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TOUGH TRUCKS.™**

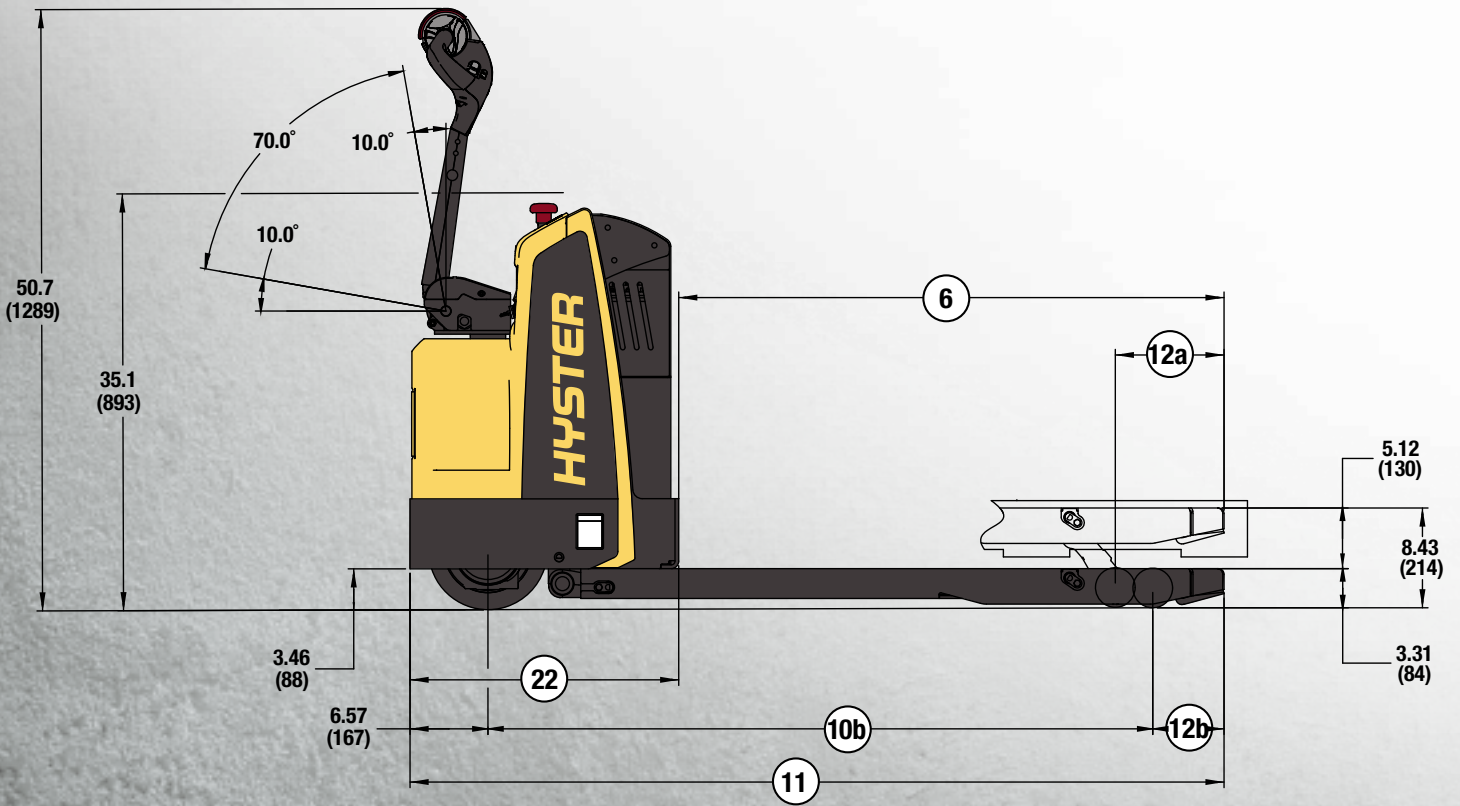
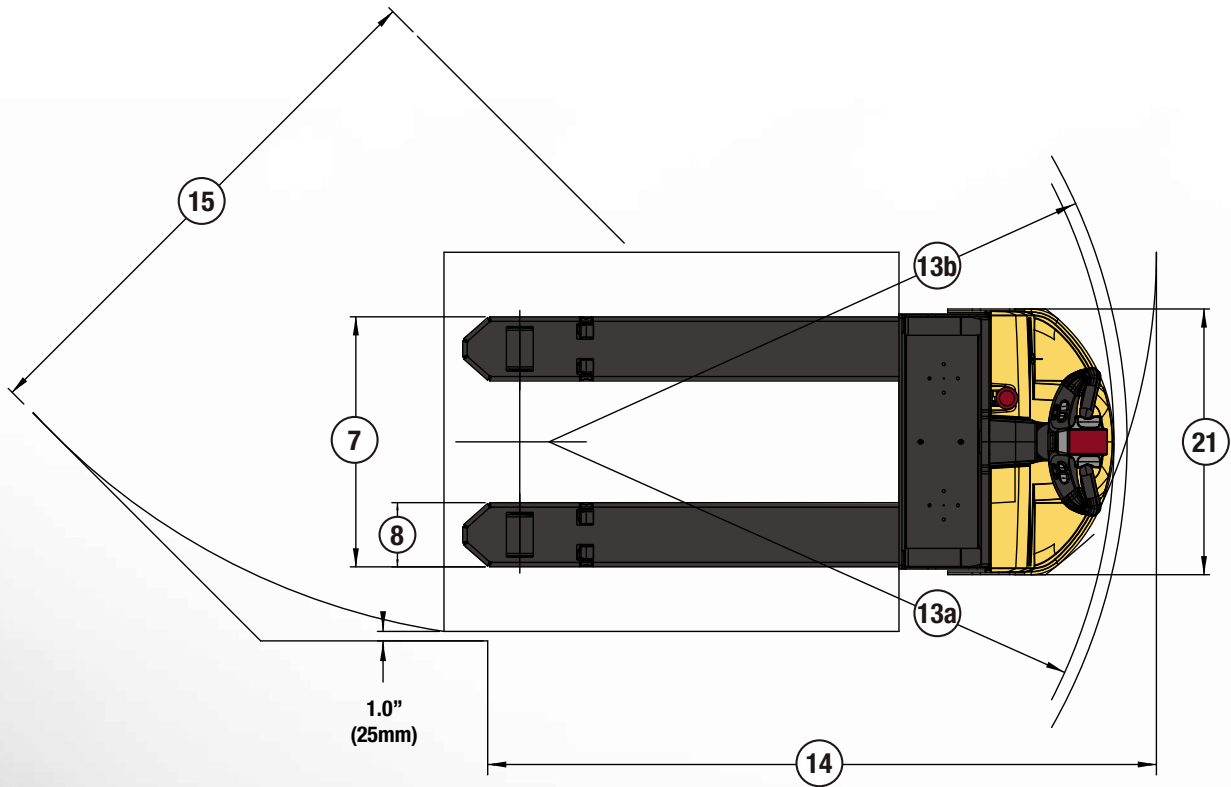


