

REACH TRUCK



2500 - 4500 LBS.

SPECIFICATIONS



RF1-SD | RF1-SDZ | RF1-HP | RF1-HPZ | RF1-BH | RF1-BE

CLASS
2

ELECTRIC MOTOR NARROW AISLE

ToyotaForklift.com

REACH TRUCK

CAPACITY
2500 - 4500 LBS.

LOAD CENTER
24 IN.

WHEELBASE
55.3 - 66.9 IN.

INDUSTRIES



Cold Storage



Distribution



Factory



Food Processing



Food Storage



General Manufacturing



General Warehousing



Retail

STANDARD FEATURES

PERFORMANCE

- 24 Volt Electrical System⁴
- 36 Volt Electrical System⁵
- AC Powered Drive System with Torque Control
- AC Hydraulic System
- Multifunction Control Handle
- Variable Speed Lift and Lowering
- Electric Power Steering Motor
- 7" Color Touchscreen Display Panel
 - Multifunctional Hour Meter
 - Time & Date Display
 - Programmable Travel, Acceleration, Lift/Lower Speeds, Reach/Retract & Coast Control
 - Fault Code Memory
 - Weight Display
- Two Speed Reach / Retract
- Current controlled proportional valve
- Lowering flow limiter
- Lift system relief valve
- UL "E" Construction

OPERABILITY

- 180-Degree Electronic Power Steering
- Auto-Position Hold
- Sidestance Operator Compartment
- Open-View 3-Stage Mast (FSW)
- Hydraulically Cushioned Mast Staging
- Hydraulic Cushioned Retract System
- Hydraulic Fork Deceleration at Floor Level
- 33 in. to 52 in. Base Leg Openings (ID)
 - in 1 in. increments^{1,2}
- Polyurethane Drive Tire (13.5 in. dia. x 6.0 in.)
- Tandem Articulated, Bolt-On Polyurethane
 - Load Wheels (5 in. x 3.62 in.)
 - Load Wheels (6 x 4 in.)
- Polyurethane Caster Wheel (8 in. x 4 in.)
- Electric Disc Brake
- Regenerative Plugging
- Ventilated Tractor Compartment w/ Door Mounted High Capacity Cooling Fan
- 36 in Tilting Load Backrest Extension (5° Fwd / 3° Bwd)
- 36 in Tilting Load Backrest Extension (3° Fwd / 4.5° Bwd)
- ITA Class II Hook-Type Carriage (32 in. Wide)
- Forks: 42 in. x 1.5 in. x 4 in. / 42 in. x 1.75 in. x 4 in.
- Anti-Static Ground Strap
- Proportional handle plugging
- Lift slowdown at max lift
- Tapered Toe Box 5" x 3.62"⁹
- Adjustable speed limit above freelif (0-3.5 mph)
- View-through Carriage

ERGONOMICS

- Bubble Cushioned Padded Floor & Brake Pedal
- Low Step Height
- High Visibility Overhead Guard
- Safety Glass Mast Guard³
- Comfort-Padded Lean Points
- Cushioned Knee Pad

SERVICEABILITY

- Battery Compartment Rollers
- Battery Retaining Gates (Adjustable)
- SB350 Red Connector⁴
- SB350 Grey Connector⁵
- Bolt-on, Ductile Iron Base Legs
- Battery Discharge Indicator w/ Lift Interrupt
- Self Diagnostics
- Built-In Analyzer
- Self-Adjusting Electric Disc Brake
- Emergency Power Disconnect Switch
- Electro-Mechanical Horn
- Key Switch
- Enclosed Battery Compartment:
 - 14.2 in. x 38.62 in. x 31 in.⁶
 - 16.2 in. x 38.62 in. x 31 in.
 - 18.2 in. x 38.62 in. x 31 in.⁷
 - 21.2 in. x 38.62 in. x 31 in.⁷
 - 23.8 in. x 38.62 in. x 31 in.⁸

¹ Specify base leg opening size (Inside Dimension).

² In order to straddle the load ensure that the baseleg opening size (ID) is at least 2 in. greater than the load width.

³ When the cold storage/freezer conditioning option is ordered, the safety glass mast guard is replaced with the wire mesh mast guard.

⁴ Standard on RF1-BE models only.

⁵ Standard on RF1-BH, RF1-SD and RF1-HP models only.

⁶ Available on RF1-BE and RF1-BH models only

⁷ Available on RF1-BH, RF1-SD and RF1-HP models only.

⁸ Available on RF1-HC models only

⁹ Double reach models only

OPTIONAL EQUIPMENT

LOAD HANDLING

- Various fork lengths
- Forks side tapered 4" x 1.75"
- Forks side and top tapered 4" x 1.75" with floor lowered height
- Forks 5x1.5 (4500 lb. rated forks)
- Forks 4x1.5 (4500 lb. rated forks)
- Forks top tapered with floor lowered height
- Forks top tapered and polished with floor lowered height
- Custom fork lengths up to 48" (specify length)
- Less forks
- Forks lower to floor height
- Various tilting backrest extensions
- Custom mast height (1 in. increments)
- Remove sideshift
- Integral sideshifter, 4 in. each way

BODY

- Full height mast guard, glass
- Wire mesh mast guard, partial height
- Wire mesh mast guard, full-height
- Hinged rear operator guard, partial length
- Hinged rear operator guard, full length
- Overhead guard clear shield
- Overhead guard mesh shield
- Custom overhead guard height
- Steered caster
- Inertial dampener
- 3" underclearance
- Fire extinguisher, 2.5 lb. dry chemical

WHEELS AND TIRES

- Various drive tire types
- Various load wheel types
- Various caster wheel types
- Various Tapered Toe Box and Baseleg Options

LIGHTS, INDICATORS & MISC.

- Led overhead guard mounted work lights (pair)
- Operator compartment led dome light
- LED travel activated work lights (1 forward, 1 reverse)
- LED forward travel activated work light
- LED reverse travel activated work light
- LED strobe light options
- Special mounting for strobe light (bottom mounted)
- Blue spotlight, key-on, tractor first only
- Blue spotlight, key-on, both directions
- Various travel alarms
- Electronic horn

PRODUCTIVITY

- RF bracket options
- Power hook-up for on-board terminal (2 or 10 amp)
- Acculaser (red or green)
- Camera system cable
- Carriage-mounted camera system
- Height indicator
- Height and tilt indicator
- Weight height limit display
- Auto height select (includes reach interlock switch)
- High-Speed Lift/Regen Lower
- Load weight display
- Mast lift limit switch w/ bypass (1 in. increments)
- Mast lift limit switch w/o bypass (1 in. increments)
- Travel speed limit switch
- Mechanical lift stop
- Reach interlock switch

OPERABILITY AND COMFORT

- Fore-Aft Stance Operator Compartment
- Rear OHG posts
- Steer tiller friction block
- Heavy-duty drive unit
- Steering wheel bar
- Secondary control handle
- Tiller 1" shorter
- Forward steering
- Reverse steering
- Compartment sensing system
- Compartment sensing system for cold storage/freezer
- Keyless on/off switch
- Electronic key (operator pin code entry)
- Operator compartment fan
- Heated handle and floor
- On-board, easy-attach power (for cold storage clothing)

BATTERY ACCESSORIES

- Optional battery connector colors
- Battery side gate interlock
- Various battery spacer options

SPECIAL MODELS

- UL Type "E" Rating
- UL type "EE" rating
- Sidestance operator compartment
- Special paint color with black mast
- Cold storage conditioning, freezer



TRUCK SPECIFICATIONS

MODEL NUMBERS

GENERAL DATA			RF1-BE1X35		RF1-BE1X40		RF1-BE2X25		
Type / Load Capacity ¹	lb (kg)		Single Reach / 3500 (1580)		Single Reach / 4000 (1814)		Double Reach / 2500 (1134)		
Load Center	in. (mm)		24 (600)		24 (600)		24 (600)		
Battery Compartment Size	in.		14.2	16.2	14.2	16.2	14.2	16.2	
Power Type			Battery		Battery		Battery		
Operator Position			Stand-Up Rider		Stand-Up Rider		Stand-Up Rider		
EXTERIOR DIMENSIONS			RF1-BE1X35 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE1X40 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE2X25 BATTERY COMPARTMENT SIZE 14.2" 16.2"		
A Maximum Fork Height (MFH)	in (mm)		270 (6858)		270 (6858)		264 (6706)		
B Free Lift	in (mm)		73 (1854)		73 (1854)		80 (2032)		
C Fork Lowered Height	in (mm)		3 (76)		3 (76)		3 (76)		
D Tilt Range	Fwd/Bwd	degrees	3/4.5		3/4.5		3/4.5		
E Mast Extended Height	in (mm)		307 (7798)		307 (7798)		302 (7671)		
F Mast Lowered Height	in (mm)		115 (2921)		115 (2921)		118 (2997)		
G Load Backrest Height			36 (914)		36 (914)		36 (914)		
H Overhead Guard Height	in (mm)		See Mast Specifications Table		See Mast Specifications Table		See Mast Specifications Table		
I Battery Roller Height	in (mm)		7 (178)		7 (178)		7 (178)		
J Bumper to Centerline of Drive Wheel			11.35 (288)		11.35 (288)		11.35 (288)		
K Wheelbase	in (mm)		56.5 (1435)	58.5 (1486)	55.3 (1405)	57.3 (1456)	59.6 (1514)	61.6 (1575)	
L Length to Fork Face	in (mm)		54 (1372)	56 (1422)	55.3 (1405)	57.3 (1456)	60 (1524)	62 (1575)	
M Overall Truck Length	in (mm)		75.6 (1920)	77.6 (1970)	77.2 (1961)	79.2 (2012)	81.3 (2065)	83.3 (2116)	
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)		2 (51)		2 (51)		
O Truck Mast Overall Width		in (mm)	31 (787)		31 (787)		31 (787)		
P Fork Size	T x W x L	in (mm)	1.5 x 4 x 42 (38 x 102 x 1067)		1.75 x 4 x 42 (44 x 102 x 1067)		1.5 x 4 x 42 (38 x 102 x 1067)		
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)		15 (381) / 30 (762)		15 (381) / 30 (762)		
R Power Unit Height ³		in (mm)	51.5 (1308)		51.5 (1308)		51.5 (1308)		
S Power Unit Width		in (mm)	42.5 (1080)		42.5 (1080)		42.5 (1080)		
T Base Leg Width			5.5 (140)		5.5 (140)		5.25 (133)		
U Base Leg Inside Dimension (ID)		in (mm)	33 to 52 (838 to 1321)		33 to 52 (838 to 1321)		33 to 52 (838 to 1321)		
V Base Leg Outside Dimension (OD)		in (mm)	44 to 63 (1118 to 1600)		44 to 63 (1118 to 1600)		43.5 to 62.5 (1105 to 1588)		
W Outside Turning Radius		in (mm)	70.8 (1798)	72.8 (1849)	72.1 (1831)	74.1 (1882)	73.6 (1869)	75.6 (1920)	
Basic Right Angle Stacking Aisle Width ⁴			Ask Dealer		Ask Dealer		Ask Dealer		
Carriage Height		in (mm)	36 (914)		36 (914)		36 (914)		
Reach Stroke		in (mm)	22.75 (578)		22.75 (578)		42 (1067)		
Step Height		in (mm)	9.25 (235)		9.25 (235)		9.25 (235)		
PERFORMANCE DATA			RF1-BE1X35 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE1X40 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE2X25 BATTERY COMPARTMENT SIZE 14.2" 16.2"		
Travel Speed ⁵	Maximum	mph (km/h)	6.5 (10.5)		6.5 (10.5)		6.5 (10.5)		
TRUCK WEIGHTS			RF1-BE1X35 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE1X40 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE2X25 BATTERY COMPARTMENT SIZE 14.2" 16.2"		
Total Weight (without battery)		lb (kg)	5700 (2585)		5700 (2585)		6599 (2993)		
TIRES			RF1-BE1X35 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE1X40 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE2X25 BATTERY COMPARTMENT SIZE 14.2" 16.2"		
Tires	Tire Type	Drive / Caster / Load	Polyurethane		Polyurethane		Polyurethane		
	Number (x = driven)	Drive / Caster / Load	1x1/4		1x1/4		1x1/4		
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)	
		Caster	in (mm)	8 x 4 (203 x 102)		8 x 4 (203 x 102)		8 x 4 (203 x 102)	
Load		in (mm)	5 x 3.62 (127 x 92)		5 x 3.62 (127 x 92)		5 x 3.62 (127 x 92)		
Suspension		Caster	Spring Loaded		Spring Loaded		Spring Loaded		
Grade Clearance		%	14		14		13		
Gradability		%	7		7		7 5		
Brake Type			Electric Disc		Electric Disc		Electric Disc		
POWER SYSTEM			RF1-BE1X35 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE1X40 BATTERY COMPARTMENT SIZE 14.2" 16.2"		RF1-BE2X25 BATTERY COMPARTMENT SIZE 14.2" 16.2"		
Battery Type			Lead Acid		Lead Acid		Lead Acid		
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	14.2 (361)	16.2 (412)	14.2 (361)	16.2 (411)	14.2 (361)	16.2 (411)
		Width	in (mm)	38.62 (981)		38.62 (981)		38.62 (981)	
		Height	in (mm)	31 (787)		31 (787)		31 (787)	
	Voltage / Capacity	Maximum	V/AH	24 / 1080		24 / 1080		24 / 1080	
Weight	Minimum	lb (kg)	1600 (726)	2000 (907)	1600 (726)	2000 (907)	1600 (726)	2000 (907)	
	Maximum	lb (kg)	2000 (907)	2300 (1043)	2000 (907)	2300 (1043)	2000 (907)	2300 (1043)	
Electric Motors	Drive	hp (kw)	6.3 (4.7)		6.3 (4.7)		6.3 (4.7)		
	Load Handling	hp (kw)	14.1 (10.5)		14.1 (10.5)		14.1 (11)		
Control Type	Drive		AC		AC		AC		
	Load Handling		AC		AC		AC		
	Power Steering		Transistor		Transistor		Transistor		

