



NR-EB/NDR-EB

Reach Trucks

3,000 · 3,500 · 4,000 · 4,500 lbs

Yale® NR/NDR-EB reach trucks combine the latest technology with improved performance to effectively meet the demands of high density warehousing.

Operator's compartment features a new movement forward in ergonomic design. The NR/NDR-EB offers two (2) operator compartments, the side-stance and the fore/aft stance compartments. The fully padded operator's compartment provides back and hip support. The noticeable non-pedal large floor has room for movement and is equipped with an Operator Presence Switch.

The side stance operator compartment has a large backrest pad with integral lumbar and armrest support. The multifunction control handle assembly is adjustable 3 inches in and out, and 6 inches vertically with the standard adjustable backrest support. The control handle is ergonomically designed with an integral palm rest, thumb rest, and can be comfortably operated. The handle provides conveniently located controls for forward/reverse, lift/lower, proportional reach/retract, tilt, horn and optional sideshift.

The fore/aft stance compartment provides a support point for the operator when facing in either direction. The multifunction handle assembly is a single axis design and is mounted on the side pad assembly. The single axis design provides additional dynamic support point for operator when facing forward. The optional Aft Travel Control Handle with Laser Operator Detection provides speed & direction control when the operator is facing aft.

The performance parameters utilized by the Next Generation of reach trucks offers a high degree of customization for specific applications, optimizing unit and operator efficiency to match application requirements.

NEW Yale® iSi Technology™ offers simple on-board parameter adjustment, diagnostics and interface for operators, supervisors and service personnel.

CANbus Technology streamlines digital communications between truck systems through one main master controller. Dash display and traction controller are controlled via the CANbus network. The CANbus controller reduces wiring and electrical connections, resulting in improved reliability and improved visibility through the mast.

AC Motors include traction and main hydraulics. AC motor technology delivers high motor efficiency, braking torques, and powerful acceleration. A speed sensor built

into the motor provides feedback to the control system, allowing motor speed and direction to be continuously monitored. A thermal protection system controls the power delivered to the motor. In addition, increased motor maintenance interval is achieved through the brushless design of the auxiliary hydraulics and steer motors.

Drive unit uses a double gear reduction drive train ..with a sealed permanently lubricated steer bearing, greatly reducing the ingress of debris increasing bearing life. **NEW** sealed for life drive unit, requiring no oil changes and a service free input joint. **NEW** serviceable wheel seal.

Yale Hi-Vis™ mast is available in triplex configurations for various heights. The trunnion mounted mast design provides for good load distribution and allows for easy service. The hydraulic cylinder incorporates a chrome plated rod for corrosion resistance. The cylinders are easily serviced and provide integral cushioning for excellent mast channel staging. Velocity fuses are provided to control lowering in the event of hydraulic failure. A manual lowering valve is standard.

Brake is spring applied and electrically released. Mounted above the drive motor and controlled by the Vehicle System Manager (VSM), the assembly provides emergency stopping and parking brake for the truck.

Vehicle System Manager (VSM) is an electronic module that monitors all truck functions. The VSM is the CANbus network master node and includes the vehicle application software. Built with input/output capability, the system monitors inputs from the operator, vehicle performance and simultaneously adjusting the vehicle operation for the best performance.

Dash display features a graphic LCD Multifunction Smart Display with Back lighting, bar Graphic Battery Discharge Indicator and Lift Interrupt, Hour Meter; Truck, Traction and Hoist Pump, Performance Mode selection and Indication with lift interrupt, LED Status Indicators with symbols, Programmable Performance Modes, User passwords and Operator logs with history, Steer Wheel Angle Graphic Indication, Truck Inspection Check List, Truck Speed Indication in MPH or KPH.

CAPACITY				
NR	—	3500	4000	4500
NDR	3000	3500*	—	—

Four operator selectable driver modes are available; Modes 4, 3, 2, and 1. Mode 4 provides maximum acceleration and travel speeds. Mode 3 provides high travel speeds at reduced acceleration. Mode 2 reduces travel speeds and acceleration further. Mode 1 reduces travel speed by 40% and also limits acceleration. All 4 modes are completely programmable by supervisor or technician.

Console covers are thermally formed. The covers are easy to remove, providing access to main electrical components.

Reach mechanism includes strong rear frame weldment and inner arm weldment cross-members. The open carriage design and optimal hose routing provide good visibility. The proportional reach/retract cylinders are fully cushioned for smooth operation. Non-filled points have grease fittings for lubrication. Dual tilt cylinders are used to evenly distribute the load.

