

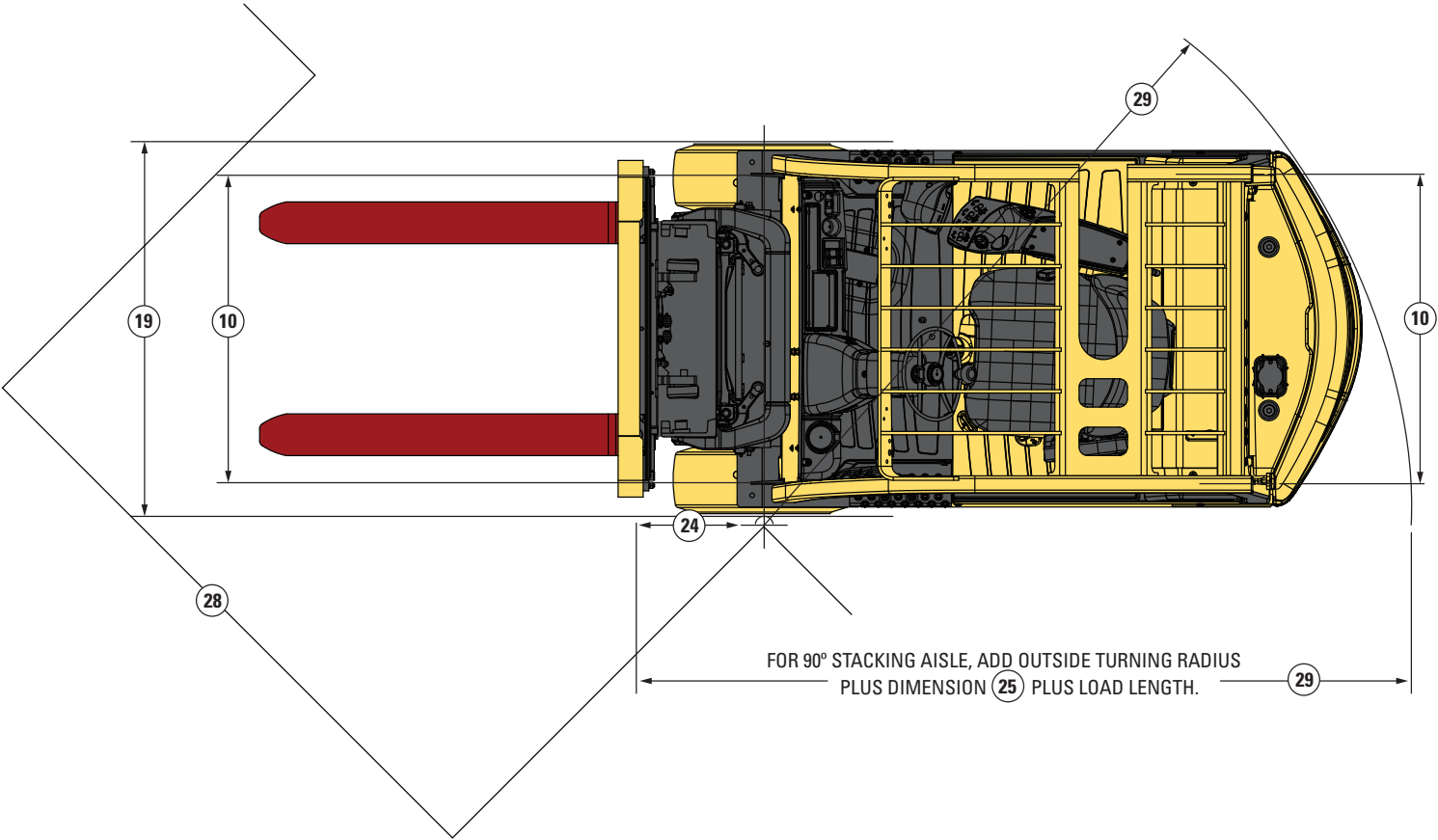
E50-60XNL SERIES



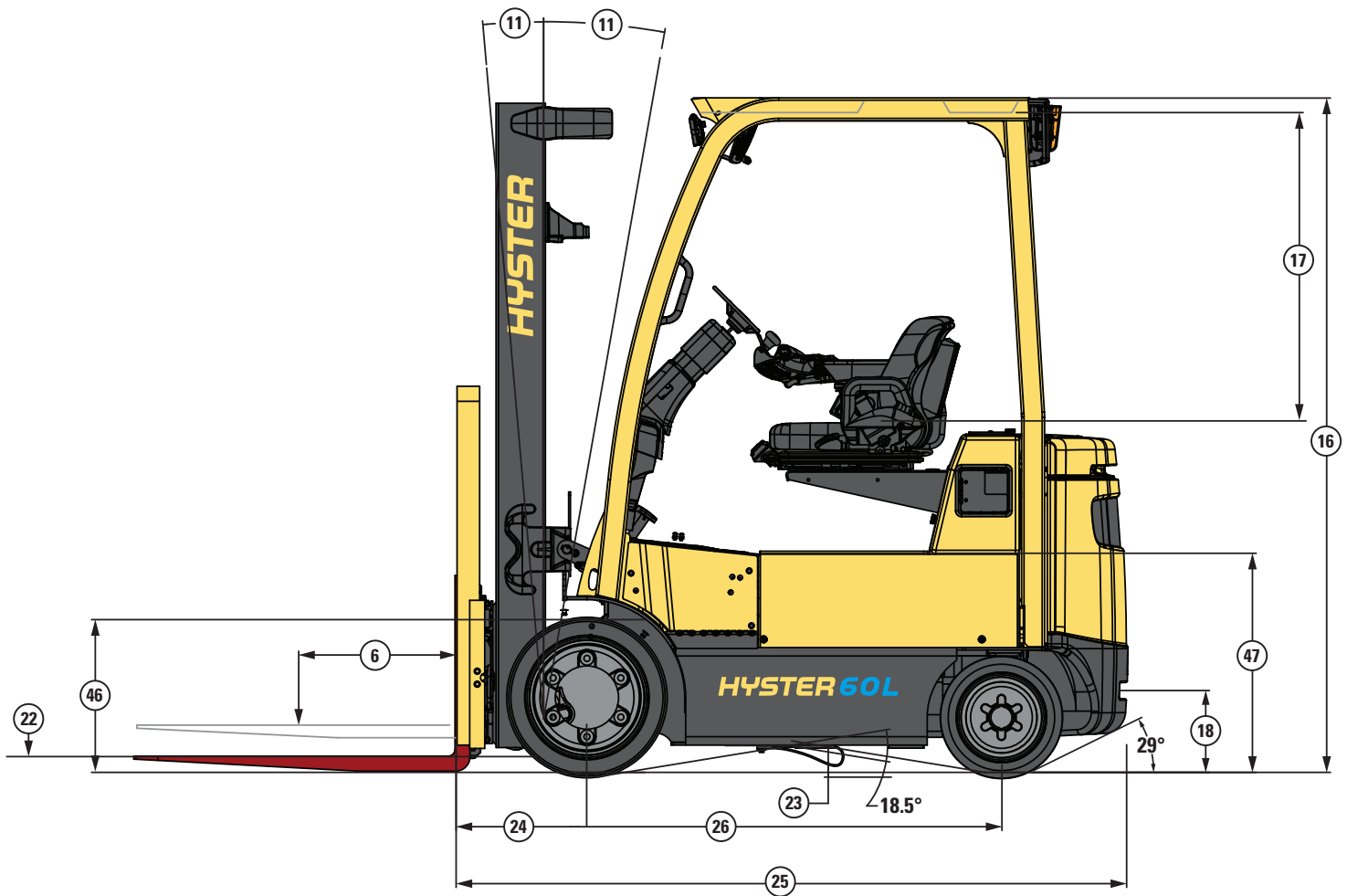
INTEGRATED LITHIUM-ION COUNTERBALANCED FORKLIFT PRODUCT TECHNICAL GUIDE



DIMENSIONS



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



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E50-60XNL SPECIFICATIONS

GENERAL	1	Manufacturer			Hyster			
	2	Model designation			E50XNL	E60XNL		
	3	Power			Electric			
	4	Operation			Sit			
	5	Rated capacity		lb (kg)	5000 (2268)	6000 (2722)		
	6	Load center		in (mm)	24 (610)			
TIRES	7	Tire type - cushion, solid, pneumatic, etc.	Drive/steer		Cushion / Cushion			
	8	Tire size	Drive/steer	in	21 x 7 x 15 / 16 x 5 x 10.5	21 x 8 x 15 / 16 x 6 x 10.5		
	9	Wheels - number	X=Driven	Drive/steer	2X / 2			
	10	Tread	Tires	Std dr/wide dr/steer	in (mm)	35.1/41.9/37 (892/1064/940)	35.6/40.9/36 (905/1039/915)	
DIMENSIONS	11	Mast tilt		Std opt opt	degrees	5F/5B 10F/5B (5F/4B)		
	12	Mast - lowered height		Std mast	in (mm)	83 (2085)		
	13	Free lift - top of fork	Std 2-stg limited free lift mast		in (mm)	5 (140)		
		Opt 2-stg full free lift mast with/without LBR			in (mm)	33/60 (860/1525)	33/56 (855/1440)	
	14	Lift height - top of fork	Std 2-stg limited free lift mast		in (mm)	125 (3192)	118 (3009)	
	15	Mast - extended height	Std mast with/without LBR		in (mm)	174/148 (4415/3740)	167/144 (4235/3655)	
	16	Overhead guard height	Std/drive in rack/opt/opt flat plate		in (mm)	88.5/88.5/86.5/84.1 (2248/2248/2197/2137)		
