



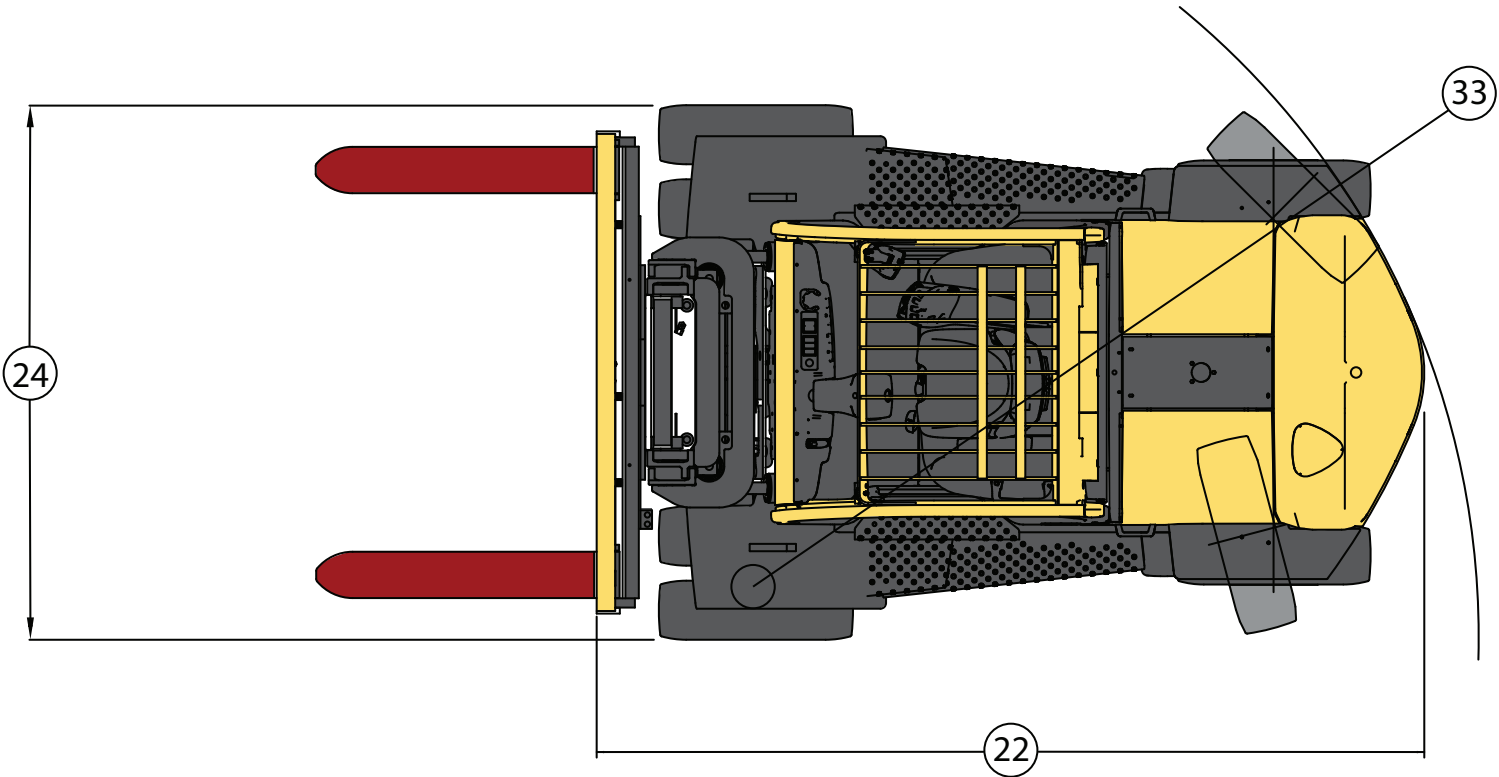
# J155-190XNL SERIES

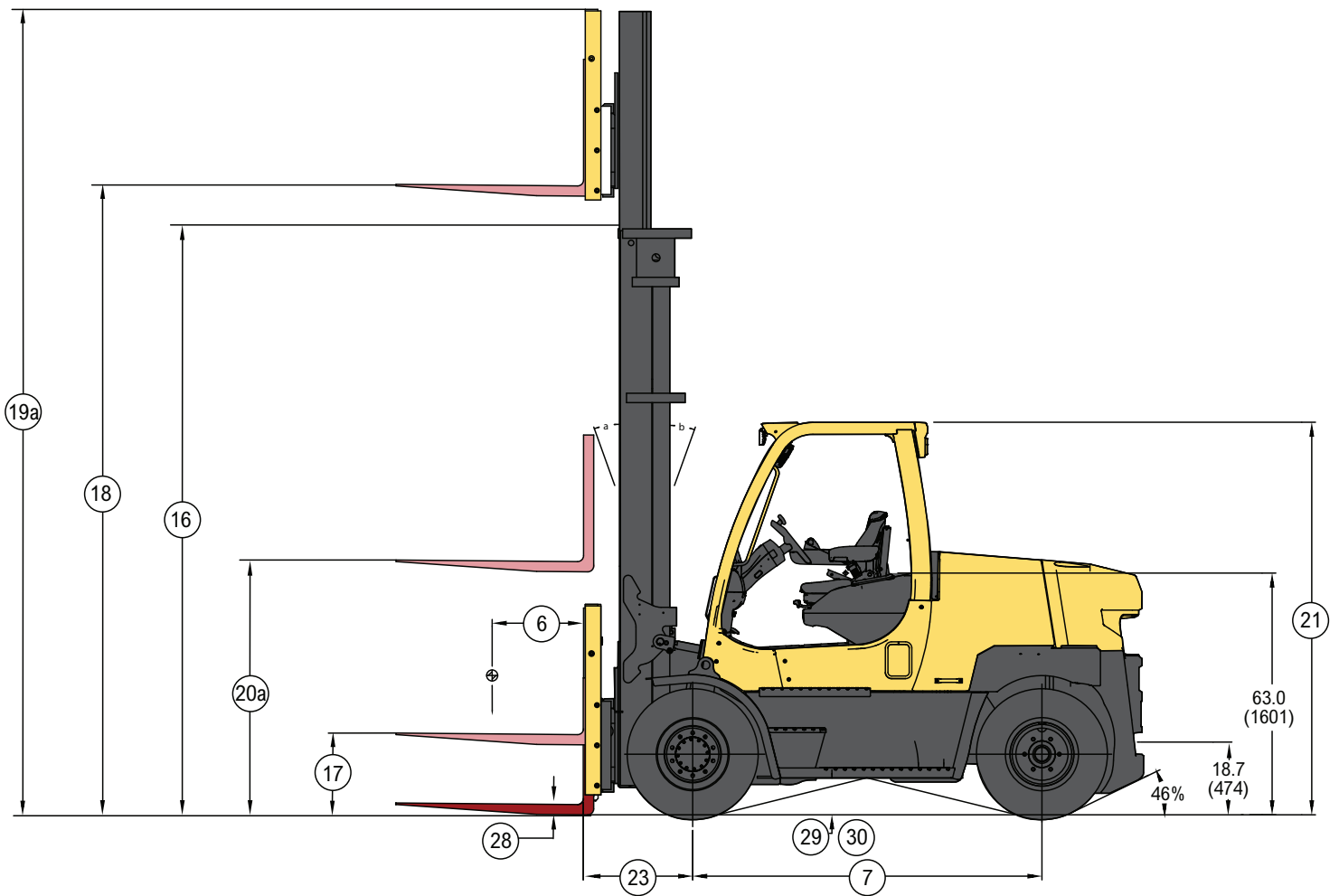
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## INTEGRATED LITHIUM-ION COUNTERBALANCED FORKLIFT PRODUCT TECHNICAL GUIDE