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

TRUCK SPECIFICATIONS

MODEL NUMBERS

GENERAL DATA				RF1-BH1X35			RF1-BH1X40			
Type / Load Capacity ¹	lb (kg)		Single Reach / 3500 (1588)			Single Reach / 4000 (1814)				
Load Center	in. (mm)		24 (600)			24 (600)				
Battery Compartment Size	in.		13.5	16.5	18.5	14.2				
Power Type	Battery						Battery			
Operator Position	Stand-Up Rider						Stand-Up Rider			
EXTERIOR DIMENSIONS				BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
				13.5"	16.5"	18.5"	14.2"			
A Maximum Fork Height (MFH)	in (mm)		270 (6858)			268 (6807)				
B Free Lift	in (mm)		73 (1854)			76 (1930)				
C Fork Lowered Height	in (mm)		3 (76)			3 (76)				
D Tilt Range	Fwd/Bwd	degrees	3/4.5			3/4.5				
E Mast Extended Height	in (mm)		307 (7798)			304 (7721)				
F Mast Lowered Height	in (mm)		115 (2921)			118 (2997)				
G Load Backrest Height	in (mm)		36 (914)			36 (914)				
H Overhead Guard Height	in (mm)		See Mast Specifications Table			See Mast Specifications Table				
I Battery Roller Height	in (mm)		7 (178)			7 (178)				
J Bumper to Centerline of Drive Wheel	in (mm)		11.35 (288)			11.35 (288)				
K Wheelbase	in (mm)		56.5 (1435)	58.5 (1486)	60.5 (1537)	58.1 (1476)				
L Length to Fork Face	in (mm)		54 (1372)	56 (1422)	58 (1473)	55.3 (1405)				
M Overall Truck Length	in (mm)		75.6 (1920)	77.6 (1971)	79.6 (2021)	77.2 (1961)				
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)			2 (51)				
O Truck Mast Overall Width	in (mm)		31 (787)			31 (787)				
P Fork Size	T x W x L	in (mm)	1.5 x 4 x 42 (38 x 102 x 1067)			1.5 x 4 x 42 (38 x 102 x 1067)				
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)			15 (381) / 30 (762)				
R Power Unit Height ³	in (mm)		51.5 (1308)			51.5 (1308)				
S Power Unit Width	in (mm)		42.5 (1080)			42.5 (1080)				
T Base Leg Width	in (mm)		5.5 (140)			5.5 (140)				
U Base Leg Inside Dimension (ID)	in (mm)		33 to 52 (838 to 1321)			33 to 52 (838 to 1321)				
V Base Leg Outside Dimension (OD)	in (mm)		44 to 63 (1118 to 1600)			44 to 63 (1118 to 1600)				
W Outside Turning Radius	in (mm)		70.8 (1798)	72.8 (1849)	74.8 (1900)	72.1 (1831)				
Basic Right Angle Stacking Aisle Width ⁴	in (mm)		See Chart			See Chart				
Carriage Height	in (mm)		36 (914)			36 (914)				
Reach Stroke	in (mm)		22.75 (578)			22.75 (578)				
Step Height	in (mm)		9.25 (235)			9.25 (235)				
PERFORMANCE DATA				BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
				13.5"	16.5"	18.5"	14.2"			
Travel Speed ⁵	Maximum	mph (km/h)	7.5 (12.0)			7.5 (12.0)				
TRUCK WEIGHTS				BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
				13.5"	16.5"	18.5"	14.2"			
Total Weight (without battery)	lb (kg)		6229 (2825)			6229 (2825)				
TIRES				BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
				13.5"	16.5"	18.5"	14.2"			
Tires	Tire Type	Drive / Caster / Load		Polyurethane			Polyurethane			
	Number (x = driven)	Drive / Caster / Load		1x/1/4			1x/1/4			
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)			13.5 x 6.0 (343 x 152)			
		Caster	in (mm)	8 x 4 (203 x 102)			8 x 4 (203 x 102)			
Suspension	Caster	Load	in (mm)	5 x 3.62 (127 x 92)			5 x 3.62 (127 x 92)			
		Spring Loaded	Spring Loaded			Spring Loaded				
Grade Clearance	%		14			14				
Gradability	%		7			7				
Brake Type	Electric Disc						Electric Disc			
POWER SYSTEM				BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
				13.5"	16.5"	18.5"	14.2"			
Battery Type	Lead Acid		Lead Acid			Lead Acid				
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	14.2 (361)	16.2 (412)	18.2 (463)	14.23 (361)			
		Width	in (mm)	38.62 (981)			38.62 (981)			
		Height	in (mm)	31 (787)			31 (787)			
	Voltage / Capacity	Maximum	V/AH	36 / 1240			36 / 1240			
		Weight	Minimum	lb (kg)	1600 (726)	2000 (907)	2300 (1043)	1600 (726)		
	Maximum	lb (kg)	2000 (907)			2000 (907)				
Electric Motors	Drive	hp (kw)	7.1 (5.3)			7.1 (5.3)				
	Load Handling	hp (kw)	16.9 (12.6)			16.9 (12.6)				
Control Type	Drive	AC						AC		
	Load Handling	AC						AC		
	Power Steering	Transistor						Transistor		

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

MODEL NUMBERS

GENERAL DATA			RF1-BH1X45			RF1-BH2X25			
Type / Load Capacity ¹	lb (kg)		Single Reach / 4500 (2041)			Single Reach / 2500 (1134)			
Load Center	in. (mm)		24 (600)			24 (600)			
Battery Compartment Size	in.		16.2	18.2	21.2	14.2		16.2	
Power Type			Battery			Battery			
Operator Position			Stand-Up Rider			Stand-Up Rider			
EXTERIOR DIMENSIONS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	14.2"		16.2"	
A Maximum Fork Height (MFH)	in (mm)		330 (8382)	372 (9449)	372 (9449)	252 (6401)			
B Free Lift	in (mm)		104 (2642)	118 (2997)	118 (2997)	76 (1930)		73 (1854)	
C Fork Lowered Height	in (mm)		3 (76)			3 (76)			
D Tilt Range	Fwd/Bwd	degrees	3/4.5			3/4.5			
E Mast Extended Height	in (mm)		366 (9296)	408 (10363)	408 (10363)	290 (7366)			
F Mast Lowered Height	in (mm)		146 (3708)	160 (4064)	160 (4064)	114 (2896)			
G Load Backrest Height			36 (914)			36 (914)			
H Overhead Guard Height	in (mm)		See Mast Specifications Table			See Mast Specifications Table			
I Battery Roller Height	in (mm)		7 (178)			7 (178)			
J Bumper to Centerline of Drive Wheel			11.35 (288)			11.35 (288)			
K Wheelbase	in (mm)		60.1 (1526)	62.1 (1577)	65.1 (1654)	59.6 (1514)		61.6 (1565)	
L Length to Fork Face	in (mm)		57.3 (1455)	59.3 (1506)	62.3 (1582)	60 (1524)		62 (1575)	
M Overall Truck Length	in (mm)		79.2 (2012)	81.2 (2062)	84.2 (2139)	81.3 (2065)		83.3 (2116)	
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)			2 (51)			
O Truck Mast Overall Width		in (mm)	31 (787)			31 (787)			
P Fork Size	T x W x L	in (mm)	1.5 x 4 x 42 (38 x 102 x 1067)			1.5 x 4 x 42 (38 x 102 x 1067)			
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)			15 (381) / 30 (762)			
R Power Unit Height ³		in (mm)	51.5 (1308)			51.5 (1308)			
S Power Unit Width		in (mm)	42.5 (1080)			42.5 (1080)			
T Base Leg Width			6.0 (152)			5.25 (133)			
U Base Leg Inside Dimension (ID)		in (mm)	33 to 52 (838 to 1321)			33 to 52 (838 to 1321)			
V Base Leg Outside Dimension (OD)		in (mm)	45 to 64 (1143 to 1626)			43.5 to 62.5 (1105 to 1588)		44 to 63 (1118 to 1600)	
W Outside Turning Radius		in (mm)	74.2 (1885)	76.2 (1935)	79.2 (2012)	73.6 (1869)		75.6 (1920)	
Basic Right Angle Stacking Aisle Width ⁴			See Chart			See Chart			
Carriage Height	in (mm)		36 (914)			38 (965)			
Reach Stroke	in (mm)		22.75 (578)			42 (1067)			
Step Height	in (mm)		9.25 (235)			9.25 (235)			
PERFORMANCE DATA			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	14.2"		16.2"	
Travel Speed ⁵	Maximum	mph (km/h)	7.5 (12.0)			7.5 (12.0)			
TRUCK WEIGHTS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	14.2"		16.2"	
Total Weight (without battery)	lb (kg)		6723 (3050)	7148 (3242)	7148 (3242)	6534 (2964)			
TIRES			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	14.2"		16.2"	
Tires	Tire Type	Drive / Caster / Load	Polyurethane			Polyurethane			
	Number (x = driven)	Drive / Caster / Load	1x/1/4			1x/1/4			
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)			13.5 x 6.0 (343 x 152)		
		Caster	in (mm)	8 x 4 (203 x 102)			8 x 4 (203 x 102)		
	Load	in (mm)	5 x 3.62 (127 x 92)			5 x 3.62 (127 x 92)			
Suspension		Caster	Spring Loaded			Spring Loaded			
Grade Clearance	%		14			13			
Gradability	%		7			5			
Brake Type			Electric Disc			Electric Disc			
POWER SYSTEM			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	14.2"		16.2"	
Battery Type			Lead Acid			Lead Acid			
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	16.2 (412)	18.2 (463)	21.2 (539)	14.2 (361)	16.2 (412)	
		Width	in (mm)	38.62 (981)			38.62 (981)		
		Height	in (mm)	31 (787)			31 (787)		
	Voltage / Capacity	Maximum	V/AH	36 / 1240			36 / 1240		
Weight	Minimum	lb (kg)	2000 (907)	2300 (1043)	2600 (1179)	1600 (726)	2000 (907)		
	Maximum	lb (kg)	2300 (1043)	2600 (1179)	2900 (1315)	2000 (907)	2300 (1043)		
Electric Motors	Drive	hp (kw)	7.1 (5.3)			7.1 (5.3)			
	Load Handling	hp (kw)	16.9 (12.6)			16.9 (12.6)			
Control Type	Drive		AC			AC			
	Load Handling		AC			AC			
	Power Steering		Transistor			Transistor			

