



Husqvarna®

Vitpilen and Svartpilen range 2024

Media information

Husqvarna Mobility is proud to introduce an all-new generation of the Vitpilen and Svartpilen models for 2024, which received the biggest technical and styling changes since their introduction in 2018. The Vitpilen 401, Vitpilen 125, Svartpilen 401 and Svartpilen 125 have each received a complete overhaul, combining state-of-the-art technology with classic motorcycle design to create a diverse range of options for the modern rider.

A brand-new steel trellis frame on each machine is paired with a new curved, lightweight aluminium swingarm. Together they offer a lengthened wheelbase and improved ergonomics that elevate the engaging, agile ride of each Vitpilen and Svartpilen model. As standard on every machine, WP suspension affords nimble handling and precise feedback while ByBre brakes and Bosch ABS combine to deliver excellent stopping power.

Newly designed and compact engines are used to power each new model. The Vitpilen 401 and Svartpilen 401 share a 399 cc, single-cylinder EURO-5+ compliant engine, making them the perfect machines in and out of urban zones. For all 125 cc and 250 cc models across both ranges, EURO-5+ compliant engines with a controllable power delivery ensure A1 licence holders can develop their riding skills with confidence.

The precise engineering used to build the 2024 Vitpilen 401, Vitpilen 125, Svartpilen 401 and Svartpilen 125 continues Husqvarna Mobility's tradition of continually developing premium quality machines. As the presence of these exciting models continue to grow within the street motorcycle market, styling updates including new LED headlights, premium paint finishes with decals, and 17" wheels help define the urban appeal of the new generation Vitpilen and Svartpilen street motorcycles.

Technical highlights

- New frame and swingarm that accommodate the new engine with off-centre rear suspension
- New 5" bonded glass TFT display
- Open cartridge front fork
- A premium paint finish with overcoated decals
- Low seat height of 820 mm
- Cornering ABS
- Easy Shift and connectivity features as standard
- LED headlight with positioning light ring
- Spoked 17" wheels with premium Pirelli Scorpion Rally STR tyres (Svartpilen 125 and Svartpilen 401)
- Cast aluminium 17" wheels with 6-spoke aero design and premium Michelin Power 6 tyres (Vitpilen 125 and Vitpilen 401)



Chassis

Geometry

The new generation Svartpilen and Vitpilen models have a slightly longer wheelbase.

As a consequence of the new seat height and frame, the ergo-triangle has been slightly adapted on the Svartpilen models. The Vitpilen range experiences an even more significant change to the ergo-triangle thanks to a new street bike handlebar.

These changes improve the models neutral cornering behaviour and maintain its agile character, ensuring that riders can experience the same level of fun and excitement as with the previous Svartpilen and Vitpilen models. For the Vitpilen, riding comfort has been significantly improved by relieving weight of the handlebar.

The high-speed steering character of the motorcycles has been significantly improved, enhancing stability and control at higher speeds. The improved ergonomics also makes the motorcycle easier to move from side to side on curvy roads and all these changes make the new Svartpilen and Vitpilen agile motorcycles without becoming nervous. While the ergo-triangle is similar, the rider position is more active than before and allows the rider to feel more connected to the motorcycle.

The new generation's goal is to maintain the beloved features of the previous generation Svartpilen but also to enhance the riding experience even further, pushing it to a new level of excellence. Through careful design and engineering, Husqvarna Motorcycles has created a bike that retains a close connection to its predecessor's best features while improving upon its performance and handling characteristics.

Steel trellis frame

The steel trellis frame is central to the Svartpilen's and Vitpilen's character and agility. Made from high strength steel using hydro formed tubes and robot welding, the frame is strong and lightweight ensuring nimble handling and detailed feedback to the rider. The new design features a rear shock absorber that is mounted off-centre to allow for a large airbox while reducing seat height and, at the same time, adding to the progressive look of the motorcycle.

The primary objective for the frame's design was to enhance vehicle dynamics by augmenting torsional rigidity. The resulting increase in torsional rigidity allows for improved agility and enhanced feedback from the chassis. Despite achieving this objective, rider comfort was not compromised as longitudinal rigidity was maintained at a similar level.