**W45Z<sup>HD</sup> SERIES**

**TECHNICAL GUIDE**

[WWW.HYSTER.COM](http://WWW.HYSTER.COM)

**> DIMENSIONS**



# SPECIFICATIONS

GENERAL	1	Manufacturer	Hyster						
	2	Model Designation	W45Z <sup>HD</sup>						
	3	Power Type	24 Volt						
	4	Operator Type	Pedestrian						
	5	Rated Capacity	lb (kg)	4500 (2041)					
	6a	Fork Length – Nominal	in (mm)	36 (914)	40 (1023)	42 (1067)	48 (1219)	48 (1219)	
	6b	Fork Length – Actual	in (mm)	34 (866)	40.3 (1023)	43 (1084)	46 (1169)	48 (1219)	
	7	Fork Overall Width	in (mm)	27 (685)	26 (670)	27 (685)	27 (685)	27 (685)	
	8	Fork Width (Individual Fork)	in (mm)	7 (172)					
DIMENSIONS	9	Load Distance – Face of Forks to Center of Load Wheels	in (mm)	25 (635)	31 (791)	37 (931)	40 (1016)	40 (1016)	
	10a	Wheelbase – Raised	in (mm)	41.0 (1042)	47.2 (1199)	49.6 (1261)	53.0 (1346)	53.0 (1346)	
	10b	Wheelbase – Lowered	in (mm)	44.2 (1122)	50.4 (1279)	52.8 (1340)	56.1 (1425)	56.1 (1425)	
	11	Overall Length	in (mm)	56.8 (1442)	63.0 (1599)	65.4 (1660)	68.7 (1745)	70.7 (1795)	
	12a	Center of Load Wheel to Tip of Forks – Raised	in (mm)	9.1 (231)	9.1 (231)	9.1 (231)	9.1 (231)	11.1 (283)	
	12b	Center of Load Wheel to Tip of Forks – Lowered	in (mm)	6.1 (155)	6.0 (153)	6.1 (155)	6.1 (155)	8.1 (205)	
	13a	Outside Turning Radius (Bumper) - Raised	in (mm)	47.6 (1208)	53.8 (1367)	57.1 (1449)	59.5 (1511)	59.5 (1511)	
		Outside Turning Radius (Bumper) - Lowered	in (mm)	50.8 (1289)	57.0 (1448)	60.3 (1530)	62.7 (1592)	62.7 (1592)	
	13b	Outside Turning Radius (Handle) - Raised	in (mm)	48.9 (1242)	55.4 (1407)	57.5 (1460)	60.8 (1545)	60.8 (1545)	
		Outside Turning Radius (Handle) - Lowered	in (mm)	52.1 (1320)	58.6 (1489)	61.6 (1565)	64.1 (1627)	64.1 (1627)	
	15	Right Angle Stack – Raised	in (mm)	59.6 (1514)	60.1 (1526) <sup>1</sup>	62.6 (1590)	70.6 (1792)	70.6 (1792)	
	16	Equal Intersecting Aisle – Raised	in (mm)	48.3 (1228)	52.5 (1334) <sup>1</sup>	55.0 (1396)	56.8 (1443)	56.8 (1443)	
	17a	Grade Clearance	Chassis	% 67					
	17b		Center of Wheelbase	%	45	38 <sup>3</sup>	36	34	34
	17c		Forks	%	74	74	74	74	59
	18	Overall Lift Height – Top of Forks	in (mm)	8.4 (214)					
	19	Lowered Height – Top of Forks	in (mm)	3.3 (84)					
	20	Total Lift	in (mm)	5.1 (130)					
	21	Truck Overall Width	in (mm)	28.0 (712)					
	22	Chassis Length	in (mm)	22.7 (576)					
	23	Battery Compartment – Standard	in (mm)	26.5 x 8.2 x OPEN (672 x 208 x OPEN)					
	PERFORMANCE	24	Maximum Travel Speed – Chassis First – NL/RL	mph (kph)	3.7/3.7 (6.0/6.0)	3.5/3.5 (6.6/6.6)	3.7/3.7 (6.0/6.0)	3.7/3.7 (6.0/6.0)	3.7/3.7 (6.0/6.0)
		25	Maximum Travel Speed – Forks First – NL/RL	mph (kph)	3.7/3.7 (6.0/6.0)	3.5/3.5 (6.6/6.6)	3.7/3.7 (6.0/6.0)	3.7/3.7 (6.0/6.0)	3.7/3.7 (6.0/6.0)
26		Number of Speeds	Infinitely Variable						
27		Traction Motor Control Method Type	AC Transistor						
28	Service Brake Type	Electro-Mechanical							
WT.	29	Truck Weight (approximate) Without Battery – NL/RL	lb (kg)	624.0/5124.0 (283.0/2324.0)	732.0 <sup>4</sup> / 5232.0 <sup>4</sup> (332.0 / 2373.0)	650.0/5150.0 (295.0/2336.0)	659.0/5159.0 (299.0/2340.0)	659.0/5159.0 (299.0/2340.0)	
	30	Axle Loading, Drive, Static w/Max. Wt Battery – NL	lb (kg)	767 (348)	772 (350)	783 (355)	783 (355)	783 (355)	
	31	Axle Loading, Load Wheel, Static w/Max. Wt Battery – NL	lb (kg)	137 (62)	121 (55)	128 (58)	128 (58)	128 (58)	
WHEELS	32	Drive Tire – Size/Type (Number of Wheels)	in	10.0 x 4.0/Polyurethane (1)					
	33	Load Wheel – Size/Type (Number of Wheels)	in	3.35 x 4.3/ Polyurethane (2)	3.25" x 4.5"/ Polyurethane (2)	3.35 x 4.3/Polyurethane (2)			
	34	Caster Wheel – Size/Type (Number of Wheels)	in	3.25 x 1.5/Spring Loaded Polyurethane (2)					
BATTERY	35	Battery Type	Lead Acid						
	36	Ampere Hours – Maximum	ah	300	225	300	300	300	
	37	Ampere Hours – Minimum	ah	158					
	38	Maximum Weight	lb (kg)	377 (171)					
	39	Minimum Weight	lb (kg)	309 (140)					

RL = Rated Load; NL = No Load

NOTE: Above specifications, unless otherwise listed, are for a standard truck without optional equipment. Right Angle Stack and Equal Intersecting Aisle are calculated using a 40" wide pallet.