	17	SIP to bottom std OHG		Std/susp/swivel	in (mm)	39.9/38.9/38.8 (1014/989/987)		
	18	Tow pin height	Vertical center of pin		in (mm)	11 (280)		
	19	Overall width	Standard tread/wide tread		in (mm)	42.1/48.9 (1070/1242)	43.6/48.9 (1108/1242)	
	20	Forks	Thickness x width x length		in (mm)	1.6 x 3.9 x 42 (40 x 100 x 1067)	2 x 4.9 x 42 (50 x 125 x 1067)	
	21	Standard carriage width		Class II	in (mm)	38.5 (977)		
	22	Ground clearance	Lowest point	NL/RL	in (mm)	3.6/3.3 (91/85)		
	23	Ground clearance	Center of truck	NL/RL	in (mm)	3.9/3.6 (98/92)	3.7/3.6 (94/92)	
	24	Load distance	Center of wheel to face of forks		in (mm)	15.4 (390)	15.8 (402)	
	25	Length to face of forks	Chassis length		in (mm)	84.3 (2143)	86.5 (2199)	
	26	Wheelbase			in (mm)	54.2 (1377)		
	27	Right angle stack			in (mm)	137.5 (3493)	139.2 (3536)	
	28	Equal aisle	90° Intersecting aisle		in (mm)	73.1 (1858)	74.2 (1885)	
	29	Outside turning radius			in (mm)	74.2 (1884)	75.4 (1915)	
	WT.	30	Truck weight		NL	lb (kg)	9180 (4170)	10240 (4650)
		31	Axle loading - drive	Static w/ max. wt. battery	NL/RL	lb (kg)	4090/1860 (12730/1460)	4180/1900 (14590/6620)
		32	Axle loading - steer	Static w/ max. wt. battery	NL/RL	lb (kg)	5100/2315 (5780/665)	6070/2755 (6620/755)
		33	Travel speed	Extended shift OFF	NL/RL	mph (km/h)	12.3/12.5 (19.8/20.1)	
				Extended shift ON	NL/RL	mph (km/h)	12.2/12.2 (19.7/19.7)	12.2/12.1 (19.7/19.4)
		34	Lift speed	Std 2-stg LFL mast	NL/RL	ft/min (m/sec)	142/96 (0.72/0.49)	124/83 (0.63/0.42)
