

# BE80-100ZHD SERIES

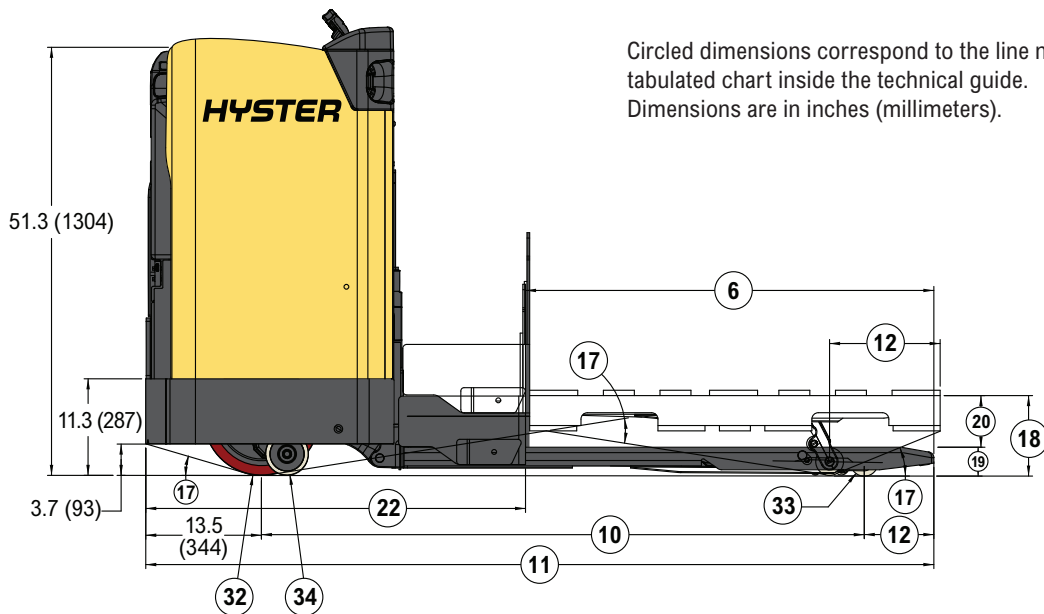
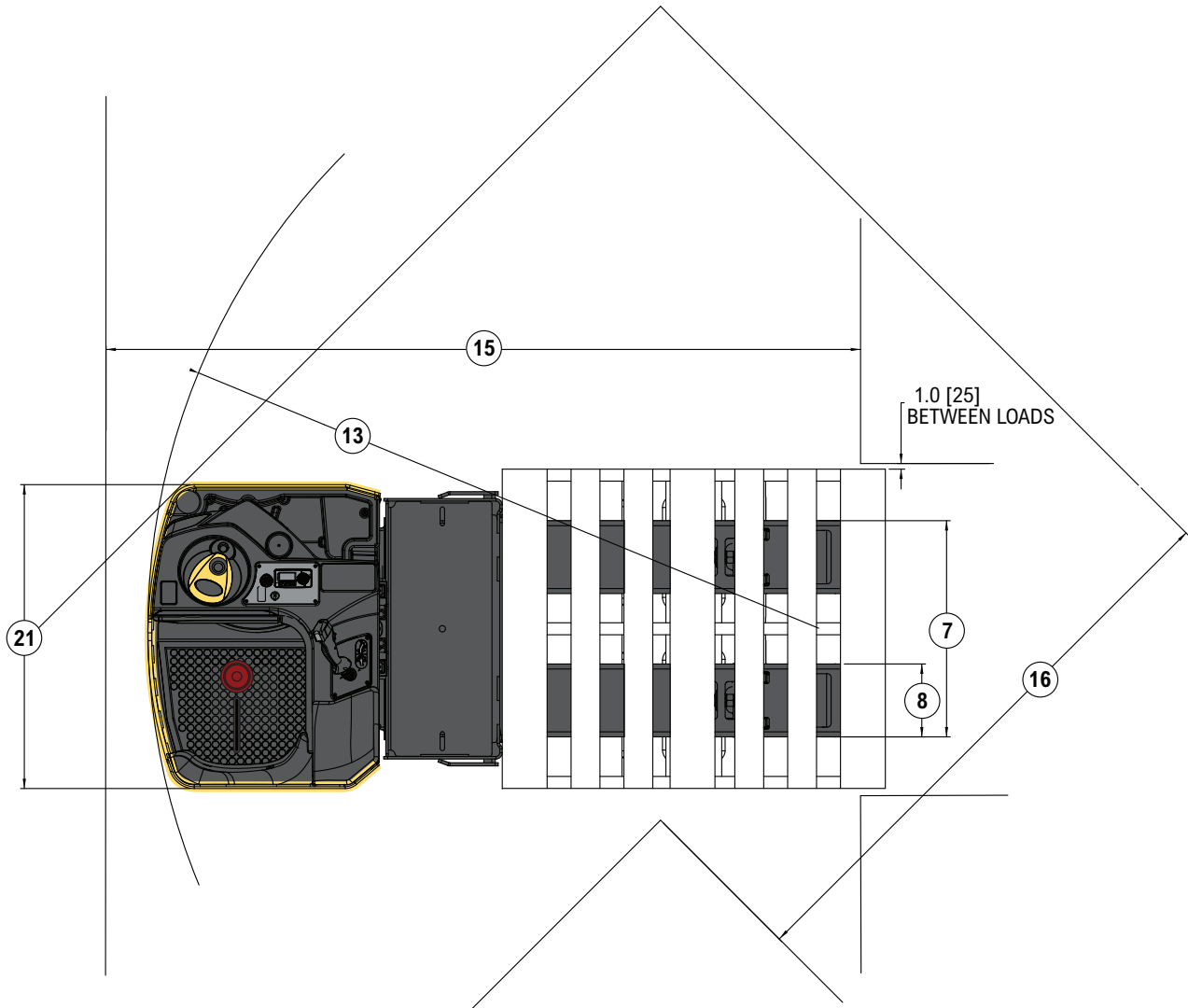
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## ENCLOSED END RIDER PALLET TRUCK PRODUCT TECHNICAL GUIDE



