



HEAVY DUTY COUNTERBALANCED TRUCKS, FRONT WHEEL DRIVE.

ECO-P_{60•70•85}

Image

- The new truck's lay-out complies with the standards of our range: compactness, strength and reliability. Thanks to the "butterfly" profile of the OHG is now possible to fit sealed improving the work condition in all environments. The truck is equipped with two batteries for long working cycles and the possibility to extract them sideways.
- Driving, lifting and steering motors present AC Technology; they are fully controlled by MOSFET inverters and the overall components' communication is managed by the latest generation of CAN system. This software allows easy updates and customer personalization.



Productivity

- The outstanding characteristics of the truck are the result of compactness, strength and stabilities. Traction and lifting grant exceptional performances in accelerations and speeds and allow the truck to achieve outstanding productivity levels even on heavy duty shifts.
- The truck is equipped with two batteries (with capacities that range from 640 to 1250Ah). This characteristic confers the truck a great autonomy and the ability to work for long and heavy duty working cycles. Their position ensures superior stability with an easy and fast battery extraction when necessary (operation possible from the side of the truck by a crane or by an ordinary lift-truck of overage capacity).

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ECO is the Cesab high capacity electric truck for loads of 6.000, 7.000 and 8.500 kg.

The key features of this truck are performance and autonomy, which are ensured by the use of electric motors with an advanced electronic control combined with the possibility of using large capacity batteries.

All this guarantees high quality in truck designed for heavy duty tasks.

- **AC technology on drive and lifting**
- **Exceptionally rigid masts with outstanding visibility**
- **Comfortable, ergonomic driving seat**
- **Choice of parameter setups**
- **Automatically-engaged parking brake**



Pro-Operator

- The high driving position is accessible from both sides thanks to the large steps and handles integrated in the OHG.

This high position gives an excellent view from every prospective. The low position of the front panel permits to view the forks in every condition; feature enhanced by the wide-mast-concept (twin free lift cylinders), extremely important characteristic for smooth and safe manoeuvres.

- The truck results extremely comfortable thanks to the outstanding comfort of the fully damped adjustable seat (position, weight, height and backrest angle adjustments), the new multifunction armrest's ergonomics, the spacious leg-room and the adjustable steering column angle. The truck results ideal even for long working shifts, lessening the vibrations and operator's fatigue.



Technology

- The Operator Smart Control (OSC) displays the main features of the truck: hour-counter, battery charge level, time, speed and more. Among the many option of the OSC you will have: 5 performances profiles, 40 passwords, scheduled services control, and batteries charge control.
- The Oil bath multi discs brake system is integrated in the front axle and the AC technology permits a perfect control on slopes. The useful Automatic Parking Brake (APB) is part of this system.
- The hydraulic system comprises a high-efficient silenced pump and an electro proportional control valve. The system is operated by the standard fingertips integrated in the multifunction armrest.
- The Counter Balance Management (CBM) provides various features for the fleet managing, as:
 - Universal key
 - 40 programmable passwords
 - 5 operator/performance profiles (customizable)
 - Scheduled servicing control
 - Battery charge level control
 - Control panel providing all controls, easily to hand, clearly visible, intuitive and user-friendly.
 - Steering column angle adjustable for correct steering wheel positioning.



- The **Operator Smart Control's (OSC)** displays directly all needed information.
- The powerful braking system combined with electric braking effect and standard rear lights (for brake and reverse alert), guarantee a safe and smooth truck's control to the operator in every condition.

Options

- Side shift with integrated forks positioner
- Masts with different lifting highs
- NFL & FFL duplex and triplex available for all masts
- Three types of pedal drive controls available on any models
- Multifunction armrest with Mini-Joystick controls
- Seat in fabric, heated or with adjustable-height backrest extension
- Various cab and paneling configurations
- Cab heating system
- Front and rear lights
- Reverse beeper
- Stereo system with CD player

