

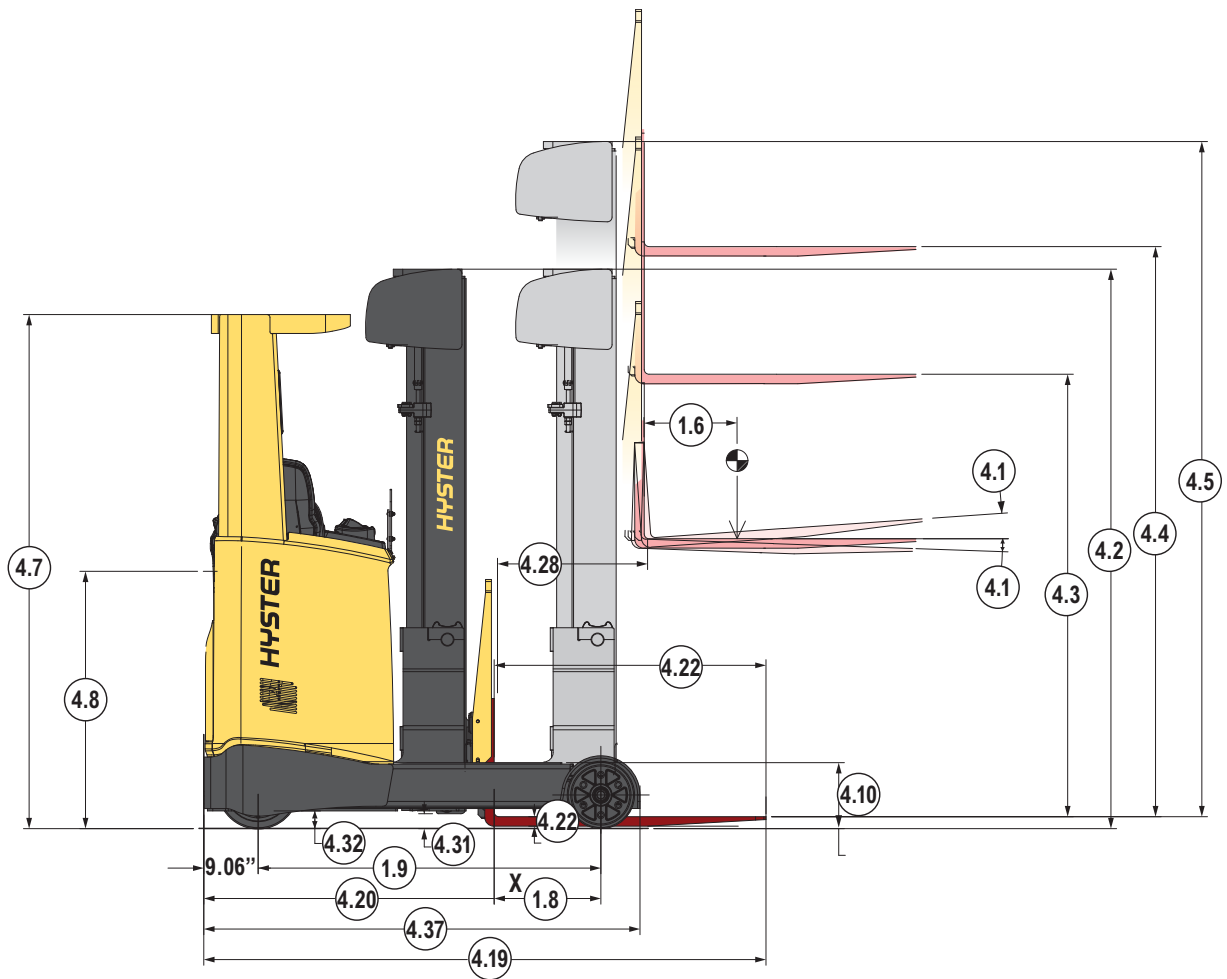


R1.4-1.6HD 406 SERIES

MOVING MAST INDOOR REACH TRUCK PRODUCT TECHNICAL GUIDE



DIMENSIONS

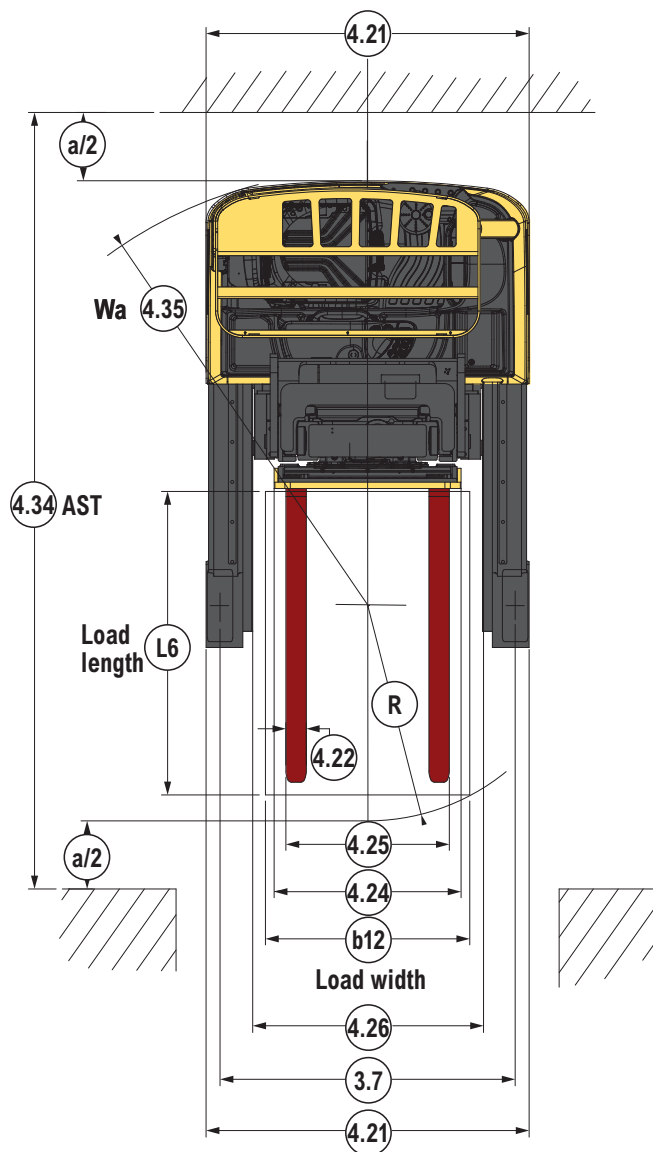
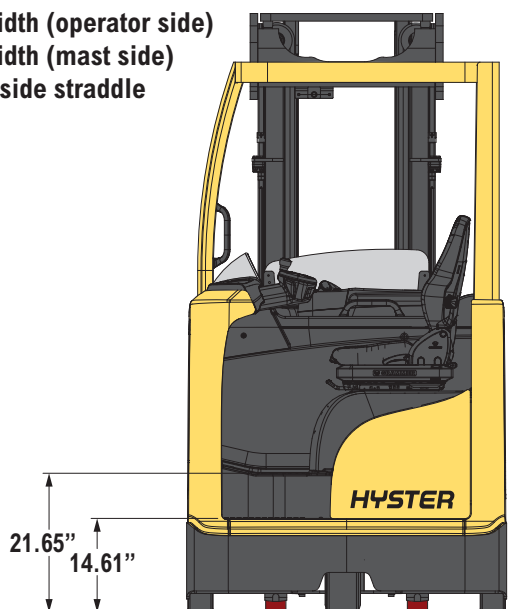


All AST dims provided include 8" of total clearance. Circled dimensions correspond to the line numbers on the tabulated chart inside the technical guide. Dimensions are in inches (millimeters).

$$R = \sqrt{(L6 - X)^2 + (b12/2)^2}$$

a = Clearance = 8"
 L6 = Load length
 b12 = Load width
 AST = Wa + R + a
 AST = Right Angle Stack

B1 = Overall width (operator side)
 B2 = Overall width (mast side)
 B4 = Overall inside straddle



All AST dims provided include 8" of total clearance. Circled dimensions correspond to the line numbers on the tabulated chart inside the technical guide. Dimensions are in inches (millimeters).

