





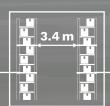
# **Bravo Electric Forklift 1.5 tonne - 2 tonne**

Performance of Diesel, Savings of Electric

## EXPERIENCE TWIN MOTOR TECHNOLOGY

Each front wheel is driven by an independent motor and an integrated gearbox. Synchronised controllers create an electronic differential. Combined with a specially designed steer axle, the Bravo Electric forklift delivers class leading turning performance. Twin Motors deliver acceleration and speed similar to a diesel forklift.





Saves 11% aisle width allowing for more pallet positions compared to other 4 wheel forklifts



0 to 15 kmph in less than 5 seconds. High acceleration significantly improves productivity even while working over short distances



Class leading turning radius of 1.7m - perfect for working in tight spaces



10% faster operations compared to single motor electric forklifts



20% gradeability; matches diesel forklift

### SAFER FORKLIFTS MAKE FOR A SAFER OPERATING ENVIRONMENT





#### **EFFECTIVE AND SAFE WET DISC BRAKES**

- Requires lower braking effort, decreasing operator fatigue during operations that require frequent braking
- More responsive, lessening stopping distance
- Faster heat dissipation with a sealed oil-cooled system and high quality friction material
- Longer service interval of 6000 to 8000 hours, improves equipment availability and productivity
- Godrej Material Handling is the only Indian manufacturer to offer wet disc brakes



#### **OPERATOR PRESENCE SENSING (OPS)**

- OPS system detects if the operator is seated correctly and the seatbelt is fastened properly; both, when starting the truck and during operations to prevent unmanned and unsafe operations
- Halts all hydraulic and driving operations, if the operator is incorrectly seated



#### **AUTOMATIC SPEED REDUCTION WHILE TURNING**

 Smart Curve Control technology automatically reduces the speed of the forklift by up to 30% around turns, enhancing stability and safety



#### ANTI-ROLLBACK SYSTEM

Anti-Rollback system holds the truck on the slope for 3 secs, even after the operator
has released the brake pedal. This gives the operator enough time to accelerate and
climb the slope. If left alone, the forklift will gradually creep down the slope

## **EXPERIENCE THE UNMATCHED EFFICIENCY OF BRAVO**



## ENERGY EFFICIENT ELECTRIC MOTORS

Indigenous AC motors designed and developed for Indian operating conditions, requiring zero maintenance



#### **3 MODES OF OPERATION**

Choose between three different speed modes - Slow, Normal or Fast based on application and operator skill



#### **SMART ENERGY USAGE**

On release of the accelerator pedal, regenerative braking charges the battery, leading to more efficient energy performance





## ONE BATTERY, TWO SHIFT OPERATIONS

With the highest battery option of 756Ah, the Bravo can operate for two shifts without requiring a change of battery



#### **OPTIMISED COOLING SYSTEM**

Thoughtfully placed cooling fans ensure heat removal from areas housing critical components like controllers and hydraulic pump/motor



## ENERGY SAVING LED LIGHTS

Bright LED lights provide reliable and intense illumination of the working area with low energy consumption

## **BUILD OPERATOR CONFIDENCE WITH IMPROVED ERGONOMICS**



#### ERGONOMICALLY DESIGNED DRIVER MODULE

Operating touch-points such as control levers, steering wheel and pedals are ergonomically positioned around the adjustable seat to make even long operating hours comfortable and fatigue free



#### **IMPROVED VISIBILITY**

Redesigned I - section mast and overhead guard improves visibility by 10% safer operations