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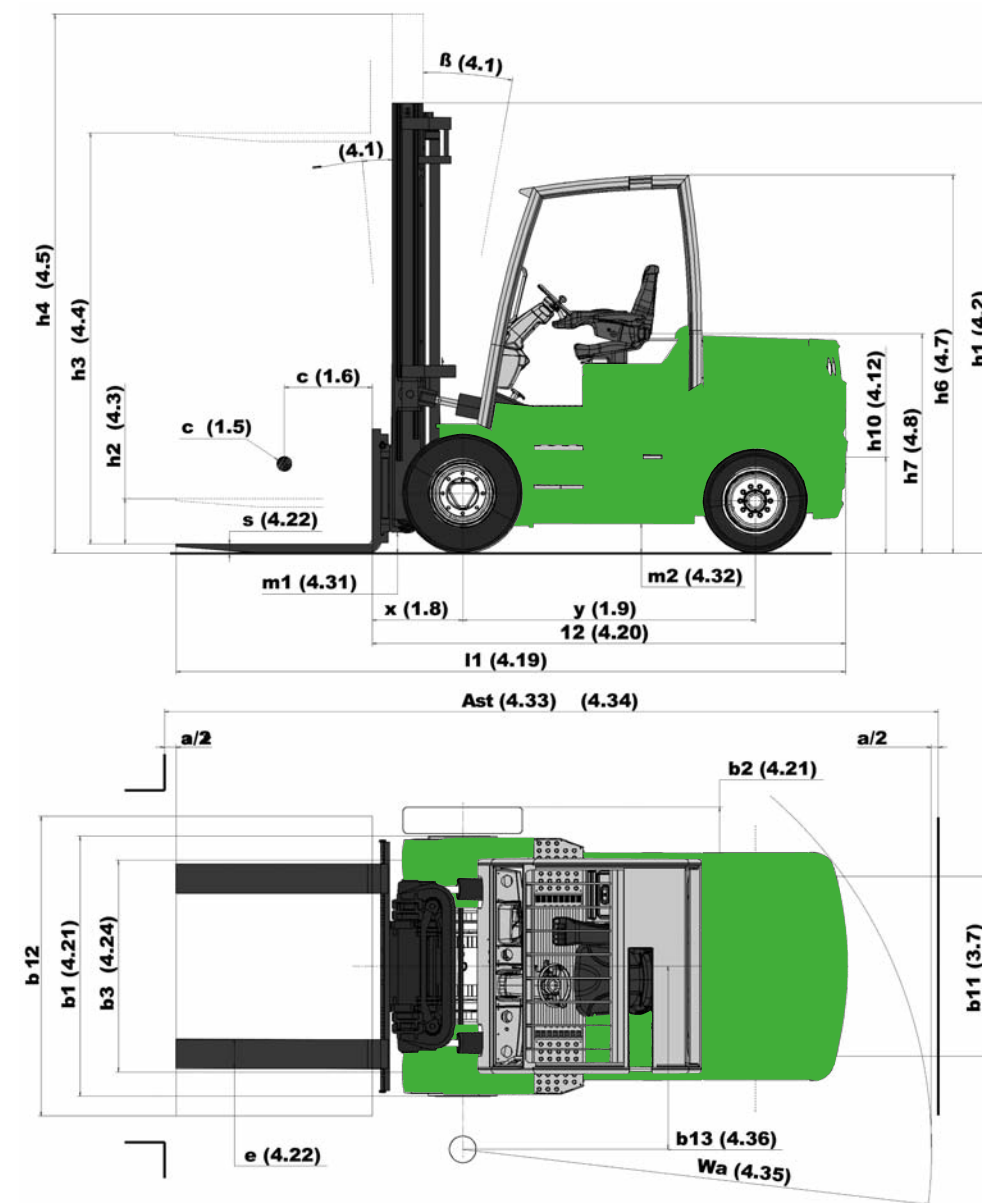
CESAB S.p.A. products, specifications and technical data are subject to change without notice.