SPECIFICATIONS

GENERAL	1.1	Manufacturer		Hyster		
	1.2	Manufacturer's type designation		R1.4 406	R1.6 406	R1.6HD 406
	1.3	Drive: electric, diesel, gasoline, LPG		Electric (battery)		
	1.4	Operator type		Seated		
	1.5	Rated capacity/rated load	lb (kg)	3000 (1400)	3500 (1600)	3500 (1600)
	1.6	Load center distance	in (mm)	24 (600)		
	1.8	Load distance, center of drive axle to fork	in (mm)	15.83 (402)	17.80 (452)	12.3 (600)
	1.9	Wheelbase	in (mm)	55.12 (1400)	57.09 (1450)	57.09 (1450)
WEIGHT	2.1	Service weight	lb (kg)	6861 (3112)	6971 (3162)	8902 (4038)
	2.3	Axle loading, NL front/rear ⁴	lb (kg)	4359/2502 (1977/1135)	4449/2522 (2018/1144)	5329/3574 (2417/1621)
	2.4	Axle loading fork advanced, RL front/rear	lb (kg)	1504/8444 (682/3830)	1325/9176 (601/4162)	1947/10483 (883/4755)
	2.5	Axle loading fork retracted, RL front/rear	lb (kg)	3920/6030 (1778/2735)	4085/6413 (1853/2909)	4788/7641 (2172/3466)
WHL/TIRES	3.1	Tires, front/rear		NDIItthane/NDIItthane		
	3.2	Tire size, front	in (mm)	13.5 x 5.5 (343 x 140)		
	3.3	Tire size, rear	in (mm)	11.2 x 3.9 (285 x 100)		
	3.5	Wheels, number front/rear (x = driven wheels)		1x/2		
	3.7	Tread, rear	in (mm)	45.47 (1155)		
DIMENSIONS	4.1	Tilt of mast/fork carriage forward/backward	degrees	2/4		
	4.2	Height of mast, lowered	in (mm)	See mast tables		
	4.3	Free lift	in (mm)	See mast tables		
	4.4	Lift	in (mm)	See mast tables		
	4.5	Height, mast extended ¹	in (mm)	See mast tables		
	4.7	Height of overhead guard (cabin) ^{2,9}	in (mm)	85.63 (2175)		
	4.8	Seat height relating to SIP	in (mm)	42.60 (1082)		
	4.10	Height of wheel arms	in (mm)	12.13 (308)		
	4.19	Overall length	in (mm)	90.51 (2299)		99.31 (2523)
	4.20	Length to face of forks	in (mm)	48.39 (1229)		54.06 (1373)
	4.21	Overall width ³	in (mm)	49.80 (1265)		
	4.22	Fork dimensions DIN ISO 2331	in (mm)	1.4/3.9/42 (35/100/1070)	1.4/3.9/42 (35/100/1070)	1.6/4.7/45.3 (40/120/1150)
	4.23	Fork carriage ISO 2328, class/type A, B		2A		
	4.24	Fork carriage width	in (mm)	27.56 (700)		
	4.25	Distance between fork arms, min/max ⁷	in (mm)	9.45/25.98 (240/660)	9.45/25.98 (240/660)	10.24/26.77 (260/680)
	4.26	Distance between wheel arms/loading surfaces	in (mm)	35.43 (900)		
	4.28	Reach distance	in (mm)	23.03 (585)	25.0 (635)	19.33 (491)
	4.31	Ground clearance, RL, below mast	in (mm)	2.95 (75)		
	4.32	Ground clearance, center of wheelbase	in (mm)	2.95 (75)		3.35 (85)
	4.34.1	Aisle width for pallets 39.3" x 47.2" (1000 mm x 1200 mm) across – (L6 x b12)	in (mm)	107.0 (2718) – See charts	107.5 (2731) - See charts	111.57 (2834) – See charts
	4.34.2	Aisle width for pallets 31.5" x 47.2" (800 mm x 1200 mm) lengthwise – (b12 x L6)	in (mm)	108.8 (2764) – See charts	108.9 (2767) - See charts	114.02 (2896) – See charts
	4.35	Turning radius (Wa)	in (mm)	65.79 (1671)	67.64 (1718)	67.64 (1718)
PERFORMANCE	4.37	Length across wheel arms	in (mm)	70.67 (1795)	72.64 (1845)	72.64 (1845)
	4.42	Step height (from ground to running board)	in (mm)	21.65 (550)		
	4.43	Step height (between intermediate steps between running board and floor)	in (mm)	14.61 (371)		
	5.1	Travel speed, RL NL	mph (km/h)	6.8/6.8 (11/11)		8.7/8.7 (14/14)
	5.1.1	Travel speed, RL NL, backwards	mph (km/h)	6.8/6.8 (11/11)		8.7/8.7 (14/14)
	5.2	Lift speed, RL NL	ft/min (m/s)	72.8/124 (0.37/0.63)	63/124 (0.32/0.63)	82.7/143.7 (0.42/0.73)
	5.3	Lowering speed, RL/NL	ft/min (m/s)	108.3/108.3 (0.55/0.55)		
	5.4	Reaching speed, RL/NL	ft/min (m/s)	29.5/29.5 (0.15/0.15)		33.5/33.5 (0.17/0.17)
	5.7	Gradeability, RL/NL ^{6,10}	%	10/15		12/18
	5.8	Max. gradeability RL/NL ¹⁰	%	10/15		12/18
ELECTRIC	5.10	Service brake		Electric		
	6.1	Drive motor, S2 60 minute rating	kW	5.4		9.6
	6.2	Lift motor, S3 15% rating	kW	9.9		14
	6.4	Battery voltage/nominal capacity	(V)/(Ah)	48/560 ⁵		
	6.5	Battery weight ⁸	lb (kg)	1653 (750)		2070 (939)
OTHER	8.1	Type of drive unit		AC		
	10.1	Operating pressure for attachments	bar	180		
	10.2	Oil volume for attachment	l/min	20		
	10.7	Sound pressure level at the driver's seat	dB(A)	< 69.7		

