

Husqvarna Motorcycles – Enduro Model Year 2024

Media Information

Husqvarna Motorcycles' all-new 2024 TE and FE machines set a new standard for riding offroad. Expertly crafted with new frames, subframes, bodywork, suspension, and brakes, the extended list of shared innovations across the new enduro platform further improves the overall rideability of all seven machines.

The change to WP XACT Closed Cartridge spring forks will be favoured by many riders and by incorporating a mid-valve piston and hydrostop, smooth action and predictable performance is guaranteed. A redesigned WP XACT shock features a new piston to improve comfort and is 100 g lighter and 15 mm shorter while retaining 300 mm of travel. Both the fork and shock settings can be adjusted by hand for a fast and easy personalised set-up.

Working in perfect harmony with the WP suspension is the new chromium molybdenum steel frame. Improving anti-squat behaviour and offering revised flex characteristics, the chassis, which includes a new and much more durable polyamide/aluminium hybrid subframe, guarantees each machine is exceptionally agile without sacrificing straight line stability.

All seven models feature new bodywork adorned with modern, Swedish-inspired graphics and a new high-grip seat cover. The rider triangle has been refined to provide more knee contact and therefore, better control. The slim design of the bodywork offers complete freedom of movement when riding. The new LED headlight produces a brighter light output and is installed with a much more efficient and user-friendly mounting system.

The TE 150, TE 250 and TE 300 2-stroke models are now powered by new engines that are fuelled using Throttle Body Injection (TBI) technology. Introduced to maintain their best-in-class performance, TBI guarantees a much more consistent and controllable spread of power throughout the rev range, even in the toughest of conditions.

The FE 250 and FE 350 machines benefit from new and much more compact DOHC engines. Positioned in the frame two degrees backwards when compared to the previous generation, the engines are designed to centralise mass and contribute to the improved anti-squat behaviour of the chassis. In addition, both engines position all major components as centrally as possible for improved handling as well as generating maximum torque and power.

The line-up is complete with premium components shared across the range including a new LED headlight, enhanced BRAKTEC brakes with high performance GSK discs, a combined start/stop button, ProTaper handlebars, and Michelin enduro tyres.

On the global racing stage, Billy Bolt's most recent success clearly underlines Husqvarna Motorcycles' reputation as a highly competitive manufacturer. Competing in the FIM SuperEnduro World Championship, the Husqvarna Factory Racing star secured his third consecutive title indoors to once again demonstrate the exceptional capability of the FE 350.

2024 Technical Highlights

- New chromium molybdenum steel frame optimised for improved anti-squat behaviour and enhanced flex characteristics
- New polyamide/aluminium hybrid subframe offers exceptional strength and durability
- New 48 mm WP XACT Closed Cartridge spring forks deliver consistent damping and predictable handling
- New WP XACT rear shock is lighter and developed specifically for enduro riding
- New ergonomic bodywork offers revised rider triangle for enhanced control
- New 2-stroke engines feature TBI technology for improved rideability and ease of use
- New 250cc and 350cc DOHC 4-stroke engines provide class-leading power and torque
- New LED headlight provides a brighter light output and simplified fitment
- New BRAKTEC brake system and high-performance GSK discs provide superior stopping power
- New multifunctional Map Select Switch design controls the Quickshifter and Traction Control (4-stroke only)
- New Offroad Control Unit (OCU) for highest level of reliability and user-friendly serviceability of electronics
- Premium-quality ProTaper handlebar and ODI Grips
- Electric starter powered by a lightweight Li-ion 2.0 Ah battery

Features and benefits

Frame

The hydro-formed, laser-cut and robot-welded frame is expertly crafted. Constructed with specifically calculated parameters of longitudinal and torsional flex, the frame provides exceptional rider feedback, energy absorption and straight-line stability. Additionally, the frame features forged brackets for mounting the newly designed skid plate.

Rotational masses in the frame and the forged steering head connection have been repositioned. Together with the new shock mounting, which is no longer connected to the main tube, the anti-squat behaviour of the chassis has been significantly improved. Also, the wall thickness of the frame has been optimised to achieve improved reliability and specific rigidity in high stress areas, such as the steering head and the shock mounts. Parallel frame mounts (same position on left and right sides) improve chassis flex characteristics, while stability characteristics remain unrivalled.

Another highlight of the new frame topology is that the footrest mounting positions have been moved inwards, resulting in less susceptibility to catching in deep ruts or when scrubbing jumps. The overall size of the all-new footrests has been increased, designed with the help of state-of-the-art Computational Fluid Dynamics (CFD).

The new one-piece steering head seal allows easier mounting in case of replacement or service and offers improved reliability. Additionally, the head tube is closed to avoid water, dust, or gasoline from the overflow hose, intruding and destroying the bearings. The gasoline overflow hose is now routed downwards and sideways.

The all-new steering lock system, which is clamped under the upper triple clamp, guarantees perfect functionality and can be easily replaced by removing the upper fork crown.

The 2-stroke model range continues to have an oil tank integrated into the frame and was optimized and adapted to the new frame concept.

A new forged one-piece side stand design is perfectly integrated on each motorcycle and provides a convenient and stable option for when the machine needs to be parked.

The frame is finished off in a premium metallic blue powder coating. The standard frame protectors feature a new and improved topology, guaranteeing superior protection, durability, and advanced grip in any condition.

- Specifically engineered longitudinal rigidity → exceptional rider feedback, energy absorption and stability
- Repositioned engine and new shock mounting → significantly improved anti-squat of chassis
- Topology-optimised frame wall thickness for specific rigidity and improved reliability in high-stress areas (e.g. steering head, shock mount)
- New parallel frame mounts (same position on left and right side) for improved flex characteristics
- Footrest mounting position moved inwards for reduced risk of catching in deep ruts or when scrubbing
- New, service friendly one-piece steering head seal → easier mounting, improved reliability
- Durable powder coated finish with standard frame protectors
- Closed head tube and new routing of gasoline overflow hose

- New forged one-piece side stand → convenient parking solution for all machines
- New steering lock system → removable without cutting of frame

Polyamide-reinforced aluminium subframe

Using 60% polyamide and 40% aluminium, the two-component subframe has a total weight of just 1.8 kg. With the help of computational dynamics, specific rigidity was engineered into the light and robust subframe, delivering outstanding handling and rider comfort.

The lower subframe spars and frame mounts are made from extruded aluminium profiles to guarantee robustness and reliability where needed. The upper subframe is a perfect combination of injection-moulded polyamide and 3D formed aluminium, enabling specific flex characteristics and allowing a reliable construction.

- New topology-optimised polyamide/aluminium hybrid construction
- Lower subframe spars and frame mounts made from 3D formed aluminium profiles → extremely robust and reliable (no weld joints)
- Upper subframe made from injection-moulded polyamide → specific rigidity and flex benefit to handling and comfort

Swingarm

The new, hollow die-cast aluminium swingarm is designed to offer optimal stiffness and reliability at the lowest possible weight. The topology has been optimised for optimal rigidity, while an improved casting process reduces weight by approximately 190 g. In order to optimise and match the new chassis flex characteristics, a new 22 mm rear axle is fitted.

Additionally, the chain guard and chain slider have been completely redesigned, resulting in improved durability and less susceptibility to catching on external objects. This new design will help reduce dirt build up around the swingarm and chain guard, especially in extreme muddy conditions.

Chain adjustment markings are also visible from above to make for simpler adjustment.

- New diecast swingarm → topology-optimised for optimal rigidity
- Improved casting process for reduced weight → 190 g less than previous generation
- New 22 mm rear axle optimised to match chassis flex characteristics
- Newly designed chain guard and chain slider
 - Transitions aligned with swingarm surface; spring-steel mounted for improved durability
- Overall, less susceptible to catching on external objects

WP XACT Closed Cartridge front fork

An all-new WP XACT Closed Cartridge spring fork is used on the Husqvarna enduro range for 2024.

Fast and consistent damping characteristics are guaranteed thanks to a new closed cartridge spring design, which optimizes the oil flow within the cartridge and has been adapted from the market leading WP Pro Component technology. This setup avoids unwanted foaming of oil, which would lead to a less consistent damping behaviour. Additionally, a spring preloaded base valve provides precise high-speed compression damping that can be further customized with a preload adjuster available as Technical Accessory through WP.

A hydro stop in the last 68 mm of the stroke helps to keep a maximum of reserves in extreme riding situations such as large jumps and flat landings (e.g., special stages in enduro races). The fork protection rings have been updated as well and now come with a new design to reduce abrasion from the fork movement.

The WP XACT Closed Cartridge fork remain at 48 mm in diameter while the total length increased from 928 mm (previous model generation) to 940 mm.

The fork is fully adjustable in rebound (36 clicks) and compression (36 clicks). Hand adjustable clickers on the bottom of the fork shoe and fork top cap allow riders to change settings on the fly without the need of tools.

Of course, with this new fork concept all suspension settings needed to be revised and specifically tested by our enduro and WP R&D departments.

- New WP XACT Closed Cartridge spring fork → fast and consistent damping characteristics, superior performance for any riding level
- New mid-valve piston → fully filled oil cartridge, no foaming of oil
- New Hydrostop → high damping reserves for strong impacts and jumps (no abrupt hardening)
- Redesigned fork protection rings → reduced abrasion from fork movement
- Fully adjustable → rebound and compression adjustable via easy access clicker dials (base valve preload adjuster available as Technical Accessory through WP)

CNC-machined triple clamps

Made from high-grade aluminium, the CNC-machined triple clamps feature optimally tuned steering stem stiffness, perfect alignment of the fork tubes and precise geometry of the fork clamps to ensure a highly responsive and smooth fork action.

Newly designed, topology optimized bar mounts provide increased grip surface for less handlebar twist at the same weight as the previous generation. Additionally, they come with rubber damped mounting, providing just the right handlebar flex. A 2-way handlebar adjustment is standard and allows for customisable ergonomics by rotating the handlebar mount.

The headlight mask integrates a triple clamp protector, which covers the lower triple clamp and protects it from wear caused by roost.