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

TRUCK SPECIFICATIONS

MODEL NUMBERS

GENERAL DATA			RF1-BH2X30			RF1-SD1X35			
Type / Load Capacity ¹	lb (kg)		Double Reach / 3000 (1361)			Single Reach / 3500 (1588)			
Load Center	in. (mm)		24 (600)			24 (600)			
Battery Compartment Size	in.		16	18	21	16.2		18.2	
Power Type			Battery			Battery			
Operator Position			Stand-Up Rider			Stand-Up Rider			
EXTERIOR DIMENSIONS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16"	18"	21"	16.2"		18.2"	
A Maximum Fork Height (MFH)	in (mm)		330 (8382)	372 (9449)	372 (9449)	301 (7645)			
B Free Lift	in (mm)		108 (2743)	122 (3099)	122 (3099)	82 (2083)			
C Fork Lowered Height	in (mm)		3 (76)			3 (76)			
D Tilt Range	Fwd/Bwd	degrees	3/4.5			3/4.5			
E Mast Extended Height	in (mm)		368 (9347)	410 (10414)	410 (9119)	337 (8560)			
F Mast Lowered Height	in (mm)		146 (3708)	160 (4064)	160 (4064)	131 (3327)			
G Load Backrest Height			36 (914)			36 (914)			
H Overhead Guard Height	in (mm)		See Mast Specifications Table			Contact Dealer			
I Battery Roller Height	in (mm)		7 (178)			7 (178)			
J Bumper to Centerline of Drive Wheel			11.35 (288)			11.35 (288)			
K Wheelbase	in (mm)		61.6 (1565)	63.3 (1608)	66.3 (1684)	58.5 (1486)		60.5 (1537)	
L Length to Fork Face	in (mm)		62 (1575)	64 (1626)	67 (1702)	56.0 (1422)		58.0 (1473)	
M Overall Truck Length	in (mm)		83.3 (2116)	85.3 (2067)	88.3 (2243)	77.6 (1971)		79.6 (2022)	
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)			2 (51)			
O Truck Mast Overall Width	in (mm)		31 (787)			31 (787)			
P Fork Size	T x W X L	in (mm)	1.5 x 4 x 42 (38 x 102 x 1067)			1.5 x 4 x 42 (38 x 102 x 1067)			
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)			15 (381) / 30 (762)			
R Power Unit Height ³	in (mm)		51.5 (1308)			51.5 (1308)			
S Power Unit Width	in (mm)		42.5 (1080)			42.5 (1080)			
T Base Leg Width			5.25 (133)			5.5 (140)			
U Base Leg Inside Dimension (ID)	in (mm)		33 to 52 (838 to 1321)			33 to 52 (838 to 1321)			
V Base Leg Outside Dimension (OD)	in (mm)		43.5 to 62.5 (1105 to 1588)			44 to 63 (1118 to 1600)			
W Outside Turning Radius	in (mm)		75.6 (1920)	77.6 (1971)	80.6 (2047)	72.8 (1882)		74.8 (1900)	
Basic Right Angle Stacking Aisle Width ⁴			See Chart			Contact Dealer			
Carriage Height	in (mm)		36 (914)			36 (914)			
Reach Stroke	in (mm)		42 (1067)			22.75 (578)			
Step Height	in (mm)		9.25 (235)			9.25 (235)			
PERFORMANCE DATA			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16"	18"	21"	16.2"		18.2"	
Travel Speed ⁵	Maximum	mph (km/h)	7.5 (12.0)			8.0 (12.1)			
TRUCK WEIGHTS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16"	18"	21"	16.2"		18.2"	
Total Weight (without battery)	lb (kg)		7093 (3217)	7518 (3410)	7518 (3410)	5835 (2646)			
TIRES			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16"	18"	21"	16.2"		18.2"	
Tires	Tire Type	Drive / Caster / Load	Polyurethane			Polyurethane			
	Number (x = driven)	Drive / Caster / Load	1x/1/4			1x/1/4			
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)			13.5 x 6.0 (343 x 152)		
		Caster	in (mm)	8 x 4 (203 x 102)			8 x 4 (203 x 102)		
Load		in (mm)	5 x 3.62 (127 x 92)			5 x 3.62 (127 x 92)			
Suspension		Caster	Spring Loaded			Spring Loaded			
Grade Clearance	%		10			13			
Gradability	%		5			7			
Brake Type			Electric Disc			Electric Disc			
POWER SYSTEM			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16"	18"	21"	16.2"		18.2"	
Battery Type			Lead Acid			Lead Acid			
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	16.22 (411)	18.22 (462)	21.22 (538)	16.22 (412)	18.22 (463)	
		Width	in (mm)	38.62 (981)			38.62 (981)		
		Height	in (mm)	31 (787)			31 (787)		
	Voltage / Capacity	Maximum	V/AH	36 / 1240			36 / 1240		
Weight	Minimum	lb (kg)	2000 (907)	2300 (1043)	2600 (1179)	2000 (907)	2300 (1043)		
	Maximum	lb (kg)	2300 (1043)	2600 (1179)	2900 (1315)	2300 (1043)	2600 (1179)		
Electric Motors	Drive	hp (kw)	71 (5.3)			71 (5.3)			
	Load Handling	hp (kw)	16.9 (12.6)			21.2 (15.8)			
Control Type	Drive			AC			AC		
	Load Handling			AC			AC		
	Power Steering			Transistor			Transistor		

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

MODEL NUMBERS

GENERAL DATA			RF1-SD1X45			RF1-SD2X32			
Type / Load Capacity ¹	lb (kg)		Single Reach / 4500 (2041)			Double Reach / 3200 (1451)			
Load Center	in. (mm)		24 (600)			24 (600)			
Battery Compartment Size	in.		16.2	18.2	21.2	16.2	18.2	21.2	
Power Type			Battery			Battery			
Operator Position			Stand-Up Rider			Stand-Up Rider			
EXTERIOR DIMENSIONS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	16.2"	18.2"	21.2"	
A Maximum Fork Height (MFH)	in (mm)		330 (8382)	372 (9449)	372 (9449)	330 (8382)	372 (9449)	372 (9449)	
B Free Lift	in (mm)		97 (2464)	111 (2819)	111 (2819)	101 (2565)	115 (2921)	115 (2921)	
C Fork Lowered Height	in (mm)		3 (76)			3 (76)			
D Tilt Range	Fwd/Bwd	degrees	3/4.5			3/4.5			
E Mast Extended Height	in (mm)		366 (9296)	408 (10363)	408 (10363)	368 (9347)	410 (10414)	410 (10414)	
F Mast Lowered Height	in (mm)		146 (3708)	160 (4064)	160 (4064)	146 (3708)	160 (4064)	160 (4064)	
G Load Backrest Height			36 (914)			36 (914)			
H Overhead Guard Height	in (mm)		Contact Dealer			Contact Dealer			
I Battery Roller Height	in (mm)		7 (178)			7 (178)			
J Bumper to Centerline of Drive Wheel			11.35 (288)			11.35 (288)			
K Wheelbase	in (mm)		60.1 (1527)	62.1 (1577)	65.1 (1654)	61.6 (1565)	63.6 (1615)	66.6 (1692)	
L Length to Fork Face	in (mm)		57.3 (1455)	59.3 (1506)	62.3 (1582)	62.0 (1575)	64.0 (1626)	67.0 (1702)	
M Overall Truck Length	in (mm)		79.2 (2012)	81.2 (2062)	84.2 (2139)	83.3 (2116)	85.3 (2167)	88.3 (2243)	
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)			2 (51)			
O Truck Mast Overall Width		in (mm)	31 (787)			31 (787)			
P Fork Size	T x W X L	in (mm)	1.75 x 4 x 42 (44 x 102 x 1067)			1.5 x 4 x 42 (38 x 102 x 1067)			
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)			15 (381) / 30 (762)			
R Power Unit Height ³		in (mm)	51.5 (1308)			51.5 (1308)			
S Power Unit Width		in (mm)	42.5 (1080)			42.5 (1080)			
T Base Leg Width			5.5 (140)			5.25 (133)			
U Base Leg Inside Dimension (ID)		in (mm)	33 to 52 (838 to 1321)			33 to 52 (838 to 1321)			
V Base Leg Outside Dimension (OD)		in (mm)	44 to 63 (1118 to 1600)			43.5 to 62.5 (1105 to 1588)			
W Outside Turning Radius		in (mm)	74.1 (1882)	76.1 (1933)	79.1 (2009)	75.6 (1920)	77.6 (1971)	78.6 (1996)	
Basic Right Angle Stacking Aisle Width ⁴			Contact Dealer			Contact Dealer			
Carriage Height		in (mm)	36 (914)			36 (914)			
Reach Stroke		in (mm)	22.75 (578)			42 (1067)			
Step Height		in (mm)	9.25 (235)			9.25 (235)			
PERFORMANCE DATA			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	16.2"	18.2"	21.2"	
Travel Speed ⁵	Maximum	mph (km/h)	8.0 (12.9)			8.0 (12.9)			
TRUCK WEIGHTS			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	16.2"	18.2"	21.2"	
Total Weight (without battery)	lb (kg)		6723 (3050)	7148 (3242)	7180 (3257)	7093 (3217)	7518 (3410)	7550 (3425)	
TIRES			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	16.2"	18.2"	21.2"	
Tires	Tire Type	Drive / Caster / Load	Polyurethane			Polyurethane			
	Number (x = driven)	Drive / Caster / Load	1x/1/4			1x/1/4			
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)			13.5 x 6.0 (343 x 152)		
		Caster	in (mm)	8 x 4 (203 x 102)			8 x 4 (203 x 102)		
Load		in (mm)	5 x 3.62 (127 x 92)			5 x 3.62 (127 x 92)			
Suspension		Caster	Spring Loaded			Spring Loaded			
Grade Clearance	%		13			13			
Gradability	%		7			7			
Brake Type			Electric Disc			Electric Disc			
POWER SYSTEM			BATTERY COMPARTMENT SIZE			BATTERY COMPARTMENT SIZE			
			16.2"	18.2"	21.2"	16.2"	18.2"	21.2"	
Battery Type			Lead Acid			Lead Acid			
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	16.22 (412)	18.22 (463)	21.22 (539)	16.22 (412)	18.22 (463)	21.22 (539)
		Width	in (mm)	38.62 (981)			38.62 (981)		
		Height	in (mm)	31 (787)			31 (787)		
	Voltage / Capacity	Maximum	V/AH	36 / 1240			36 / 1240		
Weight	Minimum	lb (kg)	2000 (907)	2300 (1043)	2600 (1179)	2000 (907)	2300 (1043)	2600 (1179)	
	Maximum	lb (kg)	2300 (1043)	2600 (1179)	2900 (1315)	2300 (1043)	2600 (1179)	2900 (1315)	
Electric Motors	Drive	hp (kw)	71 (5.3)			71 (5.3)			
	Load Handling	hp (kw)	21.2 (15.8)			21.2 (15.8)			
Control Type	Drive		AC			AC			
	Load Handling		AC			AC			
	Power Steering		Transistor			Transistor			