1 With load backrest add 20" (R1.4 - R1.6).

2 With beacon add 4.73".

3 With load wheels lateral covers: 50.78" (R1.4 - R1.6).

4 Forks retracted.

5 See battery tables.

6 Values in brackets { } are optional.

7 Side shift stroke is +/-2.95" on all trucks.

8 These values may vary of +/- 5%.

9 With PAL side line lights add 5.32"; With double work light to front add 8.66"

10 Gradeability grades based on motor thermal capacity, torque available and brake requirements

† NOTE: Performance specifications/ratings are for truck equipped as described under standard equipment in this specification sheet. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature and condition of the operating area. Specifications are subject to change and the proposed application should be discussed with your authorized Hyster® dealer.

†† All values are nominal values and are subject to tolerances. For further information on this dimension, please contact your local Hyster® dealer.

Above specifications, unless otherwise listed, are for a standard truck without optional equipment. Hyster® products are subject to change without notice. Lift trucks illustrated may feature optional equipment. See truck dimensions for batteries chart.

RL = Rated Load, NL = No Load

MAST AND BATTERY SPECIFICATIONS

R1.4-1.6 406 - MAST DETAILS, 3-STAGE FULL FREE LIFT

Model	Lift (4.4)	Free lift (4.3)	Height of mast lowered (4.2)	Height of mast extended w/o LBR (4.5) ¹
	in (mm)	in (mm)	in (mm)	in (mm)
R1.4-1.6 406	216 (5500)	71 (1820)	94 (2367)	239 (6063)
	236 (6000)	78 (1992)	100 (2539)	259 (6563)
	255 (6500)	85 (2164)	107 (2711)	279 (7063)
	295 (7500)	98 (2508)	121 (3055)	318 (8063)
	305 (7750)	102 (2594)	124 (3141)	328 (8313)
	314 (8000)	105 (2680)	128 (3227)	338 (8563)
	334 (8500)	112 (2852)	134 (3399)	357 (9063)
	374 (9500)	125 (3196)	148 (3753)	397 (10063)
R1.6HD 406	413 (10500)	139 (3540)	162 (4097)	436 (11063)
	409 (10400)	139 (3540)	162 (4097)	432 (10963)
	429 (10900)	146 (3712)	169 (4269)	452 (11463)
	448 (11400)	152 (3884)	1775 (4441)	471 (11963)

¹ With load backrest 39.37" height, add 20" ; with load backrest 59.06" height, add 39.69".