- CNC-machined aluminium with anodised surface → finest quality and reliability
- Perfect clamping and alignment → smooth fork action
- New, topology-optimised handlebar mounts → increased grip surface for less handlebar twist, same weight as previous generation
- Rubber damping on top clamp → reduced vibration, increased comfort
- Adjustable handlebar position → adjustable ergonomics

WP XACT rear shock

An all-new design results in a rear shock that is reduced in overall length by 15 mm and 100 g less weight compared to the previous generation, while keeping the rear wheel travel unchanged at 300 mm. The shock is matched to a revised linkage system with a new geometry to deliver the same progression as before but with the greatest possible traction and absorption. Combined with the new frame geometry, it improves the ground clearance of the linkage and is therefore less susceptible to damage even on the hardest enduro obstacles.

The new, Computational Fluid Dynamics (CFD) optimised main piston in the shock improves initial comfort and provides strong hold-up. Differently sized flow holes allow the shims to open more easily and reduce the overall stress of oil flow and pressure on the shims. Reduced weight also means less moving mass, resulting in lower forces on the piston bearings.

A fully hand-adjustable dual compression control concept allows high and low-speed settings to be changed by hand. Together with the newly designed rebound adjuster, which is hand or tool adjustable, riders are now able to adjust their shock settings without tools and without the help of a mechanic at the racetrack.

On top of the tool-free setting adjustment possibilities, a new preload adjuster is introduced bringing increased resistance to dirt intrusion and a new two-piece spring retainer allows for quick mounting without splitting the shock.

Combined with the low-friction and highly durable SKF linkage seals, the WP XACT rear shock reliably provides advanced damping characteristics for unsurpassed traction and energy absorption.

The new WP XACT shock also means new settings for the full enduro range. Each model has been tested carefully by our enduro and WP R&D departments and individual settings were created where needed.

- New lightweight, compact rear shock design with 15 mm reduced overall length
 - 2023 → 470 mm / 2024 → 455mm | rear wheel travel unchanged → 300 mm
 - Reduced weight results in less moving mass → 100 g lighter design results in lower forces on bearings
- New CFD-optimised main piston increases initial comfort and guarantees strong hold-up
- Improved ground clearance, lower risk of damage in extreme bottoming-out situations
- New dual compression control allows high and low-speed settings to be adjusted by hand
- New rebound adjuster allows setting changes by hand or with tool
- Two-piece spring retainer allows for quick mounting and assembly of preload adjuster and shock
- Low-friction SKF linkage seals → reliably sustain rear shock response for advanced damping characteristics

Engine hangers

The new engine hangers have been redesigned and unified across all models. This has significant advantages when it comes to machine set-up including the suspension, balance, and changes to the frame can be easily understood among the full enduro line-up. This wasn't possible in the past as frame geometry changes had different effects on each model due to different engine hangers and engine position within the frame.

- 2-stroke enduro range → unified engine hangers
- 4-stroke enduro → unified engine hangers (except FE 501)
- FE 501 → unique engine hangers due to size of engine, cylinder, cylinder head

BRAKTEC hydraulic clutch

The high quality BRAKTEC clutch system guarantees even wear, reliable and near maintenance-free operation as well as perfect action in every condition. Meaning that play is constantly compensated so that the pressure point and function of the clutch remain identical in cold or hot conditions, as well as over time. Additionally, a new lever geometry improves feeling on the rider's hand and for the pressure point.

- BRAKTEC hydraulic clutch → perfect action in every condition
- New lever geometry → improved feel on the rider's hand

BRAKTEC Brakes

The highest level of brake performance is guaranteed with an all-new generation of the BRAKTEC braking system. Redesigned brake calipers, front master cylinder, and brake lever provide exceptional quality while being specifically tailored for enduro riding and delivering a sensitive and action and feel.

New front and rear brake calipers provide increased torsional stiffness for a more precise brake feel. The calipers are matched to a 260 mm waved brake disc in the front and a 220 mm rear brake disc by GSK and are supplemented with a new brake pad compound that provides increased braking power and simultaneously better brake control. A cast aluminium, Monoblock design keeps weight to a minimum.

The offset of the front brake lever in relation to the brake pump was reduced from 17 → 16 mm to reduce pulling force. Additionally, a new front brake lever geometry improves feeling on the rider's hand and for the pressure point.

Mounting the rear wheel is also made easier with a redesigned rear brake caliper bracket for improved clearance when fitting the rear wheel.

- BRAKTEC brake system and high-performance GSK discs → exceptional stopping power with superior sensitivity and action
- New brake calipers front and rear → increased torsional stiffness for more precise brake feel
- New brake pad compound → increased braking power and simultaneously better brake control
- Reduced brake lever offset to 16 mm (2023 = 17 mm) → reduced pulling force
- New lever geometry → improved feel on the rider's hand

ProTaper handlebar

The ProTaper handlebar is second to none for function and style. Manufactured to exacting standards, the handlebar features class-leading fatigue resistance at a minimal weight. A new handlebar bend further increases comfort with an optimal pressure point on the rider's hands while the ProTaper logos are chemically applied and are scratch and peel resistant.

- ProTaper handlebar → class-leading function and style
- New handlebar bend → adapted to new ergonomics

Grips and throttle assembly

The ODI lock-on grip on the left side does not require gluing, while on the right, the vulcanised grip features an innovative integrated throttle mechanism. The assembly has easy free-play adjustment and, by changing a cam, throttle progression can be altered. The throttle housing has been redesigned for increased stability and resistance against external forces.

- Throttle assembly and ODI grips → easily alter throttle progression; easy grip mounting without glue
- New throttle housing → increased stability and resistance against external forces

Footrests

The all-new, CFD designed footrests offer a bigger surface for boot soles while being less susceptible to catching on deep ruts, take-offs when scrubbing or track barriers. The result is better control of the bike in all conditions. This was achieved by a new, narrower mounting concept integrated in the frame design, which also reduces weight.

- New, topology-optimised, die-cast footrests → reduced weight and less susceptible to dirt build-up
- Footrest mount integrated into frame → narrower profile is less susceptible to catching on deep ruts

Map Select Switch, Quickshifter and Traction Control

Designed for easy and intuitive operation, the new Map Select Switch comes as standard. It activates Traction Control, selects between two engine maps and activates the Quickshifter on 4-stroke models. Map 1 is the standard map for linear, predictable power, while Map 2 is an aggressive map for added throttle response and more explosive power output.

The new Quickshift function (upwards only) can be activated or deactivated via the Map Select Switch. The function works only when upshifting, interrupting the ignition for a fraction of a second. This allows upshifting while the throttle is fully opened without the use of the clutch lever. A sensor on the shift drum registers the force from the shift lever, sends the signal to the ECU and the ignition timing is interrupted. To prevent unintended shifts and false neutrals, the function is only active from 2nd to 6th gear.

Traction Control on 4-stroke models is engaged by a switch marked 'TC' and functions by analysing throttle input from the rider and the rate at which engine RPM increases. If the RPM increases too quickly, the Engine Management System (EMS) registers a loss of grip and reduces the amount of

power to the rear wheel ensuring maximum traction. This is a distinct advantage in wet or muddy conditions.

The Map Select Switch on the 2-stroke models features a simpler design, allowing the selection between 2 engine maps. The Quickshifter and Traction Control are not available for 2-stroke models. Map 1 is the standard, more mellow map for linear, predictable power, while Map 2 is the aggressive map for added throttle response and a more crisp, explosive power output.

Note: On the TE 150, Map 1 is leaner for hard pack riding, while Map 2 is richer for heavier conditions or sand. A feelable power difference between the maps is not given.

- Newly designed handlebar Map Select Switch → alters engine characteristics according to conditions and rider preference
- New Quickshifter → clutch-free upshifting
- Traction Control → optimal traction in all conditions

Start/Stop switch

Start/Stop switch:

- Newly designed switch including ignition on/off, start, stop. Mounted on the right side of handlebar, allows an easy and intuitive start/stop of the engine.

Engine Management System (EMS)

The EMS is specifically designed to be smaller, lighter and faster at processing data. It integrates selectable engine maps and Traction Control via the Map Select Switch on the handlebar as well as the Quickshifter (4-stroke only). Combined with the gear sensor, power delivery is tailored for each gear.

A new Rollover Sensor (ROS) cuts the ignition in case of extreme crashes, adding another level of safety to the new generation of Husqvarna enduro machines.

- Keihin EMS → small, light and faster at processing engine data for more efficient engine management
- New Rollover Sensor (ROS) → automatic cutting of ignition in extreme crashes
- Gear sensor → specific engine maps for each gear

Offroad Control Unit (OCU)

The all new OCU replaces electronic fuses and relays (main relay, fan relay, light relay) and can be found under the seat. All outputs are switched depending on signals from the voltage regulator and the ECU. In the event of over-current, outputs are deactivated individually. This allows a simple error detection as the status of each output is indicated by a LED light. The OCU checks the electronic system completely self-reliant. Once an indicated mechanical error is fixed (e.g. fuel pump), the OCU light status will change from red to green, indicating that everything is alright again.

Additionally, with the improved and more compact electrical packaging, it was possible to better integrate the voltage regulator on the vehicle allowing for an increased steering angle while keeping the regulator clean and secured.

- Simple error detection and self-explaining guidance in finding solution

- No more carrying of fuses
- New voltage regulator position → increased steering angle

Keihin throttle body

The 4-stroke range feature a 42 mm Keihin throttle body while the 2-stroke range features a newly developed 39 mm Keihin throttle body. The injectors are positioned to ensure the most efficient flow into the combustion chamber, and to ensure optimal throttle response the throttle cable is mounted directly without a linkage, providing more immediate throttle response and feel.

The new 39 mm Keihin throttle body features dual injectors positioned for optimal flow and more immediate throttle response thanks to direct cable mounting. Idle is controlled over the throttle valve (not over a bypass system as on Transfer Port Injection) with a new dual injector setup – one low load injector (positioned as on 4-stroke models) and one “top-feed” oriented injector for maximum performance before the throttle valve.

A new, and more robust TPS-Sensor provides the same cold start mechanism as on the 4-stroke models. The throttle valve pivots on ball bearings instead of plain bearings – this provides less than half the friction torque compared to the former throttle body and allows a much easier throttle operation.

