

## Brompton Wide Range Hub

The new configuration for 6-speed Bromptons will feature a wide-range hub of our design, manufactured by Sturmey Archer; the present 6-speed arrangement, employing a SRAM hub, will be discontinued from 1 January 2009.

**We believe that the Brompton Wide Range Hub [BWR], together with Brompton's derailleur system, sets a new standard in folding bike gearing systems.** It offers:

- An evenly-stepped gear range (302%) that is comparable to the leading 8-speed hubs; but
- It uses only a single epicyclic gear train (instead of three), thereby maximising efficiency;
- At 0.94kg, it weighs almost half as much as other hub gears;
- It comes in the same small package as the current three-speed hub, allowing existing owners to upgrade easily; and
- It is typically-Brompton: robust and built to last... owners can expect the same reliability as with the classic three-speed hub.

We will be supplying a 16-tooth and a 13-tooth sprocket with the BWR which, with a 50-tooth chain wheel, will give the following distances of travel:

Gear 1	33.0 gear inches (2.63 metres along the ground)
Gear 2	40.5 gear inches (3.23 metres travel)
Gear 3	51.5 gear inches (4.11 metres travel)
Gear 4	63.5 gear inches (5.06 metres travel)
Gear 5	81.0 gear inches (6.45 metres travel)
Gear 6	99.5 gear inches (7.94 metres travel)

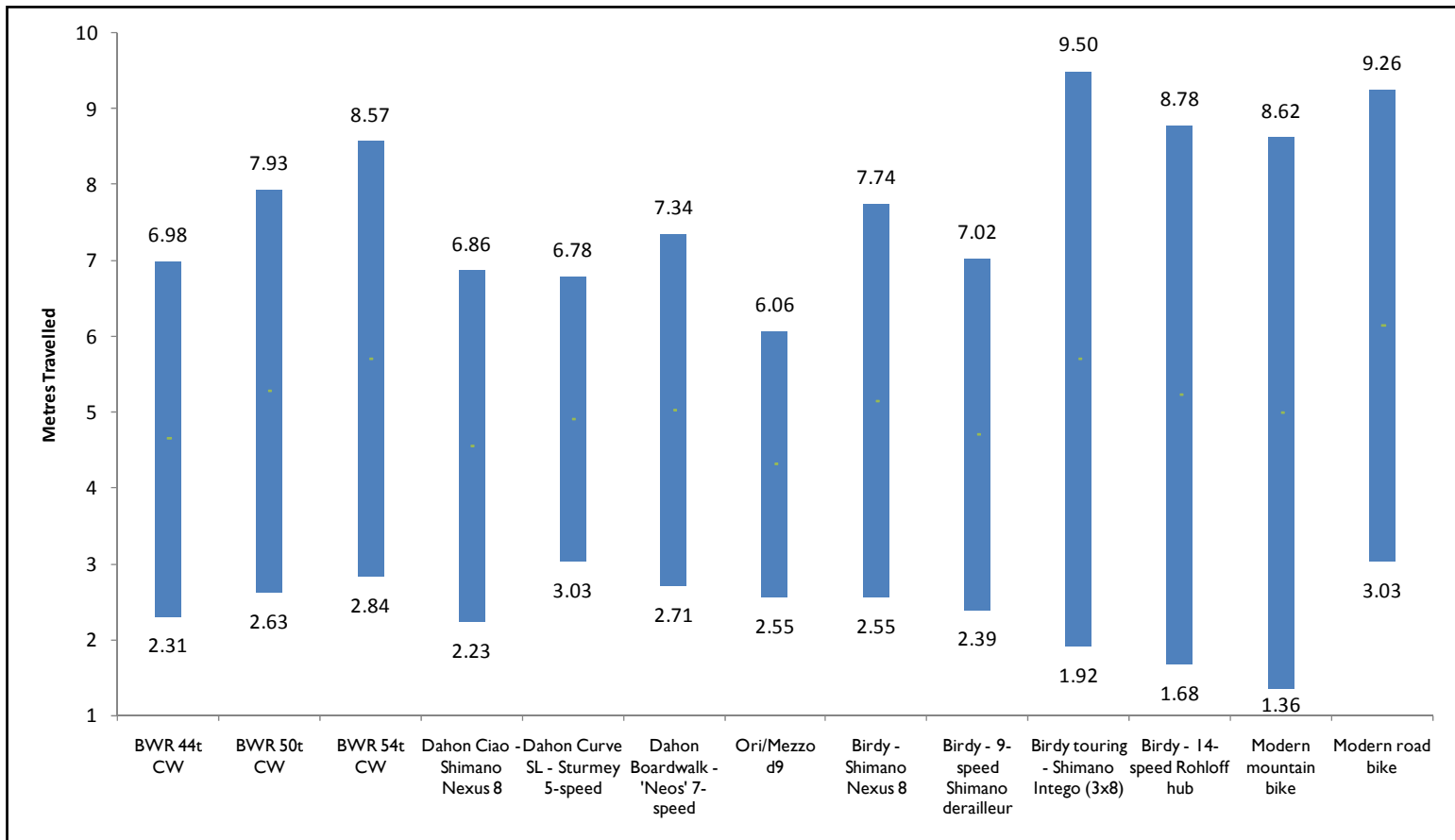


This represents a gear range (top gear/bottom gear) of 302%; by comparison, the current SRAM 6-speed arrangement offers a range of 215%.\* Like our existing 6-speed offering, however, the gearing may be raised or lowered by fitting a 54-tooth (+8%) or 44-tooth (-12%) chain wheel in place of the standard.

The graph on the next page illustrates how the new Brompton 6-speed offering fares against competitors' products and how it performs in the wider context of bicycle gearing. The gear range is almost identical to that offered by Shimano's Nexus 8, as employed on the Birdy and Dahon Ciao, while it is superior to the range offered on the Curve, Boardwalk, Ori/Mezzo d9 and the Birdy with 9-speed derailleur.

While the new 6-speed Brompton offering naturally cannot compete with the gear range found on modern MTB and road bikes (or with the heavy 14-speed Rohloff), it represents a significant advance for those would-be Brompton-owners who wanted the advantages offered by our bikes but were put off in the past by concerns about the Brompton's ability in very hilly/mountainous terrain.

\* 6.9m travel in top gear ÷ 3.2m travel in bottom gear



### The technical details

- The BWR is an epicyclic geared hub with a 34-tooth sun pinion, 60 tooth annulus and four 12-tooth planet pinions;
- In addition to direct drive (1:1), it offers a high gear of 1.567 (+56.7%) and a low gear of 0.638 (-36.2%); for comparison, the Sturmey Archer hub employed on our 3-speed bikes offers 0.75, 1:1, 1.33 and the SRAM hub currently employed on 6-speed Bromptons offers 0.73, 1:1, 1.36;
- Percentage change for a gear step is 23% or 27%;
- Hub weight without sprockets is 0.94kg;
- It utilises the same indicator as the current Sturmey Archer 3-speed;
- It employs Shimano-type sprocket splines, the same as on our current 2-speed.

The Marketing and Sales teams will be happy to assist you further, and answer any queries you might have.

With best wishes

**Emerson Roberts**  
Marketing Manager