

## Husqvarna Motorcycles – Heritage Enduro Model Year 2023

### Media Information

Celebrating the long tradition of Husqvarna Motorcycles competing at the highest level of enduro racing, a limited run of Heritage enduro machines with a distinctive, vintage-inspired colour scheme has been created to pay tribute to the rich history of the brand and commemorate its strong Swedish heritage.

All designed to compete at the highest levels of enduro racing, each model across the range is distinctly competition-focused. With four 4-stroke and three 2-stroke models available, Husqvarna Motorcycles' enduro machines inspire riders of all abilities to succeed in their chosen discipline.

Expertly assembled with the latest electronic rider aids and premium aftermarket components, all FE and TE Heritage machines deliver best-in-class rideability. With class-leading WP suspension, agile and stable frames, lightweight cast swingarms, and a reliable electric starter, the 2023 Heritage enduro range sets the standard for high-performance enduro machinery.

### 2023 Technical Highlights

- New Husqvarna Racing heritage-inspired graphics
- New high-strength EXCEL alloy rims provide excellent durability and a premium finish
- A two-piece carbon fibre composite subframe weighs just over 1 kg and is a major contributor to outstanding handling and rider comfort
- WP XPLOR front forks and WP XACT rear shock for consistent damping and exceptional handling
- Two Electronic Fuel Injection (EFI) maps on 4-stroke models plus Traction Control
- Two selectable ignition curves and automatic fuelling adjustment on 2-strokes
- Advanced linkage progression, shared with the Husqvarna motocross range, for optimum control and comfort
- Pankl Racing Systems 6-speed gearbox with enduro specific ratios
- Unparalleled attention to detail and high-quality components ensure an exceptional riding experience
- Class-leading Michelin Enduro tyres as used by Husqvarna Factory Racing for superior traction

## Features and benefits

### Frame

The chrome-moly steel frame is expertly crafted using hydro-formed tubes which are laser-cut and robot-welded to ensure the highest level of precision and quality. The specifically calculated geometry utilises advanced longitudinal and torsional flex characteristics, for unparalleled rider feedback, energy absorption, and exceptional straight-line stability.

The forged aluminium cylinder head mountings on all models deliver optimal handling characteristics and comfort. The frame is finished off in a premium white powder coating with standard frame protectors guaranteeing superior protection and durability.

- Advanced longitudinal and torsional flex characteristics → unparalleled rider feedback, energy absorption, and exceptional straight-line stability
- Forged aluminium cylinder head mountings on all models
- Durable powder coated finish with standard frame protectors

### Composite carbon fibre subframe

Unique to Husqvarna Motorcycles, the carbon composite subframe showcases advanced production technologies and innovation. Using 70% polyamide and 30% carbon fibre, the 2-piece subframe has a total weight of just over 1 kg. With the help of computational dynamics, specific rigidity was engineered into the light and robust subframe, delivering outstanding handling and rider comfort.

- 2-piece subframe → weighs just over 1 kg
- Carbon fibre composite construction → lightweight and robust
- Specific rigidity characteristics → exceptional handling and comfort

### Swingarm

The hollow, cast aluminium swingarm offers optimal stiffness and reliability at the lightest possible weight. Specific machining allows for the chain adjustment markings to be seen from above for easy maintenance.

- Optimal stiffness and reliability in a lightweight construction

### WP XPLOR fork

The WP XPLOR front forks are a 48 mm spring type design with split compression and rebound functions meaning compression is set-up on the left leg, with rebound adjusted on the right leg. Adjustments can be made by hand using easy to access clickers (30 clicks) located on the top of each fork leg. Additionally, the standard preload adjusters allow for a 3-way preload adjustment without the use of tools.

Offering unsurpassed performance and comfort, the XPLOR forks feature an advanced mid-valve piston delivering consistent damping while the design allows the fork to operate higher in the stroke for exceptional rider feedback and bottoming resistance. An oil bypass in the outer tube reduces friction for a smooth, consistent travel through the stroke.

- WP XPLOR front fork → 48 mm spring type with split damping function
- Easy access preload adjusters

- Advanced mid-valve piston and setting → superior performance, feel and comfort

### CNC machined triple clamps

The 22 mm offset black anodised CNC machined triple clamps on all Husqvarna enduro models are premium quality. The triple clamps are expertly crafted using superior techniques and materials to provide high levels of strength, flex, and reliability. A 2-way handlebar adjustment allows for customisable ergonomics.

- CNC machined aluminium triple clamps → finest quality and reliability
- Adjustable handlebar position → customisable ergonomics

### WP XACT rear shock

The WP XACT shock provides advanced damping characteristics while offering a compact and lightweight design. With a pressure balance inside the shock, damping is consistent resulting in superior rider comfort and handling.

Using the same linkage progression as found in the Husqvarna Motocross range, the rear end sits low for optimal control and comfort in extreme enduro conditions. The shock is fully adjustable and delivers unrivalled traction, feel, and energy absorption. The rear wheel travel is 300 mm.

- Advanced linkage progression → exceptional control and comfort
- Pressure balance inside the shock → consistent damping
- 300 mm wheel travel

### BRAKTEC hydraulic clutch

The high quality and reliable BRAKTEC clutch system guarantees even wear, near maintenance-free operation, as well as perfect action in all conditions. Free play is constantly compensated so that the pressure point, and function of the clutch, remains identical in cold or hot conditions, as well as over time.

- BRAKTEC hydraulic clutch → perfect action in every condition

### BRAKTEC Brakes

The highest level of quality is guaranteed with the BRAKTEC braking system which has been specifically tailored for enduro riding and offers exceptional performance with a sensitive feel at the levers.