J155-190XNL DIMENSIONS





# J155-170XNSL SPECIFICATIONS

GENERAL	1	Manufacturer		Hyster	Hyster
	2	Model		J155XNSL	J170XNSL
	3	Power type		Electric	Electric
	4	Operator type		Seated rider	Seated rider
	5	Rated capacity	lb (kg)	15,500 (7,000)	17,000 (8,000)
	6	Load center, distance	in (mm)	24 (600)	24 (600)
	7	Wheelbase	in (mm)	88 (2235)	88 (2235)
WT.	8	Weight, standard truck RL / NL	lb (kg)	39470 (17903) / 24035 (10902)	44048 (19980) / 26410 (11979)
	9	Axle loading, static front / rear RL	lb (kg)	33495 (15193) / 5975 (2710)	37891 (17187) / 6158 (2793)
	10	Axle loading, static front / rear NL	lb (kg)	9714 (4406) / 14322 (6496)	10677 (4843) / 15733 (7136)
TIRES	11	Tire type - cushion, solid, pneumatic		Pneumatic	Pneumatic
	12	Tire size, front / rear		8.25x15 14PR / 8.25x15 14PR	8.25x15 14PR / 8.25x15 14PR
	13	Wheels, number - front / rear (X = driven)		4X / 2	4X / 2
	14	Track width, front / rear	in (mm)	72.7 (1847) / 60.5 (1536)	72.7 (1847) / 60.5 (1536)
DIMENSIONS	15	Mast tilt, forward / backward	degrees	5/10 <sup>2</sup>	5/9 <sup>2</sup>
	16	Height, standard mast - lowered	in (mm)	96.7 (2456)	106.8 (2712)
	17	Std free lift height (TOF) (rounded down)	in (mm)	3.9 (100)	0 (0)
	18	Lift height, w/LBR (TOF) (rounded down)	in (mm)	118 (3000)	121 (3065)
	19a	Height, std mast - extended w/o LBR (rounded up)	in (mm)	159.1 (4040)	166.9 (4239)
	19b	Height, std mast - extended w/ LBR (rounded up)	in (mm)	171.3 (4350)	171.2 (4337)
	20a	Opt full free lift w/ LBR (TOF) (rounded down)	in (mm)	43 (1098) <sup>1</sup>	53 (1355) <sup>1</sup>
	20b	Opt full free lift w/o LBR (TOF) (rounded down)	in (mm)	56 (1425) <sup>1</sup>	57.5 (1461) <sup>1</sup>
	21a	Height, std overhead guard (high) (rounded up)	in (mm)	100 (2531)	100 (2531)
	21b	Height, std overhead guard (cab) (rounded up)	in (mm)	101 (2549)	101 (2549)
	22	Overall length (to face of forks) <sup>3</sup>	in (mm)	137.6 (3495)	140.6 (3570)
	23	Length, center of wheels to face of forks <sup>3</sup>	in (mm)	24 (609)	24.2 (614)
	24	Overall width	in (mm)	82.0 (2082)	82.0 (2082)
	25	Std forks, thickness x width x length	in (mm)	2.5 x 6.0 x 47 (60 x 150 x 1200)	2.5 x 7.9 x 47 (65 x 200 x 1200)
	26a	Std fork spread, minimum inside dimensions	in (mm)	6.2 (160)	3 (75)
	26b	Std fork spread, maximum outside dimensions	in (mm)	73.8 (1876)	82.5 (2100)
	27	Std carriage width	in (mm)	78 (1981)	80 (2030)
