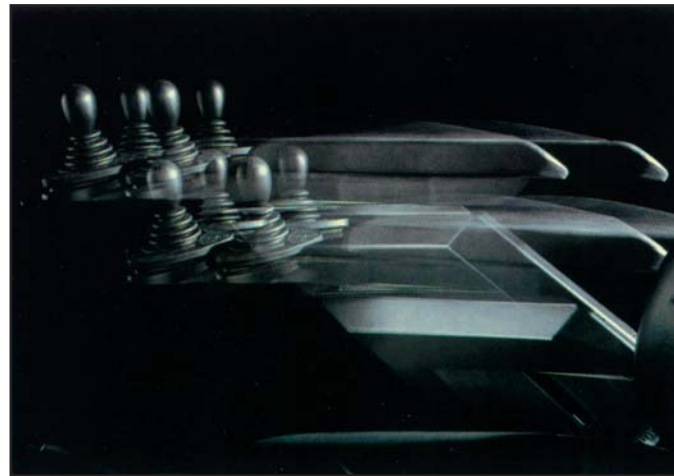


Equipment



Safety

The standard equipment of the E20P model range corresponds to all current safety requirements; of particular interest are the following standard features:

- Three braking systems
- Emergency power cut-out
- Automatic cut-out of the drive motors when the driver's module is tilted up
- Electric horn
- Electronic and hydraulic overload protection
- Fully hydrostatic power steering, zero kickback
- Excellent ergonomics
- High dynamic stability
- Excellent visibility in all directions

Standard features

- Twin-motor (S.E.M.) front wheel drive with automatic curve control
- Control electronics with integrated microprocessor for infinitely variable, highly economical control of travel speeds and working hydraulics (LDC system)
- Battery discharge indicator; when battery discharge has reached 80%, the electric power supplied to the hydraulic motor is automatically reduced
- Brush-wear sensors for drive and pump motors
- Suspension-type driver's seat, adjustability: fore-aft backrest angle, operator weight
- Tilt-up driver's module for easy and quick battery changing and truck service
- Joystick hydraulic controls (LLC system)

Optional equipment

- One or two additional hydraulic circuits available for all types of masts
- Non-standard fork lengths
- Flashing beacon
- Road lighting
- Working lights
- Operator's module, custom (adding windows, wipers, doors, up to full cab)
- Integral or hang-on sideshifters

Contact dealer/manufacturer for additional equipment availability.

ANSI CLASSIFICATION:
Standard truck meets all applicable mandatory requirements of ANSI/ASME B56.1 standards for powered industrial trucks.
NOTE: Performance data may vary due to motor and system efficiency tolerances. The performance depicted represents nominal values obtained under typical operating conditions. Metric dimensions are in millimeters unless otherwise specified. All metric dimensions are not direct equivalents due to rounding data. The descriptions and specifications included on this data sheet were in effect at the time of printing. Linde Lift Truck Corporation reserves the right to make improvements and changes in specification or design without notice and without incurring obligation. Please check with your authorized Linde dealer for information on possible updates or revisions.

09/03/5M



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Four-Wheel Electric Counterbalanced Truck 48-Volts – 4,000 lbs. Capacity



E20P



335 Series

Introduction

The Linde electric counterbalanced fork lift truck model E20P is notable for the following innovative features:

- Linde Load Control (LLC) represents a logical enhancement of the traditional way of controlling all hydraulic work functions. It corresponds to the findings of the most recent ergonomic research and permits smooth, accurate control of all movements of mast and forks.
- The excellent Linde comfort seat has been further refined. It now incorporates an adjustable armrest with integrated hydraulic joysticks.
- High-maneuverability power steering: The combi-axle steering angle is permanently monitored in curves. The speed of the inside drive motor is progressively reduced. At maximum steering angle, motor rotation is reversed.
- Twin-motor front wheel drive features S.E.M. drive motors for improved driving characteristics and reduced energy consumption via microprocessor-based Linde Digital Control (LDC) system.
- When the mast tilts backwards the front drive axle shifts forward, increasing the wheelbase and improving stability while travelling.
- Tilt-up operator's module makes battery changing and truck servicing easy.

