

ROHLOFF SPEEDHUB UPGRADE



Upgrading Rungu Dualie with the Rohloff Speedhub

Rungu Dualie/XR can be ordered with a [Rohloff Speedhub](#) (XL 170mm) instead of the derailleur and cassette. Rohloff Speedhub is an excellent internally geared (IGH) hub. The main benefit of an internally geared hub is the absence of an external derailleur and cassette assembly on the rear wheel of a bike – eliminates chains and sprockets broken due to shifting and minimizes the impact of grass and sticks getting caught in the derailleur and sprockets like the [Rungu Gear Shield](#). The Rohloff Speed hub has a reputation for being the only IGH hub robust enough to tolerate the torque output of the 52V BBSHD motor. This IGH has the additional advantage of 14 internal gears (instead of nine with our derailleur systems) with a wider gear range than any cassette that the team at Rungu can recommend. Depending on the sprocket selection for the Rohloff custom build, a rider can achieve a maximum rear wheel torque of 447 Nm or a top speed of 32 mph and remain within Rohloff Speedhub operating specifications¹.

Gearing range based on sprocket selection							
Sprocket available for Speedhub (# teeth)	Max Output Torque at wheel (NM)	Equivalent to..		Top Speed (mph)	Equivalent to ...		Max calculated input torque (Nm)*
13	306	47	T first gear	32	9	T 9th gear	85
14	330	50	T first gear	30	10	T 9th gear	92
15	353	54	T first gear	28	10	T 9th gear	99
16	377	57	T first gear	26	11	T 9th gear	105
17	400	61	T first gear	24	12	T 9th gear	112
18	424	65	T first gear	23	12	T 9th gear	118
19	447	68	T first gear	22	13	T 9th gear	125

Lead Time

The team at Rungu does not stock Rohloff components. Delivery timing depends on component availability and wheel building resource availability. Expect lead time to be three to five weeks from order.

¹ Rohloff Speedhub maximum input torque is 130 Nm; the maximum calculated input torque generated by the Rungu Dualie motor is 125 Nm when using the 19T sprocket.

Ordering a Rungu Dualie with the Rohloff Speedhub customization

To order, select the upgrade when configuring your Rungu Dualie order or contact sales@riderungu.com with the Rungu Dualie model, the sprocket size (number of teeth from chart above) you want us to use on the Speedhub.

Warranty, Disclaimers and Operating Considerations

No warranty for Rohloff Speedhub related components

STBM tests every Rungu Dualie prior to disassembly for shipment; and this includes the Rohloff Speedhub upgrade. STBM does not ship any Rungu Dualie that fails the 45-step quality inspection (which includes a test-ride and shifting through all the gears). However, STBM does not offer a warranty for the Rohloff Speedhub because Rohloff does not offer a manufacturer's warranty.

Always pedal when changing gears.

The gearing system has many attributes in common with bicycle gearing and can be damaged from the output torque of the motor, particularly during gear changes. Each Rungu Dualie comes equipped with a gearsensor (electronic clutch), which turns off the motor for one second when it senses a gear change. In power levels 4/5 and 5/5, the starting torque exceeds what most bicycle gearing can handle (and can be within 2% of the Maximum Input Torque for the Speedhub per Rohloff specifications). If the gear change fails to complete when the motor restarts, the gear change can result in significant damage to gearing inside the Speedhub. For this reason, **ALWAYS PEDAL DURING GEAR CHANGES**, so the motor can restart with the gear fully engaged – STBM further recommends that you perform gear changes in power level 3/5 or below to minimize starting torque after gear changes.

The Rungu Dualie motor may damage the Speedhub or the rear wheel.

Rungu Dualie produces enough output torque to accelerate wear on the Speedhub and the Speedhub output torque may damage the spokes on the rear wheel. Motor output torque may wear out the internal gears and/or the sprocket faster than advised by Rohloff. The torque from the Speedhub may also exceed the fatigue strength of the wheel spokes over time causing them to break. Broken spokes in the rear wheel can lead to accidents, injury including death. Your operation of the Rungu Dualie with the Speedhub may exceed the limits specified and unspecified by the manufacturer (Rohloff). Standard Bearer Machines, LLC cannot know the limits and does not know whether the prescribed maintenance of the Speedhub will or will not suffice to prevent premature wear to the Speedhub or damage to the wheel. STBM strongly recommends you maintain the Speedhub per Rohloff's directions and check rear wheel spokes before every ride.