ECO-P 60•70•85

VDI 2198

Characteristics	1.1	Manufacturer		CESAB		CESAB		CESAB	
	1.2	Model designation		ECO-P 60		ECO-P 70		ECO-P 85	
	1.3	Power unit: electric (battery), diesel, petrol, LPG		electric		electric		electric	
	1.4	Operation: manual, pedestrian, stand-on, driver seated		driver seated		driver seated		driver seated	
	1.5	Load capacity	Q (kg)	6000		7000		8500	
	1.6	Load centre	c (mm)	600		600		600	
	1.8	Axle centre to fork face	x (mm)	595 (661)		615 (695)		635 (705)	
Weights	1.9	Wheel-base	y (mm)	2000		2000		2000	
	2.1	Weight	kg	10115		10247		12326	
	2.2	Axle load with load, front/rear	kg	13996 / 2119		14128 / 2119		18821 / 2005	
Wheels and chassis	2.3	Axle load without load, front/rear	kg	4411 / 5704		4543 / 5704		5051 / 7275	
	3.1	Tyres: C=Cushion, SE=Superelastic, PN=Pneumatic, TW=Twin		C / SE / PN		CG / SEG / PNG		CG / SEG / PNG	
	3.2	Tyre size, front SE		713x360-560 / 355/65-15 / 355/65-15		713x254-560 / 8,25-15 / 8,25-15		713x254-560 / 8,25-15 / 8,25-15	
	3.3	Tyre size, rear SE		660x254-508 / 250-15		660x254-508 / 250-15		660x254-508 / 250-15	
	3.5	Tyre size, front/rear CU		2 x / 2		4 x / 2		4x / 2	
Dimensions	3.6	Track width, (tread) - front	b10 (mm)	1375 / 1450 / 1450		1450 / 1472 / 1472		1450 / 1472 / 1472	
	3.7	Track width, (tread) - rear	b11 (mm)	1230		1230		1230	
Dimensions	4.1	Mast tilt, forward/backward	α / β (gradi)	5° / 10°		5° / 10°		5° / 10°	
	4.2	Height of mast, lowered	h1 (mm)	2525		2575		2575	
	4.3	Free lift	h2 (mm)	100		100		100	
	4.4	Lift height	h3 (mm)	3150		3150		3150	
	4.5	Height of mast, extended	h4 (mm)	4050		4105		4105	
	4.7	Height of overhead guard	h6 (mm)	2570		2570		2570	
	4.8	Height of driver's seat	h7 (mm)	1379		1379		1379	
	4.12	Towing coupling height	h10 (mm)	630		630		630	
	4.19	Overall length	l1 (mm)	4425 (4491)		4445 (4525)		4538 (4608)	
	4.20	Length to fork face	l2 (mm)	3225 (3291)		3245 (3325)		3338 (3408)	
	4.21	Overall width	b1/b2 (mm)	1750 / 1750 / 1804		1972 / 1972 / 2013		1972 / 1972 / 2013	
	4.22	Fork dimensions	s/e/l (mm)	60 x 200 x 1200		60 x 200 x 1200		70 x 200 x 1200	
	4.23	Fork carriage to DIN 15173, class/form A, B		4 A		4 A		5 A	
	4.24	Width of fork carriage	b3 (mm)	1600		1600		1600	
	4.31	Floor clearance, mast (with load)	m1 (mm)	205		205		205	
	4.32	Floor clearance, centre of wheel-base (with load)	m2 (mm)	180		180		180	
	4.33	Aisle width with pallets 1000 x 1200 across forks	Ast (mm)	4989		5009		5090	
	4.34	Aisle width with pallets 800 x 1200 along forks	Ast (mm)	5189		5209		5290	
Performance	4.35	Turning radius	Wa (mm)	3194		3194		3255	
	4.36	Minimum distance between the centres of rotation	b13 (mm)	1252		1252		1252	
	5.1	Travel speed, with/without load	km/h	14 / 16		14 / 16		13,5 / 16	
	5.2	Lifting speed, with/without load	m/s	0.32 / 0.42		0.27 / 0.40		0.24 / 0.32	
	5.3	Lowering speed, with/without load	m/s	0.49 / 0.38		0.50 / 0.40		0.44 / 0.30	
	5.5	Tractive force, with/without load	N	13000		13000		13000	
	5.6	Maximum tractive force, with/without load, S2 5 minute rating	N	35000		35000		35000	
Electric motor	5.7	Climbing ability, with/without load, S2 30 minute rating	%	13 / 16		12 / 15		11 / 13	
	5.8	Maximum climbing ability, with/without load, S2 5 minute rating	%	16 / 18		15 / 17		14 / 16	
	5.9	Acceleration time, with/without load	s	--		--		--	
	5.10	Service brake: mechanical/hydraulic/electric/pneumatic		hydraulic		hydraulic		hydraulic	
Others	6.1	Drive motor, S2 60 minute rating	kW	27,1		27,1		27,1	
	6.2	Lift motor, S3 22% rating	kW	2x20		2x20		2x20	
	6.3	Battery according to DIN 43531/35/36 A, B, C, NO		NO		NO		NO	
	6.4	Battery voltage/rated capacity (5 h)	V/Ah	80 / 640		80 / 640		80 / 1050	
	6.5	Battery weight	kg	1150 x 2		1150 x 2		1350 x 2	
	6.6	Energy consumption in acc. with VDI-cycle	kWh/h	-		-		-	
Others	8.1	Type of drive control		Inverter		Inverter		Inverter	
	8.2	Working pressure for attachments	bar	190		190		190	
	8.3	Oil flow for attachments	l/min	70		70		70	
	8.4	Noise level at driver's ear	dB (A)	--		--		-	
	8.5	Towing coupling, design/type DIN		-		-		-	



ECO-P 60 (6000 Kg)					
Mast,	mm	Duplex			Triplex FFL
h3	Lift height	3150	4650	5950	6450
h1	Height of mast, lowered	2525	3325	4025	3375
h2	Free lift	100	100	100	2350
h4	Height of mast, extended	4050	5600	6950	7475
α / β	Mast tilt forward/backward	5°/10°	5°/10°	5°/10°	5°/8°
ECO-P 70 (7000 Kg)					
Mast,	mm	Duplex			Triplex FFL
h3	Lift height	3150	5950		6450
h1	Height of mast, lowered	2575	4075		3375
h2	Free lift	100	100		2350
h4	Height of mast, extended	4105	7000		7475
α / β	Mast tilt forward/backward	5°/10°	5°/10°		5°/8°
ECO-P 85 (8500 Kg)					
Mast,	mm	Duplex			Triplex FFL
h3	Lift height	3150			6450
h1	Height of mast, lowered	2575			3375
h2	Free lift	100			2350
h4	Height of mast, extended	4105			7475
α / β	Mast tilt forward/backward	5°/10°			5°/8°

(a) () with sideshift/positioner (b) with Superelastic tyres
NOTES: Unless otherwise specified, all data refer to vehicles with SE tyres. All performance figures refer to fully run-in vehicles, in perfect working status with homologated tyres mix, battery fully charged and excellent conditions with closed circuit voltage equal to nominal value. Truck performance and dimensions are nominal and subject to tolerances.