The front brake features an 11 mm master cylinder, a monoblock 2 x 25 mm piston calliper, and a 260 mm waved brake disc by GSK while the rear brake has a 12.7 mm master cylinder and a 25 mm piston calliper with a 220 mm rear disc by GSK. The cast aluminium brake system keeps weight to a minimum while offering complete braking confidence and superior stopping power in all conditions.

- BRAKTEC brake system and high-performance GSK discs → superior stopping power with outstanding performance and sensitivity

### 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 the lowest possible weight with chemically applied scratch and peel resistant logos.

- ProTaper handlebar → class-leading function and style

### Grips and throttle assembly

The ODI lock-on grip on the left side does not require gluing while the throttle tube features an innovative, integrated throttle mechanism with a vulcanised grip. The assembly has easy free-play adjustment and, by changing a cam, throttle progression can be altered.

- Throttle assembly and ODI grips → easily alter throttle progression; easy grip mounting without glue

### Map switch, traction control

Designed for easy operation, the map switch found on all 4-stroke models selects between two Electronic Fuel Injection (EFI) maps and activates the traction control feature. Traction control offers improved grip and control on slick terrain.

Traction control is activated from the switch and functions by analysing throttle input from the rider and the rate at which the RPM increases in the engine. 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 for maximum traction.

Additionally, all 2-strokes are also fitted with a standard map switch allowing selection between two ignition curves based on conditions or rider preference.

- Handlebar map switch → alters engine characteristics according to conditions and rider preference
- Traction control → optimal traction in all conditions

### Engine Management System (EMS)

Apart from controlling EFI parameters on the 4-strokes, the Hitachi-Astemo (formerly Keihin) EMS features selectable engine maps via the switch on the handlebar as well as traction control. Combined with the gear sensor, power delivery is tailored for each gear.

- Hitachi-Astemo EMS → smaller, lighter and faster at processing engine data for more efficient engine management
- Gear sensor → specific engine maps for each gear

On the 2-strokes, the EMS features an Electronic Control Unit (ECU) which is responsible for several functions. The unit determines the ignition timing, the amount of fuel and oil injected, and receives information from the throttle position, ambient air, intake pressure, crankcase pressure, and water temperature sensors, adapting values and making corrections according to outside temperature and altitude. This means there is no longer the need to change carburettor jetting as in the past.

- 2-stroke EMS → modern Engine Management System eliminates the need for jetting changes

### Throttle body

The 4-stroke range features a 42 mm Hitachi-Astemo throttle body. The injector is positioned to ensure the most efficient flow into the combustion chamber while to ensure optimal throttle response, the throttle cable is mounted directly without a linkage for instant response.

- Throttle body → 42 mm, injector positioned for optimal flow, instant throttle response thanks to direct cable mounting

The 2-strokes use a 39 mm throttle body which regulates the amount of air entering the engine and is controlled by dual throttle cables connected to the handlebar throttle assembly. Unlike 4-stroke throttle bodies, fuel is not introduced at this point, but rather 2-stroke oil is mixed with the air entering the engine to lubricate the crankshaft, cylinder, and piston. Additionally, a Throttle Position Sensor (TPS) relays airflow data to the ECU which in turn calculates the amount of oil and fuel delivered to the engine. A bypass screw regulates the idling speed and a cold start device opens a bypass providing more air when starting in cold conditions.

- 39 mm throttle body → regulates air flow, TPS relays airflow data

### Exhaust system

Tailored specifically for each model using an innovative 3D design process, the 2-stroke header pipes feature advanced geometry and performance. The header pipe on the TE 250 Heritage and TE 300 Heritage offers more ground clearance making it less susceptible to damage while a corrugated surface makes it much more resistant to impacts from other hazards found on the enduro trail. The 2-stroke mufflers also feature an aluminium mounting bracket and advanced internal construction for excellent sound damping and weight saving.

The 4-stroke exhaust system is expertly designed to deliver class-leading performance at the lowest possible weight. The header pipe is manufactured in two pieces to be as compact as possible, and the joining position allows it to be removed without needing to take out the rear shock. Further innovation allows for a short, compact silencer without increasing sound levels. The component is crafted from lightweight aluminium and is stylishly finished with a black coating to highlight its premium quality.

- Corrugated surface on TE 250 Heritage and TE 300 Heritage header pipe → more durable against damage
- Header joining position on 4-stroke → remove without removing rear shock

### Electric start and wiring harness

All TE and FE Heritage models are fitted with a reliable electric starter. The system uses a compact and lightweight Li-Ion battery which is 1 kg lighter than a conventional battery. After several years of development, the proven consistency of the electric starter ensures quick and easy starting in all conditions.

Additionally, the wiring harness concentrates all electrical components into one area below the seat for easy accessibility.

### Integrated cooling system and radiators

The radiators are expertly crafted using high-strength aluminium with Computational Fluid Dynamics (CFD) to channel air through more efficiently. The cooling system is cleverly integrated into the frame, eliminating the need for additional hoses. The large centre tube running through the frame reduces pressure at this point and allows for a consistent flow of coolant.

Additionally, the radiators are mounted close to the centre of gravity for improved handling agility. All 4-stroke models are fitted with radiator fans as standard, with all 2-stroke machines featuring mounting holes ready for a fan from the Technical Accessories range to be installed.

- Integrated cooling → maximum efficiency
- Large central tube → consistent coolant flow

### Fuel tank

The 8.5 litre polythene fuel tanks incorporate a quick release filler cap and an integrated fuel pump. The fuel pump features internal line routing directly from the pump to the flange for optimal fuel flow. Additionally, the external fuel line is specifically positioned to make it less exposed and susceptible to damage. A fuel level sensor is incorporated on all models.