<sup>1</sup> Measured using a 42" X 40" pallet

<sup>2</sup> Measured using a 36" X 36" pallet

<sup>3</sup> Measured to the bottom of a GMA approved pallet on the forks while they are in the raised position

<sup>4</sup> With delivery moveable load backrest

CERTIFICATION: These Hyster® lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178(a)(2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck. Performance specifications are for a truck equipped as described under Standard Equipment on this Technical Guide. Performance specifications are affected by the condition of the vehicle and how it is equipped, as well as by the nature, condition of the operating area, proper service and maintenance of the vehicle. If these specifications are critical, the proposed application should be discussed with your dealer.

# BATTERY AND COMPARTMENT SPECIFICATIONS

6" LITHIUM-ION BATTERY SPECIFICATIONS								
GENERAL	1	Manufacturer	Hyster					
	2	Model Designation	W45Z <sup>HD</sup>					
	3	Power Type	24 Volt					
	4	Operator Type	Pedestrian					
	5	Rated Capacity	4500 (2041)					
DIMENSIONS	6	Fork Length (Nominal)	in (mm)	36 (914)	40 (1023)	42 (1067)	48 (1219)	48 (1219)
		Fork Length (Actual)	in (mm)	34 (866)	40.3 (1023)	43 (1084)	46 (1169)	48 (1219)
	10a	Wheelbase – Raised	in (mm)	38.5 (979)	44.8 (1137)	47.2 (1199)	50.6 (1284)	50.6 (1284)
	10b	Wheelbase – Lowered	in (mm)	41.7 (1060)	47.9 (1217)	50.3 (1278)	53.7 (1363)	53.7 (1363)
	11	Overall Length	in (mm)	54.3 (1380)	60.5 (1537)	62.9 (1598)	66.3 (1683)	68.2 (1733)
	13a	Outside Turning Radius (Bumper) - Raised	in (mm)	46.5 (1180)	51.4 (1305)	55.0 (1398)	58.4 (1483)	58.4 (1483)
		Outside Turning Radius (Bumper) - Lowered	in (mm)	49.5 (1258)	54.5 (1385)	59.2 (1503)	61.5 (1561)	61.5 (1561)
	15	Right Angle Stack – Raised	in (mm)	57.6 (1462) <sup>2</sup>	56.5 (1434) <sup>1</sup>	58.9 (1496) <sup>1</sup>	68.3 (1734)	68.3 (1734)
	16	Equal Intersecting Aisle – Raised	in (mm)	46.7 (1187) <sup>2</sup>	50.5 (1283) <sup>1</sup>	53.0 (1345) <sup>1</sup>	54.8 (1393)	54.8 (1393)
	22	Chassis Length	in (mm)	20.2 (514)	20.2 (514)	20.2 (514)	20.2 (514)	20.2 (514)
23	Battery Compartment – Standard with Battery Rollers	in (mm)	26.5 x 6.0 x OPEN (672 x 153 x OPEN)					

<sup>1</sup> Measured using a 42" X 40" pallet  
<sup>2</sup> Measured using a 36" X 36" pallet

## FACTORY INSTALLED

W45Z <sup>HD</sup> BATTERY & COMPARTMENT SPECIFICATIONS										
Battery	Compartment Dimensions			Battery Dimensions - Max			Capacity Amp-Hours	Battery Connector	Max Capacity	Weight
	Width	Length	Height	X	Y	Z			6 Hr Rate	
	in (mm)			in (mm)					amp hr (kwh)	
Standard Battery Pack	26.5 (672mm)	8.2 (208mm)	Open	26.0 (660mm)	7.8 (198mm)	23.8 (605mm)	208	None	4.0	353 lbs (160 kg)
AGM Battery	26.5 (672mm)	8.2 (208mm)	Open	26.0 (660mm)	7.8 (198mm)	23.8 (605mm)	224	None	4.4	388 lbs (176 kg)
Lithium-Ion	26.5 (672.0mm)	6.0 (153.0mm)	Open	6.7 (171mm)	5.4 (136mm)	23.1 (586mm)	56	None	N/A	92lbs (42 kg)