Hydraulic functions of the truck are managed by the VSM. The system employs an electro-hydraulic system which provides low noise, low heat and speed adjustment. Lift speed is adjusted by varying motor speed rather than opening a proportional valve. Lowering function is provided via

(continued on back)



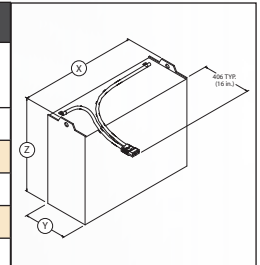
Mast table

NR035-040EB & NDR030EB - TRIPLEX HI-VIS™ MAST (5.5" STANDARD)															
Overall Lowered Height		Fork Height Top of Forks		Free Lift		Overall Height (Mast Extended) Highest Point with 36" High LBR		Overhead Guard Height to Top		Operator Clearance		Head Length (Length to Face of Forks)			
												14.5" B.C.		16.5" B.C.	
in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	Single Reach	Double Reach	Single Reach	Double Reach
87	2210	191	4851	48	1219	230	5842	86.5	2197	75.3	1913	52.12	58.02	54.12	60.02
91	2311	203	5156	52	1321	242	6147	90.5	2299	79.3	2014	52.12	58.02	54.12	60.02
95	2413	212	5385	56	1422	251	6375	94.5	2400	83.3	2116	52.12	58.02	54.12	60.02
101	2565	227	5766	62	1575	266	6756	91	2311	79.8	2027	52.12	58.02	54.12	60.02
107	2718	242	6147	68	1727	281	7137	91	2311	79.8	2027	52.12	58.02	54.12	60.02
110	2794	251	6375	71	1803	290	7366	91	2311	79.8	2027	52.12	58.02	54.12	60.02
119	3023	272	6909	80	2032	311	7899	91	2311	79.8	2027	52.12	58.02	54.12	60.02

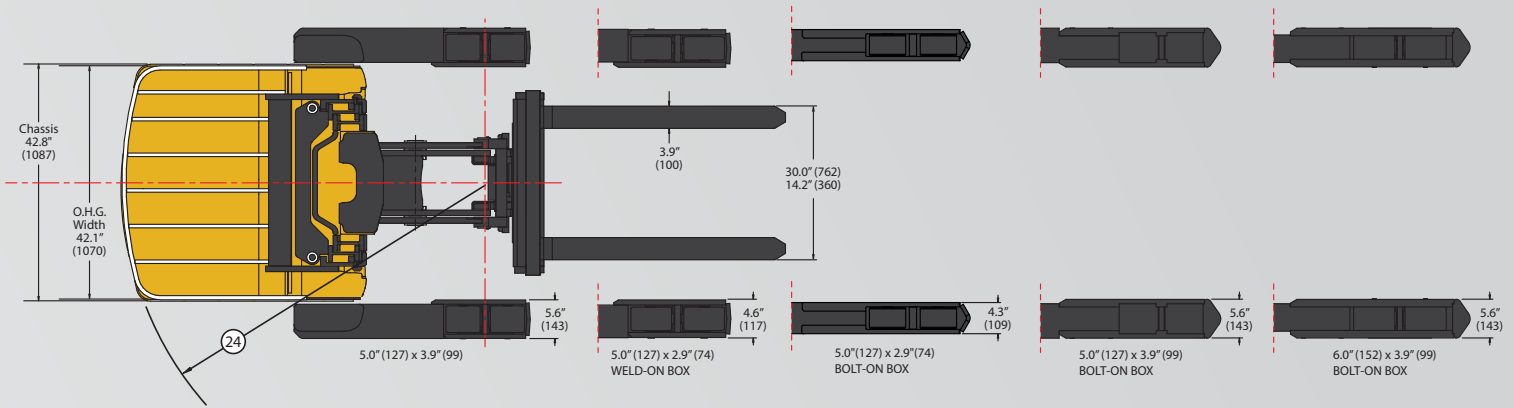
NR045EB & NDR035EB - TRIPLEX HI-VIS™ MAST (5.5" HEAVY DUTY)																			
Overall Lowered Height		Fork Height Top of Forks		Free Lift		Overall Height (Mast Extended) Highest Point w/36" High LBR		Overhead Guard Height to Top		Operator Clearance		Head Length (Length to Face of Forks)							
												14.5" B.C.		16.5" B.C.		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	Single Reach	Double Reach		
95	2413	212	5385	56	1422	251	6375	94.5	2400	83.3	2116	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
101	2565	224	5690	62	1575	263	6680	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
107	2718	239	6071	68	1727	278	7061	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
110	2794	245	6223	71	1803	284	7214	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
119	3023	266	6756	80	2032	305	7747	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
125	3175	278	7061	86	2184	317	8052	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38
131	3327	293	7442	92	2337	332	8433	91	2311	79.8	2027	55.47	61.38	57.47	63.38	59.47	65.38	62.47	68.38