Designed with specific flex characteristics, the frame works in harmony with the WP suspension to offer a comfortable and confident feel combined with a tight turning circle for ease of use in urban environments.

The subframe sports a sleek and lightweight design, thanks to its trellis structure that achieves minimal weight. Furthermore, the subframe was specifically crafted to offer a low seat height, resulting in a motorcycle that is stylish and functional.

- Off-centre shock mount – reduced seat height at maximised airbox volume
- Bolt-on subframe – advanced pillion comfort

Swingarm

The all-new curved, lightweight swingarm contours around the relocated rear shock absorber and the new end muffler complements the progressive new look.

The new curved cast aluminium swingarm provides a stable and durable platform for the rear suspension system and also features a direct shock absorber mounting that is offset to the side, making it more visible from the side of the motorcycle. With carefully calculated rigidity and dimensions, the design in combination with the WP monoshock offers predictable handling.

The swingarm's curvature adds to the sleek and modern appearance and creates additional space for the new muffler. This design feature enhances the motorcycle's sophisticated and refined look.

- Curved aluminium swingarm – optimised packaging of the under-engine exhaust



WP front suspension

The front suspension on all models is a WP APEX 43 mm diameter fork with 150 mm travel.

Svartpilen 125 and Vitpilen 125:

43 mm open cartridge fork (non-adjustable)

Svartpilen 401 and Vitpilen 401:

43 mm open cartridge fork – adjustable compression and rebound damping in 5 click steps for easy adjustment

The WP APEX 43 mm open cartridge forks are made to exacting standards ensuring the highest level of quality and craftsmanship. The open cartridge design contributes to the low overall weight of the Svartpilen by using fewer components than most closed cartridge systems while also allowing for easy maintenance. The front suspension offers dynamic handling while keeping the rider comfortable and confident when navigating busy city streets.

Only Svartpilen 401 and Vitpilen 401: Using a split damping function, compression and rebound can be adjusted effortlessly using the easy access clickers located on the top of the fork tube. This allows the rider to personalise the ride characteristics for preference and varying conditions.

WP monoshock

All models feature an off-centre, 150 mm travel and 60 mm of stroke rear shock absorber.

The differences between the different displacement models are the following:

Svartpilen 125 and Vitpilen 125:

WP APEX separate piston shock absorber (damping non-adjustable) – preload is adjustable with a tool.

Svartpilen 401 and Vitpilen 401:

WP APEX separate piston shock absorber – rebound is adjustable with 5 steps (1 step = 5 clicks). The preload is adjustable with a tool.

Fitted directly to the swingarm, the WP APEX monoshock features a progressive spring design meaning the rear shock is softer at the start of the stroke soaking up small bumps effortlessly and ensuring maximum comfort. As the stroke progresses, the shock becomes progressively stiffer absorbing larger bumps and hits. Preload can be adjusted when carrying a pillion or additional luggage.

Only Svartpilen 401 and Vitpilen 401: An adjustable rebound setting is provided with 5 steps (1 step = 5 clicks) adjustment.

Triple clamp and handlebar

The new triple clamps feature a revised offset that assists in the improved handling of the motorcycle, providing riders with greater control and stability.

The triple clamps on the Svartpilen and Vitpilen range are made from forged aluminium. The triple clamp uses specifically calculated flex characteristics to deliver advanced suspension functionality resulting in agile and comfortable handling while providing a premium feeling.

Fitted with an offroad style handlebar and risers, the Svartpilen hints a sense of scrambler with an upright and remarkably comfortable riding position. The Vitpilen models come fitted with straight and flat roadster style handlebar and risers, to offer a feel for hunting corners with an engaging yet remarkably comfortable riding position.



Brakes

The Svartpilen and Vitpilen are fitted with an all-new hydraulically operated and radially mounted four-piston caliper at the front and a new twin-piston floating caliper at the rear. In combination with the 320 mm front and 240 mm rear perforated steel discs, this delivers controllable and confident braking performance.

The calipers are manufactured to the highest standards by ByBre and provide improvements in corrosion resistance thanks to its wider use of anodised components. The new design includes a larger rear brake disc that reduces the operating temperature with improvements in the resistance to fading and longer pad lifespan.

