



# FOUR-WHEEL ELECTRIC COUNTERBALANCED LIFT TRUCKS

E2.2-3.5XN

2 200-3 500 KG

# E2.2XN, E2.5XN, E3.0XN, E3.2XN, E3.5XN

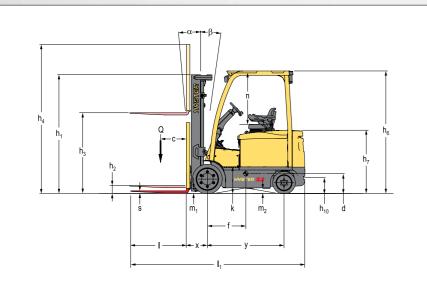
				III	STER	uvo	TER
s	1.1	Manufacturer (abbreviation)					
DISTINGUISHING MARKS	1.2 1.3	Manufacturer's type designition	_		N SWB		MWB
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas Operator type: hand, pedestrian, standing, seated, order-picker	-		: (battery) ated		(battery) ated
GUIS	1.5	Rated capacity/rated load	Q (t)		2.2		.2
STIN	1.6		(mm)		500	5	00
	1.8	Load distance, centre of drive axle to fork x	(mm)		390	3	90
	1.9	Wheelbase y	(mm)	4	530	46	50
	2.1	Service weight 🗆	ka		530		50
WEIGHTS	2.1	Axle loading, laden front/rear	kg kg	5574	1150	5601	1234
	2.3	Axle loading, unladen front/rear	kg	1809	2715	2009	2632
						1	
s	3.1	Tyres: L = pneumatic, V = solid, SE = Pneumatic Shape Solid	_		V		V
<b>LYRES / CHASSIS</b>	3.2 3.3	Tyre size, front Tyre size, rear	_		8 x 15 6 x 10.5		8 x 15 x 10.5
) (CH	3.5	Wheels, number front/rear (x = driven wheels)	-	2X	2	2X	2
<b>YRES</b>	3.6		(mm)	905	1039	905	1039
	3.7	Tread, rear b <sub>11</sub>	(mm)		940	9	40
_					-	-	
	4.1 4.2		/β (°) (mm)	5	5 235	5	5
	4.2 4.3		(mm) (mm)		235		00
	4.4		(mm)		452		152
	4.5	Height, mast extended 🔳 h <sub>4</sub>	(mm)	4	049	40	049
	4.7	Height of overhead guard (cabin) + $$h_{\rm g}$$	(mm)	2	248	22	48
	4.7.1		(mm)		286		286
	4.8 4.12		(mm) (mm)		280		80 217
	4.12		(mm) (mm)		016		17
	4.20		(mm)		016		140
5	4.21	Overall width b <sub>1</sub> /b <sub>2</sub>	_	1108	1242	1108	1242
DIMENSIONS	4.22	Fork dimensions ISO 2331 s/e/l	(mm)	100	40 1000	100 4	1000
MEN	4.23	Fork carriage ISO 2328, class/type A, B			2A		A
	4.24 4.31	3 	(mm) (mm)		977		77
	4.31		(mm) (mm)	L	85 92		15
	4.33	Load dimension $b_{12} \times I_{g}$ crossways $b_{12} \times I_{g}$	_	1200	x 1000		x 1000
	4.34		(mm)	3	329	34	75
	4.34.1	Aisle width for pallets 1000 × 1200 crossways ♦ A <sub>st</sub>	(mm)	3	329	34	75
	4.34.2		(mm)		525		574
	4.35 4.36	3	(mm) (mm)		735 501		01
	4.41	13	(mm) (mm)		774		324
	4.42		(mm)		172		72
	4.43	Step Height	(mm)		475	4	75
	5.1		km/h	19.8	19.7	19.8	19.7 0.72
E	5.2 5.3		n/sec n/sec	0.52	0.72	0.52	0.72
EDA	5.5	Drawbar pull, laden / unladen **	N	13460	14271	13460	14271
PERFORMANCE DATA	5.6	Maximum drawbar pull laden / unladen ***	Ν	22100	16785	22100	16785
EOR	5.7	Gradeability laden / unladen **** †	%	20	32	20	32
2	5.8	Maximum gradeability laden / unladen †	%	34	39	34	39
	5.9 5.10	Acceleration time, laden / unladen ▽ Service brake	sec	4.9	4.9 Iraulic	4.9 Hvdi	4.9 raulic
	5.10	Service brake	-		inauric	Tiyu	aulic
	6.1	Drive motor rating \$2.60 min	kW	:	23.6	2	3.6
ELECTRIC ENGINE	6.2	Lift motor rating at S3 15%	kW		24.0		4.0
ICE	6.3	Battery according to DIN 43531/35/36 A, B, C, no	W/ch		No 275		10
EGT	6.4 6.5	Battery voltage/nominal capacity K5 Battery weight (min / max)	V/ah kg	80	375	80	450 1770
	6.6		Nh/h		6.31		31
	-						
	8.1	Type of drive unit		AC EI	ectronic	AC Ele	ctronic
M	10.1	Operating pressure for attachments	bar		155		55
ADDITIONAL DATA	10.2 10.3		l/min		) - 40 29.7		- 40 9.7
E.	10.3	Hydraulic oil tank, capacity Sound pressure level at the driver's seat O d	B(A)		67		5.7 57
ľ.	10.8	Towing coupling, type DIN			Pin		in
_		ion data is based on VDI 2198. * Standard / Wide tread ** 60 minute rat	. x	**	**** 00		