Ergonomic driver's compartment

Access to the spacious driver's compartment is easy. The ergonomically- shaped

comfort seat can be adjusted to provide an ideal driving position for operators of all sizes. The right arm is supported by an adjustable armrest with integrated LLC controls for all hydraulically-powered functions. A combination instrument cluster directly in the operator's sight line provides information on all important truck functions. The robust overhead guard, integrated in the structure of the driver's module, can be built up to a fully enclosed cab. Visibility in all directions is excellent. The new counterbalanced trucks incorporate the famous Linde twin drive pedals for travelling forward and reverse without the need for directional control levers. In front to the right, operators will find holders for documents and drinks.

Chassis

As on all Linde counterbalanced trucks, the chassis structure is completely enclosed, which perfectly protects all components from the ingress of dirt, dust or corrosives. This rigid computer-designed structure, guarantees outstanding strength and long service life.

Front wheel drive

Two S.E.M. Linde drive motors of 5.5 hp each form a compact front drive axle. The system provides driving characteristics virtually identical to those of the highly acclaimed IC-engine Linde fork trucks with hydrostatic transmission. Acceleration, travel speed and motor braking are controlled with instant response to driver input.

Steering

Highly responsive anti-kickback hydrostatic power steering with zero backlash. Ease of steering permits use of ergonomically-designed, small diameter steering wheel with just 4.5 turns through full lock. Energy saving speed control of steering pump unit. Active steering means that direction of drive wheels is controlled as a function of steering angle, resulting in excellent maneuvering on tight turns and enabling the truck to turn around on its own axis. New Linde combi-axle adds extra safety to cornering.

Brakes

Routine deceleration is accomplished by regenerative motor braking. The rate of deceleration is governed, in forward and in reverse, by the position of the corresponding drive pedal. Motor braking involves no wear and the electric current produced by the drive motors is fed back to the battery. In addition, the drive axle incorporates mechanical brakes with hydraulic actuation. For parking, these brakes can be actuated mechanically by a brake handle positioned next to the driver's seat.

Masts

The new model range can be equipped with Standard, Dual and Triple masts all of Tru- View Design. Forward visibility has been further improved by the introduction of mast channels of optimized width, closely nested together, in conjunction with a visibility- optimized fork carriage. When the mast is tilted back, the front drive axle which doubles as the bottom mast cross-member, moves forward, thereby increasing the wheelbase and improving dynamic stability.