# BE80-100ZHD DIMENSIONS



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

# BE80ZHD SPECIFICATIONS

		Hyster								
GENERAL	1	Manufacturer		Hyster						
	2	Model designation		BE80ZHD						
	3	Battery type		24-volt						
	4	Operator type		Stand ride						
	5	Rated capacity – lifting		lb (kg)	8000 (3629)					
	6	Fork length – nominal		in (mm)	48 (1219)	54 (1372)	60 (1524)	84 (2134)	93 (2362)	
		Fork length – actual		in (mm)	47.8 (1213)	53.7 (1365)	59.8 (1518)	83.8 (2128)	92.8 (2357)	
	7	Fork overall width		in (mm)	27.1 (688)	27.1 (688)	27.1 (688)	28 (710)	28 (710)	
	8	Individual fork width		in (mm)	9.1 (232)	9.1 (232)	9.1 (232)	10 (254)	10 (254)	
	9	Load distance (face of battery box or opt. backrest to center of load wheels)	Raised	in (mm)	35.3 (896)	41.3 (1048)	47.3 (1201)	56.3 (1430)	56.3 (1430)	
		Lowered	in (mm)	39.6 (1007)	45.6 (1159)	51.7 (1312)	60.6 (1540)	60.6 (1540)		
DIMENSIONS	10	Wheelbase <sup>2</sup>	Raised	in (mm)	66.5 (1689)	72.5 (1842)	78.5 (1994)	87.5 (2222)	87.5 (2222)	
			Lowered	in (mm)	70.5 (1791)	76.5 (1944)	82.5 (2096)	91.5 (2324)	91.5 (2324)	
	11	Overall length	Raised	in (mm)	92.7 (2354)	98.7 (2506)	104.7 (2659)	128.7 (3269)	137.7 (3498)	
			Lowered	in (mm)	92.2 (2341)	98.1 (2493)	104.2 (2646)	128.2 (3256)	137.2 (3485)	
	12	Center of load wheel to tip of forks	Raised	in (mm)	12.5 (317)	12.5 (317)	12.5 (317)	27.5 (698)	36.5 (927)	
			Lowered	in (mm)	8.1 (206)	8.1 (206)	8.1 (206)	23.1 (588)	32.2 (817)	
	13	Outside turning radius	Raised	in (mm)	80.0 (2033)	86.0 (2186)	92.0 (2338)	101.1 (2567)	101.1 (2567)	
			Lowered	in (mm)	84.1 (2135)	90.1 (2288)	105.2 (2673)	105.0 (2668)	105.0 (2668)	
	15	Right angle stack <sup>1</sup>	Raised	in (mm)	95.2 (2418)	106.2 (2697)	105.6 (2683)	131.0 (3328)	140.4 (3566)	
	16	Equal intersecting aisle <sup>1</sup>	Raised	in (mm)	70.2 (1782)	73.3 (1862)	76.5 (1942)	82.0 (2084)	82.9 (2105)	
		17	Grade clearance	Chassis	%	29				
				Center of wheelbase	%	29	26	25	21	21
				Forks	%	37	37	37	17	13
	18	Overall lift height	Top of forks	in (mm)	9.3 (235)					
	19	Lowered height	Top of forks	in (mm)	3.3 (84)					
	20	Total lift		in (mm)	5.9 (151)					
	21	Truck overall width		in (mm)	38.0 (967)					
		22	Chassis length	Raised	in (mm)	44.9 (1141)				
Lowered				in (mm)	44.4 (1128)					
23	Battery compartment (standard/with battery rollers)			32 x 13.4 x OPEN (813 x 340 x OPEN) / 31 x 13.4 x OPEN (787 x 340 x OPEN)						
PERFORMANCE	24	Max travel speed - chassis first (no load/rated load)	mph (kph)	9.0/6.5 (14.5/10.5)						
	25	Max travel speed - forks first (no load/rated load)	mph (kph)	7.0/6.5 (11.3/10.5)						
	26	Number of speeds		Infinitely variable						
	27	Traction motor control method type		AC transistor						
28	Service brake type			Electro-mechanical						
WEIGHT	29	Truck weight (approximate) - without battery (no load)	lb (kg)	1824 (827)	1857 (842)	1891 (858)	1946 (882)	2057 (933)		
	30	Axle loading - drive & caster - static with max weight battery (no load)	lb (kg)	2117 (960)	2173 (985)	2223 (1008)	2278 (1033)	2269 (1029)		
		Axle loading - drive & caster - static with max weight battery (rated load)	lb (kg)	3469 (1574)	3747 (1700)	3981 (1805)	3581 (1624)	3160 (1433)		
	31	Axle loading - load wheels - static with max weight battery (no load)	lb (kg)	707 (321)	684 (310)	667 (302)	668 (303)	788 (357)		
	Axle loading - load wheels - static with max weight battery (rated load)	lb (kg)	7354 (3336)	7109 (3224)	6910 (3134)	7365 (3340)	7897 (3582)			
WHEELS	32	Drive tire – size/type (number of wheels)	in	13.5 x 5.5 x 8.0/Polyurethane (1)						
	33	Load wheel/trail wheel – size/type (# of wheels)(# of bearings per wheel)	in	3.25 x 6.5/Polyurethane (2) (2)						
	34	Caster wheel – size/type (number of wheels) caster type	in	5.0 x 2.0/Poly (2) Adj. w/ Poly spring block						
BATTERY	35	Type		Lead acid   Thin Plate Pure Lead <sup>3</sup>   Lithium-ion <sup>3</sup>						
	36	Ampere hours - maximum	ah	930						
	37	Ampere hours - minimum	ah	375						
	38	Maximum weight	lb (kg)	1500 (680)						
	39	Minimum weight	lb (kg)	825 (374)						

**CERTIFICATION:** Hyster® lift trucks meet the design and construction requirements of B56.1-1969, per OSHA Section 1910.178(a)(2), and also comply with the B56.1 revision in effect at time of manufacture. 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.