All models have a new brake lever and master cylinder system with the main goal of improving tolerances and ergonomics. Furthermore, the front brake disc has been moved to the right hand side, the objective is to improve the looks of the motorcycle when parked on the side stand. The Svartpilen and Vitpilen models feature adjustable brake and clutch levers.

Additionally, a state-of-the-art Bosch ABS system ensures the highest level of safety under braking in varying conditions. The system can be set to Supermoto mode, which disengages the ABS functionality on the rear wheel. More advanced rider's then have control to lock up the rear wheel if needed. With this latest iteration, the Supermoto ABS mode stays on after ignition on/off.

- Hydraulically operated disc brakes → advanced braking performance
- Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401: 9.3 MP two-channel Bosch cornering ABS → highest levels of safety and brake performance
- ABS can be set to Supermoto mode

Wheels and tyres

Svartpilen:

A design highlight of the Svartpilen 125 and Svartpilen 401 are the 17" spoked wheels. The wheels offer a rugged character to the Svartpilen and are also very robust offering premium reliability on challenging urban terrain.

Fitted to the wheels are Pirelli Scorpion STR tyres which not only have a unique visual appeal but offer exceptional grip on a wide variety of terrain.

- 17" spoked wheels → stylish and robust
- Pirelli Scorpion Rally STR → exceptional grip on a wide variety of terrain

Vitpilen:

A design highlight of the Vitpilen 125 and Vitpilen 401 are the 17" cast aluminium 6-spoke aero wheels. The wheels offer a progressive and unique character to the Vitpilen and are also very robust offering premium reliability on challenging urban terrain.

Fitted to the wheels are new Michelin Power 6 tyres which not only have a unique visual appeal but offer exceptional grip on a wide variety of terrain.

- 17" cast aluminium 5-spoke aero wheels → stylish and robust
- Michelin Power 6 → exceptional grip for dynamic riding

Design

Central to the Svartpilen is the progressive, yet reduced design. The updated design for the new generation model strips away all unnecessary gimmicks to create a simple, progressive mix of modern thinking and classic design philosophies from previous eras.

This way of thinking is synonymous with the Swedish heritage of the Husqvarna brand and is clearly seen as a design which comprises only what is needed.

The design additionally incorporates premium features and finishes with subtle highlights such as new LED front and rear lights. The new headlight features an LED daytime running light while the rear light is integrated into the rear bodywork. The number plate holder gives the rear end a slim and uninterrupted look.

Only on Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401: LED reflector headlight with high and low beam. Additionally, the LED positioning light ring provides a unique light signature.

- Progressive and simple design
- Premium finish and components



Bodywork

The lightweight and narrow bodywork integrates the fuel tank cover into the side panels making rider movement seamless while riding. The quality painted finish with subtle accents highlights the progressive and unique Svartpilen and Vitpilen design.

On the Svartpilen range, the standard skid plate mounted below the engine casing conveys the motorcycle's urban design character while also protecting the engine on challenging city roads.

- Striking graphics highlight the unique Svartpilen and Vitpilen heritage

Seat

The Svartpilen models feature a separate rider and pillion seat, while the Vitpilen models feature a one-piece rider and pillion seat. The rider seats are narrower and designed with a more pronounced curvature for reduced seat height. This provides a more accessible riding position for shorter riders due to an improved ground reach.

The Svartpilen and Vitpilen seats can be interchanged.

Footrests

The footrests feature a completely new design.

The Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401 feature lightweight forged aluminium footrest brackets, this style of footrests has a premium look and feel.

Mirrors

The new generation of Svartpilen and Vitpilen models have been equipped with new mirrors with an improved design that is based on a ball joint adjustment and provide a more premium look.

Fuel tank

Seamlessly integrated into the design, the 13l fuel tank is a focal point of the Svartpilen and Vitpilen design. The fuel tank cover is combined with the side panels in a one-piece construction allowing the rider to move smoothly between riding positions.

Additionally, the Svartpilen features a standard luggage rack fitted to the fuel tank. The rack allows for the magnetic mounting of light luggage for added convenience.