### Airbox and tool-less air filter access

The airbox is designed with precisely positioned inlet ducts aimed at preventing air deformation ensuring 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 that features a simple fail proof mounting system for safe and accurate filter installation.

- Airbox → maximum air flow and filter protection
- Filter mounting system → safe and accurate protection against dirt
- Tool-less filter access → easy and fast maintenance

### Wheels

Black anodised EXCEL rims are made from high-strength aluminium and laced 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 Heritage enduro range features Michelin enduro tyres as used by Husqvarna Factory Racing. The FIM approved tyres offer exceptional grip in a wide variety of different terrain and riding conditions.

- Michelin Enduro tyres → advanced grip in all conditions

## Bodywork

The Heritage machines feature a distinctive white, blue and yellow colour scheme inspired by the Swedish legacy of the brand.

The ergonomics are specifically tailored to deliver exceptional comfort and control. As a result of extensive testing, the slim contact points make shifting between riding positions easier and offer all riders complete freedom of movement.

The flat seat profile, together with the seat cover texture, deliver superior comfort and control in all conditions.

- Progressive bodywork → with distinctive graphics inspired by the Swedish heritage of the brand
- Ergonomics → confidence-inspiring riding position in all riding situations
- Seat → flat seat profile for exceptional comfort and control in all conditions

## Technical information by model

### FE 250 Heritage

The FE 250 Heritage is the smallest capacity 4-stroke in the enduro line-up. The small engine size means it is very lightweight and shines in tough, technical terrain while delivering a torquey and manageable power delivery. Combined with class leading WP suspension, selectable engine maps, and a BRAKTEC hydraulic clutch, the FE 250 Heritage features an array of premium components for unsurpassed quality and reliability.

#### Engine

The 250cc engine is designed to be powerful, light, and compact. All major components and shaft arrangements are carefully positioned to best suit the performance and handling characteristics of the overall package. As a result, the engine weighs only 27.9 kg while retaining its torquey nature, making the FE 250 Heritage accessible for both professionals and amateurs.

- Engine design → light and compact for optimised mass-centralisation
- Powerful engine → accessible for all skill levels

#### Cylinder head

The cylinder head features advanced technology aimed at reducing weight and drag from the low friction surface upon which the twin overhead camshafts rotate. The four lightweight titanium valves - intake 32.5 mm, exhaust 26.5 mm - are actuated by Diamond Like Carbon (DLC) coated finger followers. This aids the engine to rev freely while maintaining smooth, efficient power throughout the rpm range.

- Cylinder head → minimum drag for maximum performance
- Finger followers with DLC coating → reduced friction, increased performance

#### Cylinder and piston

The cylinder is taken from the proven FC 250 motocross model and features the same 78 mm bore. It also houses a forged bridged-box-type piston which is professionally engineered from high-strength aluminium. The compression ratio of 13.8:1, in combination with the state-of-the-art cylinder, provides outstanding performance and reliability.

- State-of-the-art cylinder → optimal compression ratio and engine performance
- Forged bridged-box-type piston → low weight, low oscillating mass

#### Crankshaft

The plain big end bearing features two force-fitted bearing shells ensuring maximum reliability and durability, guaranteeing long service intervals of 135 hours.

- Plain big end bearing with force-fitted bearing shells → 135-hour service interval



### Counter balancer shaft

In order to counteract the rotational force of the crankshaft and reduce vibration, the FE 250 Heritage engine uses a multifunctional counter balancer shaft which also drives the water pump and timing chain.

- Multifunctional counter balancer shaft → reduced vibrations, compact design

### Crankcases

The FE 250 Heritage engine is designed to be compact while centralising rotating masses. As a result, the crankcases are engineered to house the shaft arrangements at the ideal centre of gravity and provide an oil supply to the main bearings. The casings are manufactured using a high-pressure die cast production process and are optimised for minimal weight while retaining exceptional reliability. The iconic Husqvarna logo adorns the bronze finished clutch cover.

- Crankcases → light and compact, aiding mass-centralisation
- High pressure die-cast production process → minimal weight while maintaining strength

### Gearbox

The 6-speed gearbox from Pankl Racing Systems features an enduro specific gear ratio. Additionally, a gear sensor allows the Engine Management System (EMS) to engage a specific engine map designed for each gear.

- Pankl 6-speed gearbox → enduro specific gear ratio
- No-dirt gear lever → prevents dirt build up for precise shifting

### DDS clutch

The FE 250 Heritage 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 for a very light feel at the lever. An integrated damping system offers 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 BRAKTEC hydraulic system ensures perfect action in all conditions.

- DDS clutch → compact and reliable
- BRAKTEC hydraulic system → perfect clutch action

### Benefits

- Class leading performance and weight
- Centralised mass for top-level handling and manoeuvrability
- Advanced electronics for unsurpassed usability
- Hydraulic clutch and reliable gearbox for precise and smooth shifting
- Dependable electric start

## **FE 350 Heritage**

The FE 350 Heritage is known for its versatility on all types of terrain. With a lightweight chassis and proven performance, the FE 350 Heritage possesses a 450-rivalling power-to-weight ratio and the light and agile feel of a 250. Combined with WP suspension, traction control, and comfortable ergonomics, the FE 350 Heritage is second to none when the going gets tough.

### Engine

The DOHC 350cc engine is second to none in terms of versatility. Sharing much of its architecture with the FE 250 Heritage engine, the FE 350 Heritage offers a significant increase in power and torque while retaining a lightweight character.