Above specifications, unless otherwise listed, are for a standard truck without optional equipment.

<sup>1</sup> Right Angle Stack and Equal Intersecting Aisle are calculated using a 40" wide pallet flush with fork tips.

<sup>2</sup> Subtract 12.9 mm if equipped with tandem load wheels.

<sup>3</sup> Optional with Hyster Power Collect™

# BE80-100ZHD SPECIFICATIONS

		Hyster							
GENERAL	1	Manufacturer	BE80ZHD					BE100ZHD	
	2	Model designation	BE80ZHD					BE100ZHD	
	3	Battery type	24 volt						
	4	Operator type	Stand ride						
	5	Rated capacity – lifting	lb (kg)	8000 (3629)			10000 (4536)		
	6	Fork length – nominal	in (mm)	96 (2438)	144 (3658)	144 (3658)	160 (4064)	192 (4877)	
	7	Fork length – actual	in (mm)	95.8 (2433)	143.8 (3652)	143.8 (3652)	159.9 (4063)	191.9 (4875)	
	8	Fork overall width	in (mm)	28 (710)	28.6 (726)	28.6 (726)	28 (710)	28 (710)	
	9	Individual fork width	in (mm)	10 (254)	10 (254)	10 (254)	10 (254)	10 (254)	
DIMENSIONS	10	Wheelbase <sup>2</sup>	Raised	in (mm)	87.5 (2222)	135.5 (3442)	114.6 (2910)	137.4 (3490)	183.1 (4650)
		Lowered	in (mm)	91.5 (2324)	139.5 (3544)	118.6 (3012)	141.4 (3591)	187.0 (4751)	
	11	Overall length	Raised	in (mm)	140.7 (3574)	188.7 (4793)	188.7 (4793)	204.9 (5204)	236.9 (6016)
			Lowered	in (mm)	140.2 (3561)	188.2 (4780)	188.2 (4780)	204.4 (5191)	236.3 (6003)
	12	Center of load wheel to tip of forks	Raised	in (mm)	39.5 (1003)	39.5 (1003)	59.9 (1521)	53.9 (1369)	40.3 (1023)
			Lowered	in (mm)	35.2 (893)	35.2 (893)	56.1 (1424)	49.5 (1257)	35.9 (911)
	13	Outside turning radius	Raised	in (mm)	101.1 (2567)	149.1 (3789)	128.1 (3254)	150.9 (3834)	196.6 (4994)
			Lowered	in (mm)	105.0 (2668)	153.1 (3888)	132.1 (3356)	154.9 (3934)	200.6 (5094)
	15	Right angle stack <sup>1</sup>	Raised	in (mm)	143.5 (3644)	189.8 (4820)	190.6 (4842)	206.0 (5232)	230.0 (5824)
	16	Equal intersecting aisle <sup>1</sup>	Raised	in (mm)	83.2 (2114)	108.0 (2744)	99.7 (2533)	114.6 (2912)	120.5 (3061)
	17	Grade clearance	Chassis	%	29				
			Center of wheelbase	%	21	15	16	15	13
			Forks	%	12	12	8	9	12
	18	Overall lift height	Top of forks	in (mm)	9.3 (235)				
	19	Lowered height	Top of forks	in (mm)	3.3 (84)				
	20	Total lift		in (mm)	5.9 (151)				
	21	Truck overall width		in (mm)	38.0 (967)				
	22	Chassis length	Raised	in (mm)	44.9 (1141)				
			Lowered	in (mm)	44.4 (1128)				
	23	Battery compartment (standard/with battery rollers)		32 x 13.4 x OPEN (813 x 340 x OPEN)/31 x 13.4 x OPEN (787 x 340 x OPEN)					
PERFORMANCE	24	Max travel speed - chassis first (no load/rated load)	mph (kph)	9.0/6.5 (14.5/10.5)					
	25	Max travel speed - forks first (no load/rated load)	mph (kph)	7.0/6.5 (11.3/10.5)					
	26	Number of speeds		Infinitely variable					
	27	Traction motor control method type		AC transistor					
	28	Service brake type		Electro-mechanical					
WEIGHT	29	Truck weight (approximate) - without battery (no load)	lb (kg)	2068 (938)	2282 (1035)	2211 (1002)	2302 (1044)		
	30	Axle loading - drive & caster - static with max weight battery (no load)	lb (kg)	2267 (1028)	2519 (1142)	2405 (1091)	2513 (1139)		
		Axle loading - drive & caster - static with max weight battery (rated load)	lb (kg)	3021 (1370)	4429 (2009)	3194 (1449)	4408 (1999)		
	31	Axle loading - load wheels - static with max weight battery (no load)	lb (kg)	801 (363)	763 (346)	805 (365)	789 (358)		
		Axle loading - load wheels - static with max weight battery (rated load)	lb (kg)	8047 (3650)	6852 (3108)	8016 (3636)	8894 (4034)		
WHEELS	32	Drive tire – size/type (number of wheels)	in	13.5 x 5.5 x 8.0/Polyurethane (1)					
	33	Load wheel/trail wheel – size/type (# of wheels)(# of bearings per wheel)	in	3.25 x 6.5/Polyurethane (2) (2)					3.25 x 5.0/ Poly (4)(2)
	34	Caster wheel – size/type (number of wheels) caster type	in	5.0 x 2.0/Poly (2) adj. w/ poly spring block					
BATTERY	35	Type		Lead acid   Thin Plate Pure Lead <sup>3</sup>   Lithium-ion <sup>3</sup>					
	36	Ampere hours - maximum	ah	930					
	37	Ampere hours - minimum	ah	375					
	38	Maximum weight	lb (kg)	1500 (680)					
	39	Minimum weight	lb (kg)	825 (374)					

