

NR-DA/NDR-DA Reach Trucks

3,000 • 3,500 • 4,000 lbs

Yale NR/NDR-DA 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-DA 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. Mounted to the armrest pad is the multi-function control assembly. The multi-function control assembly is adjustable 3 inches in and out. The control handle is ergonomically designed with an integral palm rest and can be comfortably operated. The handle provides conveniently located controls for forward/reverse, lift/lower, 2-speed 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 multi-function handle assembly is a new 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.

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 permanently lubricated steer bearing.

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

	CAPACITY		
	NR	—	3500
NDR	3000	—	—

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 Two dash displays are offered with the truck, the standard display and the premium display. The standard display provides status, warning, and fault messages to the operator. The display has input for operator to change drive mode from rabbit through turtle. It also provides setup and diagnostic menus for service technician. Hour meters for truck, traction, hoist, and auxiliary systems are also accessible through the menus. The optional premium display has all the same features as the standard display. In addition, the display provides larger text output, an integrated operator check list and maintenance reminder.

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

(continued on back page)

Truck shown with optional equipment



MAST TABLE

NR035-040DA & NDR030DA - 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)			
												12.5" or 14.5" B.C.	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

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.

NR035/040DA					
Truck with 12.5" or 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	

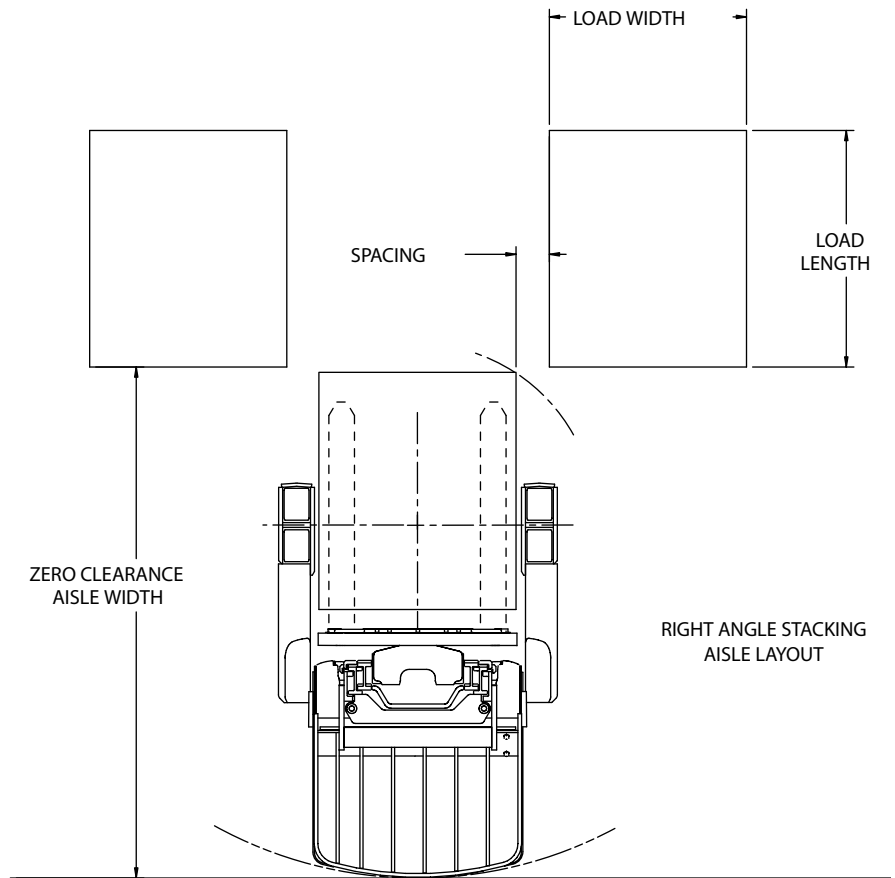
Add 1" for Sideshift
Add 2" for 16.5" Battery Compartment

