

PBE Hybrid Technical Data

Prepared for course and turf managers · Par, Birdie, Eagle Golf Ltd. (PBE Golf), Ireland

Product overview

The PBE Hybrid is a dual-mode electric golf buggy that can be ridden or used as a powered walk-behind trolley. It is a four-wheel unit. The primary load is carried on the two rear pneumatic drive wheels. The front wheels are non-pneumatic and carry only the golf bag, and are mounted on a leaf-spring suspension arm. The rear wheels are mounted on rigid hubs with no suspension travel.

Key specifications

Configuration	Four wheel, rear-wheel drive, dual mode (ride or powered walk-behind)
Motors	2 × 800 W brushless hub motors (1,600 W combined)
Battery	48 V lithium-ion, 14 Ah standard or 20 Ah upgrade, rear-mounted, key-locked and removable
Range	20–35 km (12–22 miles), 27 holes on 14 Ah and 36 holes on 20 Ah, specified for riding
Charging time	6–8 hours from empty
Speed modes	5 / 15 / 25 km/h, plus reverse. Cruise at 4 or 6 km/h in walk-behind mode
Climbing ability	Up to 20° (approx. 36% gradient)
Braking	Regenerative electronic braking (EABS) through the dual hub motors, no mechanical brakes
Hill-hold	Holds the buggy with bag and clubs once the rider steps off, only while the unit is switched on. It will not hold the rider's weight and it is not a parking brake
Turning radius	≤ 1.8 m
Dimensions unfolded	93.5 (L) × 86 (W) × 95 (H) cm
Dimensions folded	95 (L) × 53 (W) × 37 (D) cm
Handlebar height	Adjustable 95–140 cm
Weight	28 kg excluding battery, 3.5 kg battery, 31.5 kg total
Maximum total load	120 kg all-in (18.9 stone / 265 lb)
Frame	Aluminium alloy
Warranty	1 year buggy, 2 years battery

Rear tyres and turf loading

Load sits on the two rear pneumatic drive tyres, which use a golf turf tread pattern without aggressive lugs. Fully loaded with rider, bag and battery the Hybrid weighs roughly 150 kg, about a third of the loaded weight of a traditional ride-on golf cart.

Rear tyre size	85/65-6.5 (10 inch overall diameter, 6.5 inch rim)
Rear tyre construction	Pneumatic, golf turf tread pattern
Rated inflation (cold)	210 kPa / 30 psi. Can be run lower for soft ground, with a modest trade-off in range and handling
Rated load per rear tyre	70 kg
Front wheels	Non-pneumatic, leaf-spring suspension, carry the golf bag only
Typical loaded weight	Approx. 150 kg (rider, bag and battery)

Turf-impact context

Typical inflation pressures and loaded weights for common golf equipment, for reference:	
PBE Hybrid	Approx. 150 kg loaded, load on two rear tyres at 210 kPa (30 psi)
Walking golfer	80 kg heel-strike over roughly 150 cm ² , approx. 50 kPa (8 psi) turf contact
Walk-behind trolley	Approx. 103–172 kPa (15–25 psi) inflation
Ride-on golf cart	Approx. 500 kg loaded, tyres at 83–152 kPa (12–22 psi) inflation

Because the Hybrid's loaded weight is roughly a third that of a traditional ride-on cart, its turf loading is proportionally lower before accounting for the turf-tread tyres. Ground pressure at a specific rider and kit weight can be calculated on request, and rear tyre pressure can be reduced below the 30 psi rating for soft ground if a course prefers.