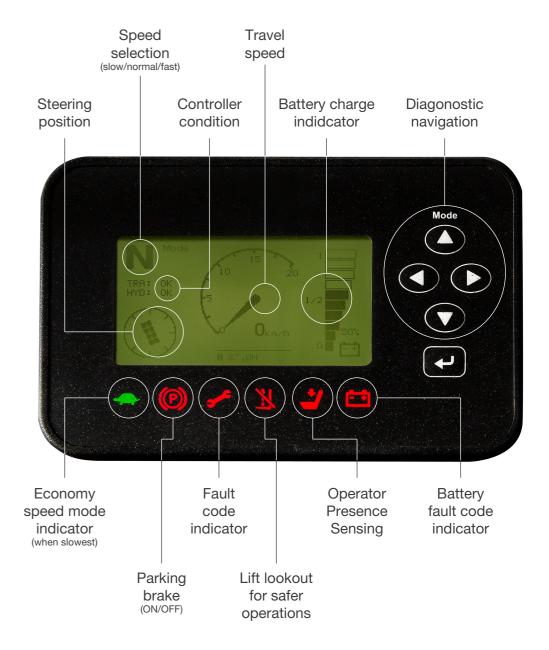
## CUSHIONED LIFT CYLINDERS

Cushioned lift cylinders ensure smooth mast stage change while lifting and lowering of the load and thus ensuring safety of workspace



#### INTERACTIVE DISPLAY

Interactive LCD screen shows vital information of all key parameters like speed, temperature, steering position, battery life and fault codes- which assist in fault diagnostics, enabling informed decisions.





#### **MOTOR OVERHEATING SENSORS**

In the unlikely event of motors overheating, sensors detect the abnormal temperature rise beyond optimal value and halt all operations, preventing failures



#### **EASY INGRESS AND EGRESS**

The low entry step, high overhead guard clearance and three-point contact, ensures that the operator gets on and off the forklift truck safely



#### LIFT LOCKOUT

Lift lockout disables lifting function at 20% battery charge level, allowing truck to reach to the charging station. Prevents deep discharge of battery

## **EASY SERVICEABILITY**

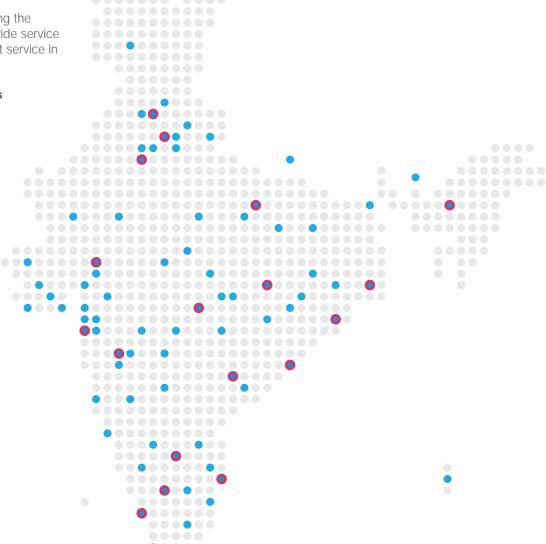


#### **LOCATION NO BAR**

No matter where you are using the Bravo Electric Forklifts, our wide service network assures you the best service in the shortest possible time.

Branch and Dealer locations

Dealer locations





#### SPARE PARTS, ANYWHERE

Our extensive service network, of over 70 touch points, assure your business easy availability of quality spares.



## SUPER EASY PREVENTIVE MAINTENANCE

Easy access to sub-assemblies and main aggregates for better serviceability.

## **OFFERINGS AND ACCESSORIES**

#### **STANDARD OFFERINGS**

- 15kW AC Lift Motor; Twin 6.5kW AC Drive Motors with Electronic Differential
- · Adjustable Steering Column
- Electronic controllers with Built-In Diagnostics
- Hydrostatic Power Steering
- LED Lights Module (Head Lights, Tail Lights, Signal Lights and Spot Light), Reverse Alarm, Rear View Mirrors and Retractable Seat Belt
- Multifunctional LCD Display
- One Pair of Standard 1000mm Hook-On Forks
- Operator Presence Sensing (OPS)
- Solid Cushion tyres
- Toolkit, Tarpaulin canopy on overhead guard roof
- Lead Acid Battery 48V/460Ah
- Wet Disc Brakes with Regenerative Braking