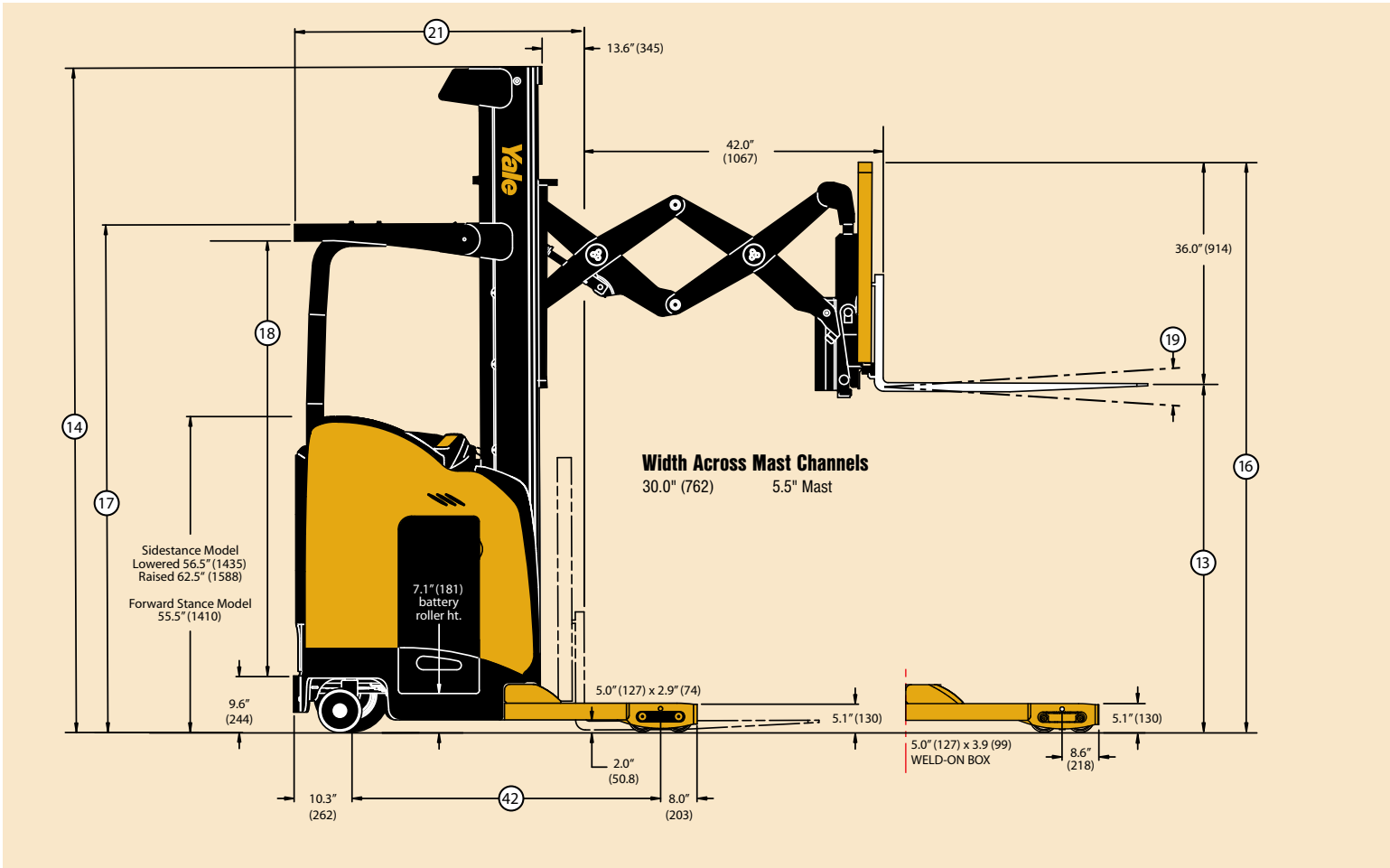
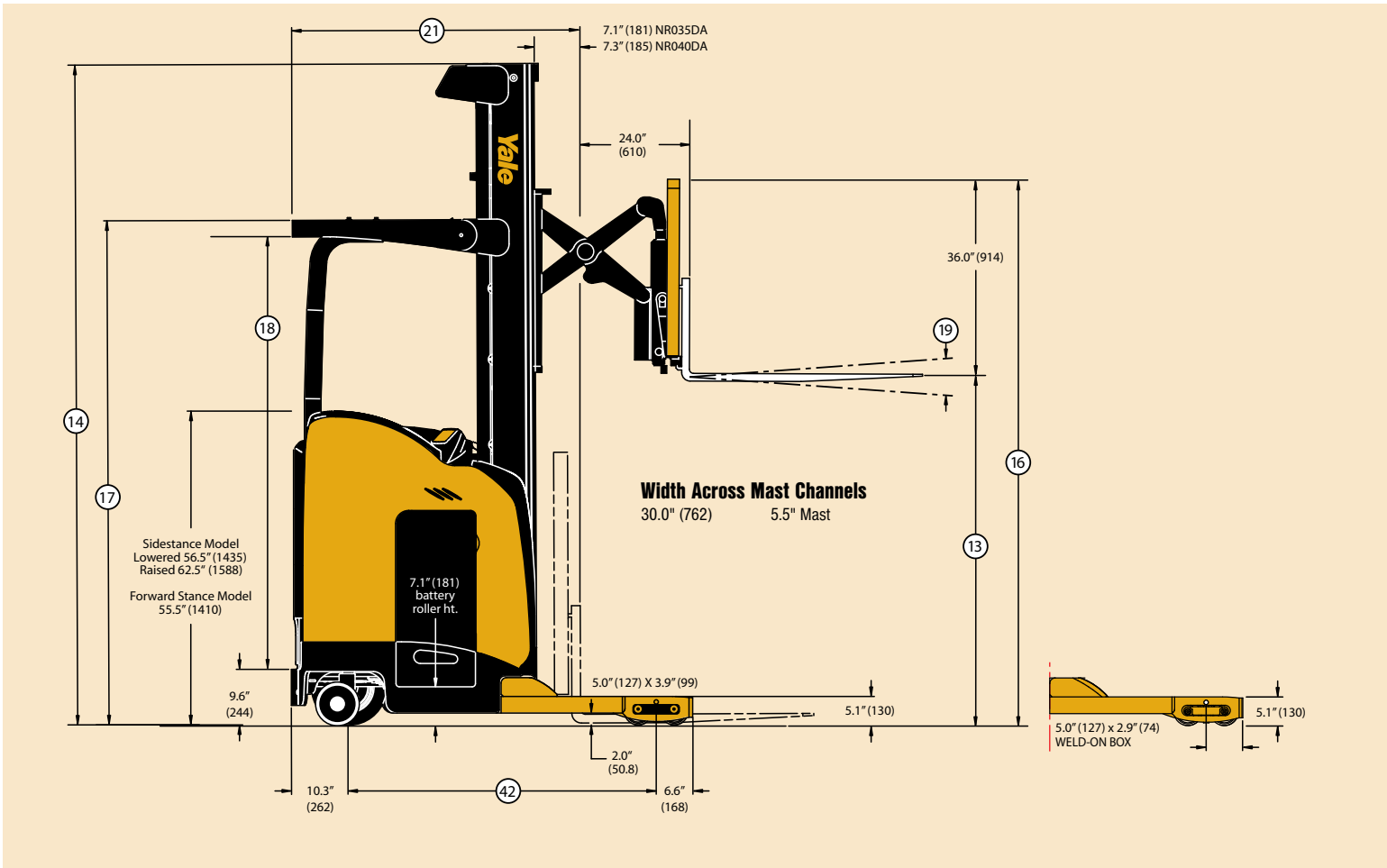
NDR030DA					
Truck with 14.5" Battery Compartment and 42" ID					
Triplex - 4" Between Loads					
Pallet Length (inches)	Pallet Width (inches)				
		36	40	44	48
	36	90	90	90	90
	40	91	91	91	91
	44	95	94	94	93
48	99	99	98	98	