R1.4 406 TRUCK DIMENSIONS FOR BATTERIES

1.8	Load distance, center of drive axle to fork	in (mm)	15.81 (402)	12.97 (330)	15.81 (402)	12.97 (330)	10.14 (258)	10.14 (258)
1.9	Wheelbase	in (mm)	55.12 (1400)	55.12 (1400)	55.12 (1400)	55.12 (1400)	55.12 (1400)	55.12 (1400)
2.1	Service weight	lb (kg)	6861 (3112)	7295 (3309)	6861 (3112)	7319 (3320)	7705 (3495)	7807 (3541)
2.3	Axle loading, NL front/rear ⁵	lb (kg)	4359/ 2502 (1977/1135)	4464/ 2833 (2025/1285)	4359/ 2502 (1977/1135)	4480/ 2842 (2032/1289)	4530/ 3175 (2055/1440)	4594/ 3212 (2084/1457)
2.4	Axle loading fork advanced, RL front/rear	lb (kg)	1504/ 8444 (682/3830)	1746/ 8636 (792/3917)	1504/ 8444 (682/3830)	1764/ 8644 (800/3921)	1951/ 8841 (885/4010)	2015/ 8878 (914/4027)
2.5	Axle loading fork retracted, RL front/rear	lb (kg)	3920/ 6030 (1778/2735)	3865/ 6517 (1753/2956)	3920/ 6030 (1778/2735)	3880/ 6526 (1760/2960)	3772/ 7020 (1711/3184)	3838/ 7057 (1741/3201)
4.19	Overall length	in (mm)	90.51 (2299)	93.35 (2371)	90.51 (2299)	93.35 (2371)	96.18 (2443)	96.18 (2443)
4.20	Length to face of forks	in (mm)	48.37 (1229)	51.20 (1301)	48.37 (1229)	51.20 (1301)	54.04 (1373)	54.04 (1373)
4.28	Reach distance	in (mm)	23.03 (585)	20.20 (513)	23.03 (585)	20.20 (513)	17.36 (441)	17.36 (441)
4.34.1	Aisle width for pallets 39.3" x 47.2" (1000 mm x 1200 mm) across - (L6 x b12)	in (mm)	107.01 (2718)	109.09 (2771)	107.01 (2718)	109.09 (2771)	111.34 (2828)	111.26 (2826)
4.34.2	Aisle width for pallets 31.5" x 47.2" (800 mm x 1200 mm) lengthwise - (b12 x L6)	in (mm)	108.82 (2764)	111.38 (2829)	108.82 (2764)	111.38 (2829)	113.98 (2895)	113.98 (2895)
4.34.3	Aisle width for pallets 40" x 48" lengthwise (b12 x L6)	in (mm)	111.54 (2833)	113.97 (2895)	111.54 (2833)	113.97 (2895)	116.46 (2958)	116.46 (2958)
4.34.4	Aisle width for pallets 48" x 48" (b12 x L6)	in (mm)	113.82 (2891)	116.13 (2950)	113.82 (2891)	116.13 (2950)	118.49 (3010)	118.49 (3010)
4.34.5	Aisle width for pallets 48" x 40" across (b12 x L6)	in (mm)	107.74 (2737)	109.81 (2789)	107.74 (2737)	109.81 (2789)	111.97 (2844)	111.97 (2844)
4.35	Turning radius	in (mm)	65.79 (1671)	65.79 (1671)	65.79 (1671)	65.79 (1671)	65.79 (1671)	65.79 (1671)
6.3	Battery according to DIN 43531/35/36 A,B,C, no (reference only)		C	C	C "Super"	C "Super"	C	C "Super"
6.4	Battery voltage/nominal capacity	V/Ah	48/420	48/560	48/465	48/620	48/700	48/775
6.5	Battery weight ⁴	lb (kg)	1653 (750)	2070 (939)	1653 (750)	2094 (950)	2467 (1119)	2568 (1165)