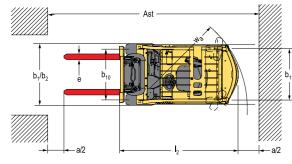
Specification data is based on VDI 2198. \* Standard / Wide tread \*\* 60 minute rating \*\*\*\* 5 minute rating \*\*\*\* 30 minute rating

EQUIPMENT AND WEIGHT: Weights (line 2.1) are based on the following specifications: Complete truck with 3 492 mm (E2.2-2.5XN), 3 309 mm (E3.0-3.5XN) 2-stage limited free lift mast, 1 020 mm hook-type carriage with load backrest, 1 000 mm forks, overhead guard and standard cushion drive and steer tyres.

	1.1	HYSTER	HY	STER	HYS	STER	HYS	TER	HYS	STER	HYSTER				
	1.2	3.5XN LWB		N LWB		N MWB		E2.5XN SWB E2.5XN M							
	ry) 1.3 1.4	ctric (battery)	Electric (battery)         Electric (battery)         Electric (battery)           Seated         Seated         Seated							(battery)	Electric (				
_	1.4	3.5		3.2		ateu 3.0		ated 25		Seat					
	1.6	500		00		00			2.5 2.5 500 500						
	1.6	402		02	4	02	4	90	3	0	39				
	1.9	1545	1	545	15	377	13	377	13	30	12				
	2.1	5390	5	180	51	090	50	650	46	10	471				
	2.2	1166	7722	1108	7271	1126	6963	1043	6098	1168	6041				
_	76 2.3	3176	2212	2946	2233	3059	2031	2632	2009	2947	1762				
	3.1	V		V		V		V		/	V				
	3.2	21 x 9 x 15	21 x	8 x 15		8 x 15		8 x 15			21 x 8				
	3.3	16 x 7 x 10.5		6 x 10.5		6 x 10.5		i x 10.5			16 x 6 x				
	3.5	2	2X	2	2X	2	2X	2	2X	2	2X				
		1013	929	1039	905	1039	905	1039	905	1039	905				
	3.7	915		40	9	40	9	40	9	40	94				
	4.1	5	5	5	5	5	5	5	5	5	5				
	4.2	2235		235		235		235			223				
	4.3	100		00		00		00			10				
	4.4	3259		259		259		152			345				
	4.5 4.7	3954 2248		954 248		954 248		248			404				
1	4.7	2248		240		246		240			224				
	4.8	280		80		80		80		0	28				
2	4.12	1217	1	217	12	217	12	217	12	17	121				
	4.19	3367		343		<u>3143</u> 3199			3143		3143		304		
	4.20	2367		343		199		143			204				
		1242 50 1000	1158 125	1242 50 1000	1108 125 5	1242 50 1000	1108 125 5	1242 40 1000	1108 100 4	1242 40 1000	1108 100 4				
	4.22	30 1000 3A		BA 1000		30   1000 3A		A 1000			24				
	4.24	977		77		77		77			97				
1	4.31	85		35	8	85	8	35	8	5	85				