	28	Ground clearance under mast, RL	in (mm)	4.9 (125)	6.8 (175)
	29	Ground clearance, center of wheelbase	in (mm)	9.7 (246)	9.7 (246)
	30	Step height	in (mm)	12.6 (321)	12.6 (321)
	31a	Aisle wth, right angle stack (pallet w=42in, l=48in)	in (mm)	193.2 (4908)	196 (4978)
	31b	Aisle wth, right angle stack (add length of load)	in (mm)	145.2 (3688)	148 (3760)
	32	Equal aisle, 90-degree intersecting aisle (pallet w=42in, l=48in)	in (mm)	113.0 (2871.2)	113.1 (2871.9)
	33	Turning radius, minimum outside (OTR) <sup>4</sup>	in (mm)	121.3 (3080)	123.8 (3145)
	34	Turning radius, minimum inside (ITR) <sup>5</sup>	in (mm)	-3.5 (-90)	-3.5 (-90)
PERFORMANCE	35	Travel speed, RL/NL <sup>6</sup>	mph (km/h)	14.9 (24) / 14.9 (24)	14.9 (24) / 14.9 (24)
	36a	Lift speed, standard 2-stage LFL RL / NL	ft / min (m/s)	84.6 (0.43) / 129.9 (0.66)	78.7 (0.40) / 90.5 (0.46)
	36b	Lift speed, optional 3-stage FFL RL / NL	ft / min (m/s)	78.7 (0.40) / 129.9 (0.66)	76.7 (0.39) / 90.5 (0.46)
	37a	Lowering speed, std 2-stage LFL RL / NL	ft / min (m/s)	114.1 (0.58) / 104.3 (0.53)	80.7 (0.41) / 72.8 (0.37)
	37b	Lowering speed, optional 3-stage FFL RL / NL	ft / min (m/s)	104.3 (0.53) / 80.7 (0.41)	76.7 (0.39) / 64.9 (0.33)
	38a	Drawbar pull RL/NL @ 1mph (1.6kph) <sup>6</sup>	ft-lb (N)	10986 (48871) / 5824 (25907)	10986 (48871) / 6408 (28506)
	38b	Maximum drawbar pull RL / NL <sup>6</sup>	ft-lb (N)	11138 (49547) / 5824 (25907)	11138 (49547) / 6408 (28506)
	39a	Gradeability RL/NL @ 1mph (1.6kph) <sup>6</sup>	%	30 / 24	26 / 24
	39b	Maximum gradeability RL / NL <sup>6</sup>	%	30 / 24	27 / 24
	40	Service brake - method of control / operation		Foot / hydraulic	Foot / hydraulic
	41	Park brake - method of control / operation		Hand / mechanical	Hand / mechanical
	42	Battery type		Integrated Li-ion	Integrated Li-ion
POWERTRAIN	43	Battery voltage / capacity <sup>7</sup>	V/Ahr	350/192	350/192
	44	Traction motor type		Permanent magnet	Permanent magnet
	45	Pump motor type		Permanent magnet	Permanent magnet
	46	Traction motor power (S2 60 minute rating)	hp (kW)	60.3 hp (45kW)	60.3 hp (45kW)
	47	Pump motor power (S2 60 minute rating)	hp (kW)	80.4 hp (60kW)	80.4 hp (60kW)
OTHER	48	Auxiliary hydraulic pressure relief for attachments	PSI (bar)	2509 (173)	2509 (173)
	49	Auxiliary hydraulic flow for attachments	gal/min (l/min)	24.4 (92.7)	24.4 (92.7)
	50	Sound level (with / without cab)	dB(A) LPAZ	68/67	68/67

