718)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
368 (9347)	157 (3988)	407 (10338)	118 (2997)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
401 (10185)	170 (4318)	440 (11176)	131 (3327)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50
422 (10719)	179 (4547)	461 (11709)	140 (3556)	91 (2311)	79.8 (2027)	59.60	65.50	62.59	68.50

N45ZR2/N35ZDR2 BATTERY SPECIFICATIONS

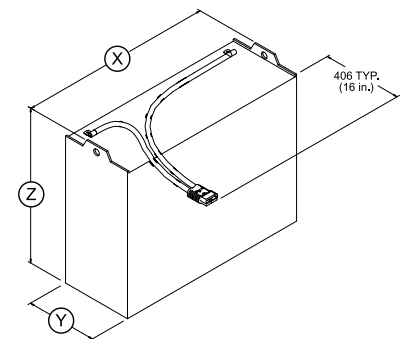
Battery Compartment Size	Battery Voltage	Maximum 6 Hr Rate		Battery Dimensions						Minimum Batt. Wt.	Maximum Batt. Wt.
				"X" Max.		"Y" Max.		"Z" Max.			
in (mm)		AH	KWH	in	(mm)	in	(mm)	in	(mm)	lb (kg)	lb (kg)
18.5 (469.9)	36	1085	38.1	38.8	(985)	18.25	(464)	31.0	(788)	2200 (998)	2800 (1270)
21.5 (546.1)	36	1240	43.5	38.8	(985)	21.25	(540)	31.0	(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.

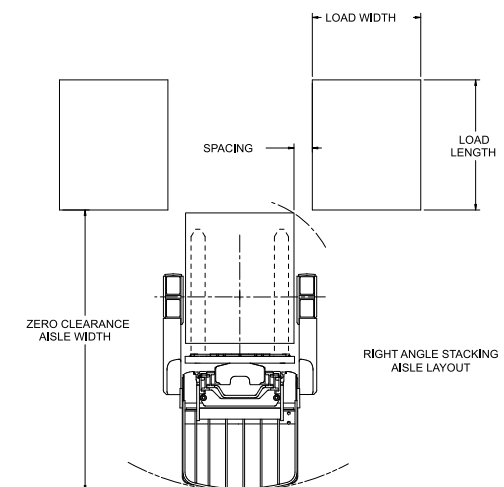


N45ZR2/N35ZDR2 RIGHT ANGLE AISLE STACKING

N45ZR2					N35ZDR2				
Truck with 18.5" Battery Compartment and 42" ID					Truck with 18.5" battery compartment and 42" ID				
3 Stage - 4" Between Loads					3 Stage - 6" Between Loads				
Pallet Length (inches)	Pallet Width (inches)				Pallet Length (inches)	Pallet Width (inches)			
	36"	40"	44"	48"		36"	40"	44"	48"
	36"	90	90	89	89	36"	94	93	93
	40"	95	94	94	93	40"	98	98	97
	44"	99	99	98	98	44"	103	102	101
	48"	104	103	103	102	48"	107	107	106

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

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



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


FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
36-volt (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, lift and lower speeds	x	
Power lowering (unloaded) and regenerative lowering (loaded)	x	
High speed lift	x	
Load transport position		x
Laser line fork positioning		x
Return to set tilt		x
Shelf height selector		x
Fork camera		x
Load weight display		x
Fork height display		x
DRIVE	STD	OPT
Park brake (spring applied, electrically released)	x	
Polyurethane drive tire - 13.5" x 5.5" (standard on N45ZR2, N35ZDR2)	x	
5" x 3.9" Poly articulating tandem load wheels - high load compound (standard on N45ZR2)	x	
5" x 2.9" Poly articulating tandem load wheels - high load compound (standard on N35ZDR2)	x	
Dual articulating polyurethane non-steered caster wheels	x	
Bolt-on wheel box for use with 5" x 3.9", 6" x 3.9", and 5" x 2.9" load wheels		x
Electric - steered caster		x
Various sizes of load wheels - sealed or greaseable		x
Various drive tire compounds and types		x
Tapered load wheel boxes		x
LIFT	STD	OPT
119" / 272" - 3 Stage full free lift 6.9" mast (standard on N45ZR2, N35ZDR2)	x	
Single reach mast with 33.5" wide Class II with integral sideshift (hook type carriage) (standard on N45ZR2)	x	
Double reach mast with 33.5" wide Class II with integral sideshift (hook type carriage) (standard on N35ZDR2)	x	
Tilting carriage (3° fwd, 4° back)	x	
36" High load backrest extension	x	
Lift limit - with or without override		x
48" High load backrest extension		x
Single reach without integral sideshift for standard 33.5" wide carriage		x
Various mast heights for 6.9" mast		x
HANDLING	STD	OPT
Forks: 1.6" x 3.9" x 42" (40 mm x 100 mm) - Class II hook type (standard on N35ZDR2)	x	
Forks: 1.8" x 3.9" x 42" (45 mm x 100 mm) - Class II hook type (standard on N45ZR2)	x	
Fully proportional multi-function control handle	x	
Control handle with simultaneous hydraulic functions	x	
Various fork lengths		x
Reduced travel speed with carriage extended		x
ERGONOMICS	STD	OPT
Low profile anti-fatigue floormat	x	
Adjustable armrest and backrest (sidestance operator controls only)	x	
Fixed steer tiller position	x	
Low step height	x	
Padded operator compartment	x	
Adjustable steer tiller position		x

ERGONOMICS (CONTINUED)	STD	OPT
Operator overhead fan		x
Dual LED headlights		x
Rear LED worklight		x
Operator LED desktop light		x
OPERATION	STD	OPT
UL Classification 'E'	x	
Sidestance operator controls compartment	x	
Key switch start	x	
Wire mesh mast guard	x	
Automotive steering	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	
Reverse steering		x
UL Classification 'EE'		x
Keyless start		x
Outrigger 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
RF terminal bracket		x
RF handheld scanner holder		x
12-volt DC auxiliary power supply		x
Battery gate interlock (SPED)		x
Clear mast guard (SPED)		x
Rear operator compartment door (SPED)		x
Wire mesh on top overhead guard (SPED)		x
Hyster Tracker™ (SPED)		x
Hyster Reaction™ (SPED)		x
SUPPLEMENTAL	STD	OPT
12 Months / no hour limit full truck warranty, 36 months / 6,000 hours powertrain warranty, lifetime frame warranty; please see full warranty statement for additional details.	x	
Operating manual	x	
Parts manual		x
CONSTRUCTION	STD	OPT
Standard construction	x	
Cooler/freezer construction (0°F to 120°F) with anti-slip floorplate covering		x
SubZero freezer construction (operating temperatures -40°F to 120°F) with anti-slip floorplate covering		x
SubZero freezer with heated floor and control handle (operating temperatures -40°F to 120°F) with anti-slip floorplate covering		x
ENERGY SYSTEM	STD	OPT
Lead Acid Battery	x	
Power Collect™ (SPED)		x
Fuel Cell (SPED)		x



Hyster Company
P.O. Box 7006, Greenville, North Carolina 27835-7006

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