

## **Husqvarna Motorcycles – Minicycles Model Year 2023**

### **Media Information**

Designed for the highest levels of competition, Husqvarna Motorcycles' TC 85, TC 65 and TC 50 are fully equipped 2-stroke motocross machines that cater for youth racers of all ages and feature the very latest technology and high-quality components.

For 2023 the TC 85, TC 65, and TC 50 models are stylishly adorned with a striking white, grey, and yellow colour scheme.

Inspiring confidence with easily controllable power and unrestrictive ergonomics, youngsters can truly focus on riding to the best of their ability on any model from the Husqvarna Motorcycles minicycle range. With the TC 85, TC 65, and TC 50 models setting the standard when it comes to top-level 2-stroke performance and durability on which they can safely enter the exciting world of offroad motorcycling.

### **2023 Technical Highlights:**

- Striking new white, grey, and yellow TC 85, TC 65, and TC 50 graphics - underline Husqvarna Motorcycles' Swedish heritage
- New MAXXIS MAXXCROSS MX-ST tyres for all models - exceptional straight-line stability and excellent traction
- All models deliver unrivalled engine performance and rideability
- Easily adjustable WP XACT forks with AER technology and XACT PDS monoshock - optimal performance and low weight
- Confidence-inspiring ergonomics and a high-grip seat cover for comfort and control
- New Formula clutch assembly on the TC 65 for improved action and durability
- New larger rear disc and brake components from Formula for enhanced TC 65 stopping power
- NEKEN tapered aluminium handlebars ensure optimised ergonomics for TC 65 and TC 50
- Roller-actuated TC 85 throttle assembly for a smoother action in all conditions
- Black Excel rims and CNC-machined hubs for TC 85 - low unsprung weight and greater stability

## **TC 85**

Setting the bar in the ultra-competitive 85cc class, the TC 85 features much of the same technology found in the successful full-size Husqvarna motocross line-up. With a chromium molybdenum steel frame and state of the art WP suspension, young mini riders can focus on performing on track in total confidence. Featuring an engine that delivers a broad and controllable power delivery, the TC 85 offers top-level performance and durability for the stars of tomorrow.

### **Engine**

The TC 85 engine uses the latest 2-stroke technology to deliver unrivalled performance and rideability in the ultra-competitive 85cc class.

Key to the engine is a power valve, which allows the power delivery to be tailored simply and effectively. Additionally, the roller-actuated throttle assembly delivers a smooth motion when opening the throttle.

- Roller-actuated throttle assembly → smooth throttle motion and advanced durability
- Engine - latest in 2-stroke technology

### **Cylinder and piston**

The cylinder is designed around the power valve system. The system controls both the exhaust valve and the sub exhaust port for optimal power, torque, and controllability. As a result, the TC 85 delivers class-leading mid-range performance, reducing the need to use the clutch in loamy or sandy conditions.

- Cylinder and ports – top level performance using the latest 2-stroke technology

### **Crankshaft**

The lightweight crankshaft features optimal balancing for minimal vibration. The precisely tailored rotational inertia of the crankshaft delivers unsurpassed torque and rideability.

- Crankshaft – precisely balanced

### **Crankcases**

The crankcases are manufactured using a high-pressure die-cast production process that keeps wall thickness to a minimum while retaining strength and durability. The design of the cases is compact and aims at positioning the shaft arrangements as close as possible to the centre of gravity for optimal handling.

### **Bodywork/seat**

The TC 85 features progressive bodywork which precisely fits the proportions of an 85cc rider. The contact points and overall feeling allow younger riders to enjoy similar levels of control and comfort as older riders do on the larger models.

The ergonomics instil confidence while leaving room for free and unrestricted movement thanks to the broad and flat seat and one-piece airbox covers. A high-grip seat cover delivers superior comfort and control in all conditions.

## **Frame**

The professionally crafted chromium-molybdenum steel frame is constructed using hydro-formed tubes joined by precision robot welding to ensure the highest level of consistent quality.

The frame employs a geometry aimed at tailoring flex characteristics for optimal handling and comfort. Together with the laterally-mounted cylinder head mountings the result is advanced torsional rigidity and longitudinal stiffness. This allows the frame to move in harmony with the suspension soaking up big hits while delivering optimal agility and high-speed stability.