(1) Measured with lowest offered height 3 stage FFL Mast

(2) Back tilt is limited to 6 degrees with some mast options

(3) Measured with standard mast and carriage

(4) Measured with Turn Assist System equipped. OTR without Turn Assist System is J155XNSL: 129.3 in (3282mm); J170XNSL: 131.8 in (3347mm)

(5) Measured with Turn Assist System equipped. ITR without Turn Assist System is J155XNSL: 9.1 in (230mm); J170XNSL: 9.1 in (230mm)

(6) Extended shift off (max performance)

(7) Nominal values

NL = no load, RL = rated load

The BorgWarner 50kW charger is approved for use with the J155-190XNL series trucks. Please see the J155-190XNL product page on [hyster.com](http://hyster.com) or contact your Hyster dealer for more information.

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.

# J175XNL36 | J190XNL SPECIFICATIONS

GENERAL	1	Manufacturer		Hyster	Hyster
	2	Model		J175XNL36	J190XNL
	3	Power type		Electric	Electric
	4	Operator type		Seated rider	Seated rider
	5	Rated capacity	lb (kg)	17,500 (8,000)	19,000 (9,000)
	6	Load center, distance	in (mm)	36 (900)	24 (600)
	7	Wheelbase	in (mm)	96.5 (2450)	96.5 (2450)
WT.	8	Weight, standard truck RL / NL	lb (kg)	44677 (20265) / 27040 (12265)	45245 (20523) / 25407 (11524)
	9	Axle loading, static front / rear RL	lb (kg)	40627 (18428) / 4048 (1836)	40654 (18440) / 4593 (2083)
	10	Axle loading, static front / rear NL	lb (kg)	11736 (5323) / 15305 (6942)	10986 (4983) / 14421 (6541)
TIRES	11	Tire type - cushion, solid, pneumatic		Pneumatic	Pneumatic
	12	Tire size, front / rear		8.25x15 14PR / 8.25x15 14PR	8.25x15 14PR / 8.25x15 14PR
	13	Wheels, number - front / rear (X = driven)		4X / 2	4X / 2
	14	Track width, front / rear	in (mm)	78.9 (2003) / 60.4 (1535)	78.9 (2003) / 60.4 (1535)
DIMENSIONS	15	Mast tilt, forward / backward	degrees	5/9 <sup>2</sup>	5/9 <sup>2</sup>
	16	Height, standard mast - lowered	in (mm)	106.8 (2712)	106.8 (2712)
	17	Std free lift height (TOF) (rounded down)	in (mm)	0 (0)	0 (0)
	18	Lift height, w/LBR (TOF) (rounded down)	in (mm)	121 (3065)	121 (3065)
	19a	Height, std mast - extended w/o LBR (rounded up)	in (mm)	166.9 (4239)	166.9 (4239)
	19b	Height, std mast - extended w/ LBR (rounded up)	in (mm)	171.2 (4337)	171.2 (4337)
	20a	Opt full free lift w/ LBR (TOF) (rounded down)	in (mm)	53 (1355) <sup>1</sup>	53 (1355) <sup>1</sup>
	20b	Opt full free lift w/o LBR (TOF) (rounded down)	in (mm)	57.5 (1461) <sup>1</sup>	57.5 (1461) <sup>1</sup>
	21a	Height, std overhead guard (high) (rounded up)	in (mm)	100 (2531)	100 (2531)
	21b	Height, std overhead guard (cab) (rounded up)	in (mm)	101 (2549)	101 (2549)
	22	Overall length (to face of forks) <sup>3</sup>	in (mm)	159 (4038)	156 (3958)
	23	Length, center of wheels to face of forks <sup>3</sup>	in (mm)	24.2 (614)	24.2 (614)