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<sup>1</sup> Right angle stack and equal intersecting aisle are calculated using a 40" wide pallet flush with fork tips.

<sup>2</sup> Subtract 12.9 mm if equipped with tandem load wheels.

<sup>3</sup> Optional with Hyster Power Collect™

# BATTERY SPECIFICATIONS

BATTERY SPECIFICATIONS							
NUMBER OF CELLS	CELL SIZE	PLATES PER CELL	CAPACITY 6 HR RATE	BATTERY DIMENSIONS			WEIGHT
				"X"	"Y"	"Z"	
			AMP HR (KWH)	IN (MM)	IN (MM)	IN (MM)	LB (KG)
12	75	11	375 (8.7)	26.5 (673)	13.0 (330)	23.3 (592)	825 (374)
12	85	11	425 (9.9)	26.5 (663)	13.0 (330)	23.3 (592)	865 (392)
12	75	13	450 (10.5)	30.9 (785)	13.0 (330)	23.3 (592)	987 (448)
12	85	13	510 (11.9)	30.9 (785)	13.0 (330)	23.3 (592)	1035 (469)
12	100	13	600 (14.0)	30.9 (785)	13.0 (330)	26.2 (665)	1200 (544)
12	125	13	750 (17.6)	30.9 (785)	13.0 (330)	31.0 (787)	1500 (680)
12	155	13	930 (21.5)	30.9 (785)	13.0 (330)	31.0 (787)	1500 (680)