Technology features

LED Lights

All models come with a new LED headlight and taillight that provide improved illumination for increased visibility in low-light conditions. An LED position light ring is standard on the Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401.

The LED indicators feature a new automatic reset (ATIR) function. The indicator signal turns off automatically after 10 seconds or after riding for 150 meters.

On the Svartpilen models, a tinted fly screen provides the added benefit of protection and wind deflection to the rider.

Dashboard

All Svartpilen/Vitpilen models come with a completely new 5" dashboard. The new dashboard is a bonded glass TFT for Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401.

New features:

- Street and Rain ride modes on Svartpilen 401 and Vitpilen 401
- The Svartpilen 401 and Vitpilen 401 have 3 MTC levels (Street, Rain, Off)
- A new speed limiter function on Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401 → option to restrict maximum speed to use it as a cruise control functionality

Switch cubes

The Svartpilen and Vitpilen models feature completely redesigned switch cubes with optimised ergonomics and illuminated switches.

The left-side 4-way menu switch allows easy interaction with all vehicle functions and even the phone when connected. It is smaller and more compact than before allowing for improved reach with the hand on the handlebar grip.

The new switch cubes have an integrated hazard warning lights switch and come standard on all Svartpilen and Vitpilen models.

Connectivity

All new generation models are equipped with standard connectivity functions through the integrated Connectivity Unit.

Available functions:

- Music player
- Answer incoming calls
- Turn-by-Turn+ navigation with the Ride Husqvarna app.
- Remote Control Mode (Phone can be controlled with the switch cubes)

USB charging port

USB C port is standard and allows for easy charging of handheld devices.

Immobiliser

The Svartpilen/Vitpilen 125 and Svartpilen/Vitpilen 401 have a standard immobiliser to provide anti-theft protection.

Electronic rider aids

The Easy Shift function is standard on all models and provides clutch-less up- and downshifts.

The Svartpilen/Vitpilen 401 now feature (cornering) MTC that uses the lean angle input from the integrated 3D sensor to adapt in cornering situations.

Additionally, the Svartpilen/Vitpilen 401 feature selectable ride modes: The available modes are "Street" and "Rain". The street mode is the standard mode, while the rain mode has a less aggressive throttle response. Each riding mode is linked to a specific MTC level (Street or Rain). More advanced riders have the option of turning the MTC off completely.



Engine

Engine

The new Svartpilen and Vitpilen models are powered by an entirely new generation engine. The new LC4c (compact) engine family is made up of a smaller 125-250 cc base engine and a larger 399 cc engine powering the Svartpilen 401 and Vitpilen 401.

The powerplants are based on a completely new design and build on the experience gained with the previous generation of small single-cylinder engines.

Additionally, the cylinders are now processed with a plasma coating instead of a Nicasil coating as on the previous generation. This new coating process requires less chemicals and thus provides a cleaner, more sustainable production process.

The engine delivers an impressive torque from low down in the RPM range, perfect for urban riding. Additionally, by implementing a counter balancer shaft, vibration is kept to a minimum delivering a smooth and comfortable ride.

The peak horsepower is accessible to the respective A1 or A2 licence holders while, with a lightweight construction delivering a power-to-weight ratio that will also excite more experienced riders.

- Svartpilen and Vitpilen 401: 39 Nm of torque, peak horsepower of 45 hp (33 kW)
- Svartpilen and Vitpilen 125: 11,5 Nm of torque, peak horsepower of 15 hp (11 kW)

Cylinder head

The cylinder head on all three engines has been completely redesigned.

- A larger valve cover with a smaller cylinder head → reducing the weight at the top of the engine
- A flat sealing surface area for the valve cover split line → simpler gasket that is easier to replace for maintenance
- A new thermostat position results in more stable thermal sensing. Benefitting the engine temperature balance and low temperature efficiency.
- The heat up time of the engine is shorter and at the same time the cooling system reacts faster and prevents the engine from running too hot.
- The new camshafts have more lift to allow a better flow of the fuel-air mixture and exhaust gasses. (single camshaft on the Svartpilen 125; double camshaft on the Svartpilen 401)

The cylinder head is made up of four lightweight valves actuated by the overhead camshafts using cam levers. The cam levers incorporate a DLC (diamond like carbon) coating meaning they transmit minimal friction improving performance while making the design very reliable.