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

TRUCK SPECIFICATIONS

MODEL NUMBERS

GENERAL DATA			RF1-HP1X45		RF1-HP2X32		RF1-SD1Z45		
Type / Load Capacity ¹	lb (kg)		Single Reach / 4500 (2041)		Double Reach / 3200 (1451)		Single Reach 4500 (2041)		
Load Center	in. (mm)		24 (600)		24 (600)		24 (600)		
Battery Compartment Size	in.		18.2	21.2	18.2	21.2	18.3	21.3	
Power Type			Battery		Battery		Battery		
Operator Position			Stand-Up Rider		Stand-Up Rider		Stand-Up Rider		
EXTERIOR DIMENSIONS			RF1-HP1X45 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-HP2X32 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-SD1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
A Maximum Fork Height (MFH)	in (mm)		400 (10160)	444 (11278)	400 (10160)	444 (11278)	372 (9449)		
B Free Lift	in (mm)		118 (2997)	135 (3429)	122 (3099)	139 (3531)	117 (2972)		
C Fork Lowered Height	in (mm)		3 (76)		3 (76)		3 (76)		
D Tilt Range	Fwd/Bwd	degrees	3/4.5		3/4.5		3/4.5		
E Mast Extended Height	in (mm)		436 (11074)	480 (12192)	438 (11125)	482 (12243)	408 (10363)		
F Mast Lowered Height	in (mm)		167 (4242)	184 (4674)	167 (4242)	184 (4674)	160 (4064)		
G Load Backrest Height			36 (914)		36 (914)		36 (914)		
H Overhead Guard Height	in (mm)		Contact Dealer		Contact Dealer		Contact Dealer		
I Battery Roller Height	in (mm)		7 (178)		7 (178)		7 (178)		
J Bumper to Centerline of Drive Wheel			11.35 (288)		11.35 (288)		11.35 (288)		
K Wheelbase	in (mm)		63.9 (1623)	66.9 (1699)	65.1 (1654)	68.1 (1730)	62.1 (1527)	65.1 (1654)	
L Length to Fork Face	in (mm)		62.2 (1580)	65.2 (1656)	66.8 (1697)	69.8 (1773)	60.3 (1531)	63.3 (1608)	
M Overall Truck Length	in (mm)		84.5 (2146)	87.5 (2223)	86.8 (2205)	89.8 (2281)	83.2 (2113)	86.2 (2189)	
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)		2 (51)		2 (51)		
O Truck Mast Overall Width		in (mm)	35.5 (902)		35.5 (902)		31 (787)		
P Fork Size	T x W X L	in (mm)	1.75 x 4 x 42 (44 x 102 x 1067)		1.5 x 4 x 42 (38 x 102 x 1067)		1.75 x 4 x 42 (44 x 102 x 1067)		
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)		15 (381) / 30 (762)		15 (381) / 30 (762)		
R Power Unit Height ³		in (mm)	51.5 (1308)		51.5 (1308)		60 (1524)		
S Power Unit Width		in (mm)	42.5 (1080)		42.5 (1080)		49.5 (1257)		
T Base Leg Width			6.0 (152)		5.25 (133)		5.5 (140)		
U Base Leg Inside Dimension (ID)	in (mm)		42 to 52 (1067 to 1321)		37 to 52 (940 to 1321)		33 to 52 (838 to 1321)		
V Base Leg Outside Dimension (OD)	in (mm)		54 to 64 (1372 to 1626)		47.5 to 62.5 (1207 to 1588)		44 to 63 (1118 to 1600)		
W Outside Turning Radius	in (mm)		79.6 (2022)	82.6 (2098)	79.6 (2022)	82.6 (2098)	80.1 (2034)	83.1 (2111)	
Basic Right Angle Stacking Aisle Width ⁴			Contact Dealer		Contact Dealer		Contact Dealer		
Carriage Height	in (mm)		36 (914)		36 (914)		36 (914)		
Reach Stroke	in (mm)		22.75 (578)		42 (1067)		22.75 (578)		
Step Height	in (mm)		9.25 (235)		9.25 (235)		9.25 (235)		
PERFORMANCE DATA			RF1-HP1X45 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-HP2X32 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-SD1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Travel Speed ⁵	Maximum	mph (km/h)	8.0 (12.1)		8.0 (12.1)		8.0 (12.9)		
TRUCK WEIGHTS			RF1-HP1X45 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-HP2X32 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-SD1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Total Weight (without battery)	lb (kg)		8250 (3742)	8370 (3796)	8620 (3910)	8740 (3964)	7508 (3406)		
TIRES			RF1-HP1X45 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-HP2X32 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-SD1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Tires	Tire Type	Drive / Caster / Load	Polyurethane		Polyurethane		Polyurethane		
	Number (x = driven)	Drive / Caster / Load	1x/1/4		1x/1/4		1x/1/4		
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)	
		Caster	in (mm)	8 x 4 (203 x 102)		8 x 4 (203 x 102)		8 x 4 (203 x 102)	
Load		in (mm)	6 x 4 (152 x 102)		5 x 3.62 (127 x 92)		5 x 3.62 (127 x 92)		
Suspension		Caster	Spring Loaded		Spring Loaded		Spring Loaded		
Grade Clearance	%		10		10		13		
Gradability	%		5		5		7		
Brake Type			Electric Disc		Electric Disc		Electric Disc		
POWER SYSTEM			RF1-HP1X45 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-HP2X32 BATTERY COMPARTMENT SIZE 18.2" 21.2"		RF1-SD1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Battery Type			Lead Acid		Lead Acid		Lead Acid		
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	18.22 (463)	21.22 (539)	18.22 (463)	21.22 (539)	18.27 (464)	21.27 (540)
		Width	in (mm)	38.62 (981)		38.62 (981)		38.62 (981)	
		Height	in (mm)	31 (787)		31 (787)		31 (787)	
	Voltage / Capacity	Maximum	V/AH	36 / 1240		36 / 1240		36 / 1240	
		Weight	Minimum	lb (kg)	2300 (1043)	2600 (1179)	2300 (1043)	2600 (1179)	2300 (1043)
	Maximum	lb (kg)	2600 (1179)	2900 (1315)	2600 (1179)	2900 (1315)	2600 (1179)	2900 (1315)	
Electric Motors	Drive	hp (kw)	7.1 (5.3)		7.1 (5.3)		7.1 (5.3)		
	Load Handling	hp (kw)	29.5 (22)		29.5 (22)		21.2 (15.8)		
Control Type	Drive		AC		AC		AC		
	Load Handling		AC		AC		AC		
	Power Steering		Transistor		Transistor		Transistor		

1 Please refer to the Mast Specifications.

2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

MODEL NUMBERS

GENERAL DATA			RF1-SD2Z32		RF1-HP1Z45		RF1-HP2Z32		
Type / Load Capacity ¹	lb (kg)		Double Reach 3200 (1451)		Single Reach 4500 (2041)		Double Reach 3200 (1451)		
Load Center	in. (mm)		24 (600)		24 (600)		24 (600)		
Battery Compartment Size	in.		18.3	21.3	18.3	21.3	18.3	21.3	
Power Type			Battery		Battery		Battery		
Operator Position			Stand-Up Rider		Stand-Up Rider		Stand-Up Rider		
EXTERIOR DIMENSIONS			RF1-SD2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
A Maximum Fork Height (MFH)	in (mm)		372 (9449)		400 (10160)		400 (10160)		
B Free Lift	in (mm)		121 (3073)		117 (2972)		122 (3099)		
C Fork Lowered Height	in (mm)		3 (76)		3 (76)		3 (76)		
D Tilt Range	Fwd/Bwd	degrees	3/4.5		3/4.5		3/4.5		
E Mast Extended Height	in (mm)		410 (10414)		436 (11074)		438 (11125)		
F Mast Lowered Height	in (mm)		160 (4064)		167 (4242)		167 (4242)		
G Load Backrest Height			36 (914)		36 (914)		36 (914)		
H Overhead Guard Height	in (mm)		Contact Dealer		Contact Dealer		Contact Dealer		
I Battery Roller Height	in (mm)		7 (178)		7 (178)		7 (178)		
J Bumper to Centerline of Drive Wheel			11.35 (288)		11.35 (288)		11.35 (288)		
K Wheelbase	in (mm)		63.6 (1615)		63.9 (1623)		65.1 (1654)		
L Length to Fork Face	in (mm)		66.0 (1676)		64.2 (1580)		68.8 (1697)		
M Overall Truck Length	in (mm)		87.3 (2116)		86.5 (2146)		88.8 (2205)		
N Underclearance (center of wheelbase)	No Load	in (mm)	2 (51)		2 (51)		2 (51)		
O Truck Mast Overall Width		in (mm)	31 (787)		35.5 (902)		35.5 (902)		
P Fork Size	T x W x L	in (mm)	1.5 x 4 x 42 (38 x 102 x 1067)		1.75 x 4 x 42 (44 x 102 x 1067)		1.5 x 4 x 42 (38 x 102 x 1067)		
Q Fork Spread (outer edge to edge)	Min./Max.	in (mm)	15 (381) / 30 (762)		15 (381) / 30 (762)		15 (381) / 30 (762)		
R Power Unit Height ³		in (mm)	60 (1524)		60 (1524)		60 (1524)		
S Power Unit Width		in (mm)	49.5 (1257)		49.5 (1257)		49.5 (1257)		
T Base Leg Width			5.25 (133)		6.0 (152)		5.25 (133)		
U Base Leg Inside Dimension (ID)		in (mm)	33 to 52 (838 to 1321)		42 to 52 (1067 to 1321)		42 to 52 (1067 to 1321)		
V Base Leg Outside Dimension (OD)		in (mm)	43.5 to 62.5 (1105 to 1588)		54 to 64 (1372 to 1626)		52.5 to 62.5 (1334 to 1588)		
W Outside Turning Radius		in (mm)	82.6 (2098)		83.5 (2120)		84.5 (2146)		
Basic Right Angle Stacking Aisle Width ⁴			Contact Dealer		Contact Dealer		Contact Dealer		
Carriage Height	in (mm)		38 (965)		36 (914)		38 (965)		
Reach Stroke	in (mm)		42 (1067)		22.75 (578)		42 (1067)		
Step Height	in (mm)		9.25 (235)		9.25 (235)		9.25 (235)		
PERFORMANCE DATA			RF1-SD2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Travel Speed ⁵	Maximum	mph (km/h)	8.0 (12.9)		8.0 (12.1)		8.0 (12.1)		
TRUCK WEIGHTS			RF1-SD2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Total Weight (without battery)	lb (kg)		7878 (3573)		8585 (3894)		8980 (4073)		
TIRES			RF1-SD2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Tires	Tire Type	Drive / Caster / Load	Polyurethane		Polyurethane		Polyurethane		
	Number (x = driven)	Drive / Caster / Load	1x1/4		1x1/4		1x1/4		
	Size (dia. X width)	Drive	in (mm)	13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)		13.5 x 6.0 (343 x 152)	
		Caster	in (mm)	8 x 4 (203 x 102)		8 x 4 (203 x 102)		8 x 4 (203 x 102)	
Load		in (mm)	5 x 3.62 (127 x 92)		6 x 4 (152 x 102)		5 x 3.62 (127 x 92)		
Suspension		Caster	Spring Loaded		Spring Loaded		Spring Loaded		
Grade Clearance	%		13		10		10		
Gradability	%		7		5		5		
Brake Type			Electric Disc		Electric Disc		Electric Disc		
POWER SYSTEM			RF1-SD2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP1Z45 BATTERY COMPARTMENT SIZE 18.3" 21.3"		RF1-HP2Z32 BATTERY COMPARTMENT SIZE 18.3" 21.3"		
Battery Type			Lead Acid		Lead Acid		Lead Acid		
Battery (6-hour ratings) ²	Compartment Size (Maximum)	Length	in (mm)	18.27 (464)		18.27 (464)		18.27 (464)	
		Width	in (mm)	38.62 (981)		38.62 (981)		38.62 (981)	
		Height	in (mm)	31 (787)		31 (787)		31 (787)	
	Voltage / Capacity	Maximum	V/AH	36 / 1240		36 / 1240		36 / 1240	
Weight	Minimum	lb (kg)	2300 (1043)		2300 (1043)		2300 (1043)		
	Maximum	lb (kg)	2600 (1179)		2600 (1179)		2600 (1179)		
Electric Motors	Drive	hp (kw)	7.1 (5.3)		7.1 (5.3)		7.1 (5.3)		
	Load Handling	hp (kw)	21.2 (15.8)		29.5 (22)		29.5 (22)		
Control Type	Drive		AC		AC		AC		
	Load Handling		AC		AC		AC		
	Power Steering		Transistor		Transistor		Transistor		