Additionally, the frame is fitted with “no dirt” footrests that prevent the build-up of dirt collected through deep ruts and muddy terrain. The simple but effective self-cleaning system ensures the footrests don’t clog up with mud and always return to their original position for complete control in all conditions.

The frame is finished off in a highly durable blue powder coating with standard frame protectors.

- Hydro formed and robot welded → highest level of consistent quality
- Flex characteristics – advanced handling and comfort
- “No dirt” footrests → complete control in all conditions

## **Subframe**

Made from lightweight aluminium, the subframe features a short and compact profile contributing to mass centralisation and the overall light weight of the motorcycle.

- Short and compact profile – low weight and centralised masses

## **Swingarm**

Manufactured using a gravity die-cast production process, the one-piece aluminium swingarm offers exceptional strength at the lowest possible weight. For easy maintenance, the chain adjustment markings are visible from above to make adjustment simple.

## **WP suspension**

Mirroring the latest technology found in the Husqvarna full-size motocross range, the TC 85 features the latest WP suspension technology.

Up front, the WP XACT fork with AER technology consists of a 43 mm split-fork design using a capsuled air spring in the left leg and the trusted oil damping system in the right leg. Adjustment is made simple thanks to a single air pressure valve (charged using the supplied air pump) for preload, and easy access clickers for compression and rebound. The components offer advanced damping characteristics while being significantly lighter than conventional spring forks.

- WP XACT 43 mm → advanced damping characteristics
- Simple adjustment → single air chamber and supplied pump, easy access clickers

On the rear, a specific version of the WP XACT PDS shock absorber is fitted to the TC 85. PDS (Progressive Damping System) allows the rear end to stay stable over smaller bumps and rough terrain, while also soaking up bigger hits with ease.

The WP XACT PDS is fully adjustable for preload, compression and rebound.

- WP XACT PDS → advanced damping under all loads
- Fully adjustable preload, compression and rebound damping

### **Cooling**

The radiators are designed using CFD (Computational Fluid Dynamics) to ensure the ideal passage of air through the cooling fins. Combined with an advanced routing of the coolant circuit, the system ensures optimum engine temperature for the highest performance in varying conditions.

The radiator protectors not only serve as protection from flying rocks and debris but also serve as a brace that diverts energy around the radiators in the event of an impact.

### **Airbox**

The airbox is designed to offer the best possible performance with the highest level of filter protection. The air filter is easily accessed, without tools, by removing the left side panel. Easy maintenance is guaranteed thanks to the Twin Air filter and filter cage design, which features a simple fail-proof mounting system for safe and accurate filter installation.

### **Handlebar, grips, throttle**

The TC 85 features a lightweight and strong tapered aluminium handlebar fitted with a throttle assembly that allows for easy free play adjustment.

Additionally, the TC 85 is fitted with ODI lock-on grips as standard. The system includes a vulcanised grip on the right side while the lock-on grip on the left does not require glue or wire for mounting.

### **Wheels and tyres**

Black Excel rims and CNC-machined hubs are fitted with MAXXIS MX-ST tyres that deliver outstanding performance on a wide variety of terrain. The pattern design and rubber compound offer exceptional straight-line stability and excellent traction and predictability.

- Black Excel wheels and CNC-machined hubs → low unsprung weight and great stability
- New MAXXIS MAXXCROSS MX-ST tyres → exceptional straight-line stability and excellent traction and predictability

### **Brakes**

Formula floating brake calipers, with a 240 mm wave disc up front and 220 mm wave disc at the rear provide exceptional brake feel and consistent brake pad wear to ensure confident braking in any riding condition.

Additionally, the clutch and brake assembly are designed to reduce wear and ensure maximum reliability and durability.

- Formula brake calipers, clutch and brake assemblies → superior stopping power and advanced reliability

### **Exhaust**

The exhaust system is perfectly tailored to the engine's power characteristics, contributing to the outstanding performance and all-round rideability.

The header pipe is made in a three-dimensional stamping process. Once the components are shaped they are robot welded to ensure the highest level of quality and durability.

### **Gearbox**

The TC 85 features a lightweight 6-speed gearbox with motocross-specific ratios and a progressive shifting action that allows the rider to select the next gear with confidence. Additionally, similar to the footrest design, a self-cleaning gear selector prevents the build-up of dirt ensuring complete control in all conditions.

