

# ECB50

COUNTER BALANCE  
FORKLIFT SERIES



## NEW ENERGY FORKLIFT LEADER

BYD Efficient Lithium-Ion Electric Forklift

[byd-forklifts.com](http://byd-forklifts.com)

## STANDARD FEATURES

### Safety

- Electric braking system
- Slope protection
- Multi-functional seat with safe belt
- Operator Presence Sensing (OPS)
- Programmable automatic speed limit
- Cylinder lowering speed limit
- Charger protection
- Overload protection
- High loading position protection
- Strobe light and reversing alarm
- LED headlights and rear combination lights

### Performance

- Iron-phosphate Battery
- AC drive system
- AC hydraulic lift system
- Small turning radius
- Battery rapid charging & opportunity charging
- Programmable performance
- Digital (LCD) multifunction display
  - Time & date
  - OPS time accumulator
  - Battery capacity indicator
  - Over-discharge warning (lift interrupt)
  - Parking brake indicator
- Direction indicator
- Maintenance indicator
- Overload indicator
- Built-in analyzer
- Self-diagnostics

### Operability & Ergonomics

- Strategically configured instrument
- Front & rear operator assist grips
- Automatic fork-leveling control
- Hydraulic directional shift control
- Seat-mounted Mini dual joystick
- Heavy-duty slip-resistant floor mat
- Bay with USB port
- Bay with Cup holder
- Parking brake alarm

### Serviceability

- AC drive motor (no brushes or commutator)
- AC hydraulic motor (no brushes or commutator)
- Charging port analyzing connection
- Easy-access no-tools floorboard
- Maintenance-free battery case
- Easy-lift battery hood
- Hydraulic fluid level check
- Easy-access controllers
- CAN-bus controller wiring

## OPTIONAL EQUIPMENT

### Load Handling (Wide visible mast)

- Standard lift 2-stage mast (Duplex standard)
- Full free-lift 2-stage mast (Duplex FFL)
- Full free-lift 2-stage 2-cylinder mast (Duplex FFL)
- Lifting buffer
- Standard lift 3-stage mast (Triplex standard)
- Full free-lift 3-stage 3-cylinder mast (Triplex FFL)
- Full free-lift 3-stage 4-cylinder mast (Triplex FFL)
- Lifting speed limit
- Other customized fork
- High-load backrest
- Other customized load backrest

### Load Handling (Hose & Valve Assembly)

- 4-way valve (no 3rd & 4th function hosing)
- 4-way valve (with 3rd function hosing)
- 4-way valve (with 3rd & 4th function hosing)
- Hydraulic DV10 fitting on 3rd lever
- Hydraulic DV10 fitting on 4th lever
- Cascade hang-on side shifter
- Integral side shifter
- Fork positioners
- Clamps
- Rotators
- Load pushes
- Multiple load handlers
- Mobile weighing
- Layer pickers
- Hose reels

### Lights & Indicators

- Front headlights
- Rear combination lights
- LED distance warning spot light
- LED distance warning laser light
- Strobe light, yellow (on top of OHG)
- Back up buzzer
- Armrest horn

### Body

- Operator Presence Sensing Unit
- Fork camera
- Reversing radar
- Reversing camera
- Fan
- Fire extinguisher
- Overload protection
- Parking brake alarm
- Rearview mirrors (left & right sides)
- Flat internal rearview mirror
- Panoramic rearview mirror
- Rear assist grip with horn button
- Orange seatbelt
- Cabin without woors (Includes windshield with wiper, roof & rear glass)
- Full sealing cabin (Includes windshield with wiper & roof)
- Front windshield with wiper & Roof
- Synchronous steering
- Special key
- Bay with USB inlet
- Fork sleeves
- Overhead guard sheet
- Double accelerator pedal (One on each side of brake pedal)