#### **OPTIONAL OFFERINGS**

- Auto Refill System
- Battery Changing Trolley
- Battery Options 48V/560Ah; 48V/648Ah; 48V/756Ah
- Bolt-On, Epoxy Coated Battery Container with Blinky
- · Load Back Rest

- Long Forks 1200mm or 1600mm
- · Non-Marking Solid Tyres

#### **ADDITIONAL SAFETY ACCESSORIES**

- 1. All-In-One Access Control
- Electronic Pin Access
- Biometric Access Control
- Key Card Access
- 2. Overload Alarm

- 3. Safety Lights
  - Red Halo Safety Lights
- Blue Safety Lights
- Reverse Spotlight
- · Emergency Flashing Light

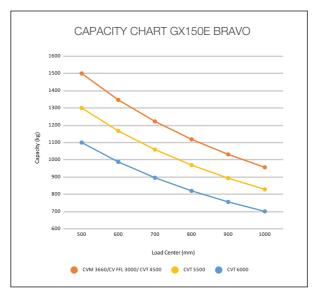
#### **ATTACHMENTS**

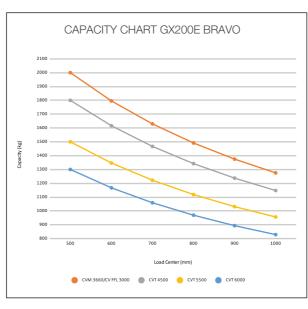
- Paper Roll Clamp
- 1200mm Coil Handling Ram
- Bale Clamp
- Push/Pull Attachment
- Fork Mounted Crane
- · Carriage Mounted Crane
- Parrot Beak Attachment
- Prong Attachment for Drum Handling
- Rotating Fork Attachment
- Side Shifter
- Fork Positioner
- Fork Extensions