### **Clutch**

The TC 85 features a compact and durable diaphragm spring clutch. The exclusive characteristics of this system include a single diaphragm steel pressure plate instead of traditional coil springs.

The clutch is actuated via a Formula hydraulic system meaning that play is always compensated for and that the clutch point remains the same under different conditions as well as over time.

### **Graphics**

The TC 85 features striking new graphics in white, grey, and yellow, which depict the Swedish heritage of the Husqvarna brand. Applied using an in-mould process, the graphics offer unrivalled durability for a long-lasting finish.

## **TC 65**

The TC 65 will be the first time many young riders experience a full race motorcycle that features a manual clutch and gearbox. The performance, together with the use of a manual gearbox, brings the overall feel of the TC 65 as close as possible to Husqvarna's full-size motocross machines. The TC 65 features the same level of quality as found on the full-size motocross range, with premium components fitted as standard. The 2023 model come with an upgraded clutch and Formula brake components.

### **Engine**

Featuring the latest in 2-stroke technology, the TC 65 is highly competitive in the 65cc class. Apart from using the lightest and most durable materials, the engine features a pressure-controlled exhaust valve that delivers top-level performance. Additionally, the engine features a manual 6-speed transmission and hydraulic clutch, which allows the rider to have full control of the power delivery.

### **Cylinder**

The high-performance cylinder is made from lightweight and durable aluminium. Incorporating a pressure-controlled exhaust valve (PCEV) the cylinder provides unrivalled performance within the highly competitive 65cc class.

### **Bodywork**

The progressive bodywork is scaled down to precisely fit the proportions of a 65cc rider. The contact points allow younger riders to feel a similar level of control and comfort as riders do on Husqvarna's full-sized models.

The ergonomics instil confidence while leaving room for free and unrestricted movement, allowing riders to perform at their peak for longer periods of time.

### **Frame**

The high-strength chromoly steel frame integrates carefully calculated parameters of longitudinal flex and torsional rigidity to benefit handling and suspension functionality. It guarantees easy handling and precise cornering, along with outstanding stability. The subframe is fitted to the frame with four screws and is made from lightweight aluminium.

### **Swingarm**

Made from lightweight cast aluminium, the hollow swingarm is designed using sophisticated simulation data and calculated to have optimal rigidity while using minimal wall thickness. As a result, the swingarm features ideal rigidity at the least possible weight.

### **Radiators**

An intelligent cooling circuit with integrated crankcase cooling and two radiators ensures heat dissipation. The result is constant temperature balance for consistent high performance.

### **WP XACT front suspension**

Featuring the latest in suspension technology, the TC 65 is fitted with WP XACT forks with AER technology. Besides being lightweight, the 35 mm USD forks feature exceptional damping and comfort characteristics that allow riders to perform with complete confidence. Featuring 215 mm of wheel travel, the air unit in the left fork leg can be adjusted easily (with the use of an air pump) according to rider preference, weight or track conditions. This leaves the rider with more riding time and less time spent setting up the suspension.

### **WP XACT rear suspension**

Linked directly to the swingarm, the WP XACT PDS monoshock is matched perfectly to the front forks for the faultless balance and damping characteristics.

Additionally, the rear shock offers 270 mm of suspension travel and is fully adjustable allowing it to be tailored to rider preferences or track conditions.

### **Handlebars**

The tapered NEKEN handlebar is made of high-quality aluminium alloy ensuring both strength and comfort. Its diameter shrinks from the central 28 mm area to 22 mm in the bends and the grip mounting position. Here a lock-on ODI grip is mounted on the left side while a vulcanised ODI grip is fitted onto the right-side throttle assembly.

Additionally, the specific handlebar bend is created to offer the best ergonomic position. A crash pad on the handlebar protects the rider from heavy impacts.

### **Clutch**

The reliable and light hydraulic clutch system guarantees even wear, near maintenance-free operation, and perfect action in every condition. With the play being constantly adjusted, the pressure point and function of the clutch remain identical in cold or hot conditions, as well as over time.

### **Wheels and tyres**

Mirroring the full-size motocross range, the TC 65 uses lightweight, black anodised, aluminium rims that provide the highest strength and reliability. The new MAXXIS MX-ST tyres deliver outstanding performance on a variety of terrain. The pattern design and rubber compound deliver exceptional straight-line stability and excellent traction and predictability.

