HP VELOTECHNIK

Press release,
July 11th, 2022

– Free for immediate release –

***Eurobike* trade fair in Frankfurt am Main (13. - 17. Juli 2022)**

World novelty *Speedmachine S-Pedelec* by HP VELOTECHNIK

With speed on the way to the trade fair Eurobike *in Frankfurt:The* Speedmachine S-Pedelec *from the HP VELOTECHNIK.* *Photos: HP VELOTECHNIK*

From 0 to 45 in 8.29 seconds

With the *Speedmachine S-Pedelec*, HP VELOTECHNIK presents the world's first recumbent bike in the fast class of S-pedelecs / The bike manufacturer becomes motor vehicle manufacturer

FRANKFURT AM MAIN. Speed is already in the name of HP VELOTECHNIK's fastest bike, the *Speedmachine*. Now the recumbent manufacturer is going one better with the motor: the classic low recumbent is now also available with an electric motor that provides pedaling assistance up to 45 km/h. This makes the *Speedmachine S-Pedelec* a streamlined alternative for anyone looking for a fast bike, for example, one that will work briskly to cover long distances. The *Speedmachine S-Pedelec* will celebrate its world premiere at *Eurobike* (July 13 to 17). It can be seen at the HP VELOTECHNIK booth in Hall 8 (D22).

Equipped is the full-suspension bike with the virtually silent rear hub motor *Z20 RS* from NEODRIVES. It develops a peak power of 1000 watts with an efficiency of 85 percent. Safety plus for the pilot: Thanks to the low center of gravity with the battery mounted under the seat, the vehicle remains perfectly stable even at high speed. Even when fully loaded with up to four panniers, the bike remains safely on course. In addition, the elegant racer comes standard with hydraulic disc brakes, high-intensity lighting from BUSCH & MÜLLER (*IQ-XE*, 150 lux), a large rearview mirror and a luggage rack for two bags. Suspended front and rear wheels are essential for the *Speedmachine*, clarifies Daniel Pulvermüller, Head of Development at HP VELOTECHNIK: "When you can reach such high speeds so easily, a vehicle must stay securely on the road. This is ensured by the *Concept 5* steering head suspension fork at the front, while the rear suspension uses *No-Squat* technology. This effectively prevents deflection caused by drive forces." In internal tests, the previous acceleration record from 0 to 45 km/h (28 mph) is 8.29 seconds. The data was recorded with a calibrated measuring device.

Parallel to building the fast two-wheeler, HP VELOTECHNIK has pushed ahead with another development: The Germans are now a motor vehicle manufacturer registered with the German Federal Motor Transport Authority. This has the advantage that the bikes no longer have to go through the acceptance and approval process at the TÜV individually, but can be produced in volume. The operating permit required for this is valid for the entire EU as well as Switzerland.

The *Speedmachine S-Pedelec* will be available from specialist dealers in the fall at prices starting at 8,690 euros. In addition to the standard powder coating in Silver gray or Crimson, special colors such as Colza yellow (pictured) as well as numerous other extra requests can also be realized.

Further information (only for editorial offices) from Alexander Kraft (Press Officer HP VELOTECHNIK), 06192-97992283 or 0160-99858794; alexander.kraft@hpvelotechnik.com

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(Long version) FRANKFURT AM MAIN. Speed is already in the name of HP VELOTECHNIK's fastest bike, the *Speedmachine*. Now the recumbent manufacturer is going one better with the motor: the classic low recumbent is now also available with an electric motor that provides pedaling assistance up to 45 km/h (28 mph). This makes the *Speedmachine S-Pedelec* a streamlined alternative for anyone looking for a fast bike, for example, one that will work briskly to cover long distances. The *Speedmachine S-Pedelec* will celebrate its world premiere at the trade fair *Eurobike* (July 13 to 17). It can be seen at the HP VELOTECHNIK booth in Hall 8 (D22).

The specifications alone are top-notch "ready-to-ride". The rear wheel is powered by the proven and virtually silent *Z20 RS* hub motor from NEODRIVES. The battery comes from BMZ's V8 series and has an energy content of 651 watt hours. Safety plus for the pilot: Thanks to the low center of gravity with the battery mounted under the seat, the vehicle remains perfectly stable even at high speed. Even when loaded to the brim with up to four panniers, the bike pulls safely along its course.

As an S-pedelec, the *Speedmachine* is always built with full suspension. Daniel Pulvermüller, head of development from HP VELOTECHNIK, explains: "When you can reach such high speeds so easily, a vehicle must stay securely on the road. This is ensured by the *Concept 5* steering head suspension fork at the front, while the rear suspension uses *No-Squat* technology. This effectively prevents deflection caused by drive forces." For this purpose, the DNM *DV-22* steel suspension or, as an optional extra, the *Monarch RL* oil-air suspension element from ROCKSHOX is used. In addition, the elegant racer comes standard with hydraulic disc brakes, high-intensity lighting from BUSCH & MÜLLER (*IQ-XE*, 150 lux), a large rearview mirror and a luggage rack for two bags.