1 Please refer to the Mast Specifications.

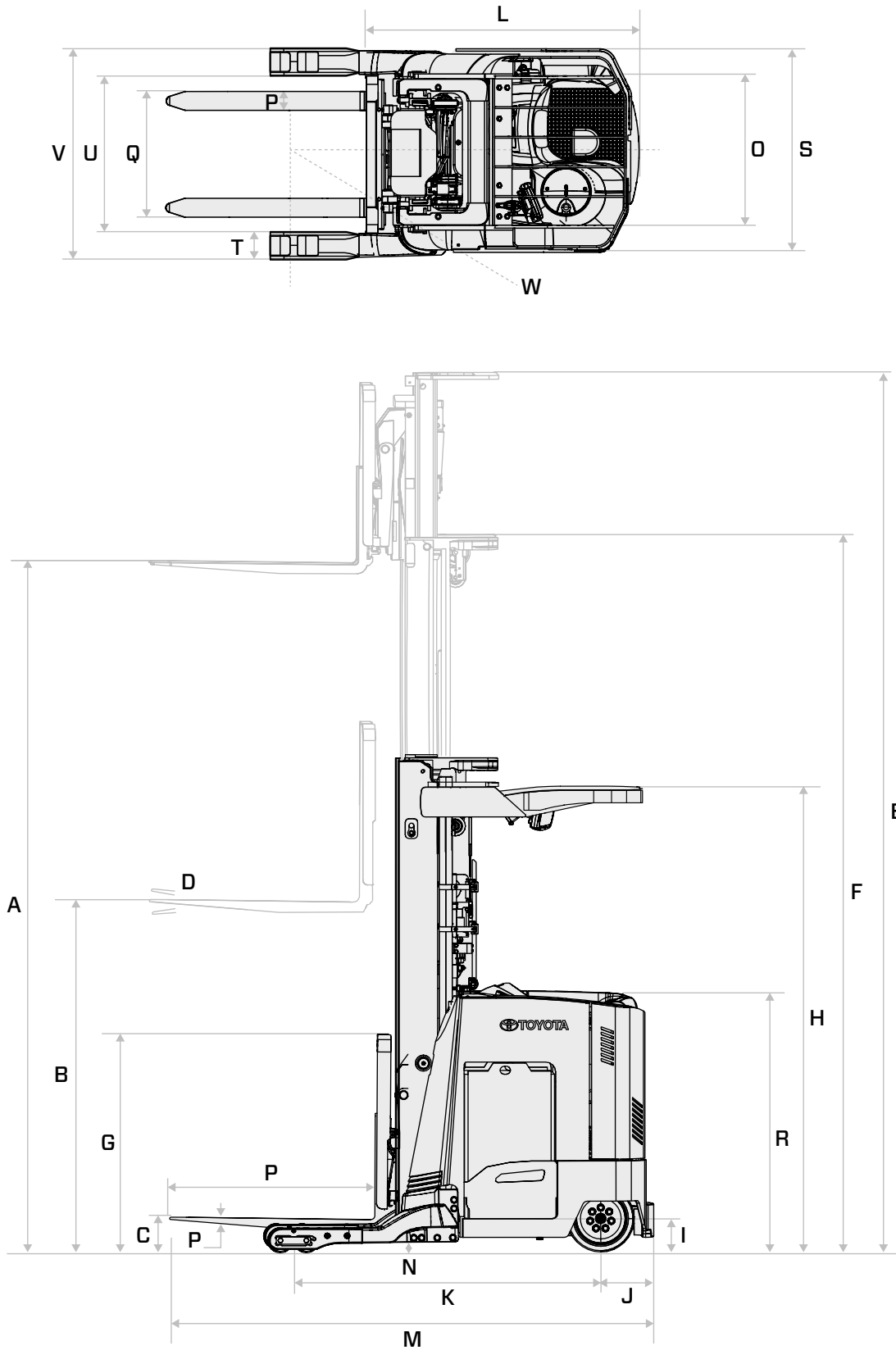
2 Please refer to the Battery Compartment Specification Chart.

3 Add 8.5 in. (216 mm) for optional extended operator backrest.

4 Please refer to the Aisle Width Requirements for Right Angle Stacking Charts.

5 Maximum speed provided is after break-in period. Values vary with truck weight, rolling resistance, mast height, options, and battery condition.

EXTERIOR DIMENSIONS



MAST SPECIFICATIONS

MAST TYPE	MAXIMUM FORK HEIGHT (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ¹	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST	in (mm)				
in (mm)								
RF1-BE1X35								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	192 (4877)	87 (2210)	228 (5791)	43 (1092)	86.75 (2203)	75.5 (1917)	3	4.5
	195 (4953)	88 (2235)	231 (5867)	46 (1168)	87.75 (2229)	76.5 (1943)	3	4.5
	204 (5182)	91 (2311)	240 (6096)	49 (1245)	90.75 (2305)	79.5 (2019)	3	4.5
	216 (5486)	95 (2413)	252 (6401)	53 (1346)	94.75 (2407)	83.5 (2121)	3	4.5
	231 (5867)	100 (2540)	267 (6782)	58 (1473)	93.0 (2362)	81.75 (2076)	3	4.5
	252 (6401)	107 (2718)	288 (7315)	65 (1651)	90.8 (2306)	79.55 (2020)	3	4.5
	270 (6858)	115 (2921)	307 (7798)	73 (1854)	90.8 (2306)	79.55 (2020)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ¹	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST	in (mm)				
in (mm)								
RF1-BE1X40								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2261)	229 (5817)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	196 (4978)	90 (2286)	232 (5893)	48 (1219)	89.75 (2280)	78.5 (1994)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	53 (1346)	94.75 (2407)	89.75 (2280)	3	4.5
	226 (5740)	102 (2591)	262 (6654)	60 (1524)	95.0 (2413)	83.75 (2127)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	65 (1651)	90.8 (2306)	79.55 (2020)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	68 (1727)	90.8 (2306)	79.55 (2020)	3	4.5
	268 (6807)	118 (2997)	304 (7721)	76 (1930)	90.8 (2306)	79.55 (2020)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ¹	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST	in (mm)				
in (mm)								
RF1-BE2X25								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	189 (4800)	89 (2260)	227 (5766)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	207 (5258)	95 (2413)	245 (6223)	57 (1448)	94.75 (2407)	94.75 (2407)	3	4.5
	216 (5486)	100 (2540)	254 (6452)	62 (1575)	93 (2362) ²	81.75 (2076) ³	3	4.5
	237 (6020)	107 (2718)	275 (6985)	69 (1752)	90.8 (2306)	79.55 (2020)	3	4.5
	252 (6401)	114 (2896)	290 (7366)	76 (1930)	90.8 (2306)	79.55 (2020)	3	4.5
	264 (6706)	118 (2997)	302 (7671)	80 (2032)	90.8 (2306)	79.55 (2020)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT ⁴ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ¹	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST	in (mm)				
in (mm)								
RF1-BH1X35								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	192 (4877)	87 (2210)	228 (5791)	43 (1092)	86.75 (2203)	75.5 (1918)	3	4.5
	195 (4953)	88 (2235)	231 (5867)	46 (1168)	87.75 (2229)	76.5 (1943)	3	4.5
	204 (5182)	91 (2311)	240 (6096)	49 (1245)	90.75 (2305)	79.5 (2019)	3	4.5
	216 (5486)	95 (2413)	252 (6401)	53 (1346)	94.75 (2407)	83.5 (2121)	3	4.5
	231 (5867)	100 (2540)	267 (6782)	58 (1473)	93.0 (2362)	81.75 (2076)	3	4.5
	252 (6401)	107 (2718)	288 (7315)	65 (1651)	90.8 (2306)	79.55 (2021)	3	4.5
	270 (6858)	115 (2921)	307 (7798)	73 (1854)	90.8 (2306)	79.55 (2021)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT ⁴ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ¹	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST	in (mm)				
in (mm)								
RF1-BH1X40								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2261)	229 (5817)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	196 (4978)	90 (2286)	232 (5893)	48 (1219)	89.75 (2280)	78.5 (1994)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	53 (1346)	94.75 (2407)	83.5 (2121)	3	4.5
	226 (5740)	102 (2591)	262 (6654)	60 (1524)	95.0 (2413)	83.75 (2127)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	65 (1651)	90.8 (2306)	79.55 (2020)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	68 (1727)	90.8 (2306)	79.55 (2020)	3	4.5
	268 (6807)	118 (2997)	304 (7721)	76 (1930)	90.8 (2306)	79.55 (2020)	3	4.5

1 Tilting Load Backrest.

2 Overhead Guard Height for 16.2 in. (411 mm) battery compartment is 96 in. (2438 mm).

NOTE: Height of standard load backrest is 36 in (914 mm).

3 Operator compartment height with 16.2 in. (411 mm) battery compartment is 84.75 in. (2138 mm).

4 Recommended lift-off height is 10 in. (254 mm) higher than top beam height.

MAST SPECIFICATIONS

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-BH1X45								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2261)	229 (5817)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	196 (4978)	90 (2286)	232 (5893)	48 (1219)	89.75 (2280)	78.5 (1994)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	53 (1346)	94.75 (2407)	83.5 (2121)	3	4.5
	226 (5740)	102 (2591)	262 (6654)	60 (1524)	95.0 (2413)	83.75 (2127)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	65 (1651)	90.8 (2306)	79.55 (2021)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	68 (1727)	90.8 (2306)	79.55 (2021)	3	4.5
	268 (6807)	118 (2997)	304 (7721)	76 (1930)	90.8 (2306)	79.55 (2021)	3	4.5
	280 (7112)	122 (3099)	316 (8026)	80 (2032)	90.8 (2306)	79.55 (2021)	3	4.5
	301 (7645)	131 (3327)	337 (8560)	89 (2260)	90.8 (2306)	79.55 (2021)	3	4.5
	321 (8153)	142 (3607)	357 (9068)	101 (2565)	90.8 (2306)	79.55 (2021)	3	4.5
	330 (8382)	146 (3708)	366 (9296)	104 (2642)	90.8 (2306)	79.55 (2021)	3	4.5
	336 (8534)	148 (3759)	372 (9449)	106 (2692)	90.8 (2306)	79.55 (2021)	3	4.5
	348 (8839)	152 (3861)	384 (9754)	110 (2794)	90.8 (2306)	79.55 (2021)	3	4.5
	360 (9144)	156 (3962)	396 (10058)	114 (2896)	90.8 (2306)	79.55 (2021)	3	4.5
366 (9296)	158 (4013)	402 (10211)	116 (2946)	90.8 (2306)	79.55 (2021)	3	4.5	
372 (9449)	160 (4064)	408 (10363)	118 (2997)	90.8 (2306)	79.55 (2021)	3	4.5	

