

– For immediate release –

Even more extra power for the trikes from HP VELOTECHNIK: SHIMANO EP8, E6100 and NEODRIVES Z20 RS



Press photos trike with motor EP8:
<https://tinyurl.com/yazdztir> (300 dpi)

Cut a good figure on the E-Trikes from HP VELOTECHNIK: The new S-Pedelec motor Z20 RS from NEODRIVES in use as well as the motors from SHIMANO's Steps series EP8 and E6100 with the corresponding display (clockwise from top left).

Pictures: HP VELOTECHNIK

Tailwind

In 2021 recumbent bike specialist HP VELOTECHNIK is significantly expanding the range of electric motors for its trikes / Also at the start: SHIMANO's world novelty EP8

KRIFTEL. The vote is clear: In the current season, almost 60 percent of customers have ordered their recumbent from HP VELOTECHNIK with electrical support. That is remarkable, because: With the models from the German manufacturer, the customer can freely choose whether he wants his *Scorpion* or *Gekko* with or without an engine. All the more reason for fans of additional power from the socket to look forward to the 2021 novelties: Five different motors are available for the trikes from HP VELOTECHNIK, including two new systems and the Z20 RS motor update from NEODRIVES for the 45 km/h fast S-pedelec *Scorpion fs 26*.

The two new motors are from the Steps series of the component specialist SHIMANO. One of them is the EP8 system, which replaces the E8000 as the top model and is currently being launched by the Japanese with a huge worldwide campaign. The second system, the E6100, closes the gap in HP VELOTECHNIK's product range to the proven entry-level model E5000. It is the perfect addition to the SHIMANO engines: For the new season, batteries are available which, at 630 Wh, provide a full 50 percent more power than the standard battery.

High performance in all areas

The new Steps flagship EP8 is a real powerhouse. The motor produces up to 85 Newton meters, working on the recumbent wheel at the front, on the bottom bracket boom. The maximum assistance ratio is 400 percent, and the developers have reduced internal pedal resistance by 36 percent. Compared to its predecessor, the EP8 system has been slimmed down by 300 grams. Even at maximum power, the engine remains incredibly quiet.

Designed by SHIMANO for the MTB sector, the EP8 fits just as well into the requirement profile of a touring or trekking trike. At its heart is a system control that can hardly be topped in terms of variability: Within the support modes Eco, Trail and Boost, parameters such as response behavior or maximum power can be set precisely to the Newton meter. This works wirelessly via smartphone or tablet. An additional advantage is that two different profiles for two drivers can be saved in the digital memory – or the individual driver can easily switch from commute to world tour at the touch of a button.

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Fully automatic and plenty of pulling power

The second new SHIMANO system, the *Steps E6100*, positions itself between the top model and the most affordable motor at HP VELOTECHNIK, the *E5000*. In contrast, the *E6100* offers 50 percent more power at 60 Newton meters. This is particularly interesting for those who are often on the road with a heavy load or who frequently ride in undulating terrain. Those who opt for the *E6100* can enjoy an additional gain in comfort: The engine in the *Scorpions* and *Gekkos* from HP VELOTECHNIK is exclusively installed in combination with the SHIMANO *Nexus Di2* hub gears. This 8-speed hub with its fully automatic transmission takes all shifting operations off the rider's hands. When stopping at traffic lights, for example, the all-round carefree package automatically shifts into a low gear. The *Di2* also always changes to the most efficient gear. For all those who prefer to be the boss at the gearshift lever themselves: The *Di2* can of course also be shifted manually at any time.



For connoisseurs: Fully automatic 8-speed hub Di2 from SHIMANO.

Climate Neutral at Work with High Speed

Uncompromising up to 45 km/h: With the new Z20 RS motor from hub motor specialist NEODRIVES, the potential of the *S-pedeles Scorpion fs 26* is exploited in a way never seen before. 20 kilometers to work in half an hour – and still relaxed in a suit right at your desk? For riders of the speed trike from the factory of recumbent bike specialist HP VELOTECHNIK is not an issue. The drive system from the German engine manufacturer, which will be available from November, underlines the outstanding riding characteristics of the full-suspension racer. The predecessor models of the *S-pedeles Scorpion fs 26* have already been awarded one of the most coveted prizes in the bicycle industry, the Eurobike Award, twice in 2012 and 2018.

Daniel Pulvermüller (Chief Engineer HP VELOTECHNIK) was already fascinated by the power of the new rear wheel hub motor after the first test ride: "The Neodrives system provides full thrust assistance up to the maximum permitted assistance speed. This fits perfectly with the overall characteristics of the *Scorpion fs 26 S-Pedelec*". Because in the fast trike the pilot will find safety technology that is unique in bicycle



Full speed ahead with the *Scorpion fs 26 S-pedelec* from HP VELOTECHNIK: The Z20 RS motor from Neodrives provides for high speed. Below: the 65 l Wh battery.