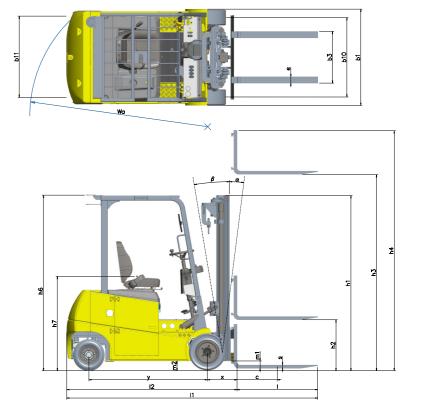
## **TECHNICAL SPECIFICATIONS**

	1.1	Manufacturer	-	Godrej	Godrej
Ä.	1.2	Model	-	GX150E BRAVO	GX200E BRAVC
DISTINGUISHING MARK	1.3	Drive (Battery, Diesel, Petrol)	-	Battery	Battery
	1.4	Operation (Manual, Pedestrian, Standing, Seated)	-	Seated	Seated
isi -	1.5	Rated capacity/rated load	kg	1500	2000
<u> </u>	1.6	Load centre distance	c (mm)	500	
TSIC	1.8	Load distance (Front overhang)	x (mm)	380	
	1.9	Wheelbase	y (mm)	1470	
<b>—</b>	2.1	Service weight incl. battery	kg	3650	
WEIGHT	2.2	Axle loading, laden front/rear	kg	5075/575	
WE	2.3	Axle loading, unladen front/rear	kg	1905/1745	
	3.1	Tyres	-	Solid	
<u>S</u>	3.2	Tyre size, front	mm	200/50-10	
- IAS	3.3	Tyre size, rear	mm	140/55-9	
ည် <u>-</u>	3.5	Wheels, number front/rear (x = driven wheels)	-	2x/	
TYRES, CHASSIS	3.6	Tread, front	b10 (mm)	984	
	3.7				
		Tread, rear	b11 (mm)	1015	
-	4.1	Tilt of mast forward/backward	α/β (deg)	5/6	
-	4.2	Height, mast lowered	h1 (mm)	2512	2512
-	4.3	Free lift Lift	h2 (mm) h3 (mm)	3660	3660
-	4.4	Height, mast extended*	h4 (mm)	4353	
-	4.7	Height of overhead guard (Cabin)	h6 (mm)	2150	
-	4.8	Seat height (SIP)	h7 (mm)	1153	
-	1.0	Coupling height	h10 (mm)	575	
SN	4.19	Overall length	I1 (mm)	3120	
081	4.20	Length to face of forks	I2 (mm)	2120	2120
DIMENSIONS	4.21	Overall width	b1 (mm)	1194	1194
	4.22	Fork dimensions	s/e/l (mm)	40x80x1000	40x80x1000
	4.23	Fork carriage DIN15173, class/type A, B	-	2A	2A
_		Fork carriage width	b3 (mm)	1040	1040
_	4.31	Ground clearance, laden, below mast	m1 (mm)	115	
-	4.32	Ground clearance, centre of wheelbase	m2 (mm)	105	
-	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3440	
	4.35	Turning radius	Wa (mm)	1770	
-	5.1	Travel speed, laden/unladen	km/h	15/15	
щ -	5.2	Lift speed, laden/unladen	m/s	0.36/0.50	Seated 2000 500 380 1470 3650 5075/575 1905/1745 Solid 200/50-10 140/55-9 2x/ 984 1015 5/6 2512 - 3660 4353 2150 1153 575 3120 2120 1194 40x80x1000 2A
PERFORMANCE	5.3	Lowering speed, laden/unladen	m/s	0.45/0.45	
- RM	5.5	Drawbar pull, laden/unladen S2 60 min	N	4800/5100	
PFC -	5.6	Max. drawbar pull, laden/unladen S2 5min	N	9200/9200	
퓝 _	5.7	Gradeability, laden/unladen	%	15/21	
-	5.8	Max. gradient performance, laden/unladen S2 5min	%	20/23	
	5.9	Acceleration time, laden/unladen	S	4.8/4.8	4.8/4.8
O	6	Drive motor rating S2 60min	kW	6.5x2	6.5x2
ž i	6	Lift motor rating at S3	kW	15	15
ELECTRIC	6.4	Battery voltage, nominal capacity K5	V/Ah	48/460	48/460
	6.5	Battery weight	kg	745	745
(0	8.1	Type of drive control	-	Twin AC	
OTHERS	8.11	Service brake		Wet Disc Brakes	
[ -	8.12	Working pressure for attachment	bar	195	

MAST SPECIFICATIONS												
Type of Mast	Maximum Fork Height (MFH)	Overall Height Lowered	Overall Height Raised*	Free Lift	Derated Capacity of MFH (kg)		Tilt Angles					
	h3 (mm)	h1 (mm)	h4 (mm)	h2 (mm)			α	β				
					GX 150E	GX 200E						
2 Stage CV	3660	2512	4353	-	1500	2000	5	6				
2 Stage with FFL	3000	2182	3612	1570	1500	2000	5	6				
	4500	2155	5171	1484	1500	1800	5	6				
3 Stage with FFL	5500	2485	6167	1818	1200	1500	5	6				
	6000	2655	6671	1984	1000	1300	5	6				







#### NOTE

All dimensions and specifications indicated are subjected to a variation of  $\pm$  10% without prior notice. The images shown in the brochure are representative, actual equipment may differ in colour and optional accessories

 $<sup>^{\</sup>star}$  Overall Height Raised with Load Back Rest = OAHR w/o LBR + 600mm



• Equipment finance

Lease finance

Rentals



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Kolkata: 033 6601 3771 Lucknow: 0522 6754 980 Mumbai: 022 6976 1725 Pune: 020 6625 5121 Raipur: 0771 6606 606 Vizag: 0891 2746 511 To find out more about what's new at Godrej Material Handling, check out www.godrej.com/intra-logistics