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-BH2X25								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	189 (4800)	89 (2260)	227 (5766)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	207 (5258)	95 (2413)	245 (6223)	57 (1448)	94.75 (2407)	83.5 (2121)	3	4.5
	216 (5486)	100 (2540)	254 (6452)	62 (1575)	93 (2362)	81.75 (2076)	3	4.5
	237 (6020)	107 (2718)	275 (6985)	69 (1752)	90.8 (2306)	79.55 (2021)	3	4.5
	252 (6401)	114 (2896)	290 (7366)	76 (1930)	90.8 (2306)	79.55 (2021)	3	4.5
	264 (6706)	118 (2997)	302 (7671)	80 (2032)	90.8 (2306)	79.55 (2021)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED ³	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-BH2X30								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	189 (4800)	89 (2261)	227 (5766)	47 (1194)	88.75 (2254)	77.5 (1968)	3	4.5
	207 (5258)	95 (2413)	245 (6223)	57 (1448)	94.75 (2407)	83.5 (2121)	3	4.5
	216 (5486)	100 (2540)	254 (6452)	62 (1574)	93 (2362)	81.75 (2076)	3	4.5
	237 (6020)	107 (2718)	275 (6985)	69 (1752)	90.8 (2306)	79.55 (2021)	3	4.5
	252 (6401)	114 (2896)	290 (7366)	76 (1930)	90.8 (2306)	79.55 (2021)	3	4.5
	264 (6706)	118 (2997)	302 (7671)	80 (2032)	90.8 (2306)	79.55 (2021)	3	4.5
	276 (7010)	122 (3099)	314 (7976)	84 (2133)	90.8 (2306)	79.55 (2021)	3	4.5
	288 (7315)	128 (3251)	326 (8280)	90 (2286)	90.8 (2306)	79.55 (2021)	3	4.5
	302 (7671)	135 (3429)	340 (8636)	97 (2464)	90.8 (2306)	79.55 (2021)	3	4.5
	315 (8001)	141 (3581)	353 (8966)	103 (2616)	90.8 (2306)	79.55 (2021)	3	4.5
	321 (8153)	142 (3607)	359 (9119)	104 (2642)	90.8 (2306)	79.55 (2021)	3	4.5
	330 (8382)	146 (3708)	368 (9347)	108 (2743)	90.8 (2306)	79.55 (2021)	3	4.5
	336 (8534)	148 (3759)	374 (9500)	110 (2794)	90.8 (2306)	79.55 (2021)	3	4.5
	348 (8839)	152 (3861)	386 (9804)	114 (2896)	90.8 (2306)	79.55 (2021)	3	4.5
	360 (9144)	156 (3962)	398 (10109)	118 (2997)	90.8 (2306)	79.55 (2021)	3	4.5
	366 (9296)	158 (4013)	404 (10262)	120 (3048)	90.8 (2306)	79.55 (2021)	3	4.5
372 (9449)	160 (4064)	410 (10414)	122 (3099)	90.8 (2306)	79.55 (2021)	3	4.5	

1 Recommended lift-off height is 10 in. (254 mm) higher than top beam height.
 2 Tilting Load Backrest.
 3 Masts with an extended height of 336 in. (8534 mm) and greater only available on 18.2 in. (462 mm) and 21.2 in. (538 mm) models.

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-SD1X35								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2261)	229 (5817)	34 (863)	87.4 (2219)	76.15 (1934)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	46 (1168)	93.4 (2372)	82.15 (2087)	3	4.5
	217 (5512)	99 (2515)	253 (6426)	50 (1270)	93.4 (2372)	82.15 (2087)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	58 (1473)	93.4 (2372)	82.15 (2087)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	61 (1549)	93.4 (2372)	82.15 (2087)	3	4.5
	271 (6883)	119 (3023)	307 (7798)	70 (1778)	93.4 (2372)	82.15 (2087)	3	4.5
	280 (7112)	122 (3099)	316 (8026)	73 (1854)	93.4 (2372)	82.15 (2087)	3	4.5
301 (7645)	131 (3327)	337 (8560)	82 (2083)	93.4 (2372)	82.15 (2087)	3	4.5	

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-SD1X45								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2260)	229 (5817)	34 (863)	87.4 (2220)	76.15 (1934)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	46 (1168)	93.4 (2372)	82.15 (2087)	3	4.5
	226 (5740)	102 (2591)	262 (6655)	50 (1270)	93.4 (2372)	82.15 (2087)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	58 (1473)	93.4 (2372)	82.15 (2087)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	61 (1549)	93.4 (2372)	82.15 (2087)	3	4.5
	268 (6807)	118 (2997)	304 (7722)	69 (1753)	93.4 (2372)	82.15 (2087)	3	4.5
	280 (7112)	122 (3099)	316 (8026)	73 (1854)	93.4 (2372)	82.15 (2087)	3	4.5
	301 (7645)	131 (3327)	337 (8560)	82 (2083)	93.4 (2372)	82.15 (2087)	3	4.5
	321 (8153)	142 (3607)	357 (9068)	93 (2362)	93.4 (2372)	82.15 (2087)	3	4.5
	330 (8382)	146 (3708)	366 (9296)	97 (2464)	93.4 (2372)	82.15 (2087)	3	4.5
	336 (8534)	148 (3759)	372 (9449)	99 (2515)	93.4 (2372)	82.15 (2087)	3	4.5
	348 (8839)	152 (3861)	384 (9754)	103 (2616)	93.4 (2372)	82.15 (2087)	3	4.5
	360 (9144)	156 (3962)	396 (10058)	107 (2718)	93.4 (2372)	82.15 (2087)	3	4.5
372 (9449)	160 (4064)	408 (10363)	111 (2819)	93.4 (2372)	82.15 (2087)	3	4.5	

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-SD2X32								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	189 (4800)	89 (2260)	227 (5766)	38 (965)	87.4 (2220)	76.15 (1934)	3	4.5
	207 (5258)	95 (2413)	245 (6223)	50 (1270)	93.4 (2372)	82.15 (2087)	3	4.5
	216 (5486)	100 (2540)	254 (6452)	55 (1397)	93.4 (2372)	82.15 (2087)	3	4.5
	237 (6020)	107 (2718)	275 (6985)	62 (1579)	93.4 (2372)	82.15 (2087)	3	4.5
	252 (6401)	114 (2896)	290 (7366)	69 (1753)	93.4 (2372)	82.15 (2087)	3	4.5
	264 (6706)	118 (2997)	302 (7671)	73 (1854)	93.4 (2372)	82.15 (2087)	3	4.5
	276 (7010)	122 (3099)	314 (7976)	77 (1956)	93.4 (2372)	82.15 (2087)	3	4.5
	288 (7315)	128 (3251)	326 (8280)	83 (2108)	93.4 (2372)	82.15 (2087)	3	4.5
	302 (7671)	135 (3429)	340 (8636)	90 (2286)	93.4 (2372)	82.15 (2087)	3	4.5
	315 (8001)	141 (3581)	353 (8966)	96 (2438)	93.4 (2372)	82.15 (2087)	3	4.5
	321 (8153)	142 (3607)	359 (9119)	97 (2464)	93.4 (2372)	82.15 (2087)	3	4.5
	330 (8382)	146 (3708)	368 (9347)	101 (2565)	93.4 (2372)	82.15 (2087)	3	4.5
	336 (8534)	148 (3759)	374 (9500)	103 (2616)	93.4 (2372)	82.15 (2087)	3	4.5
	348 (8839)	152 (3861)	386 (9804)	107 (2718)	93.4 (2372)	82.15 (2087)	3	4.5
360 (9144)	156 (3962)	398 (10109)	111 (2819)	93.4 (2372)	82.15 (2087)	3	4.5	
372 (9449)	160 (4064)	410 (10414)	115 (2921)	93.4 (2372)	82.15 (2087)	3	4.5	

1 Recommended lift-off height is 10 in. (254 mm) higher than top beam height.
2 Tilting Load Backrest.

MAST SPECIFICATIONS

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-HP1X45								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	346 (8788)	149 (3785)	382 (9703)	100 (2540)	93.4 (2372)	82.15 (2087)	3	4.5
	370 (9398)	157 (3988)	406 (10312)	108 (2743)	93.4 (2372)	82.15 (2087)	3	4.5
	376 (9550)	159 (4039)	412 (10465)	110 (2794)	93.4 (2372)	82.15 (2087)	3	4.5
	400 (10160)	167 (4242)	436 (11074)	118 (2997)	93.4 (2372)	82.15 (2087)	3	4.5
	421 (10693)	174 (4420)	457 (11608)	125 (3175)	93.4 (2372)	82.15 (2087)	3	4.5
	444 (11278)	184 (4674)	480 (12192)	135 (3429)	93.4 (2372)	82.15 (2087)	3	4.5
RF1-HP2X32								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	346 (8788)	149 (3785)	384 (9754)	104 (2642)	93.4 (2372)	82.15 (2087)	3	4.5
	370 (9398)	157 (3988)	408 (10363)	112 (2642)	93.4 (2372)	82.15 (2087)	3	4.5
	376 (9550)	159 (4039)	414 (10516)	114 (2896)	93.4 (2372)	82.15 (2087)	3	4.5
	400 (10160)	167 (4242)	438 (11125)	122 (3099)	93.4 (2372)	82.15 (2087)	3	4.5
	421 (10693)	174 (4420)	459 (11659)	129 (3277)	93.4 (2372)	82.15 (2087)	3	4.5
	444 (11278)	184 (4674)	482 (12243)	139 (3531)	93.4 (2372)	82.15 (2087)	3	4.5
RF1-SD1Z45								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	193 (4902)	89 (2260)	229 (5817)	46 (1168)	87.4 (2220)	76.15 (1934)	3	4.5
	211 (5359)	95 (2413)	247 (6274)	52 (1321)	93.4 (2372)	82.15 (2087)	3	4.5
	226 (5740)	102 (2591)	262 (6655)	59 (1499)	93.4 (2372)	82.15 (2087)	3	4.5
	241 (6121)	107 (2718)	277 (7036)	64 (1626)	93.4 (2372)	82.15 (2087)	3	4.5
	250 (6350)	110 (2794)	286 (7264)	67 (1702)	93.4 (2372)	82.15 (2087)	3	4.5
	268 (6807)	118 (2997)	304 (7722)	75 (1905)	93.4 (2372)	82.15 (2087)	3	4.5
	280 (7112)	122 (3099)	316 (8026)	79 (2007)	93.4 (2372)	82.15 (2087)	3	4.5
	301 (7645)	131 (3327)	337 (8560)	88 (2235)	93.4 (2372)	82.15 (2087)	3	4.5
	321 (8153)	142 (3607)	357 (9068)	100 (2540)	93.4 (2372)	82.15 (2087)	3	4.5
	330 (8382)	146 (3708)	366 (9296)	103 (2616)	93.4 (2372)	82.15 (2087)	3	4.5
	336 (8534)	148 (3759)	372 (9449)	105 (2667)	93.4 (2372)	82.15 (2087)	3	4.5
	348 (8839)	152 (3861)	384 (9754)	109 (2769)	93.4 (2372)	82.15 (2087)	3	4.5
	360 (9144)	156 (3962)	396 (10058)	113 (2870)	93.4 (2372)	82.15 (2087)	3	4.5
	372 (9449)	160 (4064)	408 (10363)	117 (2972)	93.4 (2372)	82.15 (2087)	3	4.5