Piston

Made from lightweight aluminium, the piston produces very little inertia and as a result transmits very little vibration ensuring a smooth ride. The piston travels inside a Plasma coated cylinder resulting in low friction and highest level of durability and reliability.

Fuel injection

All new generation engines have a new injection setup. The new setup provides:

- New injectors with finer atomisation and improved spray angle for a more efficient combustion resulting in fewer emissions
- The injection is angled directly onto the inlet valves to reduce build-up in the inlet channel

By using electronic fuel injection and a Dell’Orto throttle body operated by a ride-by-wire system, the engine delivers a sharp but refined and controllable power delivery with low fuel consumption while adhering to strict EURO 5+ emissions regulations.

Airbox

The new generation models use a completely redesigned airbox with the following changes:

- New air intake channel that draws air from the front of the motorcycle
- The airbox is optimised for the new chassis packaging, which provides increased space for a lower seat height

Gearbox

Designed for urban use, the 6-speed close ratio gearbox provides smooth and easy shifting for the rider by using low friction components. With the ample torque provided by the engine, the correct combination of power and control can be found for all urban riding scenarios.

For added convenience, the gearbox is linked to an Easy Shift sensor which allows the rider to make seamless up and down shifts without the use of the clutch. The sensor works by relaying the moment the rider actuates the gear lever to the ECU which in turn matches engine parameters to allow a simple gear change at any RPM or engine load.

While the gearbox keeps the same ratios as in the previous generation, several updates have been included to provide an even more effortless shifting experience:

- 6 mm guides for the fork pins → improved gear guidance
- Optimised shift drum shape
- The shift lever travel has been reduced → quicker and responsive action
- The Easy Shift and the clutch spring rates have been re-specked → improving the behaviour of the complete system and feeling on the shift lever

Slipper clutch

As an additional feature, all models are fitted with power assisted slipper clutch (PASC). The slipper clutch works by allowing the clutch to slip under heavy braking when torque levels are high from downshifts. This prevents the rear wheel from hopping or sliding for a more controlled deceleration.

The gears on the clutch basket and flywheel have been redesigned and optimised for weight reduction.

Additionally, the Svartpilen 401 and Vitpilen 401 have stronger clutch springs to improve the power transfer from the engine to the gearbox.

Ride-by-wire

The Svartpilen and Vitpilen model ranges are fitted with a modern ride-by-wire throttle. This state-of-the-art system allows the throttle input of the rider to be transferred to the throttle body without the use of traditional throttle cables delivering a smooth and precise power delivery. This is accomplished by providing the engine with the perfect amount of fuel for the current requirements thus increasing performance and efficiency.

Exhaust

All powerplants, from the Svartpilen/Vitpilen 125 to the Svartpilen/Vitpilen 401 received a completely redesigned exhaust system.

Made from high-strength steel, the exhaust system ensures the Svartpilen models meet strict EURO 5+ emissions regulations with a double catalyser system. Comprising of just one part, the new under-engine silencer is made from high-strength steel while the right-side silencer outlet stylishly compliments the overall design. This results in a total exhaust weight reduction of 2 kg when compared to the previous generation.

To achieve EURO 5+, there is an active control of the catalyser. The ECU adjusts the fuel-air mixture for optimal combustion and to ensure an optimal temperature of the catalyser thereby reducing emissions. The active combustion system together with the miss fire detection also logs the misbehaviour, which can be logged by the OBD2 interface and helps diagnose the status of the catalytic converter.

The silencer cover is finished off in matt black and features a standard heat coating protecting the rider from exhaust burns.

Service and maintenance

The 3 displacements of the new generation powerplant have been optimised for better performance and greater reliability with reduced service requirements.

- The balancer shaft can be locked from the outside as on the LC4 platforms. This makes the service easier.
- All filters are located on one side of the engine, making it easier to drain all the oil.
- Increased service intervals for all displacements:
- Only oil change at 1.000 km check
- Every 10.000 km change of oil, oil filter, and air filter
- Every 20.000 km valve check and sparkplug check.





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