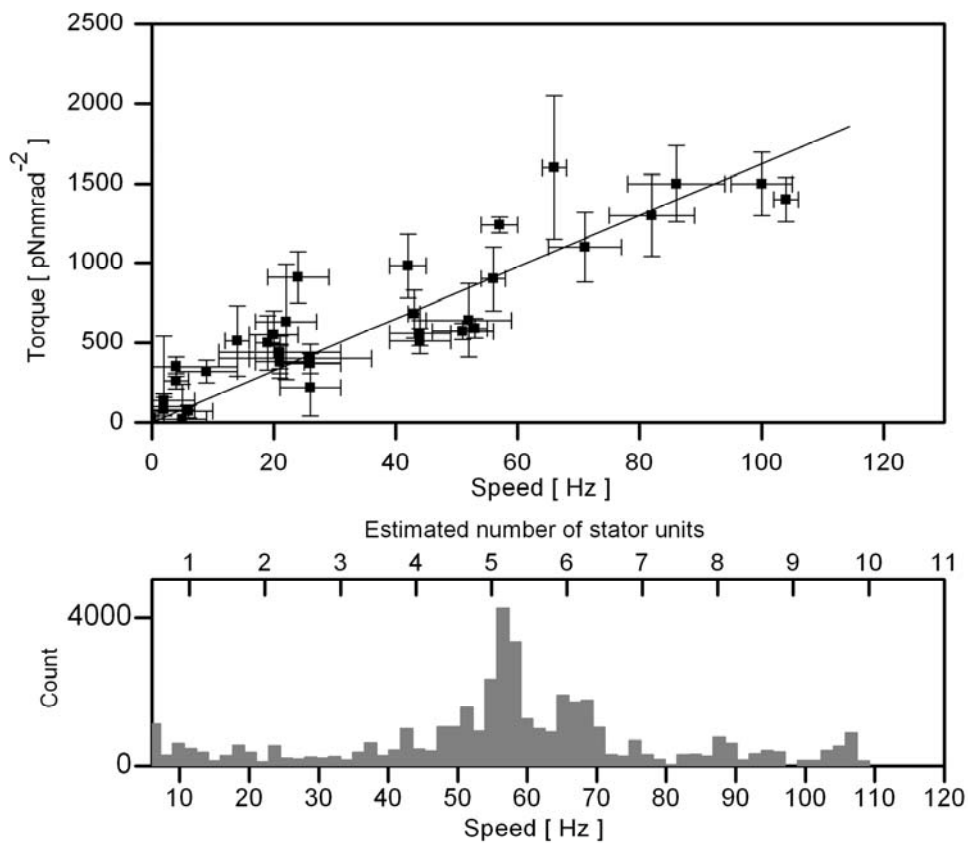


SUPPLEMENTAL FIGURE S1.

(A) Stall torque measurements with 500 nm bead-pairs and the angle-clamp feedback algorithm of Eq. 1 in extended observations of 3 different bacterial flagellar motors. Trap stiffness was calibrated for each bead-pair according to the method described in Fig.4.

(B) A histogram of free-running speeds of 5 different motors (including the 3 in Fig S1 A) during intervals between measurements of the stall torque as described in Fig S1 A. The estimated number of stator units as function of speed is shown in Fig. S1 B, and corresponds to a stall torque of  $170 \pm 40$  pNmrad<sup>-2</sup> per stator unit.



SUPPLEMENTAL FIGURE 1