Data *Speedmachine S-Pedelec*

Frame material:	Aluminium 7005 T6
Wheel size (f/r):	20" / 26"
Suspension (f/r):	50 / 80 mm (1.97 / 3.15")
Length:	180 – 210 cm (71 – 82.7")
Height (handlebar):	106 cm (41.7")
Width (incl. mirror):	90 cm (35.4")
Bottom bracket height:	69 – 72 cm (27" – 28.3")
Seat height *BodyLink*:	48 cm (18.9")
Seat height *ErgoMesh* and *ErgoMesh Premium*	51 cm (20.1")
Weight:	from 28,5 kg (63 lbs)
Payload:	max. 120 kg (265 lbs)
Motor:	NEODRIVES *Z20 RS*
Support:	up to 45 km/h (28 mph)
Maximum power:	1000 W
Maximum torque:	40 Nm (at the rear wheel)
Force amplification (5 levels):	0/80/160/240/320/400%
Energy content:	651 Wh
Range:	60 km (37.5 mi)
Extras:	Color display with touchscreen
Price:	from 8.690,– Euro
Available:	from fall 2022

In the recumbent, theory becomes propulsion

One of the biggest advantages of recumbents over conventional upright bikes is their superior aerodynamics. The simple formula here, familiar from sports cars: the lower, the faster. In physical terms, the aim is to offer little resistance to the air. To achieve this, the surface area must be as small and the shape as streamlined as possible. With recumbents, there is a second aspect to the issue of speed: the different height of the bottom bracket and seat position. The designers' trick: a seat that is significantly lower than the bottom bracket ensures particularly effective power utilization. For recumbent cyclists, a raised bottom bracket is, so to speak, cycling out of the saddle. The rider builds up tension in the entire upper body – with the seat as an abutment – and can then convert this whole-body power into pedaling power. On the *Speedmachine*, the bottom bracket is at a height of 69 to 72 cm (27" to 28.3"). The second number indicates the height when the boom is extended far for very tall riders. The seat height of the *Speedmachine* varies between 48 and 51 cm (18.9" to 20.1"). The particularly sporty *BodyLink* shell seat is positioned lower. The airier and, in the case of the *ErgoMesh Premium,* also very comfortable *ErgoMesh* mesh seats have a height of 51 cm.

With aerodynamics in mind, the developers at HP VELOTECHNIK chose the *Aero handlebar* from the recumbent manufacturer's three handlebar types for the *Speedmachine S-Pedelec*. It combines several aspects: A posture that offers as little wind resistance as possible, sufficient grip width to be able to steer safely even at high speeds, and finally, the ergonomic design allows a comfortable arm position that is particularly suitable for longer distances.

The theory is reflected in the measured values: In internal tests with the *Speedmachine S-Pedelec*, the

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previous acceleration record from 0 to 45 km/h (28 mph) is 8.29 seconds. The data was recorded with a calibrated measuring device. Exciting details in this context: The test rider already managed the acceleration from 0 to 20 km/h (12.4 mph) in 2.46 seconds. And at the start, like a normal cyclist, he still had one foot on the ground.

Type approval for EU and Switzerland

Parallel to building the fast two-wheeler, HP VELOTECHNIK has pushed ahead with another development: The Germans are now a motor vehicle manufacturer registered with the German Federal Motor Transport Authority. This has the advantage that the bikes no longer have to go through the acceptance and approval process at the TÜV individually, but can be produced in volume. The *Speedmachine S-Pedelec* is a class L1e-B moped. The operating permit required for this is valid for the entire EU as well as Switzerland. The same applies to the company's second S-pedelec, the multitrack *Scorpion fs 26 S-Pedelec*. First presented ten years ago, it has since won numerous awards and become the innovation driver for unique developments such as the only StVZO-approved bicycle turn signal *WingBling*. For type approval, aspects such as braking distance had to be precisely measured under defined conditions. Result: from 40 km/h (24.9 mph) to 0 km/h it is 8.27 m (9') and from 30 km/h (18.6 mph) exactly 4.80 m (5.25') distance to come to a stop.

Both S-pedelec models from HP VELOTECHNIK use the *Z20 RS* rear hub motor from NEODRIVES. It develops a peak power of 1000 watts with an efficiency of 85 percent. Thanks to intelligent programming, the assistance starts up smoothly and is released just as gently when the maximum permissible speed is reached. The result is a riding and pedaling experience similar to that of an unmotorized bicycle. Another advantage of this motor

design is the ability to recover energy at the push of a button. When going downhill, the system restores the charging voltage – and at the same time, this deceleration by the motor protects the brake pads.

The color display is centrally located on the steering directly in the driver's field of vision. It has a touchscreen for scrolling through the menus. Much more practical for operation while riding: the remote control with five pushbuttons on the left side of the handlebar.

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Press release for download:
https://tinyurl.com/y5sv6dbh
A large range of press photos (300 dpi) is available for download from: https://tinyurl.com/y5cf7ew7

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 50 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*