- Performance, weight, mass centralisation → exceptional rideability
- Lightweight and compact → 450 rivalling power-to-weight ratio

### Cylinder head

The FE 350 Heritage features an advanced DOHC cylinder head layout meticulously engineered to deliver performance and reliability. Internally, the DOHC layout features polished camshafts and low-friction DLC coated finger followers. Together with the lightweight steel valves - 36.3 mm intake and 29.1 mm exhaust - they aid in delivering optimal performance.

- Lightweight steel valves → 36.3 mm intake and 29.1 mm exhaust
- Polished camshafts and finger followers with DLC coating → minimal friction

### Cylinder and piston

The 88 mm bore and 57.5 mm stroke cylinder features a compression ratio of 13.5:1 and a lightweight, forged bridged-box-type piston. As a result, the low oscillating mass delivers exceptional power, high revs, and a versatile power delivery.

- Lightweight bridged-box-type piston → reduces oscillating masses
- 13.5:1 compression ratio → high performance and versatile power

### Crankshaft

The crankshaft is optimised for overall reliability to guarantee long service intervals of 135 hours. This has been made possible by a bushing-type bearing at the connecting rod and two force-fitted bearing shells at the big-end bearing. Additionally, an oil supply to the main bearing is integrated within the engine casing.

- Bushing-type bearing on connecting rod → maximum reliability
- Plain big end bearing with force-fitted bearing shells → 135-hour service interval

### Counter balancer shaft

In order to counteract the rotational force of the crankshaft and reduce vibration, the FE 350 Heritage engine uses a multifunctional counter balancer shaft which also drives the water pump and timing chain.

- Multifunctional counter balancer shaft → reduced vibrations, compact design

## Crankcases

The engine cases are engineered to house the shaft arrangements at the ideal centre of gravity. The casings are manufactured using a high-pressure die cast production process, resulting in thin wall thickness while retaining exceptional reliability. The iconic Husqvarna logo adorns the bronze finished clutch cover.

- Crankcases → light and compact for mass-centralisation
- High pressure die cast production process → thin walls for reduced weight while maintaining strength

## Gearbox

The 6-speed gearbox from Pankl Racing Systems uses an enduro specific gear ratio. Additionally, a gear sensor allows the Engine Management System (EMS) to engage a specific engine map suited to each gear.

- Pankl 6-speed gearbox → enduro specific ratios
- No-dirt gear lever → prevents dirt build up for perfect control

## DDS clutch

The FE 350 Heritage 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 for a very light feel at the lever. An integrated damping system offers 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 BRAKTEC hydraulic system ensures perfect action in all conditions.

- DDS clutch → compact and durable
- BRAKTEC hydraulic system → perfect clutch action

## Benefits

- 450 performance with added manoeuvrability
- 250 manoeuvrability and agility
- Standard map switch and traction control
- BRAKTEC hydraulic clutch for consistent, maintenance-free operation

## **FE 450 Heritage**

The FE 450 Heritage features class leading technology and premium components as standard. The chromium molybdenum frame is expertly crafted to offer the ideal amount of flex while the powerful engine has all shaft arrangements positioned to enhance mass centralisation and handling. Combined with traction control, WP suspension, and a progressive rear linkage, the FE 450 Heritage holds no compromise in pure enduro performance and precision.

### Engine

Weighing only 29.2 kg, the 450cc engine is not only light and compact but features the latest technology available for unequalled performance, rideability, and reliability. Additionally, the engine is designed specifically for enduro riding with an electric start, 6-speed wide ratio gearbox, and an array of electronic rider aids.

- Engine → lightweight and compact
- Class leading electronics → traction control, selectable engine maps

### Cylinder head

The SOHC cylinder head is incredibly compact and lightweight with the camshaft located as close to the centre of gravity as possible for significantly improved handling and agility. The valves are actuated via a rocker arm and feature timing specifically designed to deliver precise levels of torque and throttle response. A low-friction DLC coating on the rocker arm and low-friction chain guides offer the optimum efficiency and reliability.

- SOHC cylinder head → compact, low weight design, camshaft close to centre of gravity
- DLC coating and low friction chain guides → low friction
- Lightweight valves → 40 mm titanium intake and 33 mm steel exhaust valves

### Cylinder and piston

The lightweight aluminium cylinder features a 95 mm bore and a lightweight Konig forged bridge-box-type piston. This is perfectly matched to the high compression combustion chamber which produces very little oscillating mass. The high compression ratio of 12.75:1 reduces vibration and engine knocking, further increasing rider control and comfort.

- Lightweight aluminium cylinder → 95 mm bore
- Lightweight forged bridged-box-type piston by Konig → high performance, reduced oscillating masses

### Crankshaft

A plain big end bearing comprising two force-fitted bearing shells ensures maximum reliability and durability, guaranteeing long service intervals of 135 hours.

- Plain big end bearing and force-fitted bearing shells → increased durability and service intervals

### Counter balancer shaft

In order to counteract the rotational force of the crankshaft and reduce vibration, the FE 450 Heritage engine uses a multifunctional counter balancer shaft which also drives the water pump.

- Multifunctional counter balancer shaft → reduced vibrations, compact design

### Crankcases

The crankcases are designed to house the shaft arrangements and internals of the engine in the best possible position to centralise mass for a lightweight handling feel. High-pressure die cast production processes result in a thin but reliable wall thickness and keep weight to a minimum.

- State-of-the-art design → mass-centralisation for lightweight handling
- High pressure die-cast production process → thin walls for optimised weight, while maintaining strength

### Gearbox

The lightweight 6-speed gearbox ensures smooth and precise shifting thanks to a low friction coating on the shifting fork. 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, while a gear sensor engages specific engine maps for each gear.

