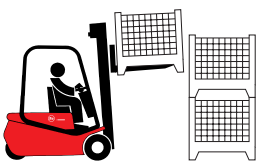
Product Information E-SERIES CBE 12-20 T



Counterbalance Fork Lift Trucks — with three wheels

The new E-SERIES AC three-wheel electric counterbalance truck from BT is designed for maximum manoeuvrability. With its low centre of gravity, the very stable three-wheel design utilises two independent high power front wheel traction AC motors to form an electronic differential which allows it to work in the tightest of spaces. Lifting capacity from 1200kg up to 2000kg, lift heights up to 7005mm. The BT CBE TL allows a larger battery.

- AC power means exceptional performance levels, combined with reduced energy consumption and lower service and maintenance requirements, due to fewer components and the absence of major wear items such as carbon brushes and traditional contactors.
- The ergonomic cab features the highest standards in operator comfort, safety and ease of access. The height of the overhead guard is only 1950 mm, which is less than most containers.
- High visibility and stability. The position of the uprights, which are widely spaced, guarantees excellent visibility and at the same time gives a rigid structure even at great height. Equipped with integrated side-shift as standard.
- Various drive programs can be selected by simply pressing the push-buttons on the steering column. The operator can choose between 3 different drive programs, as well as an additional reduced speed setting.
- The automobile-style dashboard has main function indicator lights plus error codes display for a rapid fault identification. An indicator shows the position of the rear wheels.
- The AC controller can be used to program and customize the parameters of the various functions; braking, traction and lift acceleration, and minimum acceleration threshold.
- The CAN-Bus simplifies the electrical system by reducing wiring and increases the flexibility of the truck control system.
- The use of oil bath brakes not only ensures effective braking, but also allows for more than a 1/3 reduction in maintenance costs.



Technical Details		12 T	15 T	16 T	18 T	16 TL	18 TL	20 T
Power unit		electric						
Operating type		driver seated						
Rated capacity	kg	1200	1500	1600	1800	1600	1800	2000
Load centre	mm	500	500	500	500	500	500	500
Load per axle without load, front/rear	kg	1675/1285	1680/1510	1740/1490	1770/1605	1845/1490	1860/1580	1850/1715
Load per axle with load, front/rear	kg	3685/475	4200/490	4370/460	4695/480	4355/580	4690/550	4985/580
Number of wheels, front/rear		2/2	2/2	2/2	2/2	2/2	2/2	2/2
Wheel type, front/rear [1]		C/SE/PN [2]	C/SE/PN [2]	C/SE/PN [2]	C/SE	C/SE/PN [2]	C/SE	C/SE
dimension, front		432x152/ 18x7-8	432x152/ 18x7-8	432x152/ 18x7-8	457x178/ 200|50-10	432x152/ 18x7-8	457x178/ 200|50-10	457x178/ 200|50-10
dimension, rear		381x127/ 16x6-8/ 16x6-8	381x127/ 16x6-8/ 16x6-8	381x127/ 16x6-8/ 16x6-8	381x127/ 16x6-8	381x127/ 16x6-8/ 16x6-8	381x127/ 16x6-8	381x127/ 16x6-8
Centre of wheels, front	mm	839/851 [3]	828/851 [3]	839/851 [3]	828/861	839/851 [3]	828/861	828/861
Centre of wheels, rear	mm	199/229/ 229	199/229/ 229	199/229/ 229	199/229	199/229/ 229	199/229	199/229
Fork arm carriage acc. to ISO-FEM		II A	II A	II A	II A	II A	II A	II A
Travel speed, without/with rated load	km/h	14.5/14.5	14.5/14.5	14.5/14.5	14.5/14.5	14.5/14.5	14.5/14.5	14.5/14.5
Service brake		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
Parking brake		hand brake	hand brake	hand brake	hand brake	hand brake	hand brake	hand brake
Lift speed, without/with rated load	m/s	0,54/0,35	0,54/0,34	0,54/0,34	0,54/0,33	0,54/0,34	0,54/0,33	0,54/0,32
Lowering speed, without/with rated load	m/s	0,50/0,55	0,50/0,55	0,50/0,55	0,50/0,55	0,50/0,55	0,50/0,55	0,50/0,55
Nom. drawbar pull, without/with load	N	3140/2900	3140/2840	3140/2820	3140/2780	3140/2820	3140/2780	3140/2740
Max. drawbar pull, without/with load (S2 5')	N	9000/8760	9000/8700	9000/8680	9000/8640	9000/8680	9000/8640	9000/8620
Gradient, without/with rated load (S2 30')	%	10,6/7,0	9,7/6,0	9,6/5,7	9,1/5,2	10,1/6,1	8,9/5,1	8,5/4,7
Max. gradient, without/with rated load (S2 5')	%	30,0/21,0	28,0/18,0	28,0/17,5	26,5/16,0	27,0/17,0	26,0/16,0	25,0/15,0
Drive motor	kW	4,5 x 2	4,5 x 2	4,5 x 2	4,5 x 2	4,5 x 2	4,5 x 2	4,5 x 2
Lift motor	kW	10	10	10	10	10	10	10
Battery capacity	V/Ah	48/420-500	48/420-500	48/525-625	48/525-625	48/630-750	48/630-750	48/630-750
Battery weight	kg	775	775	920	920	1090	1090	1090
Weight with battery	kg	2960	3190	3230	3375	3335	3440	3565
Steering system		hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
Speed control		AC Mosfet	AC Mosfet	AC Mosfet	AC Mosfet	AC Mosfet	AC Mosfet	AC Mosfet
Working pressure for attachments	bar	140	140	140	140	140	140	140