Sideshift is Standard on Double Reach

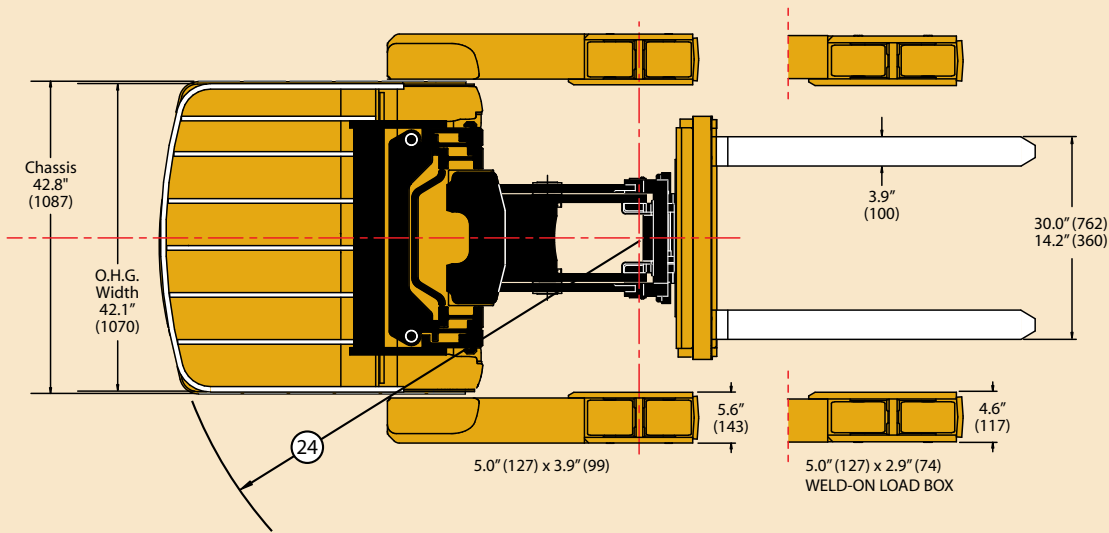
NDR030DA					
Truck with 16.5" Battery Compartment and 42" ID					
Triplex - 4" Between Loads					
Pallet Length (inches)	Pallet Width (inches)				
		36	40	44	48
	36	91	91	91	91
	40	92	92	91	91
	44	97	97	96	95
48	101	101	100	100	

Sideshift is Standard on Double Reach





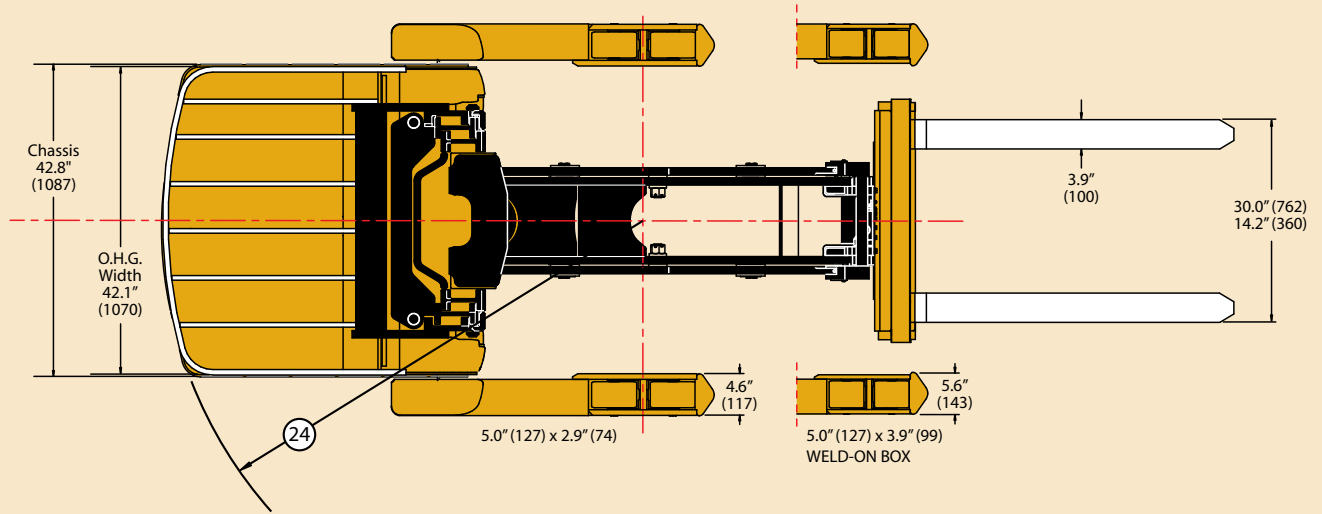
Circled dimensions correspond to the line numbers on the tabulated chart inside the spec sheet. Dimensions are in inches (millimeters).