	24	Overall width	in (mm)	88 (2239)	88 (2239)
	25	Std forks, thickness x width x length	in (mm)	2.5 x 7.9 x 47 (65 x 200 x 1200)	2.5 x 7.9 x 47 (65 x 200 x 1200)
	26a	Std fork spread, minimum inside dimensions	in (mm)	3 (75)	3 (75)
	26b	Std fork spread, maximum outside dimensions	in (mm)	82.5 (2100)	82.5 (2100)
	27	Std carriage width	in (mm)	80 (2030)	80 (2030)
	28	Ground clearance under mast, RL	in (mm)	6.8 (175)	6.8 (175)
	29	Ground clearance, center of wheelbase	in (mm)	10.0 (253)	10.0 (253)
	30	Step height	in (mm)	12.6 (321)	12.6 (321)
	31a	Aisle wth, right angle stack (pallet w=42in, l=48in)	in (mm)	221 (5613)	218.2 (5542)
	31b	Aisle wth, right angle stack (add length of load)	in (mm)	173 (4394)	170.2 (4323)
	32	Equal aisle, 90-degree intersecting aisle (pallet w=42in, l=48in)	in (mm)	122.9 (3122)	121.3 (3081)
	33	Turning radius, minimum outside (OTR) <sup>4</sup>	in (mm)	149 (3794)	147 (3723)
	34	Turning radius, minimum inside (ITR) <sup>5</sup>	in (mm)	14.3 (362)	14.3 (362)
PERFORMANCE	35	Travel speed, RL/NL <sup>6</sup>	mph (km/h)	13 (21) / 13 (21)	13 (21) / 13 (21)
	36a	Lift speed, standard 2-stage LFL RL / NL	ft / min (m/s)	62.9 (0.32) / 80.7 (0.41)	70.8 (0.36) / 90.5 (0.46)
	36b	Lift speed, optional 3-stage FFL RL / NL	ft / min (m/s)	62.9 (0.32) / 80.7 (0.41)	68.8 (0.35) / 90.5 (0.46)
	37a	Lowering speed, std 2-stage LFL RL / NL	ft / min (m/s)	74.8 (0.38) / 64.9 (0.33)	64.9 (0.33) / 64.9 (0.33)
	37b	Lowering speed, optional 3-stage FFL RL / NL	ft / min (m/s)	74.8 (0.38) / 64.9 (0.33)	74.8 (0.38) / 64.9 (0.33)
	38a	Drawbar pull RL/NL @ 1mph (1.6kph) <sup>6</sup>	ft-lb (N)	11000 (48933) / 7043 (31331)	11000 (48933) / 6593 (29330)
	38b	Maximum drawbar pull RL / NL <sup>6</sup>	ft-lb (N)	11112 (49430) / 7043 (31331)	(49430) / 6593 (29330)
	39a	Gradeability RL/NL @ 1mph (1.6kph) <sup>6</sup>	%	26 / 26	26 / 26
	39b	Maximum gradeability RL / NL <sup>6</sup>	%	26 / 26	26 / 26
	40	Service brake - method of control / operation		Foot / hydraulic	Foot / hydraulic
	41	Park brake - method of control / operation		Hand / mechanical	Hand / mechanical
	42	Battery type		Integrated Li-ion	Integrated Li-ion
POWERTRAIN	43	Battery voltage / capacity <sup>7</sup>	V/Ahr	350/192	350/192
	44	Traction motor type		Permanent magnet	Permanent magnet
	45	Pump motor type		Permanent magnet	Permanent magnet
	46	Traction motor power (S2 60 minute rating)	hp (kW)	60.3 hp (45kW)	60.3 hp (45kW)
OTHER	47	Pump motor power (S2 60 minute rating)	hp (kW)	80.4 hp (60kW)	80.4 hp (60kW)
	48	Auxiliary hydraulic pressure relief for attachments	PSI (bar)	2509 (173)	2509 (173)
	49	Auxiliary hydraulic flow for attachments	gal/min (l/min)	24.4 (92.7)	24.4 (92.7)
	50	Sound level (with / without cab)	dB(A) LPAZ	68/67	68/67