	4.32	92		92		92		92			92				
	4.33	1200 x 1000		) x 1000		x 1000		x 1000			1200 x				
	4.34 4.34.	3696 3696		676 676		518 518		175	175	175 175 574			335		
	4.34.	3896		376		717							354		
	4.35	2094		)74		915		384			175				
4.36	630		30	6	61	5	61	5	)1	50					
	4.41	1941		931		1853		324			178				
_	4.42	772		72		72		72			77				
5	4.43	475		75	4	75	4	75	4	/5	47				
	5.1	19.7	19.1	19.7	19.0	19.7	19.4	19.7	19.9	19.7	19.9				
	5.2	0.63	0.37	0.63	0.40	0.63	0.42	0.72	0.49	0.72	0.52				
	5.3	0.46	0.58	0.46	0.57	0.46	0.56	0.51	0.57	0.51	0.57				
		14078	12643 21108	14129	12837 21342	14150 17272	12953 21485	14271 16785	13315 21914	14271 16785	13315 21914				
_	5.6	27	14	18165 28	21342	29	21485	32	21914	32	19				
	5.8	37	25	37	26	36	28	39	33	39	33				
	5.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9				
)	5.10	Hydraulic	Нус	raulic	Hydi	raulic	Hydr	raulic	Hydr	aulic	Hydr				
	6.1	23.6		3.6	2:	3.6	2:	3.6	2:	.6	23				
	6.2	24.0		4.0		4.0		23.6 24.0			24.				
	6.3	No		lo		No		lo			N				
	6.4	600	80	600	80	450	80	450	80	375	80				
_	6.5 6.6	2000 8.58	1550	2000 .89	1550	1770 .70	1320 6.	1770 31	1320 6.	1500 31	1050 6.3				
	and the second se				And the store of the	STATES STATES									
_	8.1	C Electronic		ectronic		ectronic		ctronic			AC Elec				
	10.1 10.2	155		55 -40		55 )-40		-40			15				
,				9.7				9.7							
	10.3	20-40			29.7	2	29	29		29			29.7		
3	10.3 10.7	67		57		67		57	E	7	67				

## **TRUCK DIMENSIONS**





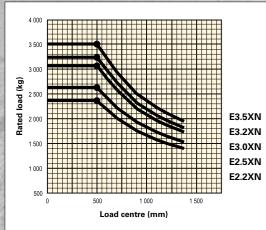
Ast = Wa + x + 16 + a (see lines 4.34.1 & 4.34.2)

a = Minimum operating clearance (VDI standard = 200 mm BITA recommendation = 300 mm)

I<sub>6</sub> = Load length

Dimensions (mm)	E2.2XN SWB	E2.2XN MWB	E2.5XN SWB	E2.5XN MWB	E3.0XN SWB	E3.2XN LWB	E3.5XN LWB
d	613	618	615	618	616	618	617
f	728	773	764	774	825	869	905
k	458	458	458	458	458	458	458
n	993	993	993	993	993	993	993

# **RATED CAPACITIES**



#### NOTE:

Specifications are affected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.