R1.6 406 TRUCK DIMENSIONS FOR BATTERIES

1.8	Load distance, center of drive axle to fork	in (mm)	17.78 (452)	14.94 (380)	17.78 (452)	14.94 (380)	12.11 (308)	12.11 (308)
1.9	Wheelbase	in (mm)	57.09 (1450)	57.09 (1450)	57.09 (1450)	57.09 (1450)	57.09 (1450)	57.09 (1450)
2.1	Service weight	lb (kg)	6971 (3162)	7408 (3360)	6971 (3162)	7432 (3371)	7818 (3546)	7919 (3592)
2.3	Axle loading, NL front/rear ⁵	lb (kg)	4449/2522 (2018/1144)	4561/2846 (2069/1291)	4449/2522 (2018/1144)	4579/2853 (2077/1294)	4636/3181 (2103/1443)	4702/3217 (2133/1459)
2.4	Axle loading fork advanced, RL front/rear	lb (kg)	1325/9176 (601/4162)	1574/9361 (714/4246)	1325/9176 (601/4162)	1590/9370 (721/4250)	1786/9559 (810/4336)	1850/9595 (839/4352)
2.5	Axle loading fork retracted, RL front/rear	lb (kg)	4085/6413 (1853/2909)	4023/6911 (1825/3135)	4085/6413 (1853/2909)	4039/6920 (1832/3139)	3922/7423 (1779/3367)	3988/7458 (1809/3383)
4.19	Overall length	in (mm)	90.51 (2299)	93.35 (2371)	90.51 (2299)	93.35 (2371)	96.18 (2443)	96.18 (2443)
4.20	Length to face of forks	in (mm)	48.37 (1229)	51.20 (1301)	48.37 (1229)	51.20 (1301)	54.04 (1373)	54.04 (1373)
4.28	Reach distance	in (mm)	25.00 (635)	22.17 (563)	25.00 (635)	22.17 (563)	19.33 (491)	19.33 (491)
4.34.1	Aisle width for pallets 39.3" x 47.2" (1000 mm x 1200 mm) across - (L6 x b12)	in (mm)	107.52 (2731)	109.49 (2781)	107.52 (2731)	109.49 (2781)	111.57 (2834)	111.57 (2834)
4.34.2	Aisle width for pallets 31.5" x 47.2" (800 mm x 1200 mm) lengthwise - (b12 x L6)	in (mm)	108.94 (2767)	111.42 (2830)	108.94 (2767)	111.42 (2830)	114.02 (2896)	114.02 (2896)
4.34.3	Aisle width for pallets 40" x 48" lengthwise (b12 x L6)	in (mm)	111.73 (2838)	114.13 (2899)	111.73 (2838)	114.13 (2899)	116.58 (2961)	116.58 (2961)
4.34.4	Aisle width for pallets 48" x 48" (b12 x L6)	in (mm)	114.10 (2898)	116.37 (2956)	114.10 (2898)	116.37 (2956)	118.69 (3015)	118.69 (3015)
4.34.5	Aisle width for pallets 48" x 40" across (b12 x L6)	in (mm)	108.22 (2749)	110.21 (2799)	108.22 (2749)	110.21 (2799)	112.31 (2853)	112.31 (2853)
4.35	Turning radius	in (mm)	67.64 (1718)	67.64 (1718)	67.64 (1718)	67.64 (1718)	67.64 (1718)	67.64 (1718)
6.3	Battery according to DIN 43531/35/36 A,B,C, no (reference only)		C	C	C "Super"	C "Super"	C	C "Super"
6.4	Battery voltage/nominal capacity	V/Ah	48/420	48/560	48/465	48/620	48/700	48/775
6.5	Battery weight ⁴	lb (kg)	1653 (750)	2070 (939)	1653 (750)	2094 (950)	2467 (1119)	2568 (1165)

⁴ These values may vary of +/- 5%.

⁵ Forks retracted.

RL = Rated Load, NL = No Load

All weights (2.1 to 2.5) are with lowest mast and standard forks.