Dimensions, mm		12 T	15 T	16 T	18 T	16 TL	18 TL	20 T
x	Front axle to fork face	365,5 [4]	365,5 [4]	365,5 [4]	365,5 [4]	365,5 [4]	365,5 [4]	365,5 [4]
y	Wheel base	1300	1300	1410	1410	1542	1542	1542
α/β	Mast tilt forward/backward	2°30'/6°	2°30'/6°	2°30'/6°	2°30'/6°	2°30'/6°	2°30'/6°	2°30'/6°
h_6	Height overhead guard	1950	1950	1950	1950	1950	1950	1950
h_7	Height of driver's seat	888	888	888	888	888	888	888
l_2	Truck length incl. back of fork	1880 [4]	1920 [4]	1990 [4]	2030 [4]	2122 [4]	2122 [4]	2162 [4]
b_1	Chassis, width	990/1003	990/1003	990/1003	1006/1066	990/1003	1006/1066	1006/1066
s	Fork thickness	35	35	35	35	35	35	35
e	Fork width	100	100	100	130	100	130	130
l	Fork length	1000	1000	1000	1000	1000	1000	1000
m_1	Floor clearance under mast	100	100	100	100	100	100	100
m_2	Floor clearance mid wheelbase	90	90	90	90	90	90	90
A_{st}	Aisle width, mm Pallet size 800x1200/1000x1200	3332/ 3208 [5]	3372/ 3248 [5]	3442/ 3318 [5]	3482/ 3358 [5]	3574/ 3450 [5]	3574/ 3450 [5]	3615/ 3490 [5]
W_a	Turning radius	1517	1557	1627	1667	1759	1759	1799

1) C = Cushion, SE = Superelastic, PN = Pneumatic, TW = Twin
2) PN available only on front tyres
3) C/SE
4) With side shift = +34mm
5) Shortside handling / longside handling

Truck performance and dimensions are nominal and subject to tolerances.
BT Products AB products and specifications are subject to change without notice.
All data is based on VDI 2198.

Mast, mm																		
h_3	**Lift height**	**2840**	**2970**	**3170**	**3670**	**4170**	**4270**	**4320**	**4470**	**4670**	**4965**	**4970**	**5565**	**5570**	**6165**	**6170**	**6570**	**6970**
Duplex																		
h_1	Height of mast, min.		2060	2160	2410	2660				2910								
h_2	Free lift		80	80	80	80				80								
h_4	Height of mast, max.		3520	3720	4220	4720				5220								
Duplex FFL																		
h_1	Height of mast, min.	1990		2160	2410	2660												
h_2	Free lift	1410		1580	1830	2080												
h_4	Height of mast, max.	3420		3750	4250	4750												
Triplex																		
h_1	Height of mast, min.							2010			2260		2460		2710		2860	
h_2	Free lift							0			0		0		0		0	
h_4	Height of mast, max.							4900			5570		6170		6820		7240	
Triplex FFL																		
h_1	Height of mast, min.						1990		2060			2260		2460		2710	2860	3010
h_2	Free lift						1410		1480			1680		1880		2130	2280	2430
h_4	Height of mast, max.						4850		5050			5550		6150		6750	7150	7550