				Opt 2-stg FFL mast	NL/RL	ft/min (m/sec)	130/93 (0.66/0.47)	116/81 (0.59/0.41)
				Opt 3-stg FFL mast	NL/RL	ft/min (m/sec)	134/94 (0.68/0.48)	118/81 (0.6/0.41)
			Opt 4-stg FFL mast	NL/RL	ft/min (m/sec)	136/94 (0.69/0.48)		
35		Lower speed	Std 2-stg LFL mast	NL/RL	ft/min (m/sec)	100/112 (0.51/0.57)	91/110 (0.46/0.56)	
			Opt 2-stg FFL mast	NL/RL	ft/min (m/sec)	91/106 (0.46/0.54)	73/102 (0.37/0.52)	
			Opt 3-stg FFL mast	NL/RL	ft/min (m/sec)	93/108 (0.47/0.55)	79/104 (0.4/0.53)	
			Opt 4-stg FFL mast	NL/RL	ft/min (m/sec)	77/91 (0.39/0.46)		
36		Gradeability	5 minute rating	NL/RL	%	39/33	36/28	
			60 minute rating	NL/RL	%	32/19	29/16	
37		Drawbar pull	5 minute rating	NL/RL	LBF	3773/4926	3883/4830	
			60 minute rating	NL/RL	LBF	3208/2993	3181/2912	
		Brake	Method of control	Service/parking		Hydraulic/mechanical		
			Method of operation	Service/parking		Foot/foot		
ELECTRIC	39	Battery	Type		Lithium-ion			
					80			
	40	Traction motor	60 minute rating	hp (kW)	31.6 (23.6)			
	41	Pump motor	15% rating	hp (kW)	32.2 (24)			
	42	Traction motor	Type/control method		AC/transistor			
	43	Pump motor	Type/control method		AC/transistor			
44	Number of speeds	Traction/pump			Infinitely variable/Infinitely variable			
OTHER	45	Step height		in (mm)	18.7 (475)			
	46	Floor height	Lowest point	in (mm)	27.4 (696)			
	47	Attachment relief pressure		psi (bar)	2250 (155)			
	48	Auxiliary oil flow	3rd and 4th function	gal/min (l/min)	11 (40)			
	49	Sound level	Measured per ANSI B56.11.5		dB (A)	65		