MAST AND BATTERY SPECIFICATIONS

R1.6HD 406 TRUCK DIMENSIONS FOR BATTERIES						
1.8	Load distance, center of drive axle to fork	in (mm)	12.13 (293)	12.13 (293)	11.54 (293)	11.54 (293)
1.9	Wheelbase	in (mm)	57.09 (1450)	57.09 (1450)	57.09 (1450)	57.09 (1450)
2.1	Service weight	lb (kg)	8902 (4038)	8927 (4049)	9312 (4224)	9414 (4270)
2.3	Axle loading, NL front/rear ⁵	lb (kg)	5329/3574 (2417/1621)	5344/3583 (2424/1625)	5353/3960 (2428/1796)	5417/3997 (2457/1813)
2.4	Axle loading fork advanced, RL front/rear	lb (kg)	1947/10483 (883/4755)	1964/10490 (891/4758)	2158/10681 (979/4845)	2224/10717 (1009/4861)
2.5	Axle loading fork retracted, RL front/rear	lb (kg)	4788/7641 (2172/3466)	4806/7648 (2180/3469)	4639/8201 (2104/3720)	4705/8236 (2134/3736)
4.19	Overall length	in (mm)	99.31 (2523)	99.31 (2523)	99.31 (2523)	99.31 (2523)
4.20	Length to face of forks	in (mm)	54.06 (1373)	54.06 (1373)	54.65 (1388)	54.65 (1388)
4.28	Reach distance	in (mm)	19.33 (491)	19.33 (491)	19.33 (491)	19.33 (491)
4.34.1	Aisle width for pallets 39.3" x 47.2" (1000 mm x 1200 mm) across - (L6 x b12) ^{6,7}	in (mm)	111.57 (2834)	111.57 (2834)	112.02 (2845)	112.02 (2845)
4.34.2	Aisle width for pallets 31.5" x 47.2" (800 mm x 1200 mm) lengthwise - (b12 x L6) ^{6,7}	in (mm)	114.02 (2896)	114.02 (2896)	114.54 (2909)	114.53 (2909)
4.34.3	Aisle width for pallets 40" x 48" lengthwise (b12 x L6) ^{6,7}	in (mm)	116.58 (2961)	116.58 (2961)	117.10 (2974)	117.10 (2974)
4.34.4	Aisle width for pallets 48" x 48" (b12 x L6)	in (mm)	118.69 (3015)	118.69 (3015)	119.17 (3027)	119.17 (3027)
4.34.5	Aisle width for pallets 48" x 40" across (b12 x L6)	in (mm)	112.31 (2853)	112.31 (2853)	112.74 (2864)	112.74 (2864)
4.35	Turning radius	in (mm)	67.64 (1718)	67.64 (1718)	67.64 (1718)	67.64 (1718)
6.3	Battery according to DIN 43531/35/36 A,B,C, no (reference only)		C	C "Super"	C	C "Super"
6.4	Battery voltage/nominal capacity	V/Ah	48/560	48/620	48/700	48/775
6.5	Battery weight ⁴	lb (kg)	2070 (939)	2094 (950)	2467 (1119)	2568 (1165)

⁴ These values may vary of +/- 5%.

RL = Rated Load, NL = No Load

⁵ Forks retracted.

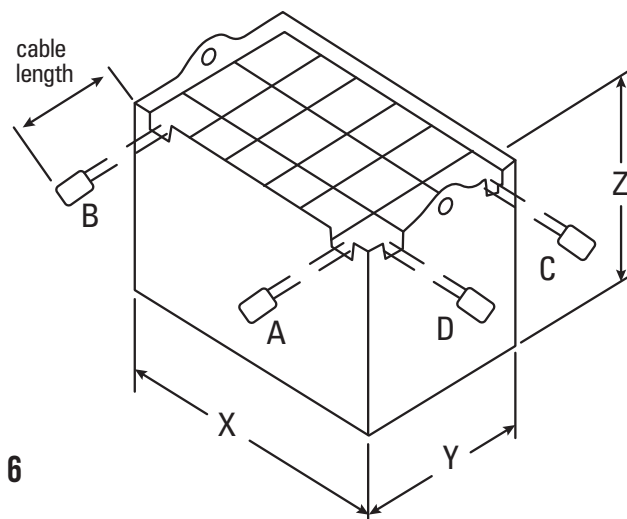
⁶ Contact your local dealer or applications engineering for AST dimensions with cold storage cab or 4-stage masts.