Pictures: HP VELOTECHNIK

construction: For the first 45 km/h fast e-bike of the multi-lane class L2e-P, which is approved in Europe, HP VELOTECHNIK has developed the turn indicator *WingBling*, which meets the German Road Traffic Licensing Regulations (StVZO). The oil level indicator for coupled brakes is also a must in Europe. The German TÜV has made this a condition for the approval of the wheel, which is legally equivalent to a motor vehicle.

According to NEODRIVES, the range is up to 60 kilometers, depending on driving style, topography, ground and weather conditions. So the good news for all those commuters who buy green electricity from their supplier is that for just 30 cents they can fully charge the "tank", a lithium-ion battery with 651 watt hours of energy content, in a climate-neutral way. The double battery option, which HP VELOTECHNIK has been offering for its trikes since 2013, doubles the range. The rider also benefits from the structural peculiarity of a hub motor that has an energy recovery function (recuperation), for example when riding downhill.

Note for editors: On page 3 of the press release you will find a detailed overview with all technical data of the five engines that can be optionally installed in HP VELOTECHNIK trikes.

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A large range of press photos (300 dpi) is available for download from: <https://tinyurl.com/yazdztlr>



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Technical data of all motors at a glance

System	SHIMANO STEPS E5000	SHIMANO STEPS E6100	SHIMANO STEPS EP8	NEODRIVES Z20	NEODRIVES Z20 RS
Available for	US: Class 1 electric bicycle Gekko fx 20, Gekko fx 26 and all Scorpion-Models excl. S-Pedelec	US: Class 1 electric bicycle Gekko fx 20, Gekko fx 26 and all Scorpion-Models excl. S-Pedelec	US: Class 1 electric bicycle Gekko fx 20, Gekko fx 26 and all Scorpion-Models excl. S-Pedelec	US: Class 1 electric bicycle Gekko fx 20, Gekko fx 26 and all Scorpion-Models excl. S-Pedelec	US: Class 3 electric bicycle Scorpion fs 26 S-Pedelec and outside of EU Scorpion fs 26 and Scorpion fs 26 Enduro
Support	max. 32 km/h (20 mph) EU: up to 25 km/h (16 mph)	max. 32 km/h (20 mph) EU: up to 25 km/h (16 mph)	max. 32 km/h (20 mph) EU: up to 25 km/h (16 mph)	max. 32 km/h (20 mph) EU: up to 25 km/h (16 mph)	up to 45 km/h (28 mph)
Push assist	up to 6 km/h (4 mph)	up to 6 km/h (4 mph)	up to 6 km/h (4 mph)	up to 4 km/h (2.5 mph) up to 3 km/h (1.8 mph)*	up to 4 km/h (2.5 mph)
Reverse gear	-	-	-	-	-
Range**	up to 189 km (117 miles) (up to 463 km / 288 miles with additional battery, folding limited)	up to 177 km (110 miles) (up to 433 km / 269 miles with additional battery, folding limited)	up to 191 km (118 miles) (up to 478 km / 297 miles with additional battery, folding limited)	bis 145 km (90 miles) (up to 290 km / 180 miles with additional battery, folding limited)	up to 60 km (37.5 miles) (up to 120 km / 75 miles with additional battery, folding limited)
Force amplification	3 levels: Eco / Normal / High	3 levels: Eco / Normal / High	3 levels: Eco / Trail / Boost	5 levels	5 levels
Noise level	silent bottom bracket motor	silent bottom bracket motor	very silent bottom bracket motor	extremely silent hub motor	extremely silent hub motor
Max. torque	40 Nm (at the front motor)	60 Nm (at the front motor)	85 Nm (at the front motor)	40 Nm (at the rear wheel)	40 Nm (at the rear wheel)
Rated power	250 W	250 W	250 W	250 W	400 W
Maximum power	-	-	-	450 W	1000 W
Rechargeable battery	SHIMANO 36V Li-Ion removable, with lock	SHIMANO 36V Li-Ion removable, with lock	SHIMANO 36V Li-Ion removable, with lock	BMZ 36V Li-Ion removable, with lock	BMZ 48V Li-Ion removable, with lock
Capacity	14 Ah	14 Ah	14 Ah	17 Ah	13,8 Ah
Energy content	418 Wh	418 Wh	418 Wh	612 Wh	651 Wh
Battery weight	2,7 kg (5.6 lbs)	2,7 kg (5.6 lbs)	2,7 kg (5.6 lbs)	3,5 kg (7.7 lbs)	4,2 kg (9.2 lbs)
Battery life	800 – 1000 charging cycles	800 – 1000 charging cycles	800 – 1000 charging cycles	800 – 1000 charging cycles	800 – 1000 charging cycles
Charger	SHIMANO (2 A)	SHIMANO (2 A)	SHIMANO (2 A)	BMZ fast charger 4 A	BMZ fast charger 4 A
Charging time	6,5 hours (3,5 hours 80%)	6,5 hours (3,5 hours 80%)	6,5 hours (3,5 hours 80%)	4 hours	4,5 hours
Charger weight	1 kg (2.2 lbs)	1 kg (2.2 lbs)	1 kg (2.2 lbs)	0,85 kg (1.9 lbs)	1,08 kg (2.4 lbs)
Additional weight	ca. 8,3 kg (18.3 lbs)	ca. 8,6 kg (18.9 lbs)	ca. 8,2 kg (18.1 lbs)	ca. 8,7 kg (19.2 lbs)	-
Display	black/white display above handlebar (Top View)	black/white display above handlebar (Top View)	black/white display above handlebar (Top View)	Colour display above handlebar (Top View) or side of handlebars	Colour display above handlebar (Top View) or side of handlebars
Drivetrain	SMX X4 8 speed derailleur gearing twist shifter 20": 44 / 11–34 teeth 26": 38 / 11–34 teeth	SHIMANO Nexus Di2 8 speed rear wheel internal gear hub 20": 44 / 18 teeth 26": 44 / 23 teeth	SHIMANO XT Di2 11 speed derailleur gearing with button (electric) 20": 50 / 11–46 teeth 26": 44 / 11–46 teeth	SMX 30 speed derailleur gearing bar end shifters 20": 60-52-40 / 11–36 teeth 26": 52-42-30 / 11–36 teeth	SMX 30 speed derailleur gearing bar end shifters 52-42-30 / 11–36 teeth
Drivetrain (alternatively)	SHIMANO Nexus Di2 8 speed rear wheel internal gear hub	-	ROHLOFF 14 speed rear wheel internal gear hub	PINION C1.12 12 speed internal gear transmission	PINION C1.12 12 speed internal gear transmission
Extras	optionally with big battery pack (630 Wh) and fast charger (4 A; 2,5 hours: 50%); on option additional battery (630 Wh) Bluetooth interface	optionally with big battery pack (630 Wh) and fast charger (4 A; 2,5 hours: 50%); on option additional battery (630 Wh) Bluetooth interface	optionally with big battery pack (630 Wh) and fast charger (4 A; 2,5 hours: 50%); on option additional battery (630 Wh) Bluetooth interface	Touchscreen USB interface Bluetooth interface	Touchscreen USB interface Bluetooth interface