NR045EB & NDR035EB - TRIPLEX HI-VIS™ MAST (6.9")																	
Overall Lowered Height		Fork Height Top of Forks		Free Lift		Overall Height (Mast Extended) Highest Point w/36" High LBR		Overhead Guard Height to Top		Operator Clearance		Head Length (Length to Face of Forks)					
												16.5" B.C.		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	Single Reach	Double Reach
119	3023	272	6909	80	2032	311	7899	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
125	3175	287	7290	86	2184	326	8280	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
131	3327	302	7671	92	2337	341	8661	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
138	3505	320	8128	99	2515	359	9119	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
143	3632	332	8433	104	2642	371	9423	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
146	3708	341	8661	107	2718	380	9652	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
157	3988	368	9347	118	2997	407	10338	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
170	4318	401	10185	131	3327	440	11176	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50
179	4547	422	10719	140	3556	461	11709	91	2311	79.8	2027	57.59	63.50	59.60	65.50	62.59	68.50

BATTERY SPECIFICATIONS									
Battery Compartment Size	Battery Voltage	Capacity 6 Hour Rate		Battery Dimensions			Min Batt Weight	Max Batt Weight	
				"X" Max.	"Y" Max.	"Z" Max.			
		amp hr	kw hr	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)	



Battery Connector: 36V - Gray; Position "B" 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.