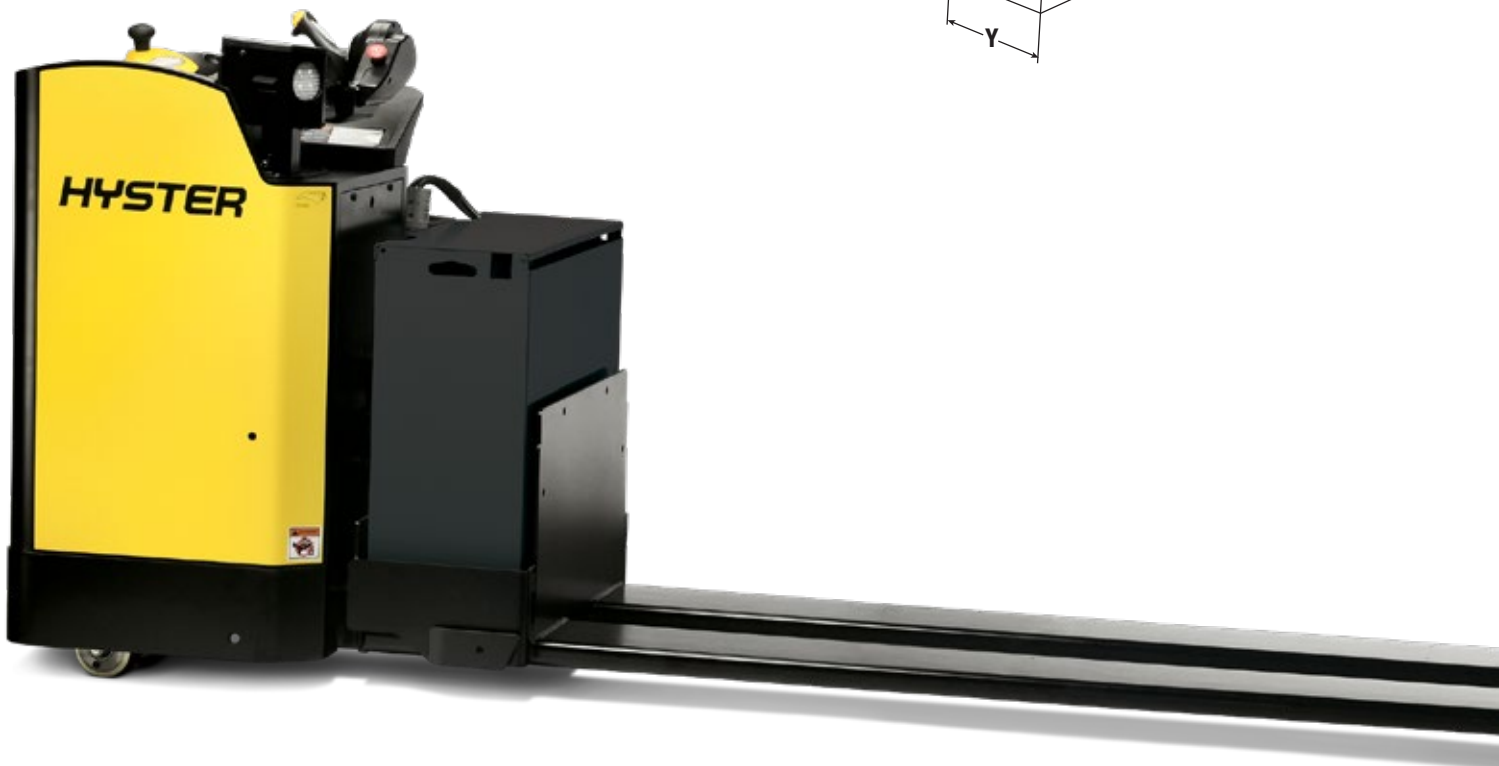
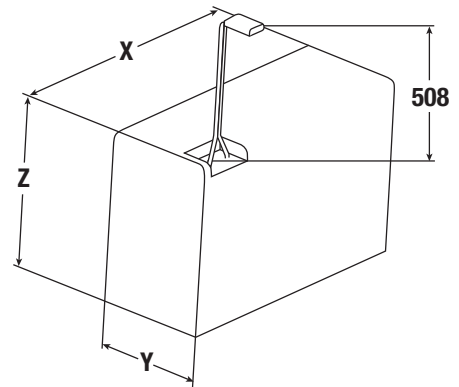
Voltage: 24V

Battery connector:

- SB 175 red - standard/SB 175 grey - optional
- SB 350 red - optional/SB 350 grey - optional

Battery lead: length 20" (508mm), position "B", 1/0 AWG

Battery cover required



## FEATURES AND OPTIONS

PERFORMANCE	STD	OPT
24 volt electrical system	x	
Four selectable performance modes	x	
CONSTRUCTION	STD	OPT
Standard construction operating temperatures: +32°F to +120°F	x	
32.0" x 13.4" open battery compartment	x	
Key ignition switch	x	
UL Classification "E"	x	
Keyless toggle ignition switch		x
Cooler/freezer package: Operating temperatures: 0°F to +120°F		x
Wash down package: Operating temperatures: 0°F to +120°F		x
SubZero: Operating temperatures: -40°F to +120°F		x
DRIVE	STD	OPT
Drive tires - 13.5" x 5.5" Superior XL-AC (901 compound)	x	
Drive tires - 13.5" x 5.5" Poly (601 compound)		x
Drive tires - 13.5" x 5.5" Poly X-Grooved (601 compound)		x
Drive tires - 13" x 5.5" Molded NDIIthane		x
Single polyurethane load wheels – 3.25" x 6.5"	x	
Single, dual and tandem (2 bearing and 4 bearing; sealed bearing)		x
Heavy duty casters – urethane block loaded – 5" x 2" dual polyurethane wheel	x	
Heavy duty casters – sealed wheel		x
LIFT	STD	OPT
Heavy duty, long life lift linkage with lubrication fittings	x	
"X" groove style greaseable pivot bushings (8K)	x	
Hardened, bolt retained flag linkage pins	x	
Knock-out load wheel axles	x	
Aluminum-bronze (Al-Br) bushings (10k)	x	

HANDLING	STD	OPT
48" long heavy duty boxed fork construction, reinforced fork tips	x	
27" fork spread	x	
Pallet exit rollers and runners/entry blades	x	
Pallet entry rollers (standard tip forks only)	x	
Pallet entry bar (BE80ZHD)		x
Flush pallet stop	x	
54" long forks – standard tip		x
60" long forks – standard tip		x
84" long forks – extended tip		x
93" long forks – extended tip		x
96" long forks – extended tip		x
144" long forks – extended tip		x
144" long forks – short wheelbase extended tip		x
160" long forks – extended tip (BE100ZHD)		x
192" long forks – extended tip (BE100ZHD)		x
Load backrest - 48" high (pivoting or bolt-on)		x
Load backrest - 60" high (pivoting or bolt-on)		x
Load backrest - 72" high (bolt-on)		x
ERGONOMICS	STD	OPT
Adjustable steer handle	x	
Electric power steering	x	
Operator fan		x
Adjustable control handle and armrest	x	
Operator back pad	x	
Knee pad	x	
Hip pad	x	
Suspended/cushioned floor with mat	x	



## FEATURES AND OPTIONS


OPERATION	STD	OPT
On-board software (program, test and diagnose; no handset required; password protected)	x	
Electronic horn	x	
Convenience tray (battery mounted)		x
RF terminal power supply – 24 volt		x
DC converter with automotive style 12 volt outlet		x
Work light sensor		x
Audible alarm		x
Strobe light		x
Telemetry display		x
Accessory pole (short and long)		x
Smart operator sensing system	x	
Graphic LCD display with back lighting	x	
Stationary mounted drive motor	x	
Replaceable wheel seal	x	
CAN bus electrical system	x	
Automotive style sealed electrical connectors	x	
Hall effect sensor technology	x	
AC traction motor	x	
Brushless steer motor	x	
Brushless hydraulic power pack	x	
Work light sensor		x
Hyster Reaction™		x

SUPPLEMENTAL	STD	OPT
Operating manual	x	
12 months/unlimited hour manufacturer's warranty	x	
36 months/6,000 hour powertrain warranty	x	
Lifetime main frame warranty	x	
ENERGY SYSTEM	STD	OPT
Lead acid	x	
Hyster Power Collect™		x





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