- 6-speed gearbox → lightweight with specific engine maps for each gear
- Fork coating → smooth and precise shifting

### DDS clutch

The FE 450 Heritage 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 making the clutch pull very light while the integrated damping system improves 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 BRAKTEC hydraulic system ensures perfect action in all conditions.

- DDS clutch → compact with improved durability
- BRAKTEC hydraulic system → perfect clutch action

### Benefits

- Class leading performance and reliability
- Intuitive and confidence-inspiring riding experience
- Advanced electronics include traction control and adjustable engine maps
- Exclusive DDS clutch with BRAKTEC hydraulics for smooth and light clutch action
- Electric starter and compact Li-Ion battery

## **FE 501 Heritage**

The FE 501 Heritage houses the most powerful engine in the enduro range from Husqvarna Motorcycles. With large moving components, vibration is kept to a minimum through a counter balancer shaft while a map select switch changes the power characteristics to suit the terrain or rider preference. High quality finishes and premium components ensure the FE 501 Heritage meets the highest level of quality and craftsmanship.

### Engine

The 510.9cc engine produces incredibly usable power while weighing just 29.4 kg. Delivering high performance, the FE 501 Heritage can be tamed using a number of advanced electronic rider aids such as traction control, and by choosing from two map settings using the handlebar-mounted map select switch. These options tailor the power to suit varying terrain and allow riders to activate their preferred setting.

- Engine → light and powerful
- Class leading electronics → Hitachi-Astemo EFI, traction control

### Cylinder head

The SOHC cylinder head is incredibly compact and lightweight with the camshaft located as close to the centre of gravity as possible for significantly improved handling and agility. The lightweight valves are actuated via a rocker arm and feature timing specifically designed to deliver precise levels of torque and throttle response. A low-friction DLC coating on the rocker arm and low-friction chain guides offer the optimum efficiency and reliability.

- SOHC cylinder head → compact design, camshaft close to centre of gravity
- DLC coating & low friction chain guides → low friction
- Lightweight valves → 40 mm titanium intake and 33 mm steel exhaust valves

### Cylinder and piston

The lightweight aluminium cylinder features a 95 mm bore and a lightweight Konig forged bridge-box-type piston. This is perfectly matched to the high compression combustion chamber, producing very little oscillating mass. The high compression ratio of 12.75:1 reduces vibration and engine knocking, further increasing rider control and comfort.

- Lightweight aluminium cylinder → 95 mm bore
- Lightweight forged bridged-box-type piston by Konig → high performance, reduced oscillating masses

### Crankshaft

A plain big end bearing comprising two force-fitted bearing shells ensure maximum reliability and durability, guaranteeing long service intervals of 135 hours.

- Plain big end bearing and force-fitted bearing shells → increased durability and service intervals

### Counter balancer shaft

In order to counteract the rotational force of the crankshaft and reduce vibration, the FE 501 Heritage engine uses a multifunctional counter balancer shaft which also drives the water pump.

- Multifunctional counter balancer shaft → reduced vibrations, compact design

### Crankcases

The crankcases are designed to house the shaft arrangements and internals of the engine in the best possible position, centralising masses for a lightweight handling feel. High-pressure die cast production processes ensure a thin but reliable wall thickness while keeping weight to a minimum.

- Compact design → mass-centralisation, lightweight handling
- High pressure die-cast production process → thin walls for optimised weight, while maintaining strength

### Gearbox

The lightweight 6-speed gearbox ensures smooth and precise shifting thanks to a low friction coating on the shifting fork. 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, while a gear sensor engages specific engine maps designed for each gear.

- 6-speed gearbox → Lightweight
- Fork coating → smooth and precise shifting
- Gear sensor → specific engine maps designed for each gear

### DDS clutch

The FE 501 Heritage 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 making the clutch pull very light while the integrated damping system improves 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 BRAKTEC hydraulic system ensures perfect action in all conditions.

- DDS clutch → compact with improved durability
- BRAKTEC hydraulic system → perfect clutch action

### Benefits

- Most powerful Husqvarna enduro engine available
- Intuitive and confidence-inspiring riding experience
- Advanced electronics include traction control and adjustable engine maps
- Exclusive DDS clutch with BRAKTEC hydraulics for smooth and light clutch action
- Electric starter and compact Li-Ion battery

## **TE 150 Heritage**

Harnessing the ethos of a lightweight and nimble 2-stroke character, the TE 150 Heritage features the latest 2-stroke fuel injection technology giving it all the convenience of a modern 4-stroke at a fraction of the weight. The TE 150 Heritage is fitted with an electric starter for easy starting, even in the toughest of situations. Additionally, the chassis offers precise flex characteristics, and in combination with WP suspension offers advanced handling characteristics and comfort in the most challenging conditions.

### Engine

Using the latest 2-stroke fuel injection technology, the TE 150 Heritage has all the convenience of modern 4-stroke engines with no need to premix fuel or adjust the jetting at different altitudes or temperatures. The engine uses specific shaft arrangements designed to harness the rotating mass of the engine in the ideal centre of gravity. The lightweight and compact engine provides a powerful, enduro specific power delivery while maintaining the inherent low-cost maintenance of a 2-stroke.

- Latest generation 2-stroke → Fuel injection, powerful, light, and compact
- Mass-centralisation → significant benefits in handling and manoeuvrability

### Cylinder and piston

The cylinder features a 58 mm bore which features an innovative power valve design that delivers controllable power throughout the RPM range. The piston is designed to perfectly match the combustion chamber contour delivering the highest level of 2-stroke performance.