All in all, this provides much better idle control, more stable idle behaviour, and much better fuel-air mixture preparation. The results are more power, more response, and a larger possible fuel air mixture operation window in comparison to TPI. Therefore, it is less prone to engine cut-outs or hesitations and less sensitive to different ambient conditions (e.g. temperature, altitude, humidity).

- 4-stroke throttle body → 42 mm injector positioned for optimal flow, more immediate throttle response thanks to direct cable mounting
- 2-stroke throttle body → 39 mm with two injectors positioned for optimal flow and more immediate throttle response thanks to direct cable mounting

Exhaust system

The Husqvarna enduro 2-stroke exhaust systems benefit from the more compact engine designs. It was therefore possible to re-design the header pipes using an innovative 3D design process, with the target of achieving more ground clearance and reduce the risk of damages in deep ruts or caused by enduro-typical external objects.

A new manufacturing process adds quality and lowers manufacturing fluctuations. Therefore, the TE 250/300 header pipes do not have the corrugated surface any longer.

The compact silencers of the 2-stroke enduro range are crafted from lightweight aluminium, feature an aluminium mounting bracket and advanced internal construction for excellent noise damping and weight saving. Additionally, they are stylishly finished off in a black coating that highlights its premium quality.

The 4-stroke exhaust system is expertly designed to deliver class-leading performance at the lowest possible weight. The header pipe is designed and manufactured in two pieces, to be as compact as possible. The joining position allows it to be removed without having to take out the rear shock. The routing of the header pipe is extremely close to the engine for a maximum of mass centralization and a minimum exposure to rocks or other objects causing potential damage.

Further innovation allows for a short, compact silencer without increasing noise levels. The component is crafted from lightweight aluminium and is stylishly finished off in a black coating that highlights its premium quality.

- More compact exhaust systems, light weight and engineered for optimal performance
- Header joining position allows removal without removing rear shock
- New, standardized mounting points and screw length across 4-stroke exhaust systems
- Header pipe mounted directly onto engine mount for improved serviceability

LED headlight unit

All Husqvarna enduro models come with a completely new LED headlight unit and mask. The mask itself features lower triple clamp protection against roost and external objects while the new headlight no longer requires rubber straps as it is directly mounted to the triple clamp. This allows the fork to be quickly demounted while the front mask stays in position.

Inside the headlight, the LED lighting unit is snapped in place with a quick release system. This has the big advantage of fast removal and replacement in case of damages. Also, not having to replace the complete headlight unit brings enormous cost savings to customers.

Output from the light has been improved significantly, making riding in the dark a dramatically improved experience. The maximum light output is approximately three times brighter when compared to the old model generation, increasing from 320 to 900 Lumen for 2024. Undoubtedly, this is a significant improvement and is considerably effective in all low-light situations.

Additionally, the new and more robust speedometer provides improved readability while being attached to the vehicle with just one electric connector.

- State of the art headlight unit → LED technology and improved light output
- New speedometer → improved readability and less risk of failure

Electric start and Li-Ion battery

Along with the benefit of an easy electric starting system, a Li-Ion 2.0 Ah battery is fitted to the full Husqvarna enduro range. The Li-Ion battery weighs approximately 1 kg less than a conventional lead/acid battery, so the convenience of electric starting is delivered while minimising overall weight.

- Electric starter → easy starting when time is critical
- Li-Ion battery → lightweight, 1 kg lighter than a conventional battery

Integrated cooling system, radiators and fan

The radiators are expertly crafted using high-strength aluminium. CFD optimisation is used to channel air through the radiators more efficiently and provide optimal cooling in any condition. The cooling system is integrated into the frame allowing for improved cooling by channelling coolant through the frame while eliminating the need for additional hoses. A large centre tube running through the frame reduces the pressure at this point in the system allowing for a more consistent coolant flow and now includes an internal thermostat for added reliability.

Additionally, the radiators are mounted close to the centre of gravity for improved handling agility. 4-stroke models are equipped with a standard radiator fan for increased cooling effect.

- Integrated cooling with centre tube → maximum efficiency in minimum space
- New bayonet closure radiator caps
- CFD optimised radiators → efficient for optimal cooling
- ECU controlled radiator fan → no additional thermal switch necessary

Fuel tank

The new 8.5 / 8.0 litre transparent polythene (XPE) fuel tanks incorporate a threaded filler cap and an integrated fuel pump. A new one-piece fuel pump with integrated filter provides improved fuel supply and the external fuel line is specifically positioned to make it less exposed and susceptible to damage. The fuel filter can be easily replaced with toolless access.

- New 8.5 litre (TE) / 8.0 litre (FE) polythene fuel tanks → large capacity for extended running times
- New one-piece fuel pump and filter for improved fuel supply → tank can be emptied further at low fuel levels
- External fuel line routing → less exposed and susceptible to damage

Airbox and tool-less air filter access

The CFD optimised airbox is designed with precisely positioned inlet ducts to prevent air deformation and ensure maximum airflow and filter protection. The air filter is easily accessed, without tools, by removing the left side panel. Easy maintenance is guaranteed by the Twin Air filter and filter cage design, featuring a simple fail-proof mounting system for safe and accurate filter installation.

- CFD optimised airbox → improved air flow and maximised filter protection
- Intuitive filter mounting system → safe and accurate protection against dirt
- Tool-less filter access → quick and easy maintenance
- High-flow airbox cover included with each machine → added customisability of the engine response

Wheels

Black high-strength alloy rims by D.I.D with laser engraved logos are coupled to CNC machined hubs using lightweight spokes and silver anodised aluminium nipples. The nipples incorporate an advanced design reducing the frequency of spoke checks and maintenance.

- Lightweight but strong and reliable construction → minimum unsprung weight

Tyres

The enduro models feature Michelin enduro tyres as used by the Husqvarna Factory Racing team. The FIM approved tyres offer exceptional grip in a wide variety of different terrain and riding conditions.

- Michelin enduro tyres → advanced grip in challenging conditions
- Increased durability and crack resistance through innovative rubber compounds

Bodywork

The enduro range features bodywork that clearly showcases Husqvarna Motorcycles progressive approach to offroad motorcycles and striking white and blue graphics stylishly adorn the Swedish-inspired design.

An improved rider triangle for better knee contact, especially when riding in the standing position, inspires confidence for riders of every ability and enables them to perform at the highest level for extended periods of time. The slim contact surfaces on the bodywork allow the rider to move the bike around more easily and improve the overall handling and agility of the bike.

The flat seat profile, combined with a new high grip seat cover, deliver superior comfort and control in all conditions. A recessed pocket under the seat, just above the airbox, allows gripping and lifting of the bike.

- Progressive bodywork → distinctive looks, modern design and graphics
- Improved rider triangle for better knee contact, especially when riding in the standing position
- Additional contact surface → allows for improved gripping and easier movement of the bike
- Recessed grip pockets → allowing better grip to lift the bike
- Seat → flat seat profile and new high-grip seat cover offer exceptional comfort and control in all conditions

Technical information by model

FE 250

Undergoing multiple revisions to further enhance its proven technical abilities, the FE 250 features a new engine, frame, and suspension for 2024 for improved performance. Featuring a lightweight, compact, and redesigned engine, all riders are set to benefit from the refinements with the power delivery easily customisable for a personalised riding experience. Together with a new frame and WP suspension, the rideability and handling is much improved with the revised, ergonomic bodywork offering even greater control. Complete with a fresh, Swedish-inspired look and assembled with premium components throughout, the FE 250 is capable of competing at the highest level of enduro in standard form.

Engine

The newly designed FE 250 engine is tilted 2° backwards and therefore comes with a repositioned sprocket, which is 3 mm lower compared to the previous generation.

The total engine height has been reduced by 8 mm to improve mass centralization and reduce weight (ca. 100 g lower weight). Another benefit of this new design is an improved anti squat behaviour of the whole chassis.

Service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past.

All major components and shaft arrangements are carefully designed and placed to best suit the performance and handling characteristics of the overall package. The 250cc engine is not only light at 27.8 kg but also remarkably powerful.

- Light and compact engine design for optimised mass-centralisation
- Outstanding, high revving performance engine with over 12,800 rpm rev-limit
- Low friction design, reducing overall drag and vibrations
- Engine tilted 2° backwards with repositioned sprocket (3 mm lower)
- Engine height reduced by 8 mm for improved mass centralization, reduced weight and improving anti squat behaviour
 - Weight of 2024 engine: 27.8 kg
 - Weight of 2023 engine: 27.9 kg
 - Including oil, shift lever, sprocket and vent hose
- Improved serviceability of engine internals with added service markers
- Maps (1 white, 2 green) differ mainly in the partial load range and in the acceleration functions, which makes the difference clearly noticeable, but difficult to measure.

Cylinder head

The fully redesigned DOHC cylinder head features finger followers with a Diamond Like Carbon (DLC) coating resulting in minimal friction and optimal performance. These actuate large titanium valves (32.5 mm intake, 27.5 mm exhaust) which at the 12,800-rpm rev-limit open and close multiple times each second introducing fuel/air mixture to the carefully designed combustion chamber, delivering efficient and optimal power throughout the rev-range.

The new 27.5 mm exhaust valve is a result of the revised bore/stroke ratio, delivering an optimized gas flow. Valve timings have been unchanged compared to the previous generation, but the new valve measurements now improve the overall package in combination with the redesigned camshaft.

For improved serviceability and maintenance works within the engine, the redesigned camshaft bearing bridge is screwed and increases stiffness. Also, the head gasket comes with a new “stopper design”, improving the sealing function under extreme conditions.

- Fully redesigned cylinder head for improved durability and serviceability
- Finger followers with DLC coating, reducing friction and guaranteeing optimal performance
- Large titanium valves (32.5 mm intake, 27.5 mm exhaust) with new 27.5 mm exhaust valve for optimized gas flow with revised bore/stroke
- New lightweight valve cover with reduced number of mounting screws (only 2)
- Redesigned camshaft
- New camshaft bearing bridge increasing stiffness and improving serviceability (screwed design)
- New cylinder head gasket with stopper design, improving sealing function under extreme conditions

Cylinder and piston

The new 81 mm bore cylinder houses a forged bridged-box-type piston made by CP. Both, the cylinder and piston are professionally engineered from high strength aluminium resulting in outstanding performance and reliability. The compression ratio is 14.4:1, which is nearly identical to the FC 250 model. The stroke has been adapted to 48.5 mm.