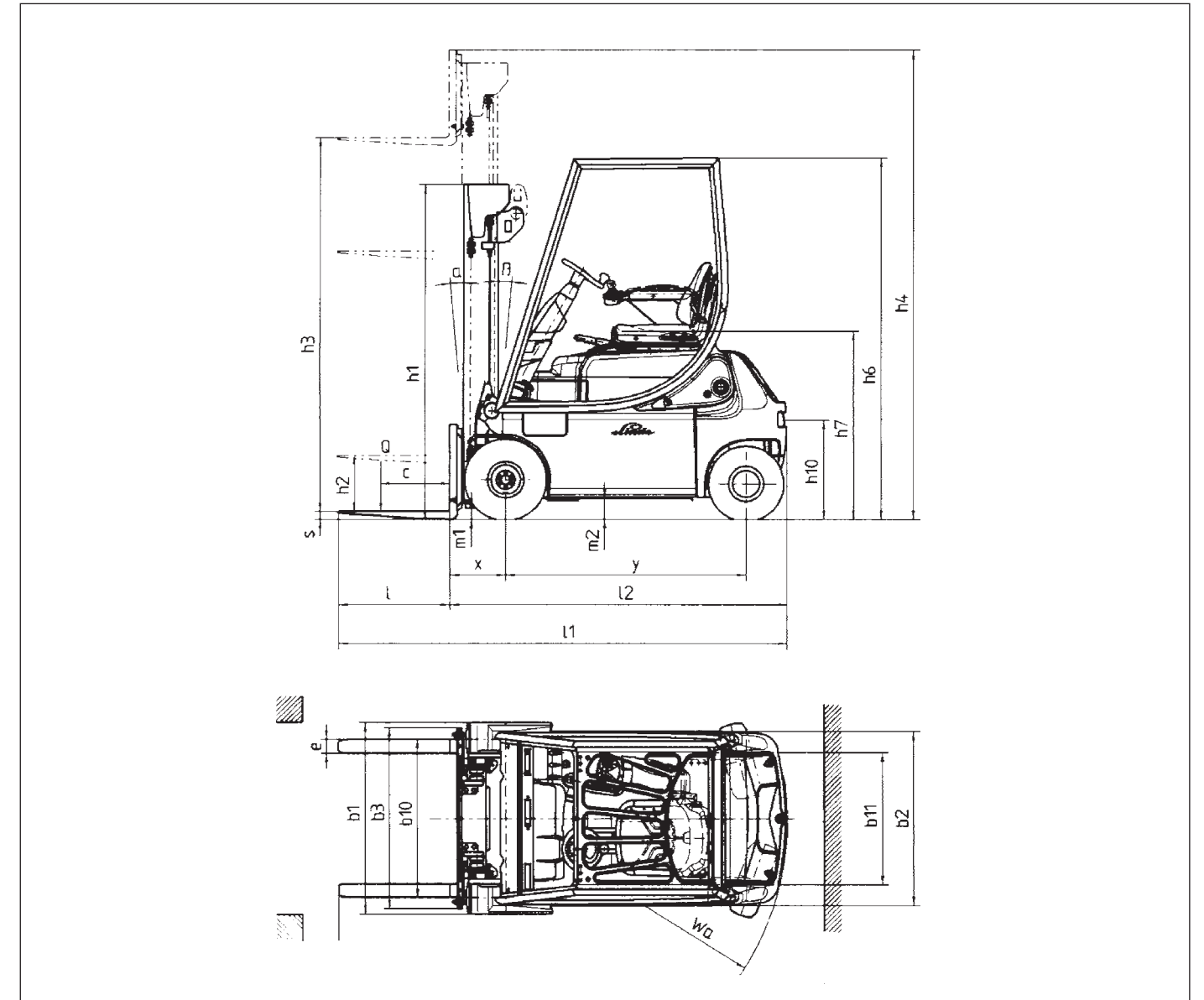
Manufacturer's Data and Design Characteristics