The following chargers are approved to use with the E50-60XNL lithium-ion battery:

- Posicharge ProCORE (80V) - 10kW, 15kW, 20kW or 30kW single cable
- EcoTec Fast Charge Access (80V) - 80-500-32FC or 80-650-32FC

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.

NL = no load, RL = rated load

E50XNL MAST DIMENSIONS

Maximum fork height (TOF)	Overall lowered height	Overall extended height		Free lift (TOF)		Approx. total wt. of standard equipped truck
		w/ Load backrest	w/o Load backrest	w/ Load backrest	w/o Load backrest	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	E50XNL lb (kg)

2-STAGE LIMITED FREE LIFT (LFL) VISTA®PLUS MAST

125 (3192)	83 (2085)	174 (4415)	147 (3749)	5 (140)	5 (140)	9180 (4170)
133 (3392)	86 (2185)	182 (4615)	155 (3949)	5 (140)	5 (140)	9220 (4185)
137 (3492)	88 (2235)	186 (4715)	159 (4049)	5 (140)	5 (140)	9240 (4195)

2-STAGE FULL FREE LIFT (FFL) VISTA® MAST

126 (3202)	83 (2085)	175 (4425)	148 (3759)	33 (862)	60 (1528)	9220 (4185)
133 (3402)	86 (2185)	183 (4625)	155 (3959)	37 (964)	64 (1628)	9260 (4205)
137 (3502)	88 (2235)	186 (4725)	159 (4059)	39 (1012)	66 (1678)	9280 (4215)

3-STAGE FULL FREE LIFT (FFL) VISTA®PLUS MAST

189 (4800)	83 (2085)	238 (6023)	210 (5399)	33 (862)	60 (1546)	9560 (4340)
194 (4950)	85 (2135)	243 (6173)	216 (5489)	36 (917)	62 (1596)	9580 (4350)
200 (5100)	88 (2235)	249 (6323)	222 (5639)	39 (1012)	66 (1696)	9630 (4370)
218 (5550)	94 (2385)	267 (6773)	239 (6089)	45 (1162)	72 (1846)	9720 (4415)
236 (6000)	102 (2585)	285 (7223)	257 (6539)	53 (1362)	80 (2046)	9910 (4500)

4-STAGE FULL FREE LIFT (FFL) VISTA® MAST

240 (6098)	84 (2133)	289 (7321)	263 (6678)	35 (910)	61 (1553)	10100 (4585)
252 (6404)	88 (2235)	301 (7627)	275 (6984)	39 (1012)	65 (1655)	10160 (4610)
264 (6710)	92 (2336)	313 (7933)	287 (7290)	43 (1113)	69 (1756)	10220 (4640)

E60XNL MAST DIMENSIONS

Maximum fork height (TOF)	Overall lowered height	Overall extended height		Free lift (TOF)		Approx. total wt. of standard equipped truck
		w/ Load backrest	w/o Load backrest	w/ Load backrest	w/o Load backrest	
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	E60XNL lb (kg)