Thanks to the CFD optimized combustion chamber, the inlet port got smaller resulting in improved engine responsiveness.

- Larger 81 mm bore and larger diameter exhaust valves for high-revving and quick response
- Forged bridged-box-type piston guaranteeing high performance and reliability
- New 81 mm bore and 48.5 mm stroke ratio
- CFD optimized combustion chamber with smaller inlet port for improved engine responsiveness
- Increased compression ratio to 14.4:1 → increased torque and peak power

Crankshaft

The crankshaft is designed to offer the best possible performance all while being placed in the perfect position to centralize oscillating masses for optimal handling. The plain big end bearing features two force-fitted bearing shells ensuring maximum reliability and durability guaranteeing long service intervals of 135 hours (big engine service in normal usage, in competition usage > 70 hours).

- Plain big end bearing with force-fitted bearing shells for increased durability and service intervals
- Friction bearing on the counter-balancer shaft for increased durability

Crankcases

The crankcase of the FE 250 engine has been redesigned and now comes with identical engine mounting points as the 350 and also FE 450 engines.

The new FE 250 engine is designed with mass centralisation as one of the main criteria. As a result, the crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity while adding the least possible weight. The casings are manufactured using a high-pressure die cast production process, resulting in thin wall thickness while retaining exceptional reliability. The Husqvarna crown logo gives the bronze powder coated enduro specific and noise reducing clutch cover a premium and durable look. Additional oil scrappers on the ignition cover round off the package.

- Light and compact crankcase, optimised mass-centralisation
- Redesigned crankcase with new, unified engine mounts
- High pressure die-cast production process with thin walls for reduced weight, while maintaining strength
- Enduro specific clutch cover (same look but lower noise compared to FC models)

Gearbox

Produced by Pankl Racing Systems, the new 6-speed gearbox is designed to be extremely light and durable, featuring a primary gearing ratio of 24:72.

A redesign of the shift shaft reduces the operating forces of gear changes. On the shift drum a new Quickshift sensor is positioned, allowing clutchless upshifts. The function can be activated/deactivated via the new QS button on the Map Select Switch, located on the left side of the handlebar.

The new gear lever is designed to prevent dirt build-up and ensures perfect gear selection in all conditions. An advanced gear sensor allows for specific engine maps delivering the best possible performance in each gear.

- 6-speed gearbox by Pankl Racing Systems with enduro-specific transmission ratio for exceptional durability and improved shifting
- Redesigned shift shaft, reducing operating force of gear changes
- Quickshift sensor positioned on the shift drum allows clutchless upshifts, the function can be activated/deactivated via the QS button on the Map Select Switch on the left side of the handlebar
- Integrated gear sensor for specific engine maps for each gear and seamless upshifts

DDS clutch

The FE 250 features a DDS (Dampened Diaphragm Steel) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. It integrates a damping system for better traction and durability. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine.

The main improvement includes a better clutch cooling from the pressure lubrication, reducing clutch fade in high stress usage. The clutch basket has been redesigned and adapted for the new 6-speed transmission.

- Lightweight DDS clutch featuring consistent action and exceptional durability
- Improved clutch cooling from pressure lubrication, reducing clutch fade from high stress

- Redesigned clutch basket for adapted 6-speed transmission ratio
- Enduro specific clutch cover for reduced noise output

FE 350

Striking a competitive balance between power and handling, the FE 350 is undoubtedly the most versatile enduro machine on the market. Powered by a new engine, which is positioned inside the new frame to centralise mass, together with new WP XACT Suspension, handling and overall performance is much improved for 2024. Complete with a fresh, Swedish-inspired look and assembled with premium components throughout, the FE 350 is capable of competing at the highest level of enduro in standard form.

Engine

The newly designed FE 350 engine is tilted 2° backwards and therefore comes with a repositioned sprocket, which is 3 mm lower compared to the previous generation. The big benefit of this new design is improved anti squat behaviour of the whole chassis.

Service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past.

- All major components and shaft arrangements are carefully designed and placed to best suit the performance and handling characteristics of the overall package. The 350cc engine is not only light at 28.8 kg but also remarkably powerful.
- Light and compact engine design for optimised mass-centralisation
 - Weight of 2024 engine 28.8 kg
 - Weight of 2023 engine 28.0 kg
 - Including oil, shift lever, sprocket, and vent hose
- Outstanding, high revving performance engine with 11,500 rpm rev-limit
- Low friction design, reducing overall drag and vibrations
- Engine tilted 2° backwards with repositioned sprocket (3 mm lower)
- Improved serviceability of engine internals with added service markers
- Maps (1 white, 2 green) differ mainly in the partial load range and in the acceleration functions, which makes the difference clearly noticeable, but difficult to measure.

Cylinder head

The fully redesigned DOHC cylinder head features finger followers with a Diamond Like Carbon (DLC) coating, resulting in minimal friction and optimal performance. These actuate large steel valves (36.3 mm intake, 29.1 mm exhaust) which at the 11,500-rpm rev-limit open and close multiple times each second introducing fuel/air mixture to the carefully designed combustion chamber delivering efficient and optimal power throughout the rev-range.

The 29.1 mm exhaust valve is a result of the redesigned engine to deliver an optimized gas flow. Valve timings work perfectly in harmony with the redesigned and new camshaft.

For improved serviceability and maintenance works within the engine, the redesigned camshaft bearing bridge is screwed and increases stiffness.

- Fully redesigned cylinder head for improved durability and serviceability
- Finger followers with DLC coating, reducing friction and guaranteeing optimal performance
- Large steel valves (36.3 mm intake, 29.1 mm exhaust) for optimized gas flow
- New lightweight valve cover with reduced number of mounting screws (only 2)
- Redesigned camshaft and adapted valve timings

- New camshaft bearing bridge increasing stiffness and improving serviceability (screwed design)

Cylinder and piston

The 88 mm bore cylinder houses a forged bridged-box-type piston made by CP. Both the cylinder and piston are professionally engineered from high strength aluminium resulting in outstanding performance and reliability. The compression ratio is 13.7:1.

- Large 88 mm bore and diameter optimized exhaust valves for high-revving and quick response
- Forged bridged-box-type piston guaranteeing high performance and reliability
- CFD optimized combustion chamber with optimized valve guides and valve shaft diameters for improved engine responsiveness
- Compression ratio of 13.7:1 for increased torque and peak power

Crankshaft

The crankshaft is designed to offer the best possible performance while being placed in the perfect position to centralize oscillating masses for optimal handling. The plain big end bearing features two force-fitted bearing shells ensuring maximum reliability and durability. This guarantees long service intervals of 135 hours (big engine service in normal usage, in competition usage > 70 hours).

- Plain big end bearing with force-fitted bearing shells for increased durability and service intervals
- Friction bearing on the counter-balancer shaft for increased durability

Crankcases

The crankcase of the FE 350 engine has been redesigned and now comes with identical engine mounting points as the 250 and also FE 450 engines.

The new FE 350 engine is designed with mass centralisation as one of the main criteria. The crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity while adding the least possible weight. The casings are manufactured using a high-pressure die cast production process, resulting in thin wall thickness while retaining exceptional reliability. The Husqvarna crown logo gives the bronze powder coated enduro specific and noise reducing clutch cover a premium and durable look. Additional oil scrappers on the ignition cover round off the package.

- Light and compact crankcase, optimised mass-centralisation
- Redesigned crankcase with new, unified engine mounts
- High pressure die-cast production process with thin walls for reduced weight, while maintaining strength
- Enduro specific clutch cover (same look but lower noise compared to FC models)

Gearbox

Produced by Pankl Racing Systems, the new 6-speed gearbox is designed to be extremely light and durable, featuring a primary gearing ratio of 24:72.

A redesign of the shift shaft reduces the operating forces of gear changes. On the shift drum a new Quickshift sensor is positioned, allowing clutchless upshifts. The function can be activated/deactivated via the new QS button on the Map Select Switch, located on the left side of the handlebar.

The new gear lever is designed to prevent dirt build-up and ensures perfect gear selection in all conditions. An advanced gear sensor allows for specific engine maps delivering the best possible performance in each gear.

- 6-speed gearbox by Pankl Racing Systems with enduro-specific transmission ratio and exceptional durability and improved shifting
- Redesigned shift shaft, reducing operating force of gear changes
- Quickshift sensor positioned on the shift drum allows clutchless upshifts, the function can be activated/deactivated via the QS button on the Map Select Switch on the left side of the handlebar
- Integrated gear sensor for specific engine maps for each gear and seamless upshifts

DDS clutch

The FE 350 features a Dampened Diaphragm Steel (DDS) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. It integrates a damping system for better traction and durability. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine.

The main improvement includes a better clutch cooling from the pressure lubrication, reducing clutch fade in high stress usage. The clutch basket has been redesigned and adapted for the new 6-speed transmission.

- Lightweight DDS clutch featuring consistent action and exceptional durability
- Improved clutch cooling from pressure lubrication, reducing clutch fade from high stress
- Redesigned clutch basket for adapted 6-speed transmission ratio
- Enduro specific clutch cover for reduced noise output

FE 450

Receiving multiple technical upgrades for 2024 to maintain its high performance, the FE 450 remains at the pinnacle of Husqvarna Motorcycles enduro line-up. Its new engine produces a broader spread of controllable power and by positioning the engine shaft arrangements at the ideal centre of gravity, manoeuvrability is vastly improved. Aiding this agile feel is the new chassis, which has been developed and manufactured using advanced engineering techniques. Together with new WP suspension enhanced comfort across rough terrain is assured. Complete with the latest technological advancements and high-quality components throughout, the FE 450 is finished with new functional bodywork adorned with white, yellow, and blue graphics that are inspired by the Swedish heritage of the brand.

Engine

The SOHC engine is the perfect example of the advanced engineering techniques used by Husqvarna Motorcycles, offering higher peak power at an overall weight of just 29 kg (- 200g compared to previous generation).