- Max battery
- ¶ Bottom of forksWithout load backrest
- + h6 subject to +/- 5 mm tolerance
- Full Suspension specified. Compressed condition, add 40 mm for nominal position
- Add 43 mm with load backrest
- $\bigtriangledown$  With 'HiP' high performance settings
- $\triangle$  eLo performance setting
- Maximum flow set through dash display.
- Stacking aisle width (lines 4.34.1 & 4.34.2) is based on the VDI standard calculation as shown on illustration. The British Industrial Truck Association recommends the addition of 100 mm to the total clearance (dimension a) for extra operating margin at the rear of the truck.
- <sup>†</sup> Gradeability figures (lines 5.7 & 5.8) are provided for comparison of tractive performance, but are not intended to endorse the operation of the vehicle on the stated inclines. Follow instructions in the operating manual regarding operation on inclines.
- With sideshift carriage add 38mm for E2.2XNSWB, 37mm for E2.2XN MWB-E2.5XN MWB,31mm for E3.0XN-E3.2XN, 30mm for E3.5XN

#### MAST TABLES KEY:

- $\star$  Add 666mm with load backrest extension.
- O Deduct 666mm with load backrest extension.
- Add 684mm with load backrest extension.
- ▲ Deduct 684mm with load backrest extension.
- \* Add 583mm with load backrest extension.
- ★ Deduct 583mm with load backrest extension.
- \* Add 601mm with load backrest extension.
- Deduct 601mm with load backrest extension.
   Wide tread required. Standard tread possible
- Wide tread required. Standard tread possible but with reduced capacity. Contact your Hyster dealer.

#### NOTICE

Care must be exercised when handling elevated loads. When the carriage and/or load is elevated, truck stability is reduced. It is important that mast tilt in either direction be kept to a minimum when loads are elevated

Operators must be trained and adhere to the instructions contained in the Operating Manual.

Hyster products are subject to change without notice. Lift trucks illustrated may feature optional equipment.

CE Safety:

This truck conforms to the current EU requirements.

# **MAST AND CAPACITY INFORMATION**

Values shown are for standard equipment. When using non-standard equipment these values may change. Please contact your Hyster dealer for information

#### VISTA MASTS E2.2-2.5KN

	Maximum Fork Height h <sub>3</sub> (mm) + s							
Vista 2-Stage limited free lift	3 492 4 132 4 832	5 5 5	2 235 2 635 2 985	4 049 ★ 4 689 ★ 5 389 ★	140 140 140			
Vista 2-Stage full free lift	3 502	5	2 235	4 059 ★	1 678 〇			
Vista 3-Stage full free lift	5 100 5 550 6 000	5 5 5	2 235 2 385 2 585	5 639 ❖ 6 089 ❖ 6 539 ❖	1 696 ▲ 1 845 ▲ 2 046 ▲			

#### VISTA MASTS E3.0-3.5XN

	Maximum Fork Height h <sub>3</sub> (mm) + s	Back Tilt	Overall Lowered Height (mm)	Overall Extended Height (mm)	Free lift (top of forks) h <sub>2</sub> (mm) □
Vista 2-Stage limited free lift	3 309 3 709 4 209	5 5 5	2 235 2 535 2 785	3 954 <b>*</b> 4 354 <b>*</b> 4 854 <b>*</b>	150 150 150
Vista 2-Stage full free lift	3 502	5	2 235	3 955 \star	1 590 🗙
Vista 3-Stage full free lift	4 768 5 218 5 968	5 5 5	2 235 2 385 2 735	5 395 <b>*</b> 5 218 <b>*</b> 5 968 <b>*</b>	1 608 ) 1 758 ) 2 108 )