### Wheels & Tires

- Solid
- Non-marking solid
- Pneumatic

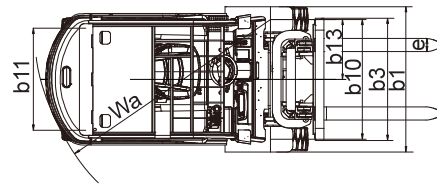
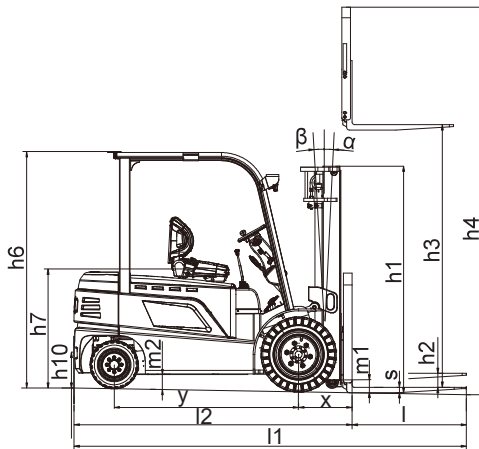
## COUNTER BALANCE FORKLIFT SPECIFICATIONS

				BYD		BYD		
				ECB50D/ECB50E		ECB50B/ECB50C		
Characteristic	Manufacturer							
	Model							
	Power Unit				Electric		Electric	
	Operation				Seat		Seat	
	Load Capacity	Q	lbs	kg	11023	5000	11023	5000
	Load Centre	c	in	mm	20	500	20	500
	Axle Centre To Force Face	x	in	mm	22	555	22	555
	Wheel Base	y	in	mm	79	2000	79	2000
Weights	Service Weight		lbs	kg	16204	7350	16204	7350
	Axle Load With Load, Front/rear		lbs	kg	24162/3064	10960/1390	24162/3064	10960/1390
	Axle Load Without load, Front/rear		lbs	kg	7319/8885	3320/4030	7319/8885	3320/4030
Wheels	Tyre Rubber, SE, Pneumatic, Polyurethane				SE		SE	
	Tyre Size, Front				250-15		28x12.5-15	
	Tyre Size, Rear				21x8-9		21x8-9	
	Wheels, Number Front/rear (x = driven)				2x/2		2x/2	
	Track Width, Front	b10	in	mm	47	1206	48	1216
	Track Width, Rear	b11	in	mm	44	1130	44	1130
Dimensions	Mast/fork Carriage Tilt, Forward/backward	$\alpha/\beta$	°	°	6/8		6/8	
	Height Of Mast, Lowered	h1	in	mm	93	2350	93	2350
	Free Lift	h2	in	mm	5	130	5	130
	Lift	h3	in	mm	118	3000	118	3000
	Height Of Mast, Extended	h4	in	mm	168	4255	168	4255
	Height Of Overhead Guard (Cabin)	h6	in	mm	93	2360	93	2360
	Height Of Seat/stand On Platform	h7	in	mm	50	1260	50	1260
	Towing Coupling Height	h10	in	mm	19	490	19	490
	Overall Length	l1	in	mm	157	3990	157	3990
	Length To Fork Face	l2	in	mm	115	2920	115	2920
	Overall Width	b1	in	mm	57	1440	60	1516
	Fork Dimensions	s/e/l	in	mm	2/6/42	50/150/1070	2/6/42	50/150/1070
	Fork Carriage To ISO 2328, Class/type A, B				3A		3A	
	Width Of Fork Carriage	b3	in	mm	59	1500	59	1500
	Ground Clearance, Below Mast	m1	in	mm	6	150	6	150
	Ground Clearance, Centre Of Wheelbase	m2	in	mm	6	160	6	160
	Aisle Width With Pallet 1000x1200 Across Forks	Ast	in	mm	171	4355	171	4355
	Aisle Width With Pallet 800x1200 Along Forks	Ast	in	mm	179	4555	179	4555
	Turning Radius	Wa	in	mm	102	2600	102	2600
Minimum Pivoting Point Distance	b13	in	mm	32	810	32	810	
Performance	Travel Speed, With/without Load		mph	Km/h	9/9	15/15	11/11	18/18
	Lifting Speed, With/without Load		ft/min	mm/s	69/89	350/450	69/89	350/450
	Lowering Speed, With/without Load		ft/min	mm/s	98/79	500/400	98/79	500/400
	Tractive Force, With/without Load		KN	KN	18/18		23/18	
	Climbing Ability, With/without Load		%	%	15/20		15/20	
	Acceleration Time, With/without Load		s	s	\		4/4.5	
	Service Brake				Hydraulic		Hydraulic	
Drive	Drive Motor, 60 Minute Rating		HP	kW	37.5	28	20.1x2	15x2
	Lift Motor, Rating at S3 15%		HP	kW	32	24	34	25.4
	Battery Voltage/Rated Capacity		V/Ah	V/Ah	80/810		80/810	
	Battery Weight		lbs	kg	1984	900	1984	900
Others	Type Of Drive Control				AC		AC	
	Operating Pressure For Attachments		Mpa	Mpa	17.0		17.0	
	Noise Level At Pperator's Ear		dB(A)	dB(A)	≤ 80		≤ 75	