All weights (2.1 to 2.5) are with lowest mast and standard forks.

⁷ Contact your local dealer for dimensions with wide and extra wide frame options.

BATTERY SPECIFICATIONS

TRUCK MODEL	COMPARTMENT DIMENSIONS-MAX.			BATTERY DIMENSIONS-MAX.			VOLTS	NO. OF CELLS	AMP HR	WEIGHT	
	WIDTH	LENGTH	HEIGHT	X	Y	Z			CAPACITY RANGE	MIN	MAX
	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)				lb (kg)	lb (kg)
				+0"/-0.12" (+0/-3)	+0"/-0.12" (+0/-3)	+0"/-0.08" (+0/-2)					
R1.4 406 - 3,000lb	48.15 (1223)	11.26 (286)	30.94 (786)	48.11 (1222)	11.14 (283)	30.87 (784)	48	24	420-465	1572 (713)	1737 (788)
R1.4 406 - 3,000lb	48.15 (1223)	14.09 (358)	30.94 (786)	48.11 (1222)	13.98 (355)	30.87 (784)	48	24	560-620	1967 (892)	2200 (998)
R1.4 406 - 3,000lb	48.15 (1223)	16.93 (430)	30.94 (786)	48.11 (1222)	16.81 (427)	30.87 (784)	48	24	700-775	2344 (1063)	2696 (1223)
R1.6 406 - 3,500lb	48.15 (1223)	11.26 (286)	30.94 (786)	48.11 (1222)	11.14 (283)	30.87 (784)	48	24	420-465	1572 (713)	1737 (788)
R1.6 406 - 3,500lb	48.15 (1223)	14.09 (358)	30.94 (786)	48.11 (1222)	13.98 (355)	30.87 (784)	48	24	560-620	1967 (892)	2200 (998)
R1.6 406 - 3,500lb	48.15 (1223)	16.93 (430)	30.94 (786)	48.11 (1222)	16.81 (427)	30.87 (784)	48	24	700-775	2344 (1063)	2696 (1223)
R1.6HD 406 - 3,500lb	48.15 (1223)	14.09 (358)	30.94 (786)	48.11 (1222)	13.98 (355)	30.87 (784)	48	24	560-620	1967 (892)	2200 (998)
R1.6HD 406 - 3,500lb	48.15 (1223)	16.93 (430)	30.94 (786)	48.11 (1222)	16.81 (427)	30.87 (784)	48	24	700-775	2344 (1063)	2696 (1223)



Battery compartment length is measured from front to rear.
Battery compartment width is measured across the truck.
Battery cover - not needed

PERFORMANCE	STD	OPT
6.8 mph travel speed (R1.4 406, R1.6 406, R1.6HD 406)	x	
Height pre-selector (with/without pallet detection device)		x
Weight indicator		x
Carriage mounted camera		x
Laser line fork positioning		x
DRIVE	STD	OPT
Top/front load wheel protection	x	
LIFT	STD	OPT
3-stage mast/tilting carriage	x	
HANDLING	STD	OPT
TouchPoint™ mini-levers hydraulic controls	x	
Simultaneous lift/reach functionality	x	
Lift comfort package		x
ERGONOMICS	STD	OPT
Intermediate step	x	
Grab handle on overhead guard and under armrest	x	
Adjustable length armrest	x	
Full suspension seat	x	
Standard display	x	
Adjustable steering column	x	
Seat belt		x
Premium touch screen display		x
Amber strobe		x
One front light		x
One front / two rear light		x

OPERATION	STD	OPT
180 degree steering	x	
Keyless access		x
360 degree steering		x
Clipboard		x
High temperature environment		x
Side battery change - battery tray rollers		x
Audible alarm (forks leading)		x
Load backrest (39.4" (1000 mm)		x
Cold storage (-22 deg F (-30 deg C))		x
Pedestrian awareness lights (spotlight chassis direction - forks trailing)		x
Telescoping forks		x
Full view overhead guard		x
Wet grip tires		x
Front and/or rear blue pedestrian awareness spotlights		x
Red line (side) pedestrian awareness lights		x



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