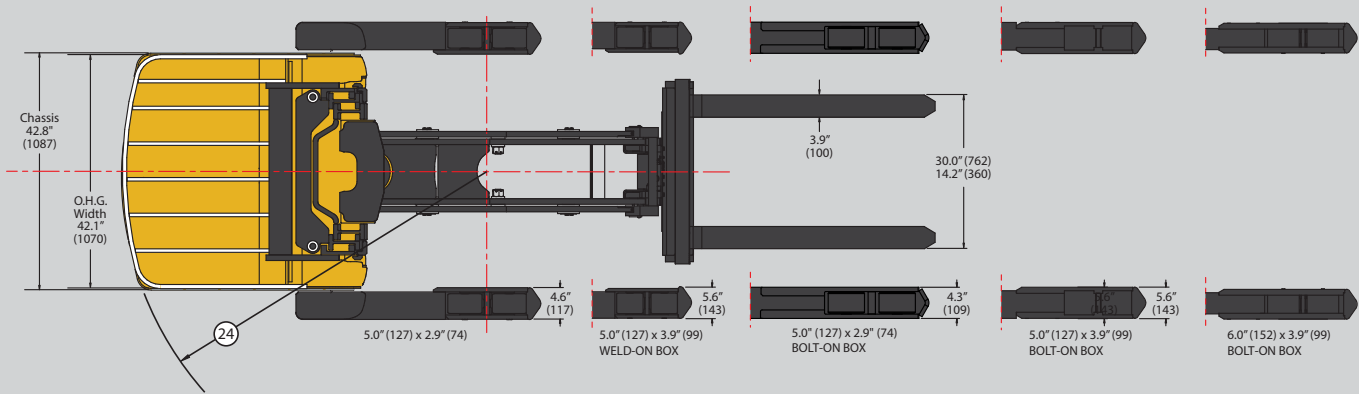


GENERAL		WT.		DIMENSIONS		PERFORMANCE		WHEELS & TIRES		ELECTRIC			
1	Manufacturer	Manufacturer's Name		Yale									
2	Model Designation	Manufacturer's Model Designation		NR035EB									
3	Model Configuration	Wheel Base Designation ²		SWB									
4	Rated Capacity	Load Capacity	lbs.	3500 (1588)									
5	Load Center	Distance	in.	24 (610)									
6	Power type	Electric, Diesel, LPG		Electric - 36 volt									
7	Operator type	Pedestrian, Stand, Seated Rider		Stand									
8	Tire type	Load / Caster / Drive		Poly / Poly / Poly									
9	Wheels (x = driven)	Load / Drive		4 / 2 (1x)									
10	Truck Weight	without Battery (approximate)		lbs.	4950								
11	Axle Loading - Front / Rear with Assembly Retracted	Static with Rated Load and Max. Wt. Battery		lbs.	Front	Rear							
12					6750	3800							
13	Mast Triplex Hi-Vis	Standard Lift (Max Fork Height)		in. (mm)									
14		Standard Mast Lowered (OALH)		in. (mm)									
15		Freelift (Max Fork Height)		in. (mm)							See Mast Table		
16		Standard Mast Extended w/ LBR		in. (mm)									
17		Top of OHG		in. (mm)									
18		Operator Clearance		in. (mm)									
19	Carriage	Tilt Angle (forward / back)		degrees	3° Fwd / 4° Back								
20	Forks	Standard (length x width x thickness)		in.	1.60 x 3.9 x 42								
21	Headlength to Face of Forks ¹	All - Battery Compartments		in.	See Mast Table								
22	Outrigger ID			in.	34" - 49" (1" increments)								
23	Battery Compartment Size - Length x Width x Height	14.5" Battery Compartment		in.	39.0 x 14.5 x 31.5								
		16.5" Battery Compartment		in.	39.0 x 16.5 x 31.5								
		18.5" Battery Compartment		in.	N/A								
		21.5" Battery Compartment		in.	N/A								
		21.5" Battery Compartment		in.	N/A								
24	Turning Radius - Minimum Outside ¹	14.5" Battery Compartment		in.	65.74								
		16.5" Battery Compartment		in.	67.74								
		18.5" Battery Compartment		in.	N/A								
		21.5" Battery Compartment		in.	N/A								
25	Aisle Width - Zero Clearance - Right Angle Stack ¹			see chart	See "RAS" Table								
26	Stability - Comply with ANSI					Yes							
27	Travel Speed	Rearward (chasis first) - Empty / Rated Load		mph	Standard	Optional							
		Forward (forks first) - Empty / Rated Load		mph	7.4/6.5	N/A							
					Standard	Optional							
		Empty		ft/min	100	N/A							
		2000		ft/min	75	N/A							
		3000		ft/min	69	N/A							
		3500		ft/min	64	N/A							
		4000		ft/min	N/A	N/A							
		4500		ft/min	N/A	N/A							
		Rated Load		ft/min	95	N/A							
28	Lowering Speeds - Standard / Optional				95	N/A							
29	Size - front load wheels (tandem articulating)	Standard				5 x 3.9							
30	Size - drive tire / dual casters	Standard				Drive	Caster						
						12.0 x 5.5	7.9 x 2.2						
31	Wheel Base	14.5" Battery Compartment		in.	55.35								
		16.5" Battery Compartment		in.	57.36								
		18.5" Battery Compartment		in.	N/A								
		21.5" Battery Compartment		in.	N/A								
32	Brakes, service / parking	Method of Control				Foot							
33		Method of Operation				Spring Apply / Electric Release							
34	Battery, type					Lead Acid							
35	Electric Motors	Traction motor rating (60 minute rating)		hp (kw)	7.5 (5.6)								
		Hoist motor rating (5 minute rating)		hp (kw)	14.8 (11.0)								
		Traction motor control method				Transistor							
		Hoist motor control method				Transistor							
		Number of speeds						Infinitely Variable					

¹ Single Reach - add 1" for Sideshift, Double Reach is standard with Sideshift

² Short or Long Wheelbase is determined by Mast Height

³ Travel Speed will be reduced to 6.8 / 5.8 (Empty / Rated Load) with MFHs above 341" in the Rearward and Forward direction.