#### E2.2-3.5KN - capacity chart in kg @ 500 mm load centres

		Cushion Tyres														
	Maximum		Without	sideshift		N	/ith integr	ral sideshi	ift	Maximum	Wit	hout sides	hift	With integral sideshift		
	fork height (mm) + s	E2.2XN (700)	E2.2XN (847)	E2.5XN (700)	E2.5XN (847)	E2.2XN (700)	E2.2XN (847)	E2.5XN (700)	E2.5XN (847)	fork height (mm) + s	E3.0XN (847)	E3.2XN (1 015)	E3.5XN (1 015)	E3.0XN (847)	E3.2XN (1 015)	E3.5XN (1 015)
Vista 2-Stage limited free lift	3 492 4 132 4 832	2 200 2 200 2 120	2 200 2 200 2 130	2 500 2 500 2 420	2 500 2 500 2 420	2 160 2 150 2 070	2 160 2 160 2 070	2 450 2 450 2 350	2 450 2 450 2 350	3 309 3 709 4 209	3 000 3 000 3 000	3 200 3 200 3 200	3 500 3 500 3 500	2 930 2 920 2 190	3 120 3 110 3 100	3 410 3 400 3 390
Vista 2-Stage full free lift	3 502	2 200	2 200	2 500	2 500	2 160	2 160	2 450	2 450	3 310	3 000	3 200	3 500	2 930	3 120	3 410
Vista 3-Stage full free lift	5 100 5 550 6 000	2 080 2 000 1 920	2 080 2 010 1 930	2 370 2 290 2 200 □	2 370 2 280 2 190	2 020 1 940 1 850	2 030 1 950 1 860	2 300 2 220 2 120 ⊡	2 300 2 210 2 110	4 768 5 218 5 968	2 890 2 810 2 650 ⊡	3 090 3 000 2 840 □	3 390 3 290 3 120 □	2 800 2 710 2 540 ⊡	2 990 2 900 2 720 ⊡	3 280 3 180 3 000 ⊡

#### E2.2-3.5XN - capacity chart in kg @ 600 mm load centres

		Cushion Tyres														
	Maximum		Without	sideshift		N	With integral sideshift Maximum					hout sides	shift	With integral sideshift		
	fork height (mm) + s	E2.2XN (700)	E2.2XN (847)	E2.5XN (700)	E2.5XN (847)	E2.2XN (700)	E2.2XN (847)	E2.5XN (700)	E2.5XN (847)	fork height (mm) + s	E3.0XN (847)	E3.2XN (1 015)	E3.5XN (1 015)	E3.0XN (847)	E3.2XN (1 015)	E3.5XN (1 015)
Vista 2-Stage limited free lift	3 492 4 132 4 832	2 030 2 020 1 940	2 030 2 020 1 950	2 300 2 2900 2 210	2 300 2 290 2 210	1 950 1 940 1 860	1 950 1 940 1 870	2 210 2 200 2 120	2 210 2 200 2 120	3 309 3 709 4 209	2 760 2 760 2 750	2 940 2 940 2 930	3 210 3 210 3 200	2 640 2 640 2 630	2 810 2 810 2 800	3 070 3 070 3 060
Vista 2-Stage full free lift	3 502	2 030	2 030	2 300	2 300	1 950	1 950	2 210	2 210	3 310	2 760	2 940	3 210	2 640	2 810	3 070
Vista 3-Stage full free lift	5 100 5 550 6 000	1 900 1 820 1 740	1 900 1 830 1 750	2 160 2 080 1 900 □	2 160 2 080 1 980	1 820 1 750 1 670	1 830 1 750 1 680	2 080 2 000 1 910 ⊡	2 070 1 990 1 900	4 768 5 218 5 968	2 650 2 560 2 400 □	2 820 2 740 2 570 ⊡	3 090 3 000 2 830 □	2 530 2 450 2 300 □	2 700 2 620 2 460 ⊡	2 960 2 870 2 710 ⊡

NOTE: To calculate truck capacities with alternative truck specifications to the ones shown in the above tables, please consult your Hyster dealer. The rated capacities shown are for masts in a vertical position on trucks equipped with standard or sideshift carriage and nominal length forks. Masts above the maximum fork heights shown in the mast table are classified as high lift and, depending on the tyre/tread configuration may require reduced capacity, restricted back tilt or wide tread.

Load centre: Distance from front forks

to centre of gravity of load.

E2 2-2 5XN and 4 120 mm for

riage with Load Backrest.

Rated load: Based on vertical 3-stage

E3.0-3.5XN and 977 mm Standard Car-

full free lift mast up to 4 310 mm for

## **PRODUCT FEATURES**

#### DEPENDABILITY

- Redesigned mast incorporates new chain placement and hose routings that maximise fork visibility for the driver and reliable, high performance lifting.
- New robust mast design provides excellent visibility and reliable, high performance lifting.
- Strong chassis construction and reliable, long-lasting components deliver excellent durability and stability, increasing driver confidence and enhancing productivity.
- AC motor technology on traction and hoist, with built in thermal management system, allows the truck to work reliably over long runs and in demanding work cycles, reducing downtime significantly.
- The electrical system features a CANbus communications network and Hall Effect sensors for increased reliability.
- IP54 enclosed traction motors and IP65 protection of controls prevents ingress of water and dust particles, reducing the probability of truck downtime.