- New MAXXIS MAXXCROSS MX-ST tyres - exceptional straight-line stability and excellent traction and predictability

### **Brakes**

Featuring the same level of technology offered on the full-size motocross range, the TC 65 is fitted with new floating brake calipers from Formula and large waved front (198 mm) and rear (180 mm) brake discs. The system ensures advanced brake feeling and stopping performance in all conditions.

Additionally, a new clutch and brake assembly reduces wear and ensures maximum reliability and durability.

- New Formula brake calipers, clutch and brake assemblies → superior stopping power and improved reliability

### **Graphics**

The TC 65 features striking new graphics in white, grey, and yellow with the design taking inspiration from the Swedish heritage of the Husqvarna brand. Additionally, the graphics are applied using an in-mould process to ensure the highest levels of durability and quality.

## **TC 50**

The TC 50 features the same ergonomic feel as Husqvarna's full-size motocross machines, just in a reduced size to suite the future stars of tomorrow. The similarities between the TC 50 and the larger motocross range do not end there, as a superior level of quality and attention to detail are incorporated into the TC 50 making it a premium 50cc motocross model. Top-level performance is critical in the competitive 50cc category and as a result the TC 50 is built around an advanced steel frame, which houses the most powerful engine in its class and leading components such as the 35 mm WP XACT fork.

### **Engine**

The modern and compact engine features the latest in 2-stroke technology, offering class-leading performance and rideability. By using a three-shaft design, the crankshaft is positioned near the centre of gravity, which not only benefits mass centralisation but also creates the ideal intake angle into the reed valve for top-level performance. Additionally, the engine is fitted with an automatic centrifugal clutch that reduces riding complexity for younger riders.

### **Exhaust**

The exhaust is designed to specifically match the character of the TC 50 engine and is manufactured using a three-dimensional stamping process. Once the components are shaped, they are robot welded to ensure high levels of quality and durability.

### **Clutch**

A key feature of the TC 50 is the automatic centrifugal clutch. This allows youngsters to ride without the complexity of operating a manual clutch and gearbox. The multi-disc clutch delivers a precise and predictable power delivery across the RPM range. Furthermore, it can easily be set to suit rider preferences or track conditions without the use of any special tools.

### **Power reduction kit**

For absolute beginners the engine power can be reduced to a moderate 5.5 hp using a kit from Husqvarna Motorcycles Technical Accessories.

### **Bodywork**

The progressive bodywork is scaled down to precisely fit the proportions of younger riders. The contact points and overall feeling of the machine allow riders to feel the perfect control and comfort as found on the larger models.

The ergonomics instil confidence while leaving room for free and unrestricted movement, thus allowing riders to perform at their peak for extended periods of time.

### **Frame**

The high-strength chromium-molybdenum steel frame integrates carefully calculated parameters of longitudinal flex and torsional rigidity to benefit handling and suspension functionality. It guarantees easy handling and precise cornering, along with outstanding stability.

### **Swingarm**

Made from lightweight cast aluminium, the hollow swingarm is designed using sophisticated simulation data and calculated to improve rigidity while minimising wall thickness. As a result, the swingarm features the ideal rigidity at the least possible weight.

### **WP XACT front suspension**

Featuring the latest in suspension technology, the TC 50 is fitted with a set of WP XACT forks with AER technology. Besides being very light weight, the 35 mm USD forks feature exceptional damping and comfort characteristics, allowing the rider to push their limits with complete confidence. With 205 mm of wheel travel, the air unit in the left fork leg can be easily adjusted with the use of an air pump for rider preference, weight, or track conditions, leaving the rider with more riding time and less time spent setting up the suspension.

### **WP XACT rear suspension**

Linked directly to the swingarm, the WP XACT PDS monoshock features a setting that is matched perfectly to the front forks for the perfect balance and damping characteristics. Additionally, the rear shock offers 185 mm of suspension travel and is fully adjustable allowing it to be tailored to rider preferences or track conditions.

### **Brakes**

Featuring the same level of technology offered on the full-size motocross range, the TC 50 is fitted with hydraulic brake calipers and waved front and rear brake discs. The system ensures advanced brake feeling and stopping performance in all conditions.

### **Wheels and tyres**

Mirroring the full-size motocross range, the TC 50 uses lightweight, black anodised, aluminium rims providing the highest strength and reliability. The new MAXXIS MX-ST tyres deliver outstanding performance on a variety of terrain. The pattern design and rubber compound deliver exceptional straight-line stability and excellent traction and predictability.