Yale NR040EB		Yale NDR030EB		Yale NR045EB		Yale NDR035EB		GENERAL
SWB		LWB	SWB	SWB		LWB	SWB	1
4000 (1814)		3000 (1361)		4500 (2041)		3500 (1588)		2
24 (610)		24 (610)		24 (610)		24 (610)		3
Electric - 36 volt		Electric - 36 volt		Electric - 36 volt		Electric - 36 volt		4
Stand		Stand		Stand		Stand		5
Poly / Poly / Poly		Poly / Poly / Poly		Poly / Poly / Vulk		Poly / Poly / Vulk		6
4 / 2 (1x)		4 / 2 (1x)		4 / 2 (1x)		4 / 2 (1x)		7
5000		5250	N/A	5400		5650	N/A	8
Front	Rear	Front	Rear	Front	Rear	Front	Rear	9
7400	3700	6300	4050	8400	3800	6700	4250	10
See Mast Table		See Mast Table		See Mast Table		See Mast Table		11
3° Fwd / 4° Back		3° Fwd / 4° Back		3° Fwd / 4° Back		3° Fwd / 4° Back		12
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		13
See Mast Table		See Mast Table		See Mast Table		See Mast Table		14
34" - 49" (1" increments)		34" - 49" (1" increments)		34" - 49" (1" increments)		34" - 49" (1" increments)		15
39.0 x 14.5 x 31.5		39.0 x 14.5 x 31.5		N/A		N/A		16
39.0 x 16.5 x 31.5		39.0 x 16.5 x 31.5		39.0 x 16.5 x 31.5		39.0 x 16.5 x 31.5		17
N/A		N/A		39.0 x 18.5 x 31.5		39.0 x 18.5 x 31.5		18
N/A		N/A		39.0 x 21.5 x 31.5		39.0 x 21.5 x 31.5		19
65.74		70.74	65.74	N/A		N/A		20
67.74		72.74	67.74	67.90		72.90	67.90	21
N/A		N/A		69.90		74.90	69.90	22
N/A		N/A		72.90		77.90	72.90	23
See "RAS" Table		See "RAS" Table		See "RAS" Table		See "RAS" Table		24
Yes		Yes		Yes		Yes		25
Standard	Optional	Standard	Optional	Standard	Optional	Standard	Optional	26
7.4/6.5	N/A	7.4/6.8	N/A	7.4/6.5 ³	8.0/6.5 ³	7.4/6.8 ³	8.0/6.8 ³	27
7.4/6.0	N/A	7.4/6.8	N/A	7.4/5.8 ³	8.0/5.8 ³	7.4/6.5 ³	8.0/6.5 ³	28
Standard	Optional	Standard	Optional	Standard	Optional	Standard	Optional	29
100	114	100	114	114	130	114	130	30
75	86	71	82	86	98	82	93	31
69	78	65	73	78	90	73	85	32
64	72	N/A	N/A	72	84	70	79	33
60	68	N/A	N/A	68	78	N/A	N/A	34
N/A	N/A	N/A	N/A	65	74	N/A	N/A	35
95	N/A	95	N/A	105	105	105	105	36
95	N/A	95	N/A	105	105	105	105	37
5 x 3.9		5 x 2.9		5 x 3.9		5 x 2.9		38
Drive	Caster	Drive	Caster	Drive	Caster	Drive	Caster	39
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	13.5 x 5.5	7.9 x 2.2	40
55.35		60.35		N/A		N/A		41
57.36		62.36		57.36		62.36		42
N/A		N/A		59.37		64.37		43
N/A		N/A		62.36		67.36		44
Foot		Foot		Foot		Foot		45
Spring Apply / Electric Release		Spring Apply / Electric Release		Spring Apply / Electric Release		Spring Apply / Electric Release		46
Lead Acid		Lead Acid		Lead Acid		Lead Acid		47
7.5 (5.6)		7.5 (5.6)		7.5 (5.6)		7.5 (5.6)		48
14.8 (11.0)	18.0 (13.4)	14.8 (11.0)	18.0 (13.4)	18.0 (13.4)	20.7 (15.4)	18.0 (13.4)	20.7 (15.4)	49
Transistor		Transistor		Transistor		Transistor		50
Transistor		Transistor		Transistor		Transistor		
Infinitely Variable		Infinitely Variable		Infinitely Variable		Infinitely Variable		

regenerative lowering. Efficient design and the use of O-ring face seals have allowed significant reduction of hydraulic fittings reducing potential leak points. The hydraulic fluid reservoir is baffled to prevent foaming and is located away from the operator for heat reduction. A strainer and 10 micron spin-on filter are standard.

Frame features a fixed drive unit mounting with spring loaded caster assembly to compensate for uneven floors. It also incorporates thick plates, strong rear frame, and mast connections for enhanced durability. The frame is available in various battery compartment sizes based on truck capacity. The frame is available in 14.5 inches and 16.5 inches for the 3500 lb. and 4000 lb. trucks. The 16.5, 18.5 and 21.5 inch battery compartments are available for the 4500 lb. models.

All wiring is numbered for easy trouble-shooting and meets the UL 583 requirements. Sealed electrical connectors are used throughout the truck. Electrical connections are provided for convenient field installation of electric options.