#### PRODUCTIVITY

- AC traction motor delivers smooth acceleration, fast travel and rapid direction changes with excellent torque performance. This is combined with regenerative braking to deliver efficient load handling in the toughest of applications.
- Compact dimensions deliver tight turning circles and class leading manoeuvrability when working in aisles or congested loading/unloading bays.
- Powerful 80 V battery, offering extended battery shift
   life and optional side battery removal, delivers superb
   traction and hoist performance, for fast, efficient,
   uninterrupted load handling and simple fast recharging
   keeps trucks on the move.
- Advanced design drive axle with self-adjusting powerassisted drum brakes - and new steer axle, - featuring HSM<sup>™</sup> (Hyster Stability Mechanism) - give the driver confidence, which increases his productivity.

#### ERGONOMICS

- The ergonomically designed operator compartment provides a comfortable and highly productive environment for the operator, offering generous foot space and easy on/off access.
- Low noise and whole body vibration combined with a full suspension seat with 80 mm suspension travel and a range of adjustments - ensures the operator remains comfortable over long shifts.
- The fully adjustable tilt steering column with telescopic and memory tilt options - allows the operator to get on and off the truck quickly and easily throughout the shift, ensuring maximum comfort and increased productivity.
- The TouchPoint<sup>™</sup> mini-lever module armrest with built in hydraulic controls, integrated directional control, emergency off switch and horn, offers the ultimate in comfort and control. Alternatively, seat-side manual levers also deliver easy load handling.
- A 'heads-up' display keeps the driver's field of vision clear but provides him with 'at a glance' information on truck operating conditions or performance settings.
- A rear grab handle with integrated horn for frequent reverse travel and an automatic park brake also contribute to ease of operation and excellent driver comfort.

#### LOW COST OF OWNERSHIP

- A wide choice of truck capacity, battery size and wheelbase options offers customers the best combination of battery shift life, performance and manoeuvrability to match their application needs.
- Customisable performance settings allow energy efficiency to be ideally balanced with productivity, delivering high throughput at lower operating cost.
- Extended shift life reduces the need for battery recharging, saving time and money and increasing uptime.
- The Vehicle System Manager (VSM) allows adjustment of truck performance parameters and monitors key functions, leading to application matched performance and minimum downtime.
- Fast delivery of diagnostic information enables precise troubleshooting, optional service remainder, easy maintenance planning and leads to lower operating costs.

#### SERVICEABILILTY

- Standard 1 000 hour service interval.
- Service access is fast and unrestricted, with an easily removable two-piece floor plate providing access to brake fluid, hydraulic filter and valves, VSM, tilt cylinders and automatic park brake release.
- Battery is easily accessible thanks to the well designed hood, which opens to a wide angle with minimum effort.
- Access to diagnostic information via dash display with or plug-in port and laptop. This functionality saves technician time when setting up multiple items.
- LED master, indicator, brake and back-up lights are designed to last the lifetime of the truck. Combined with the approved LED work lights truck is bulb less.

# STRONG PARTNERS. TOUGH TRUCKS."

Hyster supplies a complete range of warehouse equipment, IC and electric counterbalanced trucks, container handlers and reach stackers. Hyster is committed to being much more than a lift truck supplier.

Our aim is to offer a complete partnership capable of responding to the full spectrum of material handling issues: Whether you need professional consultancy on your fleet management, fully qualified service support, or reliable parts supply, you can depend on Hyster.

Our network of highly trained dealers provides expert, responsive local support. They can offer cost-effective finance packages and introduce effectively managed maintenance programmes to ensure that you get the best possible value. Our business is dealing with your material handling needs so you can focus on the success of your business today and in the future.





A division of NACCO Materials Handling Limited.