Additionally, the cylinder features two inlet positions located on the transfer ports at the rear of the cylinder where a pair of fuel injectors are mounted. The injectors deliver the fuel downwards into the transfer port which guarantees excellent atomisation with the air travelling upward to the combustion chamber. This ensures a more efficient combustion resulting in reduced fuel consumption and emissions.

- Cylinder and piston → Optimal combustion chamber contour
- Fuel injection → increased efficiency and reduced emissions

### Crankshaft

With a 54.5 mm stroke, the crankshaft is perfectly balanced to reduce vibrations. The weighted flywheel attached to the crankshaft provides abundant torque and controllable enduro specific power while the large alternator provides all the power needed for the EFI system.

- Lightweight crankshaft → very little vibration
- Large alternator → ample electrical power to power EFI system

### Crankcases

The crankcases are manufactured using a high-pressure die cast production process for a thin wall thickness and minimal weight. To centralise mass, the layout features a shaft arrangement precisely positioned to harness rotating masses at the ideal centre of gravity. The reed block features optimised carbon reeds for improved sealing.

- High pressure die-cast production process → thin walls and low weight



- Shaft arrangement → ideal mass centralization

### Oil tank and pump

The TE 150 Heritage features an electronic oil pump which feeds vital 2-stroke oil into the engine to keep it lubricated. The pump is located just below the oil tank and feeds the engine oil via the throttle body, meaning it is not mixed with the fuel which eliminates the need for pre-mixing as on traditional 2-stroke engines. The pump is controlled by the Engine Management System (EMS) and delivers the optimal amount of oil according to the current RPM and engine load which reduces waste, as well as prevents excessive smoke being transmitted from the exhaust.

The oil tank is located beneath the fuel tank and is connected to a filler hose which runs through the upper member of the frame to a filler cap conveniently located for easy refills. The tank capacity is 0.7 litres and is fitted with a sensor which illuminates when the oil level is low.

- Oil pump and tank → convenient solution, eliminates pre-mix

### Gearbox

The TE 150 Heritage is fitted with a Pankl 6-speed gearbox. With enduro specific gear ratios tailored to the power delivery of the TE 150 Heritage, an innovative gear level reduces dirt build up ensuring perfect operation in all conditions.

- Pankl 6-speed gearbox → enduro specific gearing
- Innovative gear lever → prevents dirt build up for precise shifting at all times

### DS clutch

The TE 150 Heritage 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.

- DS clutch → excellent action and durability

### Benefits

- Continuous 2-stroke development offering maximum performance and low running costs
- Low weight and agile handling
- Hydraulic clutch
- High quality standard components

## **TE 250 Heritage**

The TE 250 Heritage offers the perfect balance between usable 2-stroke power, nimble handling, and the very best aftermarket components. Featuring the latest in electronic fuel injection technology, the standard for 2-stroke offroad competition motorcycles has been redefined. The TE 250 Heritage is 2-stroke simplicity at its finest and in addition its proven capabilities on the trail, it offers low running costs and reduced emissions.

### Engine

The 250cc 2-stroke continues to offer the best combination of unsurpassed power and a lightweight construction. The simplicity and low maintenance cost of the 2-stroke motor has made it a favourite amongst enduro riders for generations. The TE 250 Heritage features an advanced electronic fuel injection system comprising a set of fuel injectors positioned at the transfer ports which deliver the ideal amount of fuel to the engine in every situation. This not only reduces fuel consumption and emissions, but also delivers clean and smooth power. Additionally, TE 250 Heritage engine has an advanced construction featuring shaft arrangements positioned for greater mass centralisation, a counter balancer shaft reducing vibration, a twin-valve controlled power valve, and a 6-speed enduro-specific gearbox.

### Cylinder

The 66.4 mm bore cylinder features a twin valve-controlled power valve system which delivers smooth and controllable power throughout the RPM range. Optimal exhaust port timing is achieved with the combination of a state-of-the-art, adjustable power valve drive and machined port window.

Additionally, the cylinder features two inlet positions located on the transfer ports at the rear of the cylinder where a pair of fuel injectors are mounted. The injectors deliver the fuel downwards into the transfer port which guarantees excellent atomisation with the air travelling upward to the combustion chamber. This ensures a more efficient combustion resulting in reduced fuel consumption and emissions.

- Dual fuel injectors → excellent atomisation, reduced fuel consumption
- Power valve → Machined port window

### Piston

The lightweight piston is perfectly matched to the cylinder and transmits minimal oscillating mass ensuring high levels of performance and reliability.

Piston → fits perfectly to cylinder and combustion chamber

### Engine casings

The TE 250 Heritage engine is designed to improve mass centralisation. As a result, the lightweight, die-cast engine casings are developed to accommodate the shaft arrangements in the ideal position, centralising oscillating mass, and improving rideability. Additionally, the counter balancer shaft is integrated in a very compact way and has little effect on the overall design.

Additionally, the water pump casing is designed for effective cooling by optimising the flow of coolant.

- Die cast engine casings → mass centralisation, optimal handling
- Water pump casing → optimal flow of coolant for effective cooling

### Counter balancer shaft

The engine houses a laterally mounted counter balancer shaft. The balancer significantly reduces vibration resulting in a smoother and more comfortable ride.

- Counter balancer shaft → significantly reduced vibration

### Crankshaft

The perfectly balanced crankshaft features a 72 mm stroke and in conjunction with the counter balancer shaft, the TE 250 Heritage produces minimal vibration. By incorporating a heavier ignition rotor, the crankshaft produces more inertia than its motocross counterpart which improves control in the lower RPM range.

### Gearbox

A 6-speed Pankl gearbox features enduro specific ratios while an innovative shift lever reduces dirt build up for easy shifting in all conditions.