2-STAGE LIMITED FREE LIFT (LFL) VISTA®PLUS MAST

118 (3009)	83 (2085)	167 (4237)	143 (3654)	5 (150)	5 (150)	10240 (4650)
126 (3209)	86 (2185)	175 (4437)	151 (3854)	5 (150)	5 (150)	10280 (4665)
130 (3309)	88 (2235)	179 (4537)	155 (3954)	5 (150)	5 (150)	10300 (4675)

2-STAGE FULL FREE LIFT (FFL) VISTA® MAST

118 (3010)	83 (2085)	167 (4237)	144 (3655)	33 (857)	56 (1440)	10280 (4665)
126 (3210)	86 (2185)	175 (4437)	151 (3855)	37 (957)	60 (1540)	10320 (4685)
130 (3310)	88 (2235)	179 (4537)	155 (3955)	39 (1007)	62 (1590)	10340 (4695)

3-STAGE FULL FREE LIFT (FFL) VISTA®PLUS MAST

175 (4468)	83 (2085)	225 (5696)	200 (5095)	33 (857)	57 (1458)	10610 (4815)
181 (4618)	85 (2135)	231 (5846)	206 (5245)	35 (907)	59 (1508)	10640 (4830)
187 (4768)	88 (2235)	237 (5996)	212 (5395)	39 (1007)	63 (1608)	10660 (4840)
205 (5218)	94 (2385)	254 (6446)	230 (5845)	45 (1157)	69 (1758)	10770 (4890)
223 (5668)	102 (2585)	272 (6896)	248 (6295)	53 (1357)	77 (1958)	10910 (4955)

4-STAGE FULL FREE LIFT (FFL) VISTA® MAST

240 (6098)	84 (2133)	289 (7321)	263 (6678)	35 (910)	61 (1553)	11000 (4995)
252 (6404)	88 (2235)	301 (7627)	275 (6984)	39 (1012)	65 (1655)	11060 (5020)
264 (6710)	92 (2336)	313 (7933)	287 (7290)	43 (1113)	69 (1756)	11120 (5050)

BATTERY SPECIFICATIONS AND ONBOARD CHARGING

The battery run time and battery charge time tables are a helpful guide to visualize the truck run time with different batteries in different applications. (The tables are a guide only and not a replacement for a site survey and full power study.)

Heavy – High throughput, typically runs full capacity, runs either attachments or has high lifts

Medium – High throughput, runs near capacity without attachments or high lifts

Light – Lower throughput, runs less than rated capacity without attachments or high lifts

The onboard charging option allows integrated lithium-ion forklifts to be charged via commonly available infrastructure without any facility equipment. Ideal for applications with limited charging options or those with the downtime for slower charging due to lower hour usage.

BATTERY SPECIFICATIONS			
E50XNL BATTERY RUN TIME			
Battery size	Application		
	Heavy	Medium	Light
33.6kWh	7h 15m	10h 15m	13h 45m
25.2kWh	5h 30m	7h 45m	10h 15m
16.8kWh	3h 30m	5h 0m	6h 45m
E60XNL BATTERY RUN TIME			
Battery size	Application		
	Heavy	Medium	Light
33.6kWh	6h 45m	9h 45m	13h 0m
25.2kWh	5h 0m	7h 15m	9h 45m
16.8kWh	3h 15m	4h 45m	6h 30m
E50-60XNL BATTERY CHARGE TIME			
Charger size	Battery size		
	33.6kWh	25.2kWh	16.8kWh
30kW	1h 15m	1h 0m*	1h 0m*
20kW	1h 45m	1h 15m	1h 0m*
15kW	2h 15m	1h 45m	1h 15m
10kW	3h 30m	2h 45m	1h 45m
5kW	6h 45m	5h 15m	3h 30m

*Note: Run time is from 100% to lift-lock out. Charge time is from lift-lock out to 100%. Charge times with * are limited to 1C charging (i.e. cannot charge faster than 1 hour).*


ONBOARD CHARGING			
ONBOARD CHARGE TIME			
Charger size	Battery size		
	33.6kWh	25.2kWh	16.8kWh
6kW (240V outlet)	5h 10m	3h 55m	2h 35m
1.4kW (120V outlet)	22h 5m	16h 35m	11h 5m
BATTERY RECHARGE TIME FOLLOWING 1 HOUR OF OPERATION			
Charger size	Application		
	Heavy	Medium	Light
6kW (240V outlet)	0h 50m	0h 40m	0h 30m
1.4kW (120V outlet)	3h 50m	2h 30m	1h 50m