GENERAL		Manufacturer's Name		Yale	
1	Manufacturer	Manufacturer's Name		Yale	
2	Model Designation	Manufacturer's Model Designation		NR035DA	
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 - 24 volt	
7	Operator type	Pedestrian, Stand, Seated Rider		Stand	
8	Tire type	Load / Caster / Drive		Poly / Poly / Rubber	
9	Wheels (x = driven)	Load / Drive		4 / 2 (1x)	
WT.		Truck Weight		without Battery (approximate)	
10	Truck Weight			lbs. 4950	
DIMENSIONS		Axle Loading - Front / Rear with Assembly Retracted		Static with Rated Load and Max. Wt. Battery	
11	Axle Loading - Front / Rear with Assembly Retracted			lbs. Front 6750 Rear 3800	
12	Axle Loading - Front / Rear with Assembly Retracted	Standard Lift (Max Fork Height)		in. (mm)	
13	Mast Triplex Hi-Vis	Standard Mast Lowered (OALH)		in. (mm)	
14		Freelift (Max Fork Height)		in. (mm)	
15		Standard Mast Extended w/ LBR		in. (mm)	
16		Top of OHG		in. (mm)	
17		Operator Clearance		in. (mm)	
18	Carriage	Tilt Angle (forward / back)		degrees ° 3° Fwd / 4° Back	
19	Forks	Standard (length x width x thickness)		in. 1.60 x 3.9 x 42	
20	Headlength to Face of Forks ¹	All - Battery Compartments		in. See Mast Table	
21	Outrigger ID			in. 34" - 49" (1" increments)	
22	Battery Compartment Size - Length x Width x Height	12.5" Battery Compartment		in. 39.0 x 12.5 x 31.5	
23		14.5" Battery Compartment		in. 39.0 x 14.5 x 31.5	
24		16.5" Battery Compartment		in. 39.0 x 16.5 x 31.5	
25	Turning Radius - Minimum Outside ¹	12.5" Battery Compartment		in. 65.74	
26		14.5" Battery Compartment		in. 65.74	
27		16.5" Battery Compartment		in. 67.74	
28	Aisle Width - Zero Clearance - Right Angle Stack ¹			see chart See "RAS" Table	
29	Stability - Comply with ANSI [*]			Yes	
PERFORMANCE		Travel Speed		Rearward (chassis first) - Empty / Rated Load	
30	Travel Speed			mph 6.5/6.5	
31	Lift Speed	Forward (forks first) - Empty / Rated Load		mph 6.5/6.5	
32		Empty		ft/min 60	
33		2000		ft/min 46	
34		3000		ft/min 43	
35		3500		ft/min 40	
36	Lowering Speeds - Standard / Optional	4000		ft/min N/A	
37		4500		ft/min N/A	
38		Empty		ft/min 85	
39	Rated Load		ft/min 85		
WHEELS & TIRES		Size - front load wheels (tandem articulating)		Standard 5 x 3.9	
40	Size - drive tire / dual casters			Drive 12.0 x 5.5 Caster 7.9 x 2.2	
41		Standard			
42	Wheel Base	12.5" Battery Compartment		in. 55.35	
43		14.5" Battery Compartment		in. 55.35	
44		16.5" Battery Compartment		in. 57.36	
45	Brakes, service / parking	Method of Control		Foot	
46	Battery, type	Method of Operation		Spring Apply / Electric Release	
47		Lead Acid			
48		Traction motor rating (60 minute rating)		hp (kw) 7.5 (5.6)	
49		Hoist motor rating (5 minute rating)		hp (kw) 14.8 (11.0)	
50	Electric Motors	Traction motor control method		Transistor	
51		Hoist motor control method		Transistor	
52	Number of speeds		Infinitely Variable		

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

² Short or Long Wheelbase is for Double Reach Only. Short Wheelbase is used on masts over 278".