- 6-speed gearbox → enduro specific ratios
- Gear lever → prevents dirt build up

### Clutch

The TE 250 Heritage features a Damped Diaphragm Steel (DDS) clutch. What this means is the clutch uses a single diaphragm spring instead of the more common coil spring design resulting in a much lighter clutch action. This design also incorporates a damping system which improves both traction and durability. Additionally, the light and robust basket and inner hub guarantee optimal oil supply to the clutch to aid cooling.

Combined with the BRAKTEC hydraulic system, a light clutch feeling is guaranteed which is almost maintenance and adjustment free.

- DDS clutch → light action with integrated damping system, improved traction and reliability
- BRAKTEC hydraulic system → light clutch action and near maintenance free

### Oil tank and pump

The TE 250 Heritage features an electronic oil pump which feeds vital 2-stroke oil into the engine to keep it lubricated. The pump is located just below the oil tank and feeds the engine oil via the throttle body, meaning it is not mixed with the fuel which eliminates the need for pre-mixing as on traditional 2-stroke engines. The pump is controlled by the Engine Management System (EMS) and delivers the optimal amount of oil according to the current RPM and engine load which reduces waste, as well as prevents excessive smoke being transmitted from the exhaust.

The oil tank is located beneath the fuel tank and is connected to a filler hose which runs through the upper member of the frame to a filler cap conveniently located for easy refills. The tank capacity is 0.7 litres and is fitted with a sensor which illuminates when the oil level is low.

- Oil pump and tank → convenient solution, eliminates pre-mix

### **Benefits**

- State of the art 2-stroke technology
- Reduced fuel consumption
- No premix needed
- Smooth and clean power delivery
- Low maintenance costs
- Hydraulic clutch
- Excellent handling and agility

## **TE 300 Heritage**

The flagship TE 300 Heritage offers astonishing power in a light and agile package. While retaining solid reliability and low maintenance costs, the TE 300 Heritage features innovative Electronic Fuel Injection (EFI). While being the largest 2-stroke model in the Husqvarna enduro range, the TE 300 Heritage is incredibly controllable due to the EFI which also eliminates the need to premix fuel and make tedious jetting changes. Additionally, the system significantly reduces emissions and fuel consumption allowing the rider to stay on the trail for extended periods of time.

### Engine

The 300cc 2-stroke engine is the benchmark for unrivalled power in a lightweight construction. The engine features precisely positioned shaft arrangements for optimal mass centralisation, a counter balancer shaft reducing vibration, a twin-valve controlled power valve, and 6-speed enduro gearbox.

The TE 300 Heritage features an advanced Electronic Fuel Injection system. This comprises a set of fuel injectors positioned at the transfer ports which deliver the ideal amount of fuel into the engine for every condition. This not only reduces fuel consumption and emissions, but also delivers a clean and smoother power delivery.

### Cylinder

The 72 mm bore cylinder features a twin valve-controlled power valve system which delivers smooth and controlled power throughout the RPM range. Optimal exhaust port timing is achieved with the combination of a state-of-the-art, adjustable power valve drive and machined exhaust port window.

Additionally, the cylinder features two inlet positions located on the transfer ports at the rear of the cylinder where a pair of fuel injectors are mounted. The injectors deliver the fuel downwards into the transfer port which guarantees excellent atomisation with the air travelling upward to the combustion chamber. This ensures a more efficient combustion resulting in reduced fuel consumption and emissions.

- Dual fuel injectors → excellent atomisation, reduced fuel consumption

### Piston

The lightweight piston is perfectly matched to the cylinder and transmits minimal oscillating mass ensuring high levels of performance and reliability.

- Piston → high performance and reliability

### Engine casings

The TE 300 Heritage engine is designed to improve mass centralisation. As a result, the lightweight, die-cast engine casings are developed to accommodate a shaft arrangement aimed at centralising oscillating mass and improving rideability. Additionally, the counter balancer shaft is integrated in a very compact manner and little effect on the overall design.

Additionally, the water pump casing is designed for effective cooling by optimising the flow of coolant.

- Die cast engine casings → mass centralisation, optimal handling
- Water pump casing → optimal flow of coolant for effective cooling

### Counter balancer shaft

The engine houses a laterally mounted counter balancer shaft. The balancer significantly reduces vibration resulting in a smoother and more comfortable ride.

- Counter balancer shaft → significantly reduced vibration

### Crankshaft

The perfectly balanced crankshaft features a 72 mm stroke and in conjunction with the counter balancer shaft, the TE 300 Heritage produces minimal vibration. By incorporating a heavier ignition rotor, the crankshaft produces more inertia than its motocross counterpart which improves control in the lower RPM range.

### Gearbox

A 6-speed Pankl gearbox features enduro specific ratios while an innovative shift lever reduces dirt build up for easy shifting in all conditions.

- 6-speed gearbox → enduro specific ratios
- Gear lever → prevents dirt build up

### Clutch

The TE 300 Heritage features a Damped Diaphragm Steel (DDS) clutch. What this means is the clutch uses a single diaphragm spring instead of the more common coil spring design resulting in a much lighter clutch action. This design also incorporates a damping system which improves both traction and durability. Additionally, the light and robust basket and inner hub guarantee optimal oil supply to the clutch to aid cooling.

Combined with the BRAKTEC hydraulic system, a light clutch feeling is guaranteed which is almost maintenance and adjustment free.