* Reverse gear NEODRIVES for Scorpion, Scorpion fs 26, Scorpion fs 26 Enduro, Scorpion plus 26 and Gekko fx 26 presumably available from Spring 2021.

** Range as stated by manufacturer: NEODRIVES Z20: 100 W rider input, support level 1, flat terrain, smooth roads, 70 kg (154 lbs) payload incl. rider; NEODRIVES Z20 RS: support level 3 in optimal conditions (flat terrain, temperature 20°, even ride, pedalling power driver 80 W, speed 39 km/h (24.2 mph); with support level 5 up to about 40 km (24.9 miles).

SHIMANO STEPS 5000, E6100 and EP8: support mode Eco, flat terrain, 23 km/h, system weight 105 kg (231 lbs), outside temperature 23°, without electric gearing and light (standard battery with 418 Wh).

Background information HP VELOTECHNIK

HP VELOTECHNIK, founded in 1993 by Paul Hollants and Daniel Pulvermüller, manufactures approx. 2,000 recumbents per year in the factory in Kriftel near Frankfurt with 45 employees (including six trainees) and is thus market leader in Europe. The bikes are built individually by hand according to the customers wish and sold in specialist bicycle shops. The signs are pointing to growth: recumbents are sold in Germany and Europe; an increasing share is exported to more distant regions such as the USA, Australia or Japan. This successful business strategy was honoured in 2017 with the "Hessian Export Prize", which is jointly awarded by the State of Hesse and the Hessian Chambers of Crafts and Industry and Commerce.

HP VELOTECHNIK has developed 15 recumbent models that cover the entire range from everyday bikes to racing bikes. All models are available with powerful electric motors on request. Recently, the models from the Scorpion series caused a sensation, winning the renowned "Eurobike Award" design prize three times in a row. Most recently, in 2013 the trike Scorpion fs Enduro and in 2014 the Scorpion plus 20 as a therapy trike.

Even as schoolchildren, the company founders Hollants and Pulvermüller became national winners of the JUTEC Youth and Technology competition of the Association of German Engineers – the foundation of the development from a garage laboratory to one of Germany's most innovative bicycle companies. Since 2006 HP VELOTECHNIK has been awarded as one of the three best bicycle manufacturers in Germany by the industry association VSF several times. Information at www.hpvelotechnik.com