Mass-centralisation is key in the engine design. Chassis engineers positioned the engine closer to the centre of gravity for greatly improved handling and manoeuvrability. This was achieved by tilting the engine 2° backwards and repositioning the sprocket 3 mm lower. Together with the benefits of mass centralization and reduced weight the anti-squat behaviour of the chassis was significantly improved.

Another focus was put on the serviceability of the new FE 450. Service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past.

- Light and compact engine design for optimised mass-centralisation
 - Weight of 2024 engine 29 kg
 - Weight of 2023 engine 29.2 kg
 - Including clutch slave master cylinder, oil, shift lever, sprocket, and vent hose
- Improved performance of engine with rev-limit at 10,500 rpm.
- Engine tilted 2° backwards with repositioned sprocket (3 mm lower) for improved mass centralisation and better anti-squat behaviour
- Improved serviceability of engine internals with added service markers and draining noses for liquids

Cylinder head

The redesigned SOHC cylinder head is incredibly compact and lightweight using a short profile with the camshaft located as close to the centre of gravity as possible. The frame mounts significantly improve handling and agility (now unified among 4-stroke models, only 500cc needs different frame mounts due to the cylinder size).

The lightweight valves are actuated via a rocker arm and feature optimized timing, specifically designed to deliver precise levels of torque and throttle response. The diameter of the intake valves is 40 mm, while on the exhaust it is 33 mm. Redesigned intake ports allow higher flow coefficients, resulting in a more efficient and powerful engine.

A new valve cover reduces the number of mounting screws (only 2 needed), and a single oil spray jet guarantees efficient cooling while keeping weight low.

A new fine punched cam chain and the low-friction DLC coating on the rocker arm offers optimum efficiency, reliability, and durability.

Another focus was put on maintenance work. Added lock positions for the cam chain improve the serviceability of the valve train.

- Redesigned SOHC cylinder head with compact design, featuring a camshaft close to centre of gravity
- Redesigned Intake ports for higher flow coefficients
- DLC coating on rocker arms for optimum efficiency reliability, and durability
- Optimized valve timings for improved torque and throttle response
- New lightweight valve cover with reduced number of mounting screws (only 2) and only one oil spray jet for cooling
- New, fine punched cam chain adding durability and reduced friction
- Improved serviceability of valve train through added lock positions for cam chain

Cylinder and piston

The lightweight aluminium cylinder features a 95 mm bore and a CP bridged-box-type piston optimized for low weight and a high-power character. The piston features anodized annular grooves, adding durability and longer service intervals. The compression ratio has stayed unchanged at 12.75:1 while gaining power.

The piston bolt is no longer DLC coated but comes with a cube bushing offering similar performance and reliability.

- Lightweight aluminium cylinder with 95 mm bore / 63.40 mm stroke
- Lightweight, high-performance CP forged bridged-box-type piston reducing oscillating masses
- Unchanged compression ratio (12.75:1) but significantly increased peak performance
- Anodized annular groove, adding durability, and guaranteeing longer service intervals
- Piston bolt with cube bushing

Crankshaft

The inertia produced by the crankshaft has been carefully calculated to deliver optimal traction and ride-ability from the powerful 450 4-stroke enduro engine. The crankshaft is specifically positioned to harness the rotating mass in the ideal centre of gravity, resulting in a lightweight and agile handling feel. A plain big end bearing comprising of two force-fitted bearing shells, which ensure maximum reliability and durability. On top, the oil scrapper design has been significantly improved.

- Crankshaft position with ideal centre of gravity, improving handling
- Plain big end bearing and force-fitted bearing shells for advanced durability and longer service intervals
- Significantly improved oil scraper design on the crankcase (crankshaft)

Crankcases

The crankcases are designed to house the shaft arrangements and internals of the engine in the position that offers the best possible handling. A new steel oil pump gear, repositioned oil jets and an increased overall oil pressure, result in increased resistance against clutch overheating and improved durability. The counter balancer shaft has been revised with a slight increase in weight reducing engine vibration.

High-pressure die cast production processes keep the overall weight to a minimum, resulting in thin wall thickness while retaining reliability. The Husqvarna crown logo gives the bronze powder coated enduro specific and noise reducing clutch cover a premium and durable look. Additional oil scrappers on the ignition cover round off the package.

- Design featuring optimised mass-centralisation and increased efficiency
- High pressure die-cast production process with thin walls for reduced weight, while maintaining strength
- New, steel oil pump gear and repositioned oil jets improve durability
- Higher oil pressure for increased resistance against clutch overheating
- New oil scrappers on the ignition cover
- Increased side balancer shaft counter mass (higher vibration comfort)
- Enduro specific clutch cover (noise reduction compared to FC models)

Gearbox

The redesigned lightweight 6-speed gearbox is produced by Pankl Racing Systems ensuring the highest level of durability and reliability. The redesign focused on a weight optimized shift shaft, reducing the operating force of gear changes. The gearbox also features a revised transmission ratio, as well as a revised primary gear ratio (29:72).

The gear lever features a design that prevents dirt build-up and keeps the lever tip in its original position even in the toughest conditions. An advanced gear sensor selects a specific engine map tailored for each gear.

The above-mentioned gear sensor is positioned on the shift drum and is now also used for the new Quickshift function, allowing clutch less upshifts (from 2nd gear up). The function can be activated/deactivated via the new QS button on the Map Select Switch, located on the left side of the handlebar.

- Redesigned 6-speed gearbox with revised transmission ratio
- Weight optimized shift shaft, reducing operating force of gear changes for smooth and precise shifting
- Quickshift sensor positioned on the shift drum allows clutchless upshifts, the function can be activated/deactivated via the QS button on the map-select switch on the left side of the handlebar
- Integrated gear sensor for specific engine maps for each gear

DDS clutch

The FE 450 features a Dampened Diaphragm Steel (DDS) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. It integrates a damping system for better traction and durability. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine.

The main improvement includes a better clutch cooling from the pressure lubrication, reducing clutch fade in high stress usage. The clutch basket has been redesigned and adapted for the new 6-speed transmission.

- Lightweight DDS clutch featuring consistent action and exceptional durability
- Improved clutch cooling from pressure lubrication, reducing clutch fade from high stress
- Redesigned clutch basket for adapted 6-speed transmission ratio
- Enduro specific clutch cover for reduced noise output

Exhaust

The diameter of the header pipe is now the same as on the FC 450 model. It's a reduced diameter compared to the old model, allowing for more engine response in lower rpms but also increased peak power.

- New header pipe diameter for increased engine response and peak power

FE 501

Enhanced with the latest technical innovations and producing more power than the previous generation, the FE 501 continues to be the most powerful machine in the Husqvarna Motorcycles enduro line-up. A new engine for 2024 produces a broader spread of controllable power and by positioning the engine shaft arrangements at the ideal centre of gravity, this vastly benefits manoeuvrability. Aiding this agile feel is the new chassis, which has been developed and manufactured using advanced engineering techniques, which together with new WP suspension ensures enhanced comfort across rough terrain. Expertly assembled with high-quality components throughout, the FE 501 is finished with new functional bodywork adorned with white, yellow, and blue graphics inspired by the Swedish heritage of the brand.

Engine

The SOHC engine is the perfect example of the advanced engineering techniques used by Husqvarna Motorcycles, offering higher peak power at an overall weight of just 29.5 kg (-300 g compared to previous generation).

Mass-centralisation is key in the engine design. Chassis engineers positioned the engine closer to the centre of gravity for greatly improved handling and manoeuvrability. This was achieved by tilting the engine 2° backwards and repositioning the sprocket 3 mm lower. Together with the benefits of mass centralization and reduced weight the anti-squat behaviour of the chassis was significantly improved.

Another focus was put on the serviceability of the new FE 501. Service markers on the engine (▲) clearly show where to use washers, making maintenance and service easier than in the past.

- Engine tilted 2° backwards with repositioned sprocket (3mm lower) for improved mass centralisation and better anti-squat behaviour
- Light and compact engine design for optimised mass-centralisation
 - Weight of 2024 engine 29.5 kg
 - Weight of 2023 engine 29.8 kg
 - Including clutch slave master cylinder, oil, shift lever, sprocket, and vent hose
- Improved performance of engine with rev-limit at 10,000 rpm.
- Improved serviceability of engine internals with added service markers

Cylinder head

The redesigned SOHC cylinder head is incredibly compact and lightweight using a short profile with the camshaft located as close to the centre of gravity as possible. The frame mounts significantly improve handling and agility and are specifically developed to work for the oversized 500cc 4-stroke power plant and the new Husqvarna frame geometry in an ideal way.

The lightweight valves are actuated via a rocker arm and feature optimized timing, specifically designed to deliver precise levels of torque and throttle response. The diameter of the intake valves is 40 mm, while on the exhaust it is 33 mm. Redesigned intake ports allow higher flow coefficients, resulting in a more efficient and powerful engine.

A new valve cover reduces the number of mounting screws (only 2 needed) and a single oil spray jet guarantees efficient cooling while keeping weight low.

A new fine punched cam chain and the low-friction DLC coating on the rocker arm offers optimum efficiency, reliability, and durability.

Another focus was put on maintenance work. Added lock positions for the cam chain improve the serviceability of the valve train.

- Redesigned SOHC cylinder head with compact design, featuring a camshaft close to centre of gravity
- Redesigned Intake ports for higher flow coefficients
- DLC coating on rocker arms for optimum efficiency reliability, and durability
- Optimized valve timings for improved torque and throttle response
- New lightweight valve cover with reduced number of mounting screws (only 2) and only one oil spray jet for cooling
- New, fine punched cam chain adding durability and reduced friction
- Improved serviceability of valve train through added lock positions for cam chain

Cylinder and piston

The lightweight aluminium cylinder features a 95 mm bore and a CP bridged-box-type piston optimized for low weight and a high-power character. The piston features anodized annular grooves, adding durability and longer service intervals. The compression ratio has been unchanged at 12.75:1, but now guarantees a new maximum output of over 64 hp. The 500cc power plant is the most powerful in Husqvarna's offroad competition model range.

The piston bolt is no longer DLC coated but comes with a cube bushing offering similar performance and reliability.