(1) Measured with lowest offered height 3 stage FFL Mast

(2) Back tilt is limited to 6 degrees with some mast options

(3) Measured with standard mast and carriage

(4) Measured with Turn Assist System equipped. OTR without Turn Assist System is J155XNSL: 129.3 in (3282mm); J170XNSL: 131.8 in (3347mm)

(5) Measured with Turn Assist System equipped. ITR without Turn Assist System is J155XNSL: 9.1 in (230mm); J170XNSL: 9.1 in (230mm)

(6) Extended shift off (max performance)

(7) Nominal values

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# J155-190XNL LIFT AND BATTERY SPECIFICATIONS

STANDARD LIFT SPECIFICATIONS											
Maximum fork height (TOF) in (mm)		Overall lowered height in (mm)		Overall extended highest w / load backrest in (mm)		Overall extended highest w / o load backrest in (mm)		Free-lift (TOF) w / load backrest in (mm)		Free-lift (TOF) w / o load backrest in (mm)	
J155XNSL	J170XNSL, J175XNL36, J190XNL	J155XNSL	J170XNSL, J175XNL36, J190XNL	J155XNSL	J170XNSL, J175XNL36, J190XNL	J155XNSL	J170XNSL, J175XNL36, J190XNL	J155XNSL	J170XNSL, J175XNL36, J190XNL	J155XNSL	J170XNSL, J175XNL36, J190XNL
2-STAGE LFL MAST											
118 (3000)	121 (3065)	100 (2540)	107 (2715)	172 (4354)	171 (4347)	166 (4195)	167 (4239)	6 (160)	0 (0)	6 (160)	0 (0)
133 (3400)	140 (3565)	108 (2740)	117 (2965)	188 (4754)	191 (4847)	181 (4595)	187 (4739)	6 (160)	0 (0)	6 (160)	0 (0)
173 (4400)	179 (4565)	128 (3240)	137 (3465)	227 (5754)	230.2 (5847)	221 (5595)	226 (5739)	6 (160)	0 (0)	6 (160)	0 (0)
212 (5400)	219 (5565)	148 (3740)	156 (3965)	266 (6754)	267 (6847)	260 (6595)	265 (6739)	6 (160)	0 (0)	6 (160)	0 (0)
236 (6000)	238 (6065)	164 (4165)	166 (4215)	292 (7417)	289 (7347)	277 (7040)	265 (6739)	6 (160)	0 (0)	6 (160)	0 (0)
3-STAGE FFL MAST											
185 (4700)	181 (4615)	102 (2570)	107 (2705)	239 (6054)	232 (5897)	230 (5830)	228 (5791)	47 (1216)	56 (1420)	56 (1440)	60 (1526)
220 (5600)	217 (5515)	113 (2870)	118 (3005)	274 (6954)	268 (6797)	265 (6730)	263 (6691)	59 (1516)	68 (1720)	68 (1740)	72 (1826)
244 (6200)	234 (5965)	123 (3120)	125 (3115)	298 (7554)	285 (7247)	289 (7330)	281 (7141)	69 (1766)	74 (1870)	78 (1990)	78 (1976)
-	258 (6565)	-	132 (3355)	-	309 (7847)	-	305 (7741)	-	82 (2070)	-	86 (2176)

The battery run time and battery charge time tables below 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

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).

J155XNSL BATTERY RUN TIME		J190XNL BATTERY RUN TIME	
APPLICATION	BATTERY SIZE: 54.9kWh	APPLICATION	BATTERY SIZE: 54.9kWh
Heavy	3h 0m	Heavy	2h 30m
Medium	4h 15m	Medium	3h 30m
Light	5h 30m	Light	4h 45m

J155-190XNL BATTERY CHARGE TIME	
CHARGER SIZE	BATTERY SIZE: 54.9kWh
50kW	1h 15m
40kW	1h 30m
30kW	2h 0m
20kW	2h 45m
10kW	5h 30m