## MAST SPECIFICATIONS

- h1** Height, Mast Fully Lowered    **h2<sup>1</sup>** Full Free Lift Height (1200 mm Load Backrest)    **h4** Height, Mast Fully Extended  
**h3** Lifting Height    **h2<sup>2</sup>** Full Free Lift Height (without Load Backrest)    **α** Tilt Forward    **β** Tilt Backward

ECB50 MAST	h3	h2 <sup>1</sup>	h2 <sup>2</sup>	h1	h4	α	β	Residual Capacity (without attachment) lbs (kg) @610mm
	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	deg	deg	
2-stage standard Mast	118.1(3000)	5.5(140)	5.5(140)	92.5(2350)	167.3(4250)	6°	8°	10580(4800)
	129.9(3300)	5.5(140)	5.5(140)	98.4(2500)	179.1(4550)	6°	8°	10430(4730)
	137.8(3500)	5.5(140)	5.5(140)	102.4(2600)	187.0(4750)	6°	8°	10360(4700)
	157.5(4000)	5.5(140)	5.5(140)	112.2(2850)	206.7(5250)	6°	8°	9920(4500)
	177.2(4500)	5.5(140)	5.5(140)	122.0(3100)	226.4(5750)	6°	6°	9480(4300)
	196.9(5000)	5.5(140)	5.5(140)	131.9(3350)	246.1(6250)	6°	6°	9040(4100)
	216.5(5500)	5.5(140)	5.5(140)	141.7(3600)	265.7(6750)	6°	6°	8600(3900)
	236.2(6000)	5.5(140)	5.5(140)	151.6(3850)	285.4(7250)	6°	6°	8160(3700)
2-stage with single FFL	118.1(3000)	40.7(1035)	58.7(1490)	88.0(2235)	167.3(4250)	6°	8°	10580(4800)
	129.9(3300)	46.7(1185)	64.6(1640)	93.9(2385)	179.1(4550)	6°	8°	10430(4730)
	137.8(3500)	50.6(1285)	68.5(1740)	97.8(2485)	187.0(4750)	6°	8°	10360(4700)
	157.5(4000)	62.4(1585)	80.3(2040)	109.6(2785)	206.7(5250)	6°	8°	9920(4500)
3-stage with single FFL	157.5(4000)	37.2(945)	54.7(1390)	84.4(2145)	206.7(5250)	6°	6°	9590(4350)
	169.3(4300)	41.1(1045)	58.7(1490)	88.4(2245)	218.5(5550)	6°	6°	9370(4250)
	177.2(4500)	43.9(1115)	61.0(1550)	91.1(2315)	226.4(5750)	6°	6°	9150(4150)
	189.0(4800)	47.8(1215)	65.0(1650)	95.1(2415)	238.2(6050)	6°	6°	8930(4050)
	196.9(5000)	50.6(1285)	67.3(1710)	97.8(2485)	246.1(6250)	6°	6°	8710(3950)
	216.5(5500)	56.9(1445)	74.4(1890)	104.1(2645)	265.7(6750)	6°	6°	8270(3750)
	236.2(6000)	63.6(1615)	80.7(2050)	110.8(2815)	285.4(7250)	6°	6°	7830(3550)
	255.9(6500)	70.3(1785)	87.0(2210)	117.5(2985)	305.1(7750)	6°	3°	7390(3350)
	267.7(6800)	74.2(1885)	90.9(2310)	121.5(3085)	316.9(8050)	6°	3°	7160(3250)
	283.5(7200)	81.3(2065)	96.5(2450)	128.5(3265)	332.7(8450)	3°	3°	6760(3070)
295.3(7500)	85.2(2165)	100.4(2550)	132.5(3365)	344.5(8750)	3°	3°	6510(2950)	



BYD Forklift production site is certified:  
**ISO 9001 ISO 14001 OHSAS 18001**



BYD trucks conform to the  
 United States Safety Requirements  
 All BYD forklifts comply with ANSI B56.1



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