Yale										1	GENERAL
NR035DA		NR040DA		NR040DA		NDR030DA		NDR030DA		2	
SWB		SWB		SWB		LWB		LWB		3	
3500 (1588)		4000 (1814)		4000 (1814)		3000 (1361)		3000 (1361)		4	
24 (610)		24 (610)		24 (610)		24 (610)		24 (610)		5	
Electric - 36 volt		Electric - 24 volt		Electric - 36 volt		Electric - 24 volt		Electric - 36 volt		6	
Stand		Stand		Stand		Stand		Stand		7	
Poly / Poly / Rubber		Poly / Poly / Rubber		Poly / Poly / Rubber		Poly / Poly / Rubber		Poly / Poly / Rubber		8	
4 / 2 (1x)		4 / 2 (1x)		4 / 2 (1x)		4 / 2 (1x)		4 / 2 (1x)		9	
4950		5000		5000		5250		5250		10	
Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	11	
6750	3800	7400	3700	7400	3700	6300	4050	6300	4050	12	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		13	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		14	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		15	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		16	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		17	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		18	
3° Fwd / 4° Back		3° Fwd / 4° Back		3° Fwd / 4° Back		3° Fwd / 4° Back		3° Fwd / 4° Back		19	
1.60 x 3.9 x 42		1.80 x 3.9 x 42		1.80 x 3.9 x 42		1.60 x 3.9 x 42		1.60 x 3.9 x 42		20	
See Mast Table		See Mast Table		See Mast Table		See Mast Table		See Mast Table		21	
34"- 49" (1" increments)		34"- 49" (1" increments)		34"- 49" (1" increments)		34"- 49" (1" increments)		34"- 49" (1" increments)		22	
39.0 x 12.5 x 31.5		39.0 x 12.5 x 31.5		39.0 x 12.5 x 31.5		N/A		N/A		23	
39.0 x 14.5 x 31.5		39.0 x 14.5 x 31.5		39.0 x 14.5 x 31.5		39.0 x 14.5 x 31.5		39.0 x 14.5 x 31.5		24	
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		39.0 x 16.5 x 31.5		25	
65.74		65.74		65.74		N/A		N/A		26	
65.74		65.74		65.74		65.74		65.74		27	
67.74		67.74		67.74		67.74		67.74		28	
See "RAS" Table		See "RAS" Table		See "RAS" Table		See "RAS" Table		See "RAS" Table		29	
Yes		Yes		Yes		Yes		Yes		30	
6.7/6.5		6.5/6.5		6.7/6.5		6.5/6.5		6.7/6.7		31	
6.7/6.5		6.5/6.05		6.7/6.0		6.5/6.5		6.7/6.7		32	
75		60		75		60		75		33	
54		46		54		44		51		34	
50		43		50		40		47		35	
47		40		47		N/A		N/A		36	
N/A		38		45		N/A		N/A		37	
N/A		N/A		N/A		N/A		N/A		38	
85		85		85		85		85		39	
85		85		85		85		85		40	
5 x 3.9		5 x 3.9		5 x 3.9		5 x 2.9		5 x 2.9		41	
Drive	Caster	Drive	Caster	Drive	Caster	Drive	Caster	Drive	Caster	42	
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	12.0 x 5.5	7.9 x 2.2	43	
55.35		55.35		55.35		N/A		N/A		44	
55.35		55.35		55.35		60.35		60.35		45	
57.36		57.36		57.36		62.36		62.36		46	
Foot		Foot		Foot		Foot		Foot		47	
Spring Apply / Electric Release		Spring Apply / Electric Release		Spring Apply / Electric Release		Spring Apply / Electric Release		Spring Apply / Electric Release		48	
Lead Acid		Lead Acid		Lead Acid		Lead Acid		Lead Acid		49	
7.5 (5.6)		7.5 (5.6)		7.5 (5.6)		7.5 (5.6)		7.5 (5.6)		50	
14.8 (11.0)		14.8 (11.0)		14.8 (11.0)		14.8 (11.0)		14.8 (11.0)		51	
Transistor		Transistor		Transistor		Transistor		Transistor		52	
Transistor		Transistor		Transistor		Transistor		Transistor		53	
Infinitely Variable		Infinitely Variable		Infinitely Variable		Infinitely Variable		Infinitely Variable		54	

good visibility. The two speed reach/retract cylinders are fully cushioned for smooth operation. Pivot points have grease fittings for lubrication, and dual tilt cylinders are used to evenly distribute the load.

Hydraulic functions of the truck are managed by the VSM. The system features a Motor Controller, AC Hoist Motor, Pump and Hydraulic Reservoir. Efficient design and the use of O-ring face seals have allowed significant reduction of hydraulic fittings reducing potential leak points.

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 compart-

ment sizes based on truck capacity. The frame is available in 12.5 inches, 14.5 inches and 16.5 inches for the 3500 lb. and 4000 lb. trucks. The 16.5 inch battery compartment is available for the 3000 lb. double reach model.

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

- RF Terminal Bracket
- RF Handheld Scanner Holder
- Impact Monitor
- 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 (Forward and Reverse 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 Package
- Sideshifter (Standard on the Double Reach)
- Various Load Wheels and Drive Tires
- Steer Caster - Electrically Steered
- Side Stance With Comfort Package
- Fore/Aft Stance With Comfort Package

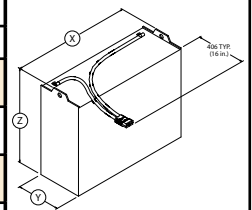
Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale Industrial Truck Dealer if any of the information shown is critical to your application. Specifications are subject to change without notice.

This truck meets all design specifications of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc. as to fire hazard only.

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

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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)
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 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.



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