PERFORMANCE	STD	OPT
350 volt integrated lithium-ion battery with battery management system	x	
Permanent magnet AC traction and pump motors	x	
High voltage traction and pump motor controllers	x	
Progressive thermal management system	x	
Liquid cooling system for motors and controllers	x	
Oil-cooled wet disc brakes	x	
Advanced VSM (vehicle system manager)	x	
Turn Assist System (155 and 170 models only)		x
Reverse Speed System		x
DRIVE	STD	OPT
Dual drive tires, pneumatic 8.25 x 15-14PR	x	
Steer tires, pneumatic 8.25 x 15-14PR	x	
Multiple drive and steer tire options		x
LIFT	STD	OPT
2-stage mast with maximum fork height of 118" (3000 mm) (155 only)	x	
2-stage mast with maximum fork height of 121" (3065 mm) (170,175,190)	x	
5° forward / 10° backward mast tilt (155 only)	x	
5° forward / 9° backward mast tilt (170,175,190)	x	
Multiple 2-stage limited free lift (LFL) mast height options		x
Multiple 3-stage full free lift (FFL) mast height options		x
5° forward / 6° backward mast tilt		x
HANDLING	STD	OPT
78" (1981 mm) wide hook-type carriage with 48" (1219 mm) tall load backrest extension (155 only)	x	
80" (2030 mm) wide hook-type carriage with 48" (1219 mm) tall load backrest extension (170,175,190)	x	
47" (1200 mm) long hook type standard taper forks	x	
Hang-on side shift (155 only)		x
Hang-on side shift fork positioner (155 only)		x
Integral side shift		x
Integral side shift fork positioner (170,175,190)		x
Multiple fork types and lengths		x
Return to set tilt		x
Accumulator		x
Load weight indicator		x
Hydraulic attachment extension tubes		x
ERGONOMICS	STD	OPT
Single brake pedal	x	
12" steering wheel with integral spinner knob	x	
Air suspension vinyl seat with black seat belt	x	
Hand activated/released mechanical park brake	x	
On-demand power steering	x	
Power assist braking	x	
Auto Deceleration System with regenerative braking	x	
Multifunction display: <ul style="list-style-type: none"> <li>• LCD backlit screen</li> <li>• Battery state of charge indicator with lift interrupt</li> <li>• Four operator selectable, programmable performance modes</li> <li>• System status indicator icons &amp; digital clock</li> <li>• Fault indicator (audible &amp; visible)</li> <li>• Hour meters – traction motor, hydraulic pump motor, and truck</li> </ul>	x	

ERGONOMICS (continued)	STD	OPT
Operator convenience station - storage areas, beverage and clipboard holders	x	
TouchPoint electro-hydraulic mini-lever controls with fully adjustable armrest	x	
Adjustable tilt steering column	x	
Cushioned floormat	x	
Seatside power disconnect button	x	
Seatside directional control	x	
MONOTROL® Pedal		x
Air suspension cloth seat with black seat belt		x
LED work light package		x
LED brake/tail/back-up light packages		x
Rear drive handle with integrated horn button		x
Dual side view mirrors		x
Low mount display		x
OPERATION	STD	OPT
Standard construction	x	
Key switch start	x	
100" (2531mm) tall overhead guard	x	
3-function hydraulic control valve	x	
Fully integrated CANbus communication	x	
Tow pin	x	
Electronic horn with integral relay (long life / no adjustments)	x	
Traction speed limiting	x	
Operator presence system	x	
4-function hydraulic control valve		x
Hydraulic clamping function		x
Full steel cab, including the following: <ul style="list-style-type: none"> <li>• Front and rear wiper</li> <li>• Full light package</li> <li>• Integral heater</li> <li>• Removable doors</li> <li>• Operator dome light</li> <li>• Fan</li> </ul>		x
Keyless start (with auxiliary key switch)		x
Audible reverse alarm		x
Visible amber strobe light - continuous activated, overhead guard mounted		x
Impact monitor		x
Operator password		x
Operator daily checklist		x
Fire extinguisher		x
Hyster Reaction™		x
SUPPLEMENTAL	STD	OPT
36 month / 6,000 hour powertrain warranty	x	
12 month / 2,000 hour full truck warranty	x	
60 month / 10,000 hour lithium-ion battery warranty	x	
Operating manual	x	





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