September 2003

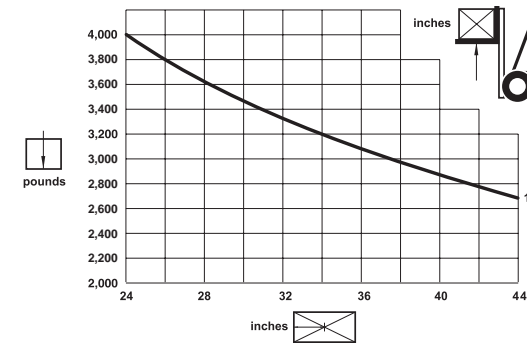


Characteristics				
1.1	Manufacturer		Linde	
1.2	Model designation		E20P	
1.3	Power unit: Battery, Diesel, Gasoline, LP Gas		Battery	
1.4	Operation: manual, pedestrian, stand-on, seated, order picker		Seated	
1.5	Load capacity	Q lbs (kg)	4,000	(2,000)
1.6	Load center	c in (mm)	24	(500)
1.8	Axle center to fork face	x in (mm)	13.3	(339)
1.9	Wheelbase	y in (mm)	54.4	(1,383)
Weight				
2.1	Service weight	lbs (kg)	7,870 ¹	(3,570) ¹
2.2	Axle load with load, front/rear	lbs (kg)	10,107/1,763	(4,740/830)
2.3	Axle load without load, front/rear	lbs (kg)	3,682/4,189	(1,670/1,900)
Wheels & Tires				
3.1	Tires, front/rear (SE=superelastic, P=pneumatic, C=cushion)		SE/SE	
3.2	Tire size, front		200/50-10	
3.3	Tire size, rear		16x6-8	
3.5	Wheels, number front/rear (x = driven)		2x/2	
3.6	Track width, front	in (mm)	37.2	(945)
3.7	Track width, rear	in (mm)	29.8	(757)
Dimensions				
4.1	Mast/fork carriage tilt, forward/back	degrees	4.5/7	
4.2	Height of mast lowered	h1 in (mm)	See Mast Table	
4.3	Free lift	h2 in (mm)	See Mast Table	
4.4	Lift	h3 in (mm)	See Mast Table	
4.5	Height of mast extended	h4 in (mm)	See Mast Table	
4.7	Height of overhead guard (cabin)	h6 in (mm)	81.7	(2,075)
4.8	Height of seat/stand-on platform	h7 in (mm)	40.6	(1,032)
4.12	Towing coupling height	h10 in (mm)	22.0	(560)
4.19	Overall length	l1 in (mm)	115.9	(2,944)
4.20	Length to fork face	l2 in (mm)	80.5	(2,044)
4.21	Overall chassis width with cushion drive tires	b1/b2 in (mm)	45.5	(1,155)
4.22	Fork dimensions	s/e/l in (mm)	1.75x4x42	(45x100x1,070)
4.23	Fork carriage class		2A	
4.24	Width of fork carriage	in (mm)	40.9	(1,040)
4.31	Ground clearance, mast	m1 in (mm)	3.5	(88)
4.32	Ground clearance, center of wheelbase	m2 in (mm)	4.3	(110)
4.34	Aisle width (min.)	in (mm)	77.6 ³	(1,951) ³
4.35	Turning radius	Wa in (mm)	67.7	(1,719)
Performance				
5.1	Travel speed, with/without load	mph (km/h)	8.9/9.4	(14.4/15.2)
5.2	Lifting speed, with/without load	fpm (m/s)	65/118.1	(0.33/0.60)
5.3	Lowering speed, with/without load	fpm (m/s)	114.2/98.4	(0.58/0.50)
5.5	Tractive force, with/without load, 60 minute rating	lbs (N)	390/470	(1,737/2,091)
5.6	Maximum tractive force, with/without load, 5 min. rating	lbs (N)	1,540/1,620	(6,852/7,205)
5.7	Climbing ability, with/without load, 30 minute rating	%	4.2/8	
5.8	Maximum climbing ability, with/without load, 5 min. rating	%	12.9/21.9	
5.19	Service brake		electric/hydraulic	
Drive				
6.1	Drive motor, 60 min. rating	hp (kW)	2x5.5	(2x4)
6.2	Lift motor, 15% rating	hp (kW)	12	(9)
6.4	Battery voltage/rated capacity	V/Ah	48/700	
6.5	Battery weight +/-5% (minimum)	lbs (kg)	2,465	(1,118)
6.6	Battery compartment size ²	l x w x h in	33x25.9x31.25	
6.7	Type of drive/hydraulic/steering control		SEM/LLC/LDC	
7.1	Working pressure for attachments	psi/bar	3,630	(250)

1) With minimum battery.
 2) 31.25x25.9x31.25 option.
 3) Add load length plus safety margin.



E20P CAPACITY DIAGRAM:



Contact manufacturer for additional downrating information.

MAST AND CAPACITY INFORMATION					Capacity @ 24" Load Center	
Type	in (mm) Collapsed Height h1	in (mm) Maximum Fork Height h3	in (mm) Overall Height h4	in (mm) Free Lift h2	lbs.	Capacity wo/w Integral Sideshifter
Simple	80 (2032)	121 (3073)	169 (4293)	—	4000/3900	4000/3900
	84 (2134)	129 (3276)	177 (4496)	—	4000/3900	4000/3900
	92 (2337)	145 (3683)	193 (4902)	—	4000/3900	4000/3900
Dual	82 (2083)	122 (3099)	170 (4318)	58 (1473)	4000/3900	4000/3900
	86 (2184)	130 (3302)	178 (5521)	62 (1575)	4000/3900	4000/3900
	92 (2337)	142 (3607)	190 (4826)	68 (1727)	4000/3900	4000/3900
Triple	82 (2083)	177 (4515)	225 (5715)	58 (1473)	3750/3750	3750/3750
	86 (2175)	189 (4815)	237 (6020)	62 (1575)	3625/3500	3625/3500
	98 (2475)	216 (5486)	264 (6706)	74 (1880)	3025/2675	3025/2675