Additional features include a bolt-on 36 inch (910 mm) high load backrest extension and 42 inch (1067 mm) long hook type forks as standard. All non-sealed friction points are equipped with grease fittings. The truck is painted gold, parchment, and black.

Options

- Auto Fork Leveling
- Fork Height Display
- Fork Camera
- Shelf Height Selector
- Audible Alarm
 - Reverse Operated
 - Forward and Reverse Operation
 - Forward/Reverse and Lift/Lower Operation
- Visible Alarm
 - Amber Strobe (Continuous operation with Key-on)
 - Amber Strobe (FWD and REV Operation)
- Lights
 - Operator Desktop LED Light (OHG Mounted)
 - Dual Headlight 12 Volt (OHG Mounted)
 - Rear Worklight 12 Volt (OHG Mounted)
- Operator Compartment Rear Door
- Various Fork Lengths
- Various I.D. Outriggers
- Operator Overhead Fan
- Cooler/Freezer and SUBZERO Packages
- Sideshifter (STD on Double Reach)
- Various Load Wheels/Drive Tires
- Steer Caster – Electrically Steered
- Side Stance Adjustable Steering wheel position
- Fore/Aft/Stance w/Adjustable steering wheel position, with or without Aft travel control handle
- Load weight display

Right angle aisle stacking ("RAS" table)

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

NR035/40EB					
Truck with 14.5" Battery Compartment and 42" ID					
Triplex - 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	

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

NR045EB					
Truck with 16.5" Battery Compartment and 42" ID					
Triplex - 4" Between Loads					
Pallet Length (inches)	Pallet Width (inches)				
		36	40	44	48
	36	88	88	87	87
	40	93	92	92	91
	44	97	97	96	96
48	102	101	101	100	

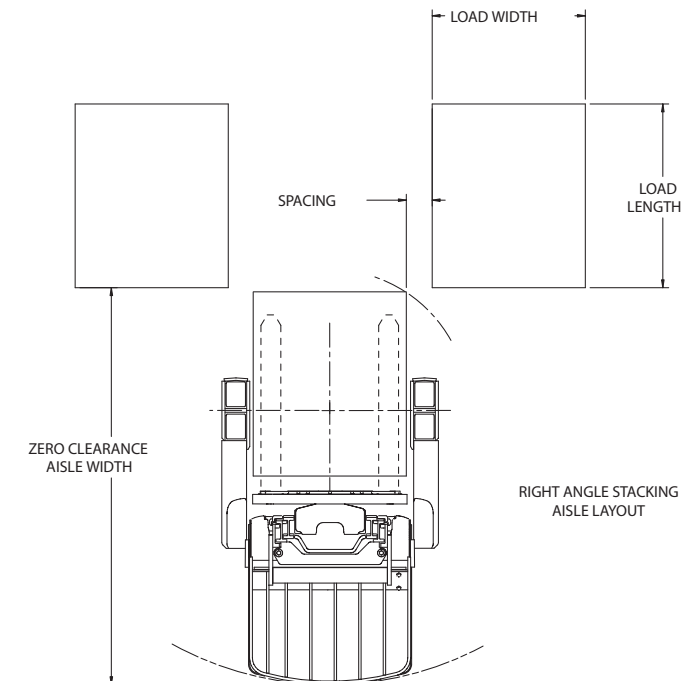
*Add 2" for 18.5" Battery Compartment
Add 5" for 21.5" Battery Compartment
Add 1" for Sideshift*

NDR030EB					
Truck with 14.5" Battery Compartment and 42" ID					
Triplex - 4" Between Loads					
Pallet Length (inches)	Pallet Width (inches)				
		36	40	44	48
	36	90	90	90	90
	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*

NDR035EB					
Truck with 16.5" Battery Compartment and 42" ID					
Triplex - 4" Between Loads					
Pallet Length (inches)	Pallet Width (inches)				
		36	40	44	48
	36	92	91	91	91
	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*



YALE MATERIALS HANDLING CORPORATION
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www.yale.com

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Manufactured in our own ISO 9001 and 14001 Registered Facilities

2449-4 6/2013 All trucks shown with optional equipment.

Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale® Industrial Truck Dealer if any of the information shown is critical to your application. Specifications are subject to change without notice.

This truck meets all applicable mandatory requirements of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc., as to fire and electric shock hazard only for Type E industrial trucks.

The Yale® products included in this document may be covered by US patent 6,684,148 and other patents pending.

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