- Lightweight aluminium cylinder with 95 mm bore / 72 mm stroke
- Lightweight, high-performance CP forged bridged-box-type piston reducing oscillating masses
- Unchanged compression ratio (12.75:1) but significantly increased peak performance
- Anodized annular groove, adding durability, and guaranteeing longer service intervals
- Piston bolt with cube bushing

Crankshaft

The inertia produced by the crankshaft has been carefully calculated to deliver optimal traction and ride-ability from the ultra-powerful 500cc engine. The crankshaft is specifically positioned to harness the rotating mass in the ideal centre of gravity resulting in a lightweight and agile handling feel. A plain big end bearing comprising of two force-fitted bearing shells ensure maximum reliability and durability. On top, the oil scrapper design has been significantly improved.

Crankshaft position with ideal centre of gravity, improving the handling

- Plain big end bearing and force-fitted bearing shells for advanced durability and service intervals
- Significantly improved oil scraper design on the crankcase (crankshaft)

Crankcases

The crankcases are designed to house the shaft arrangements and internals of the engine in the position that offers the best possible handling. A new steel oil pump gear, repositioned oil jets and an increased overall oil pressure, result in increased resistance against clutch overheating and improved durability. The side balancer shaft counter mass has been adopted as well. Increased mass leads to less overall vibrations from the engine.

High-pressure die cast production processes keep the overall weight to a minimum, resulting in thin wall thickness while retaining reliability. The Husqvarna crown logo gives the bronze powder coated enduro specific and noise reducing clutch cover a premium and durable look. Additional oil scrappers on the ignition cover round off the package.

- Design featuring optimised mass-centralisation and increased efficiency
- High pressure die-cast production process with thin walls for reduced weight, while maintaining strength
- New, steel oil pump gear and repositioned oil jets improving durability
- Higher oil pressure for increased resistance against clutch overheating
- New oil scrappers on the ignition cover
- Increased side balancer shaft counter mass (higher vibration comfort)
- Enduro specific clutch cover (noise reduction compared to FC models)

Gearbox

The redesigned lightweight 6-speed gearbox is produced by Pankl Racing Systems ensuring the highest level of durability and reliability. The redesign focused on a weight optimized shift shaft, reducing the operating force of gear changes. The gearbox also features a revised transmission ratio, as well as a revised primary gear ratio (29:72).

The gear lever features a design that prevents dirt build-up and keeps the lever tip in its original position even in the toughest conditions. An advanced gear sensor selects a specific engine map tailored for each gear.

The above-mentioned gear sensor is positioned on the shift drum and is now also used for the new Quickshift function, allowing clutchless upshifts (from 2nd gear up). The function can be activated/deactivated via the new QS button on the Map Select Switch, located on the left side of the handlebar.

- Redesigned 6-speed gearbox with revised transmission ratio
- Weight optimized shift shaft, reducing operating force of gear changes for smooth and precise shifting
- Quickshift sensor positioned on the shift drum allows clutchless upshifts, the function can be activated/deactivated via the QS button on the Map Select Switch on the left side of the handlebar
- Integrated gear sensor for specific engine maps for each gear

DDS clutch

The FE 501 features a Dampened Diaphragm Steel (DDS) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. It integrates a damping system for better traction and durability. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine.

The main improvement includes a better clutch cooling from the pressure lubrication, reducing clutch fade in high stress usage. The clutch basket has been redesigned and adapted for the new 6-speed transmission.

- Lightweight DDS clutch featuring consistent action and exceptional durability
- Improved clutch cooling from pressure lubrication, reducing clutch fade from high stress
- Redesigned clutch basket for adapted 6-speed transmission ratio
- Enduro specific clutch cover for reduced noise output

Exhaust

The diameter of the header pipe is now the same as on the FC 450 model. It's a reduced diameter compared to the old generation, allowing for more engine response in lower rpms but also increased peak power.

- New header pipe diameter for increased engine response and peak power

TE 150

All the latest innovations have been brought into the 2-stroke enduro competition platform and many parts of the TE 150 engine have been rearranged, modified, or developed from the ground up. With an overall weight of just 18.8 kg (incl. oil, gear lever, clutch slave cylinder), the new 150cc enduro engine sets the benchmark for youngsters, beginners and enduro riders looking for an ultra-lightweight, agile 2-stroke character.

Engine

Engine weights (incl. oil, gear lever, clutch slave cylinder, kick start → old generation):

- 2024 TE 150 18.8 kg
- 2023 TE 150 18.9 kg

The lightweight engine is designed with a focus on torque, making it easy to use for many different riders and riding preferences. The significant advantage of the new power plant comes from the new injection technology. The improved top-end rev is the immediately noticeable and feelable result. Riders can rev the engine longer and higher now, without experiencing a sudden loss of performance as felt on the older TPI engine generation.

The engine is designed to centralize rotating mass for optimal operation with the chassis resulting in a light and agile handling feel. Together with the benefits of mass centralization and reduced weight the anti-squat behaviour of the chassis was significantly improved by changing the backbone of the steel frame concept while the engine is mounted symmetrically on both sides.

An all-new Throttle Body Injection (TBI) system (Keihin 39 mm throttle body in combination with Vitesco EMS) and an electronic exhaust control was implemented on the 150cc enduro engine, allowing for a more compact engine design and free definable values for engine speed and load. The result is a tailor-made power delivery for each gear and every situation.

Another focus in development was put on the serviceability of the new 150cc enduro engine. A new oil level indicator and added service markers on the engine (▲) clearly show where to use washers, making maintenance and service easier than in the past.

A new water pump concept includes a shaft featuring a drive wheel instead of the previous centrifugal regulator and is protected by the new aluminium diecast water pump cover. The new water pump concept is shared among all 2-stroke enduro engines, making it easy for dealers to supply spare parts in the rare case it's needed.

The durability of the FE 150 swingarm bolts were significantly improved by adding a flange bushing. This setup gives the swingarm architecture the life span it deserves without keeping much attention to it in terms of service.

The changes to the engine alone make it easier to go faster and improve their riding experience for everyone, from beginners, racers to seasoned professionals.

- Pinnacle of performance → high power output, 18.8 kg
- New era with 2-stroke EFI technology (TBI)
 - Map 1 / white: a leaner map for hardpack conditions
 - Map 2 / green: richer map for loose ground like sand

- Keihin Throttle body → massive step in quality and performance compared to older generation
- Mass-centralisation → significant benefits in handling and manoeuvrability
- Improved serviceability of engine internals → added service markers

Cylinder head

The cylinder head cover now features an external water temperature sensor located within the tubing for a maximum level of accurate values. A “front” indication makes it close to impossible to mount the cylinder head the wrong way, which not only helps mechanics but also tech-savvy end customers servicing engines by themselves.

The redesigned combustion chamber inserts follow the same logic. Mixing up inserts from different models is now a thing of the past. All these details significantly improve the overall engine quality and the serviceability on dealer floors.

The 150cc specific cylinder timing and porting results in a new compression ratio for the entry-enduro model.

- “Front” indication on cylinder head → avoiding wrong installations
- Redesigned combustion chamber inserts → impossible to mix-up with insert of other models
- Enduro-specific cylinder timing and porting → enduro typical compression ratio without compromises

Cylinder

The cylinder features a 58 mm bore. The highly innovative electronical exhaust control manages the opening of both, the main exhaust and lateral exhaust ports via newly developed kinematics, activated via an actuator. On the TE 150 both the lateral exhaust ports and the main exhaust port open at the same time. The lateral exhaust ports open faster while the main exhaust port takes longer to open completely and deliver the maximum power.

The results are a much better rideability, engine control and a larger adjustability range of the engine characteristics. The power valve can be controlled according to the throttle position and engine rpms (vs. only engine rpms on mechanical system). Additionally, its auto-calibrating, meaning there is no more hassle with wrong power valve adjustments.

The machined finish on the upper contour of the exhaust port ensures accurate port timing delivering unrivalled performance in every situation.

- Electronical exhaust control → tailor-made, linear and predictable power delivery
- Machined exhaust port → outstanding performance and controllability

Crankshaft

The new crankshaft is designed with weight reduction in mind to increase the liveliness and response of the engine (approx. -300 g compared to previous generation and the same as on the TC 125 model).

The perfect balance of rotating masses is achieved by balancing the weights of the crankshaft flywheel and the new rotor. With this new weight combination, vibrations are kept to an absolute

minimum. The component is also positioned to ensure that the rotational mass created has very little effect on the handling of the motorcycle.

- New lightweight crankshaft → responsive engine character
- Combination of crankshaft and rotor → very little vibration

Crankcases

The new TE 150 engine is designed with mass centralisation and weight minimization as the main criteria. As a result, the crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity while adding the least possible weight. The casings are manufactured using a high-pressure die cast production process, resulting in thin wall thickness while retaining exceptional reliability.

The black powder coating provides additional durability and a premium look, while service markings and oil level markings improve the serviceability. Additionally, the engine is connected to the frame with symmetrical engine mounts (left and right side) resulting in an improved flex characteristic.

- Light and compact crankcase, optimised mass-centralisation
- Redesigned, symmetrical engine mounts
- Improved serviceability of engine internals with added service markers
- Optimized crank case pressure sensor: larger hose diameter, more robust against soiling with oil carbon particles, better signal quality and better engine load detection

Gearbox

The 6-speed gearbox is manufactured exclusively by Pankl Racing Systems ensuring the highest level of durability and reliability. The gearbox features specific enduro gearing while the gear lever features an innovative tip design that prevents dirt build-up. The gear shifting has been significantly improved by redesigning the shift drum and shift fork. The shift shaft is moved ca. 30 mm backwards, which improves the overall leverage and results in a smoother and more precise shift feel. A new lever design and the new transmission ventilation concept rounds off the new shift mechanism.

- 6-speed gearbox → manufactured by Pankl Racing Systems
- Redesigned shift drum and shift fork → improved leverage, more smooth and precise shifting
- Improved shifting mechanism, friction optimized in every detail → less necessary lever force

DS Clutch

The TE 150 features a Diaphragm Steel (DS) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine. A new clutch slave cylinder brings the advantage to dealers of keeping less spare parts in stock. The new design is now used among all Husqvarna enduro models.