PERFORMANCE	STD	OPT
80V electrical system	x	
80V @ 420Ah battery	x	
80V @ 315Ah battery		x
80V @ 210Ah battery		x
Premium performance package	x	
AC traction and pump motors (completely brushless)	x	
Transistor drive and pump control	x	
Advanced VSM (vehicle system manager)	x	
Progressive thermal management system	x	
Reverse Speed System		x
Onboard charging		x
DRIVE	STD	OPT
Smooth tread rubber drive tire and steer tire	x	
Non-marking, rubber, or lug tread tires		x
Wide tread tires		x
LIFT	STD	OPT
2-stage limited free lift (LFL) Hi-Vis™2 mast with maximum fork height of 125" (3192 mm) (E50XNL) or 118" (4800 mm) (E60XNL)	x	
Mast tilt option – 5° forward/5° back	x	
2-stage full free lift (FFL) Hi-Vis™2 mast		x
3-stage full free lift (FFL) Hi-Vis™2 mast		x
4-stage full free lift (FFL) Hi-Vis™2 mast		x
Mast tilt option – 10° forward/5° back		x
Mast tilt option – 5° forward/4° back		x
HANDLING	STD	OPT
38.5" (980 mm) wide class II (E50XNL) or class III (E60XNL) hook-type carriage with 38.5" (980 mm) high load backrest extension	x	
42" (1067 mm) long forks	x	
Carriage with integral sideshift		x
Carriage with integral sideshifting fork positioner		x
Attachment carriages		x
Return to set tilt		x
Accumulator		x
Load weight indicator		x
Hydraulic attachment extension tubes with quick disconnect fittings		x
ERGONOMICS	STD	OPT
12" steering wheel with integral spinner knob	x	
Non-suspension vinyl seat	x	
Black, non-cinch seat belt with Emergency Locking Retractor	x	
Foot applied/hand released park brake	x	
MONOTROL® foot direction control	x	
On-demand power steering	x	
Power assist braking	x	
Auto Deceleration System with regenerative braking	x	
Multifunction display	x	
Easy ingress/egress with low step height and contoured handhold	x	
Operator convenience station - storage areas, beverage & clipboard holders	x	
TouchPoint electro-hydraulic mini-lever controls with fully adjustable armrest	x	
Adjustable tilt steering column with low profile cowl	x	
Cushioned floor mat	x	

ERGONOMICS (continued)	STD	OPT
Seatside power disconnect button	x	
Cooler/freezer package—operating temp: -20°F to +120°F		x
Air ride suspension seat		x
Non-suspension seat (cloth)		x
Full-suspension seat (vinyl or cloth)		x
Full-suspension swivel seat (vinyl or cloth)		x
Seatside directional control		x
Automatic electro-mechanical park brake		x
Telescopic steering column with tilt memory		x
LED and halogen work light packages		x
LED dome/reading light		x
Basic & premium LED brake/tail/back-up light packages		x
Key switch controlled lights		x
Rear drive handle with integrated horn button		x
Mirrors – dual side view or panoramic		x
Low mount display		x
OPERATION	STD	OPT
Standard construction	x	
Key switch start	x	
88.5" grid style overhead guard	x	
3-function hydraulic control valve	x	
Fully integrated CANbus communication	x	
Hyster Stability System (HSS®)	x	
Static strap	x	
Tow pin	x	
On-board software: program, test & diagnose; password protected	x	
Electronic horn with integral relay (long life/no adjustments)	x	
4-function hydraulic control valve		x
86.5" grid style overhead guard		x
84.1" flat plate overhead guard		x
88.5" drive-in rack grid style overhead guard		x
Keyless start (with auxiliary key switch)		x
Audible alarm – reverse operation (manually adjustable to 87, 97 or 102 dB)		x
Visible amber strobe light - continuous activated, overhead guard mounted		x
Impact monitor		x
Operator password		x
Operator daily checklist		x
System monitor – hydraulic low fluid level indicator and hydraulic filter service indicator		x
Fire extinguisher – 2.5 lb dry chemical		x
Synchronous steering		x
Red, high-visibility, non-cinch seat belt with or without start interlock		x
Hyster Reaction™		x
SUPPLEMENTAL	STD	OPT
12 month/2,000 hour full truck warranty	x	
36 month/6,000 hour powertrain warranty	x	
84 month/12,000 hour lithium-ion battery warranty	x	
Operating manual	x	



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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. 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.