1 Recommended lift-off height is 10 in. (254 mm) higher than top beam height.
 2 Tilting Load Backrest.

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-SD2Z32								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	189 (4800)	89 (2260)	227 (5766)	50 (1270)	87.4 (2220)	76.15 (1934)	3	4.5
	207 (5258)	95 (2413)	245 (6223)	56 (1422)	93.4 (2372)	82.15 (2087)	3	4.5
	216 (5486)	100 (2540)	254 (6452)	61 (1549)	93.4 (2372)	82.15 (2087)	3	4.5
	237 (6020)	107 (2718)	275 (6985)	68 (1727)	93.4 (2372)	82.15 (2087)	3	4.5
	252 (6401)	114 (2896)	290 (7366)	75 (1905)	93.4 (2372)	82.15 (2087)	3	4.5
	264 (6706)	118 (2997)	302 (7671)	79 (2006)	93.4 (2372)	82.15 (2087)	3	4.5
	276 (7010)	122 (3099)	314 (7976)	83 (2108)	93.4 (2372)	82.15 (2087)	3	4.5
	288 (7315)	128 (3251)	326 (8280)	89 (2260)	93.4 (2372)	82.15 (2087)	3	4.5
	302 (7671)	135 (3429)	340 (8636)	96 (2438)	93.4 (2372)	82.15 (2087)	3	4.5
	315 (8001)	141 (3581)	353 (8966)	102 (2591)	93.4 (2372)	82.15 (2087)	3	4.5
	321 (8153)	142 (3607)	359 (9119)	103 (2616)	93.4 (2372)	82.15 (2087)	3	4.5
	330 (8382)	146 (3708)	368 (9347)	107 (2717)	93.4 (2372)	82.15 (2087)	3	4.5
	336 (8534)	148 (3759)	374 (9500)	109 (2769) ³	93.4 (2372)	82.15 (2087)	3	4.5
	348 (8839)	152 (3861)	386 (9804)	113 (2870) ³	93.4 (2372)	82.15 (2087)	3	4.5
	360 (9144)	156 (3962)	398 (10109)	117 (2972) ³	93.4 (2372)	82.15 (2087)	3	4.5
372 (9449)	160 (4064)	410 (10414)	121 (3073) ³	93.4 (2372)	82.15 (2087)	3	4.5	

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-HP1Z45								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	346 (8788)	149 (3785)	382 (9703)	100 (2540)	93.4 (2372)	82.15 (2087)	3	4.5
	370 (9398)	157 (3988)	406 (10312)	108 (2743)	93.4 (2372)	82.15 (2087)	3	4.5
	376 (9550)	159 (4039)	412 (10465)	110 (2794)	93.4 (2372)	82.15 (2087)	3	4.5
	400 (10160)	167 (4242)	436 (11074)	118 (2997)	93.4 (2372)	82.15 (2087)	3	4.5
	421 (10693)	174 (4420)	457 (11608)	125 (3175)	93.4 (2372)	82.15 (2087)	3	4.5
	444 (11278)	184 (4674)	480 (12192)	135 (3429)	93.4 (2372)	82.15 (2087)	3	4.5

MAST TYPE	MAXIMUM FORK HEIGHT ¹ (TOP OF FORKS)	OVERALL HEIGHT		FREE LIFT	OVERHEAD GUARD HEIGHT	OPERATOR COMPARTMENT HEIGHT	TILT RANGE ²	
		LOWERED	EXTENDED	WITH STANDARD 36" LOAD BACKREST			FWD	BWD
			WITH STANDARD 36" LOAD BACKREST					
in (mm)								
RF1-HP2Z32								
Wide Visible Full-Free Lift Three-Stage Four-Cylinder Mast (FSW)	346 (8788)	149 (3785)	384 (9754)	104 (2642)	93.4 (2372)	82.15 (2087)	3	4.5
	370 (9398)	157 (3988)	408 (10363)	112 (2842)	93.4 (2372)	82.15 (2087)	3	4.5
	376 (9550)	159 (4039)	414 (10516)	114 (2896)	93.4 (2372)	82.15 (2087)	3	4.5
	400 (10160)	167 (4242)	438 (11125)	122 (3099)	93.4 (2372)	82.15 (2087)	3	4.5
	421 (10693)	174 (4420)	459 (11659)	129 (3277)	93.4 (2372)	82.15 (2087)	3	4.5
	444 (11278)	184 (4674)	482 (12243)	139 (3531)	93.4 (2372)	82.15 (2087)	3	4.5

1 Recommended lift-off height is 10 in. (254 mm) higher than top beam height.
2 Tilting Load Backrest.
3 Subtract 4 in. (102 mm) for 21.3 in. (541) battery compartment.

AISLE WIDTH REQUIREMENTS FOR RIGHT-ANGLE STACKING

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BE1X35						
Load Length	30 (762)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)
	36 (914)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)
	40 (1016)	87 (2210)	86.5 (2197)	86 (2184)	85.2 (2164)	84.4 (2144)
	44 (1118)	92 (2337)	91.5 (2325)	91 (2311)	90.3 (2394)	89.6 (2276)
	48 (1219)	96.7 (2456)	96.3 (2446)	95.8 (2433)	95.2 (2418)	94.6 (2403)
	54 (1372)	103.5 (2629)	103.1 (2619)	102.8 (2611)	102.2 (2596)	101.7 (2583)
	60 (1524)	110.1 (2796)	109.8 (2789)	109.4 (2779)	109 (2769)	108.5 (2756)

Min. Aisle Width - 14.2 (361) Battery Compartment, with sideshift
4 in. (102 mm) Clearance Each Side of Load

- Add 2 in. (51 mm) for 16.2 (411) Battery Compartment.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- For baseleg inner dimensions greater than 41 inches, add 2 in. to aisle width requirements

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-BE1X40						
Load Length	30 (762)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)
	36 (914)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)
	40 (1016)	90 (2286)	89.5 (2273)	88.9 (2258)	88.1 (2238)	87.3 (2217)
	44 (1118)	95 (2413)	94.5 (2400)	94 (2388)	93.3 (2370)	92.6 (2352)
	48 (1219)	99.7 (2532)	99.3 (2522)	98.9 (2512)	98.3 (2497)	97.6 (2479)
	54 (1372)	106.6 (2708)	106.2 (2697)	105.9 (2690)	105.3 (2675)	104.8 (2662)
	60 (1524)	113.2 (2875)	112.9 (2868)	112.6 (2860)	112.1 (2847)	111.6 (2835)

Min. Aisle Width - 14.2 (361) Battery Compartment, with sideshift
4 in. (102 mm) Clearance Each Side of Load

- Add 2 in. (51 mm) for 16.2 (411) Battery Compartment.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- For baseleg inner dimensions greater than 41 inches, add 2 in. to aisle width requirements

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BE2X25 (UNDER RACK METHOD)						
Load Length	40 (1016)	94.0 (2387)	93.6 (2377)	93.1 (2365)	92.4 (2347)	91.7 (2329)
	42 (1067)	96.3 (2446)	95.8 (2433)	95.5 (2426)	94.8 (2408)	94.1 (2390)
	44 (1118)	98.7 (2507)	98.3 (2497)	97.9 (2487)	97.3 (2471)	96.6 (2454)
	48 (1219)	103.3 (2624)	102.9 (2614)	102.5 (2604)	102.0 (2591)	101.4 (2576)

Min. Aisle Width - 14.2 (361) Battery Compartment, with sideshift
4 in. (100 mm) Clearance Each Side of Load

- Add 2 in. (51 mm) for 16.2 in. (411 mm) Battery Compartment.
- Add a minimum of 6 in. (150 mm) to 12 in. (305 mm) for easy maneuvering.

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BE2X25 (STRADDLE METHOD)						
Load Length	40 (1016)	89.9 (2383)	89.3 (2268)	88.5 (2248)	87.5 (2222)	87.0 (2210)
	42 (1067)	94.3 (2395)	93.2 (2367)	93.2 (2367)	91.6 (2327)	90.1 (2288)
	44 (1118)	95.2 (2418)	94.6 (2403)	94.0 (2388)	93.1 (2365)	92.1 (2339)
	48 (1219)	100.0 (2540)	99.7 (2532)	99.1 (2517)	98.3 (2497)	97.5 (2477)

Min. Aisle Width - 14.2 (361) Battery Compartment, with sideshift
6 in. (152 mm) Clearance Each Side of Load

- Add 2 in. (51 mm) for 16.2 in. (411 mm) Battery Compartment.
- Add a minimum of 6 in. (150 mm) to 12 in. (305 mm) for easy maneuvering.

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BH1X35						
Load Length	30 (762)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)
	36 (914)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)	82.5 (2095)
	40 (1016)	87 (2210)	86.5 (2197)	86 (2184)	85.2 (2164)	84.4 (2144)
	44 (1118)	92 (2337)	91.5 (2325)	91 (2311)	90.3 (2394)	89.6 (2276)
	48 (1219)	96.7 (2456)	96.3 (2446)	95.8 (2433)	95.2 (2418)	94.6 (2403)
	54 (1372)	103.5 (2629)	103.1 (2619)	102.8 (2611)	102.2 (2596)	101.7 (2583)
	60 (1524)	110.1 (2796)	109.8 (2789)	109.4 (2779)	109 (2769)	108.5 (2756)

Min. Aisle Width - 14.2 in. (361 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift.
- Add 2 in. (51 mm) for 16.2 in. (411 mm) Battery Compartment.
- Add 4 in. (102 mm) for 18.2 in. (462 mm) Battery Compartment.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm).
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-BH1X40						
Load Length	30 (762)	83.3 (2116)	83.3 (2116)	83.3 (2116)	83.3 (2116)	83.3 (2116)
	36 (914)	83.3 (2116)	83.3 (2116)	83.3 (2116)	83.3 (2116)	83.3 (2116)
	40 (1016)	88 (2235)	87.5 (2223)	86.9 (2207)	86.1 (2187)	85.3 (2167)
	44 (1118)	93 (2362)	92.5 (2350)	92 (2337)	91.3 (2319)	90.6 (2301)
	48 (1219)	97.7 (2482)	97.3 (2471)	96.9 (2461)	96.3 (2446)	95.6 (2428)
	54 (1372)	104.6 (2657)	104.2 (2647)	103.9 (2639)	103.3 (2624)	102.8 (2611)
	60 (1524)	111.2 (2824)	110.9 (2817)	110.6 (2809)	110.1 (2797)	109.6 (2784)

Min. Aisle Width - 14.2 in. (361 mm) Battery Compartment, with Sideshift
4 in. (100 mm) Clearance Each Side of Load

- Includes Integral Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm).
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-BH1X45						
Load Length	30 (762)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)
	36 (914)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)	85.3 (2167)
	40 (1016)	90 (2286)	89.5 (2273)	88.9 (2258)	88.1 (2238)	87.3 (2217)
	44 (1118)	95 (2413)	94.5 (2400)	94 (2388)	93.3 (2370)	92.6 (2352)
	48 (1219)	99.7 (2532)	99.3 (2522)	98.9 (2512)	98.3 (2497)	97.6 (2479)
	54 (1372)	106.6 (2708)	106.2 (2697)	105.9 (2690)	105.3 (2675)	104.8 (2662)
	60 (1524)	113.2 (2875)	112.9 (2868)	112.6 (2860)	112.1 (2847)	111.6 (2835)

Min. Aisle Width - 16.2 (411) Battery Compartment, with sideshift
4 in. (100 mm) Clearance Each Side of Load

- Includes Integral Sideshift.
- Add 2 in. (51 mm) for 18.2 (462) Battery Compartment.
- Add 5 in. (127 mm) for 21.2 (538) Battery Compartment.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm).
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-BH2X25 (UNDER RACK METHOD)						
Load Length	40 (1016)	94.0 (2387)	93.6 (2377)	93.1 (2365)	92.4 (2347)	91.7 (2329)
	42 (1067)	96.3 (2446)	95.8 (2433)	95.5 (2426)	94.8 (2408)	94.1 (2390)
	44 (1118)	98.7 (2507)	98.3 (2497)	97.9 (2487)	97.3 (2471)	96.6 (2454)
	48 (1219)	103.3 (2624)	102.9 (2614)	102.5 (2604)	102.0 (2591)	101.4 (2576)

Min. Aisle Width - 14.2 in. (361 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 16.2 in. (411 mm) Battery Compartment.
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

AISLE WIDTH REQUIREMENTS FOR RIGHT-ANGLE STACKING

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-BH2X25 (STRADDLE METHOD)						
Load Length	40 (1016)	89.9 (2383)	89.3 (2268)	88.5 (2248)	87.5 (1372)	87.0 (2210)
	42 (1067)	94.3 (2395)	93.2 (2367)	93.2 (2367)	91.6 (2327)	90.1 (2288)
	44 (1118)	95.2 (2418)	94.6 (2403)	94.0 (2388)	93.1 (2365)	92.1 (2339)
	48 (1219)	100.0 (2540)	99.7 (2532)	99.1 (2517)	98.3 (2497)	97.5 (2477)