## DEALER/CUSTOMER INSTALLED

W45Z <sup>HD</sup> BATTERY & COMPARTMENT SPECIFICATIONS										
Battery	Compartment Dimensions			Battery Dimensions - Max			Capacity Amp-Hours	Battery Connector	Max Capacity	Weight
	Width	Length	Height	X	Y	Z			6 Hr Rate	
	in (mm)			in (mm)					amp hr (kwh)	
GNB PalletPro Battery	26.5" (672mm)	8.2" (208mm)	Open	25.3" (643mm)	7.6" (193mm)	24.5" (623mm)	195	SB-175 Red	4.5	400 lbs (181 kg)
Industrial Battery	25.5" (672mm)	9.1" (231mm)	Open	25.4" (645mm)	8.7" (221mm)	23.3" (591mm)	300	SB-175 Red	5.9	560 lbs (254 kg)

Notes: a) Battery size is limited by rounded corners of battery compartment  
 b) Cable lead position "B"  
 c) 16" cable length  
 d) Maximum cable gauge of 1/0

## FEATURES AND OPTIONS

### STANDARD EQUIPMENT

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- 46" heavy duty boxed forks
- 27" fork spread
- Standard construction – operating temperatures:
  - +32° F to + 120° F
- Press-on smooth rubber drive tire (10" x 4")
- Single polyurethane load wheels (3.25" X 4.5")
- Greaseable load wheel bearings
- Engineered composite control handle
- Direction reversing switch
- 8.2" X 26.5" battery compartment
- 24-volt AC transistor controlled electrical system
  - Sealed transistor traction controller
  - Vertically mounted AC traction motor
  - Auto Deceleration System w/regenerative braking
- Heavy duty drive unit
- Multifunction display with hour meter
  - Battery state of charge
  - Low battery lift interrupt
  - Fault indicator
- On-board diagnostic and self test
  - Program, test and diagnose
  - Password protected
- Three pre-programmed performance modes
- Two operator selectable performance levels
- Heavy duty lift pump and single hydraulic lift cylinder
- Lift time-out at full lift height
- Ramp hold with anti-rollback on grade
- One piece impact resistant power unit cover
- Soft touch keyed ignition switch
- Cowl-mounted power disconnect switch
- IP65 sealed connectors
- Electro-mechanical park brake
- Electronic horn
- Turtle speed mode selection with handle in full upright position
- Heavy duty pallet fork design
  - 3.25" lowered / 5.12" lift ht. / 8.25" overall raised ht.
  - Heavy duty torsion bar linkage connection
  - Heavy duty, long life lift linkage with lubrication fittings
  - "X" groove style greaseable pivot bushings
  - Hardened, bolt retained flag linkage pins
- Operating manual
- 12 months / unlimited hour manufacturer's warranty
- 36 months / 6,000 hour powertrain warranty
- Lifetime main frame warranty

### OPTIONAL EQUIPMENT


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- 9.1" x 25.5" battery compartment
- 6.0" x 26.5" battery compartment
- Power alternatives
  - Wet cell battery power pack
  - Absorbed Glass Mat (AGM) maintenance free battery power pack
  - Lithium-Ion Advanced Performance Power System
- Battery charger
  - 20 amp 110 volt on-board high frequency smart charger
  - 20 amp 220 volt on-board high frequency smart charger
- Cast aluminum handle
- Delivery control handle
- Fork lengths
  - 34" – short tip
  - 40.3" – short tip
  - 42" – short tip
  - 48" – standard tip
- 22" overall fork width
- Cooler/freezer package – operating temperatures:
  - 0° F to +120° F
- SubZero freezer package – operating temperatures:
  - 40° F to +120° F
- Wash down package – operating temperatures:
  - 0° F to +120° F
- Extreme corrosion wash down package
  - operating temperatures: 0° F to +120° F
- Drive tire options:
  - 10" x 4" pressed-on-smooth polyurethane
  - 10" x 4" mold-on smooth polyurethane
  - 10" x 4" pressed-on non-marking rubber
  - 10" x 4" pressed-on red EZ polyurethane grooved
  - 10" x 4" molded-on vulkollan polyurethane
- Single vulkollan load wheel
- Stainless steel greaseable or sealed bearing
- Stabilizers
  - Adjustable bolt-on stability tabs
  - Heavy duty quick adjust casters with greaseable or sealed wheel and pivot bearing
- Load backrest
  - 48" high bolt-on
  - 54" high bolt-on
  - 60" high bolt-on
  - 72" high bolt-on
  - 58.5" high moveable
- Load backrest mounted or magnetic battery mounted convenience tray
- Brake override drive / tow switch
- Hyster Intelligent Slow Down™
- Hyster Intelligent Lift™
- Self-adjusting audible alarm



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Part No. W45Z/TG  
7/2016 Litho in U.S.A.

Visit us online at [www.hyster.com](http://www.hyster.com) or call us at **1-800-HYSTER-1**.

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