- DS clutch → lightweight with consistent action and exceptional durability
- New clutch slave cylinder → less spare parts stock for dealers

EFI (TBI)

The Husqvarna 2-stroke enduro models come with an all-new electronics-controlled fuel injection. The Throttle Body Injection (TBI) was initially introduced with the 2023 2-stroke motocross range.

In cooperation with Keihin, we developed a 39 mm throttle body fulfilling the needs of an innovative and state of the art 2-stroke enduro injection. The ECU is supplied by Vitesco and works in harmony with the Keihin throttle body by always delivering the right amount of air-fuel mixture. Therefore, the ECU continuously analyses water temperature, air temperature, ambient pressure, pressure within the crankcase, rpm and Throttle Position (TPS) to calculate the perfect air-fuel mixture for any riding situation.

Additionally, the reed valve case received an important design update too. Newly added composite flaps on the outside of the reed valve case provide an improved sealing of the intake tract. This new design avoids fuel excess in extreme up or downhill sections, which could lead to overly rich engine settings while Boyesen Inc. continues to supply the carbon fibre reed petals inside the reed valve.

A beneficial side effect of the new electronic fuel injection and the ECU is the implementation of the innovative electronic exhaust control.

With all these innovative features it was also possible to introduce different engine maps on the 150cc enduro engine. Map 1 (white) is the standard, more lean map for hardpack conditions, while Map 2 (green) is the more rich map for added lubrication in deep soil environments. Both maps can be selected via the new 2-stroke Map Select Switch on the left side of the handlebar.

- New EFI by Keihin (39 mm throttle body) → optimal power delivery and performance in any condition
- Updated reed valve case design → guarantees right air-fuel mixture even in most extreme up or downhill sections
- New injectors with improved Sauter Mean Diameter (SMD) → smaller droplets

Oil Injection

Additionally, the ECU controls the specific amount of oil injected into the throttle body. It's not consistently a mix of 1:60 but varies pending on the riding situation and can be leaner or richer.

The new TBI injection has the big benefit of a more homogeneous fuel/air mixture due to a later oil injection compared to the older TPI engine. Now (TBI), the injection point is at the membrane flange while in the past (TPI) the position was at the throttle body. The oscillation of membranes increases the oil/fuel mix further and leads to an unreached level of atomization. As a result, the engines have a lower risk of engine seizing, a better internal combustion and a better rideability in all conditions. The drawback is a higher fuel and oil consumption.

The engine character of the TPI engines was not known for being very lively. Actually, quite often in low revs with low engine loads, "oil nests" were common, which led to delayed and sluggish engine responses. This is now a thing of the past and the new engines are much more versatile, fulfilling the needs of different rider levels and use cases. From hard enduro to classic enduro.

E-Start

The Husqvarna enduro range now comes with E-Start only. A kickstart is not in place any longer and cannot be retrofitted. The starter motor comes without any intermediate shaft, saving weight and allowing a compact engine design with perfect integration. A robust but also compact cover protects the starter motor from damages caused by roost or rocks. The 12.8V 2 Ah Lithium-Ion battery is placed under the rider's seat close to the centre of gravity. The engine can easily be put to life by pressing the new combined start/stop switch on the right side of the handlebar. A new high-quality stator and pickup is built into the TE 150 engine for improved reliability and an efficient power supply for the electronics.

- E-Start → less loss of time when stalling engine in races and improved user friendliness
- Li-Ion battery → lightweight, 1 kg lighter than a conventional battery
- High-quality stator and pickup → improved reliability / efficient power supply for electronics

TE 250

The 250cc 2-stroke engine has for long delivered the best combination of unsurpassed power and lightweight construction. The simplicity and low maintenance cost of the 2-stroke motor has made it a favourite amongst riders for generations. All the latest innovations have been brought into the 2-stroke enduro platform. Many parts of the TE 250 engine have been rearranged, modified, or developed from the ground up.

Engine

With 9.000 rpm and an overall weight of just 24.8 kg, the new TE 250 engine sets the benchmark in the competitive E1 class. The new TE 250 is the perfect 2-stroke machine to compete with 250cc 4-stroke models.

Engine weights (incl. oil, gear lever, without clutch slave cylinder):

- TE 250 2024: 24.8 kg
- TE 250 2023: 26 kg

The lightweight engine is designed to provide more torque than any previous 250cc 2-stroke engine without losing its typical-2-stroke character.

The engine is designed to centralize rotating mass for optimal operation with the chassis resulting in a light and agile handling feel. Together with the benefits of mass centralization and reduced weight, the anti-squat behaviour of the chassis was significantly improved by changing the backbone of the steel frame concept while the engine is mounted symmetrically on both sides.

An all-new throttle body fuel injection system (Keihin 39 mm throttle body in combination with Vitesco EMS) and an electronic exhaust control was implemented on the TE 250 engine, allowing for a more compact engine design and free definable values for engine speed and load. The result is a tailor-made power delivery for each gear and every situation.

Another focus in development was put on the serviceability of the new TE 250 engine. Service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past.

A new water pump concept includes a shaft featuring a drive wheel instead of the previous centrifugal regulator and is protected by the new aluminium diecast water pump cover. The new water pump concept is shared among all 2-stroke enduro engines, making it easy for dealers to supply spare parts in the rare case it's needed.

The changes to the engine alone make it easier to go faster for everyone, from beginners, racers, to seasoned professionals.

- Pinnacle of performance → high power output, 24.8 kg
- Mass-centralisation → significant benefits in handling and manoeuvrability
- Improved serviceability of engine internals → added service markers

Cylinder head

The cylinder head cover now features an external water temperature sensor located within the tubing for a maximum level of accurate values. A “front” indication makes it close to impossible to mount the cylinder head the wrong way, which will help dealers but also tech-savvy end customers servicing engines by themselves.

The redesigned combustion chamber inserts follow the same logic. Mixing up inserts from different models will be a matter of the past. All these details significantly improve the overall engine quality.

The enduro specific cylinder timing and porting results in a higher compression ratio and no compromise between the motocross and enduro range as each engine configuration is tailor made for its own use case.

- “Front” indication on cylinder head → avoiding wrong installations
- Redesigned combustion chamber inserts → impossible to mix-up with insert of other models
- Enduro-specific cylinder timing and porting → enduro typical compression ratio without compromises

Cylinder

The cylinder features a 66.4 mm bore. The highly innovative electronic exhaust control manages the opening of both, the main exhaust and lateral exhaust ports via newly developed kinematics, activated via an actuator. On the TE 250 the main exhaust port opens before the lateral exhaust port opens to deliver maximal, yet controllable power.

The results are a significantly improved rideability, engine control and a larger adjustability range of the engine characteristics (differences between the 2 engine maps).

The power valve can be controlled according to the throttle position and engine rpms (vs. only engine rpms on mechanical system). Additionally, its auto-calibrating, meaning there’s no more hassle with wrong power valve adjustments.

The machined finish on the upper contour of the exhaust port ensures accurate port timing delivering unrivalled performance in every situation.

- Electronic exhaust control → tailor-made, linear and predictable power delivery
- Machined exhaust port → Outstanding performance and controllability

Crankshaft

The crankshaft is designed with weight reduction in mind to increase the liveliness and response of the engine. The perfect balance of rotating masses is achieved by balancing the weights of the crankshaft flywheel, the new rotor and the counter balancer shaft. With a perfect combination of these components, vibrations are kept to an absolute minimum. Engine internals are also positioned to ensure that the rotational mass created has very little effect on the handling of the motorcycle.

- Lightweight crankshaft → responsive engine character
- Combination of crankshaft, rotor, and counter balancer shaft → very little vibration

Counter balancer shaft

The TE 250 features a laterally mounted counter balancer shaft. This shaft significantly reduces vibrations resulting in a smoother and more comfortable ride with less rider fatigue.

- Counter balancer shaft → significantly reduced vibration

Crankcases

The new TE 250 engine is designed with mass centralisation and weight reduction as one of the main criteria. As a result, the crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity while adding the least possible weight. The casings are manufactured using a high-pressure die cast production process, resulting in thin wall thickness while retaining exceptional reliability.

The black powder coating provides additional durability and a premium look, while service markings and oil level markings improve the serviceability. Additionally, the engine is connected to the frame with symmetrical engine mounts (left and right side) resulting in an improved flex characteristic.

- Light and compact crankcase, optimised mass-centralisation
- Redesigned, symmetrical engine mounts
- Improved serviceability of engine internals with added service markers
- Optimized crank case pressure sensor: larger hose diameter, more robust against soiling with oil carbon particles, better signal quality and better engine load detection

Gearbox

The 6-speed gearbox is manufactured exclusively by Pankl Racing Systems ensuring the highest level of durability and reliability. The gearbox features specific enduro gearing while the new gear lever features an innovative tip design that prevents dirt build-up. A new transmission ventilation concept rounds off the shift mechanism.

- 6-speed gearbox → manufactured by Pankl Racing Systems
- New gear lever → improved leverage, more smooth and precise shifting
- Improved shifting mechanism, friction optimized in every detail → less necessary lever force
- New gear ratio for model harmonization → almost identical feel to old gearing

DDS Clutch

The TE 250 features a Dampened Diaphragm Steel (DDS) clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs. It integrates a damping system for better traction and durability. The clutch basket is a single-piece CNC machined steel component that allows the use of thin steel liners and contributes to the compact design of the engine.

- DDS clutch featuring consistent action and exceptional durability
- Light action with integrated damping system, increased traction and reliability

EFI (TBI)

The Husqvarna 2-stroke enduro models come with an all-new electronics-controlled fuel injection. The Throttle Body Injection (TBI) was initially introduced with the 2023 2-stroke motocross range.

In cooperation with Keihin, we developed a 39 mm throttle body fulfilling the needs of an innovative and state of the art 2-stroke enduro injection. The ECU is supplied by Vitesco and works in harmony with the Keihin throttle body by always delivering the right amount of air-fuel mixture. Therefore, the ECU continuously analyses water temperature, air temperature, ambient pressure, pressure within the crankcase, rpm and Throttle Position (TPS) to calculate the perfect air-fuel mixture for any riding situation.

Additionally, the reed valve case received an important design update too. Newly added composite flaps on the outside of the reed valve case provide an improved sealing of the intake tract. This new design avoids fuel excess in extreme up or downhill sections, which could lead to overly rich engine settings while Boyesen Inc. continues to supply the carbon fibre reed petals inside the reed valve case.