Min. Aisle Width - 14.2 in. (361 mm) Battery Compartment, with Sideshift
6 in. (152 mm) Clearance Each Side of Load

- Includes Integral Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 16.2 in. (411 mm) Battery Compartment.
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BH2X30 (UNDER RACK METHOD)						
Load Length	40 (1016)	96.0 (2438)	95.5 (2426)	95.0 (2413)	94.4 (2398)	93.7 (2380)
	42 (1067)	98.3 (2497)	97.8 (2484)	97.5 (2477)	96.8 (2459)	96.1 (2441)
	44 (1118)	100.7 (2558)	100.3 (2548)	99.8 (2535)	99.2 (2520)	98.6 (2504)
	48 (1219)	105.2 (2672)	104.9 (2664)	104.5 (2654)	103.9 (2639)	103.4 (2626)

Min. Aisle Width - 16.2 (411) Battery Compartment, with sideshift
4 in. (100 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add 2 in. (51 mm) for 18.2 in. (462 mm) Battery Compartment.
- Add 5 in. (127 mm) for 21.2 (538) Battery Compartment.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1020)	44 (1120)	48 (1220)	54 (1370)	60 (1520)
RF1-BH2X30 (STRADDLE METHOD)						
Load Length	40 (1016)	91.9 (2334)	89.1 (2316)	90.4 (2296)	89.5 (2273)	89.0 (2261)
	42 (1067)	96.3 (2446)	95.2 (2418)	95.2 (2418)	93.6 (2377)	92.1 (2339)
	44 (1118)	97.2 (2469)	96.6 (2454)	95.9 (2436)	95.0 (2413)	94.1 (2390)
	48 (1219)	101.9 (2588)	101.7 (2583)	101.1 (2568)	100.2 (2545)	99.5 (2527)

Min. Aisle Width - 16.2 (411) Battery Compartment, with sideshift
6 in. (152 mm) Clearance Each Side of Load

- Includes Integral Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 18.2 in. (462 mm) Battery Compartment.
- Add 5 in. (127 mm) for 21.2 (538) Battery Compartment.
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD1X35						
Load Length	30 (762)	87 (2210)	87 (2210)	87 (2210)	87 (2210)	87 (2210)
	36 (914)	87 (2210)	87 (2210)	87 (2210)	87 (2210)	87 (2210)
	40 (1016)	91 (2311)	91 (2311)	90 (2286)	89 (2261)	88 (2235)
	44 (1118)	96 (2438)	96 (2438)	95 (2413)	94 (2388)	94 (2388)
	48 (1219)	101 (2565)	100 (2540)	100 (2540)	99 (2515)	99 (2515)
	54 (1372)	107 (2718)	107 (2718)	107 (2718)	106 (2692)	106 (2692)
	60 (1524)	114 (2896)	114 (2896)	113 (2870)	113 (2870)	112 (2845)

Min. Aisle Width - 16.2 in. (411 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 18.2 in. (462 mm) Battery Compartment.
- Push-back Rack: Right Angle Stacking Aisle width is calculated by truck head length + load length + clearance (easy maneuvering and throughput requirements). Using bottom load beams is recommended to push the load back with the truck (not the reach mechanism).

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD1X45						
Load Length	30 (762)	87 (2210)	87 (2210)	87 (2210)	87 (2210)	87 (2210)
	36 (914)	87 (2210)	87 (2210)	87 (2210)	87 (2210)	87 (2210)
	40 (1016)	91 (2311)	91 (2311)	90 (2286)	89 (2261)	88 (2235)
	44 (1118)	96 (2438)	96 (2438)	95 (2413)	94 (2388)	94 (2388)
	48 (1219)	101 (2565)	100 (2540)	100 (2540)	99 (2515)	99 (2515)
	54 (1372)	107 (2718)	107 (2718)	107 (2718)	106 (2692)	106 (2692)
	60 (1524)	114 (2896)	114 (2896)	113 (2870)	113 (2870)	112 (2845)

Min. Aisle Width - 16.2 in. (411 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 18.2 in. (462 mm) Battery Compartment.
- Add 5 in. (127 mm) for 21.2 in. (538 mm) Battery Compartment.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD2X32						
Load Length	40 (1016)	97.5 (2477)	97.0 (2464)	96.6 (2454)	95.9 (2436)	95.2 (2418)
	42 (1067)	98.0 (2489)	98.0 (2489)	97.0 (2464)	97.0 (2464)	97.0 (2464)
	44 (1118)	102.1 (2593)	101.7 (2583)	101.3 (2573)	100.7 (2558)	100.0 (2540)
	48 (1219)	106.8 (2713)	106.2 (2698)	105.8 (2687)	105.3 (2675)	104.7 (2659)

Min. Aisle Width - 16.2 in. (361 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 2 in. (51 mm) for 18.2 in. (411 mm) Battery Compartment.
- Add 5 in. (127 mm) for 21.2 in. (538 mm) Battery Compartment

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP1X45						
Load Length	30 (762)	92 (2337)	92 (2337)	92 (2337)	92 (2337)	92 (2337)
	36 (914)	92 (2337)	92 (2337)	92 (2337)	92 (2337)	92 (2337)
	40 (1016)	96 (2438)	96 (2438)	95 (2413)	95 (2413)	94 (2388)
	44 (1118)	101 (2565)	100 (2540)	100 (2540)	99 (2514)	99 (2514)
	48 (1219)	106 (2692)	106 (2692)	105 (2667)	104 (2642)	104 (2642)
	54 (1372)	112 (2844)	112 (2844)	112 (2844)	111 (2819)	111 (2819)
	60 (1524)	119 (3022)	119 (3022)	118 (2997)	118 (2997)	117 (2971)

Min. Aisle Width - 18.2 in. (462 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.2 in. (538 mm) Battery Compartment.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP2X32 (UNDER RACK METHOD)						
Load Length	40 (1016)	102.4 (2601)	102.0 (2591)	101.5 (2578)	100.9 (2563)	100.2 (2545)
	42 (1067)	102.0 (2591)	102.0 (2591)	101.0 (2565)	101.0 (2565)	101.0 (2565)
	44 (1118)	107.0 (2718)	106.6 (2708)	106.2 (2697)	105.6 (2682)	105.0 (2667)
	48 (1219)	111.5 (2832)	111.1 (2822)	110.7 (2812)	110.2 (2799)	109.6 (2784)

Min. Aisle Width - 18.2 in. (462 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.2 in. (538 mm) Battery Compartment.

AISLE WIDTH REQUIREMENTS FOR RIGHT-ANGLE STACKING

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP2X32 (STRADDLE METHOD)						
Load Length	40 (1016)	98.4 (2499)	97.7 (2481)	97.1 (2466)	96.1 (2441)	95.1 (2415)
	42 (1067)	101.0 (2565)	100.4 (2550)	99.7 (2532)	98.8 (2509)	98.0 (2489)
	44 (1118)	103.6 (2631)	103.0 (2616)	102.4 (2601)	101.5 (2578)	100.6 (2555)
	48 (1219)	108.5 (2753)	107.9 (2740)	107.4 (2728)	106.6 (2707)	105.8 (2687)

Min. Aisle Width - 18.2 in. (462 mm) Battery Compartment, with Sideshift
6 in. (152 mm) Clearance Each Side of Load

- Includes Integral Sideshift
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.2 in. (538 mm) Battery Compartment.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD1Z45						
Load Length	30 (762)	90 (2286)	90 (2286)	90 (2286)	90 (2286)	90 (2286)
	36 (914)	90 (2286)	90 (2286)	90 (2286)	90 (2286)	90 (2286)
	40 (1016)	94 (2388)	93 (2362)	93 (2362)	93 (2362)	92 (2337)
	44 (1118)	99 (2514)	99 (2514)	98 (2489)	98 (2489)	97 (2463)
	48 (1219)	104 (2642)	103 (2616)	103 (2616)	102 (2590)	102 (2590)
	54 (1372)	110 (2794)	110 (2794)	110 (2794)	109 (2768)	109 (2768)
	60 (1524)	117 (2971)	117 (2971)	116 (2946)	116 (2946)	115 (2921)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD2Z32 (UNDER RACK METHOD)						
Load Length	40 (1016)	101.6 (2581)	101.2 (2570)	100.8 (2560)	100.2 (2545)	99.6 (2530)
	42 (1067)	103.0 (2616)	103.0 (2616)	102.0 (2590)	102.0 (2590)	102.0 (2590)
	44 (1118)	106.1 (2695)	105.7 (2685)	105.3 (2675)	104.7 (2659)	104.2 (2647)
	48 (1219)	110.4 (2804)	110.1 (2797)	109.7 (2786)	109.2 (2774)	108.7 (2761)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-SD2Z32 (STRADDLE METHOD)						
Load Length	40 (1016)	96 (2438)	97 (2463)	98 (2489)	101 (2565)	103 (2616)
	42 (1067)	99 (2514)	100 (2540)	100 (2540)	101 (2565)	103 (2616)
	44 (1118)	100 (2540)	100 (2540)	101 (2565)	102 (2590)	103 (2616)
	48 (1219)	104 (2641)	104 (2641)	104 (2641)	104 (2641)	104 (2641)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
6 in. (152 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP1Z45						
Load Length	30 (762)	94 (2388)	94 (2388)	94 (2388)	94 (2388)	94 (2388)
	36 (914)	94 (2388)	94 (2388)	94 (2388)	94 (2388)	94 (2388)
	40 (1016)	98 (2488)	98 (2488)	97 (2464)	97 (2464)	96 (2438)
	44 (1118)	103 (2616)	103 (2616)	102 (2591)	102 (2591)	101 (2565)
	48 (1219)	108 (2743)	107 (2718)	107 (2718)	106 (2692)	106 (2692)
	54 (1372)	114 (2896)	114 (2896)	114 (2896)	113 (2870)	112 (2845)
	60 (1524)	121 (3073)	121 (3073)	120 (3048)	120 (3048)	120 (3048)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP2Z32 (UNDER RACK METHOD)						
Load Length	40 (1016)	104.5 (2654)	104.1 (2644)	103.7 (2634)	103.1 (2619)	102.5 (2604)
	42 (1067)	105.0 (2667)	105.0 (2667)	104.0 (2641)	104.0 (2641)	104.0 (2641)
	44 (1118)	108.9 (2766)	108.6 (2758)	108.2 (2748)	107.7 (2736)	107.1 (2720)
	48 (1219)	113.3 (2878)	112.9 (2868)	112.6 (2860)	112.1 (2847)	111.6 (2835)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
4 in. (102 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

	LOAD WIDTH					
	in (mm)	40 (1016)	44 (1118)	48 (1219)	54 (1372)	60 (1524)
RF1-HP2Z32 (STRADDLE METHOD)						
Load Length	40 (1016)	98 (2489)	99 (2514)	100 (2540)	103 (2616)	105 (2667)
	42 (1067)	101 (2565)	102 (2590)	102 (2590)	103 (2616)	105 (2667)
	44 (1118)	102 (2590)	102 (2590)	103 (2616)	104 (2641)	105 (2667)
	48 (1219)	106 (2692)	106 (2692)	106 (2692)	106 (2692)	106 (2692)

Min. Aisle Width - 18.3 in. (465 mm) Battery Compartment, with Sideshift
6 in. (152 mm) Clearance Each Side of Load

- Subtract 1 in. (25 mm) for trucks without Sideshift.
- Add a minimum of 6 in. (152 mm) to 12 in. (305 mm) for easy maneuvering.
- Add 3 in. (76 mm) for 21.3 in. (541 mm) Battery Compartment.
- For loads less than 40 in. (1016 mm) wide or baseleg opening greater than 41 in. (1041 mm), add 2 in. (51 mm) to aisle width requirements.

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