- DDS clutch → light action with integrated damping system, improved traction and reliability
- BRAKTEC hydraulic system → light clutch action and near maintenance free

### Oil tank and pump

The TE 300 Heritage features an electronic oil pump which feeds vital 2-stroke oil into the engine to keep it lubricated. The pump is located just below the oil tank and feeds the engine oil via the throttle body, meaning it is not mixed with the fuel which eliminates the need for pre-mixing as on traditional 2-stroke engines. The pump is controlled by the Engine Management System (EMS) and delivers the optimal amount of oil according to the current RPM and engine load which reduces waste, as well as prevents excessive smoke being transmitted from the exhaust.

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- Oil pump and tank → convenient solution, eliminates pre-mix

### **Benefits**

- State of the art 2-stroke technology
- Reduced fuel consumption
- No premix needed
- Smooth and clean power delivery
- Low maintenance costs
- Hydraulic clutch
- Excellent handling and agility

## **Functional Apparel**

Sharing the same distinctive colours and design as the Heritage models, a premium helmet and offroad shirt will be released in conjunction with the new machines. Both products feature the latest technical innovations for assured safety, comfort, and durability. The two new additions to the Origin line also perfectly match the Origin Pants and iTrack Origin Gloves and allow riders to enjoy an ideal apparel and motorcycle set-up.

### Moto-10 Spherical Railed Helmet

Headlining the offroad collection and complete with the vintage-inspired colour scheme of the Heritage machines, the Moto-10 Spherical Railed Helmet is an advanced helmet designed with professional racers and sets a new industry standard. Exceptional protection comes from the lightweight carbon shell, MIPS, and Spherical Technology which redirects forces away from the brain during impact. Creating a cool and comfortable helmet, the front features multiple intake vents to channel in maximum airflow with large exhaust vents at the rear expelling warm air. The Moto-10 Spherical Railed Helmet is made exclusively for Husqvarna Motorcycles by leading brand Bell Helmets.

### Origin Shirt White

The Origin Shirt is an ultra-lightweight performance offroad shirt with a modern fit and fade-free graphics taking design inspiration from Husqvarna Motorcycles' Swedish heritage. Its breathable fabric wicks away sweat with mesh panels further aiding cooling, with light padding on the elbows creating a layer of additional protection.



## **Technical Accessories**

Developed in close co-operation with Husqvarna Factory Racing and taking the performance of the 2023 FE and TE Heritage machines to an even higher level, the latest selection of Technical Accessories is designed to enhance, protect, and add durability to these class leading enduro models. Headlined by a premium build quality and ease of fitment, the comprehensive, racing-focused range is available now from your local Husqvarna Motorcycles dealership.

### Factory Racing Triple Clamp

Not only a visual highlight with its elegant anodised surface, this CNC-milled aluminium triple clamp is also used by Husqvarna Factory Racing for its handling and stability benefits. The steering stem is tuned for optimal stiffness and ensures 100% alignment and correct geometry of the WP fork tubes used on the enduro range. It also prevents ovalisation of the fork outer tubes. The result is precise and smooth fork response. Offset can be easily adjusted to either 20 or 22 mm. Shorter offset means more stability on the straights while longer offset contributes to faster steering. The triple clamp is supplied with the steering head bearing already pressed on.

### Akrapovič "Racing Line"

Increased torque and performance means better power delivery at all engine speeds with the Akrapovič „Racing Line“ exhaust system. Engine braking is more balanced too. Throttle response is more sensitive and traction is refined. The design emphasises the rich engine note and the manifold is optimally designed to suit the production engine. The header is stainless steel and the silencer housing is high-grade titanium. As used by Husqvarna Factory Racing.

### Factory Wheels

Built for the biggest obstacles. Super-strong spokes lace the D.I.D DirtStar rims to the hubs, which are milled from a solid piece of aluminium and then anodised blue for a race team inspired look. Assembled neatly with anodised spoke nipples, weight savings are made in addition to the increased strength and stability in challenging conditions.

### Factory Seat

A custom designed seat for an uncompromising look with maximum grip and unrestricted freedom of movement. Standard seat height is retained. The cover has transversely stitched ribs with a wear resistant coating.

### Preload Adjuster

The easy operation mechanical-drive Preload Adjuster is lightweight and allows fast preload adjustment of the rear shock spring. It works across the entire length of the thread on the shock absorber and is resistant to dirt. As fitted to the Husqvarna Factory Racing machines.

### Supersprox Stealth Rear Sprocket

With high-strength steel teeth for extra-long service life, the Supersprox Stealth Rear Sprocket features an aluminium centre section to reduce unsprung mass. As well as being 50 % lighter than an all-steel rear sprocket, the Supersprox Stealth offers at least three times the service life of all-aluminium rear sprockets and is used by Husqvarna Factory Racing.

### Factory Racing LED Headlight

Specially developed for the enduro range, the Factory Racing LED Headlight is exceptionally robust. LED technology offers very high light output with an intensity of 1500 lm and light colour of approximately 5500 K. It can be installed in the standard headlight cowl.

### Factory Racing Handguard Kit

Extremely light and with an uncompromising race look, these two-piece plastic handguards have black-coloured middle sections for maximum strength while the coloured outers are highly flexible and offer optimal protection. They are the same as those used by Husqvarna Factory Racing. Special mountings allow direct attachment to the clutch and front brake levers.

### Skid Plate

Endurance-tested for the toughest off-road applications, the 3 mm thick Carbon Sheet Molding Compound (C-SMC) Skid Plate offers effective protection for the frame and engine. Easy to mount and extremely light and durable, it is isolated from the frame by rubber pads. The custom design boasts the highest quality workmanship.

### Hinson Clutch Cover

The Hinson Clutch Cover is CNC-milled from high-strength aluminium, resists the hardest knocks and has an uncompromising race look. Made to the same specifications as those fitted to the Factory Racing machines.