A beneficial side effect of the new Electronic Fuel Injection and the ECU is the implementation of the innovative electronic exhaust control.

With all these innovative features it was also possible to further refine engine maps on the 250 enduro engine. Map 1 is the standard, more mellow map for linear, predictable power, while Map 2 is the more aggressive map for added throttle response and a crisper, explosive power output. Both maps can be selected via the new 2-stroke Map Select Switch on the left side of the handlebar.

- New EFI by Keihin (39 mm throttle body) → optimal power delivery and performance in any condition
- Updated reed valve case design → guarantees right air-fuel mixture even in most extreme up or downhill sections
- New injectors with improved Sauter Mean Diameter (SMD) → smaller droplets

Oil Injection

Additionally, the ECU controls the specific amount of oil injected into the throttle body. It's not consistently a mix of 1:60 but varies pending on the riding situation and can be leaner or richer.

The new TBI injection has the big benefit of a more homogeneous fuel/air mixture due to a later oil injection compared to the older TPI engine. Now (TBI), the injection point is at the membrane flange while in the past (TPI) the position was at the throttle body. The oscillation of membranes increases the oil/fuel mix further and leads to an unreached level of atomization. As a result, the engines have a lower risk of engine seizing, a better internal combustion and a better rideability in all conditions. The drawback is a higher fuel and oil consumption.

The engine character of the TPI engines was not known for being very lively. Actually, quite often in low revs with low engine loads, "oil nests" were common, which led to delayed and sluggish engine responses. This is now a thing of the past and the new engines are much more versatile, fulfilling the needs of different rider levels and use cases. From hard enduro to classic enduro.

E-Start

The Husqvarna enduro range now comes with E-Start only. A kickstart is not in place any longer and cannot be retrofitted. The starter motor comes without any intermediate shaft, saving weight and allowing a compact engine design with perfect integration. A robust but also compact cover protects the starter motor from damages caused by roost or rocks. The 12.8V 2 Ah Lithium-Ion battery is placed under the rider's seat close to the centre of gravity. The engine can easily be put to life by pressing the new combined start/stop switch on the right side of the handlebar. A new high-quality stator and pickup is built into the TE 250 engine for improved reliability and an efficient power supply for the electronics.

- E-Start → less loss of time when stalling engine in races and improved user friendliness
- Li-Ion battery → lightweight, 1 kg lighter than a conventional battery
- High-quality stator and pickup → improved reliability / efficient power supply for electronics

TE 300

The flagship TE 300 offers astonishing power in a light and agile package. While retaining exceptional reliability and low maintenance costs, the 300cc 2-stroke engine features innovative throttle body fuel injection and sets the benchmark for unrivalled power and lightweight construction. While offering the highest 2-stroke performance in the enduro range, the TE 300 is even more controllable and benefits from added convenience by eliminating the need for premixing fuel.

Engine

All the latest innovations have been brought into the 2-stroke enduro platform. Many parts of the TE 300 engine have been rearranged, modified, or developed from the ground up.

With an overall weight of just 24.6 kg, the new TE 300 engine sets the benchmark when it comes to weight/performance ratio. Many championships will see the TE 300 on top of the result sheets of the highly competitive E3 class, underlining this new era of 2-stroke technology.

The lightweight engine is designed to provide more torque than any previous 2-stroke engine, without losing its typical high-revving, lightweight 2-stroke character.

Engine weights (incl. oil, gear lever, without clutch slave cylinder):

- TE 300 2024: 24.6 kg
- TE 300 2023: 25.8 kg

The engine is designed to centralize rotating mass for optimal operation with the chassis resulting in a light and agile handling feel. The power train has been positioned in the same place as on the TE 250. Together with the benefits of mass centralization and reduced weight the anti-squat behaviour of the chassis was significantly improved by changing the backbone of the steel frame concept while the engine is mounted symmetrically on both sides.

An all-new throttle body fuel injection system (Keihin 39 mm throttle body in combination with Vitesco EMS) and an electronic exhaust control was implemented on the TE 300 engine, allowing for a more compact engine design and free definable values for engine speed and load. The result is a tailor-made power delivery for each gear and every situation.

Another focus in development was put on the serviceability of the new TE 300 engine. Service markers on the engine (▲) clearly show where to use washers, making maintenance and service easier than in the past.

A new water pump concept includes a shaft featuring a drive wheel instead of the previous centrifugal regulator and is protected by the new aluminium diecast water pump cover. The new water pump concept is shared among all 2-stroke enduro engines, making it easy for dealers to supply spare parts in the rare case it's needed.

- Pinnacle of performance → high power output, 24.6 kg
- Mass-centralisation → significant benefits in handling and manoeuvrability
- Improved serviceability of engine internals → added service markers

Cylinder head

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Cylinder

The cylinder features a 72 mm bore. The highly innovative electronical exhaust control manages the opening of both the main exhaust and lateral exhaust ports via newly developed kinematics, activated via an actuator. On the TE 300 the main exhaust port opens before the lateral exhaust port opens to deliver maximum, yet controllable power.

The results are a significantly improved rideability, engine control and a larger adjustability range of the engine characteristics (differences between the 2 engine maps).

The power valve can be controlled according to the throttle position and engine rpms (vs. only engine rpms on mechanical system). Additionally, its auto-calibrating, meaning there is no more hassle with wrong power valve adjustments.

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Technical Accessories

Available now from your local Husqvarna Motorcycles dealership is a competition-focused collection of high-quality Technical Accessories. Every component has been carefully designed to enhance the performance, style, and protection of each model in the all-new enduro line-up.

Factory Racing Triple Clamp

Personalise the handling of the FE and TE machines with the Factory Racing Triple Clamp. Engineered to ensure 100% fork alignment with no ovalisation, a highly precise and smooth fork action together with improved stability is guaranteed. The CNC-machined aluminium triple clamp offers two offset options for personalised ergonomics – a 20 mm option makes the machine more stable at high speed while the 22 mm alternative offers faster cornering. Complete with the steering stem and lower bearing already installed, the Factory Racing Triple Clamp is easy to fit and available with either a black or blue anodised finish.

Akrapovič "Racing Line"

Unlocking further torque and performance from all FE models, the Akrapovič "Racing Line" is a bolt-on solution for boosting power and saving weight. The header pipe, manufactured from durable stainless steel, is optimally routed from the exhaust manifold to improve throttle response while the titanium silencer creates a rich exhaust note that complies with all current FIM and AMA sound regulations.

Factory Wheel Set

The Factory Wheel Set provides increased strength and stability across challenging terrain. The hubs are milled from one piece of aluminium then anodised blue before being laced to black D.I.D DirtStar rims using strong spokes. Undoubtedly, the Factory Wheel Set is an essential, durable, and performance-enhancing upgrade for those competing at the highest levels of racing.

Skid Plate with Linkage Protection

Manufactured using injection moulded plastic ensures the Skid Plate offers substantial protection for the engine and frame while the extended linkage guard allows the machine to glide over obstacles. Offering a light and durable construction, the Skid Plate has been developed and endurance tested for use in the most challenging offroad conditions.

Factory Racing Brake Disc Guard

To ensure the lowest possible weight, state-of-the-art, injection molding technology is used to blend carbon fiber and plastic to manufacture the Factory Racing Brake Disc Guard. In addition to protecting the disc from damage to maintain braking performance, the guard features an integrated spacer for fast wheel changes without needing to remove the cover.

Brake Caliper Support with Brake Disc Guard

Particularly effective in hard enduro when negotiating rocks and extreme obstacles, the Brake Caliper Support with Brake Disc Guard protects the rear disc from damage. This maintains full operation of the brake and thanks to its CNC milled aluminium construction, the guard is incredibly lightweight.

Radiator Fan

Channelling cool air through the radiators when they need it most, the Radiator Fan, with its customisable switch-on temperature setting, is an essential upgrade for riders who compete in hard enduro or regularly compete in tough conditions.

Functional Apparel

Designed and developed for serious offroad riding, Husqvarna Motorcycles provides a quality collection of protective, functional clothing made with the latest safety and fabric technologies for assured comfort, durability, and protection.

Moto-9 MIPS® Gotland Helmet

A high quality offroad helmet designed for competing at the highest level, the Moto-9 MIPS® Gotland Helmet offers an optimal fit and is complete with multiple safety features for maximum protection. Comfort and cooling are assured thanks to the efficient ventilation system with the interior liner easily removed for regular washing. Made by Bell Helmets exclusively for Husqvarna Motorcycles.

Velocity 5.5 Goggles

The Velocity 5.5 Goggles, made exclusively for Husqvarna Motorcycles by leading protection brand, Leatt, feature an incredibly strong, anti-fog and anti-scratch polycarbonate lens which offers an unrestricted field of vision and protects against harmful UVA, UVB, and UVC rays. A three-layer face foam wicks away sweat while the easily removable nose guard offers additional face protection.

Gotland Shirt

Available in either black or blue, the Gotland Shirt is a lightweight, premium offroad jersey constructed with moisture-wicking fabrics. With a modern fit offering unrestricted movement on the motorcycle, enhanced comfort is assured thanks to perforated ventilation zones which channel cool air onto the rider. Further technical features include a chest pocket and foam padding on the elbows.

Gotland Pants

Built to stand up to the toughest use, strategically placed mesh panels channel in cool air to keep riders comfortable. Featuring a nylon/polyester blend, the pants are further reinforced with Cordura to create a durable fabric. Complete with heatproof inner knee sections and with elasticated panels ensuring a comfortable fit, the lightweight Gotland Pants are undoubtedly made to a very high standard.

Gotland Jacket

This lightweight and versatile jacket offers removable sleeves, internal and external pockets, and is highly breathable thanks to adjustable inlets on the front and rear. Together with pre-curved sleeves for a non-restrictive fit, the Gotland Jacket is an essential piece of apparel for all enduro riders.

Crossfire 3 SRS Boots

With premium build quality and offering serious protection, the Crossfire 3 SRS Boots are designed to perform and protect. Fully adjustable to ensure a personalised and comfortable fit, these boots are made exclusively for Husqvarna Motorcycles by leading Italian brand Sidi.