- New MAXXIS MAXXCROSS MX-ST tyres - exceptional straight-line stability and excellent traction and predictability

### **Radiator**

The TC 50 features a liquid cooling system for the cylinder and crankcases. The large radiators work together with the shrouds to channel air through the cooling fins, ensuring sufficient cooling in all conditions.

### **Handlebars**

The tapered NEKEN handlebar is made of high-quality aluminium alloy ensuring both strength and comfort. Its diameter shrinks from a central 28 mm area to 22 mm in the bends to cylindrical ends of 18 mm in the grip mounting position. A thin lock-on ODI grip is mounted on the left side while a vulcanised ODI grip is mounted on the right-side throttle assembly. The thin diameter is a major benefit for youth riders, ensuring a better grasp while riding, increasing control, and drastically

reducing fatigue. Additionally, a crash pad on the handlebar protects the rider from unexpected impacts.

### **Graphics**

Striking new graphics in white, grey and yellow are fitted to the TC 50, which represent the Swedish heritage of the Husqvarna brand. Additionally, the graphics are applied using an in-mould process to ensure the best durability and quality.

## **Kids Functional Apparel**

Focusing on the specific needs of minicycle racers and riders, Husqvarna Motorcycles provides youngsters with quality protective functional clothing that delivers innovative technical features together with comfort and durability. Mirroring the styles of Husqvarna Motorcycles' adult Functional Apparel line, all kids' items offer protection for enjoyable days in the saddle.

### **Kids Railed Helmet**

Ensuring that all young racers can look good while being protected, the Kids Railed Helmet is designed specifically for kids and features a fully adjustable peak as well as a removeable, washable, moisture-wicking inner lining and cheek pads. With a dual-density EPS inner shell and outer edges that are designed for neck brace use, the helmet offers the security all youngsters need.

### **Kids Strata Goggles**

Featuring the latest goggle technology and co-ordinating perfectly with the Kids Railed Helmet, the Kids Strata Goggles are made by leading brand 100% for guaranteed quality and performance on track.

### **Kids Railed Shirt**

A high-performance race shirt that features a three-colour, fade-proof print with prominent Husqvarna Motorcycles branding on the sleeves and chest. The Kids Railed Shirt is designed to keep youngsters feeling cool and looking good and features mesh panels and perforated ventilation zones for optimum ventilation.

### **Kids Railed Pants**

Designed and manufactured to withstand the rigours of competitive motocross racing, the Kids Railed Pants are reinforced with Cordura® and feature a heatproof and abrasion-resistant knee structure from Kevlar®. Delivering a youth specific ergonomic fit, mesh panels aid optimum ventilation.

### **Kids iTrack Railed Gloves**

Lightweight performance motocross gloves exclusively made for Husqvarna Motorcycles by 100%. Allowing smaller hands to have full control of their machines, the Kids iTrack Railed Gloves feature silicone printing on palms for better grip, mesh between fingers for an optimised fit, and perforated palms for best possible cooling.

### **Kids Flame Boots**

Developed specifically for youth riders, the Kids Flame Boots allow for total control of the motorcycle thanks to its unrestrictive flex system. With three fully adjustable buckles for a secure and comfortable fit, the boots offer ample protection at a very low weight for reduced rider fatigue.

## **Technical Accessories**

Ensuring younger riders have the technical products needed to perform and look their very best, Husqvarna Motorcycles' Technical Accessories for minicycles provide numerous options for increased performance, protection, and style. Manufactured to the same high standards as all Husqvarna Motorcycles products, all parts support customisation and performance improvements.

### **FMF Powercore 2 Silencer and FMF Fatty Expansion Chamber**

Developed to improve overall engine performance, the FMF Fatty Expansion Chamber and FMF Powercore 2 Silencer work together to unlock further power from the engine. Made from extra-strong sheet steel and nickel plated for easy maintenance, the expansion chamber creates a controllable power delivery while the lightweight silencer delivers a factory look and a rich exhaust note.

### **Factory Triple Clamp**

Improving handling and enhancing rider feedback, the Factory Triple Clamp is made from CNC-milled aluminium then anodised black for a factory racing team inspired look. Ensuring 100% alignment of the front suspension and guaranteeing no ovalisation to the outer fork leg, performance from the WP Suspension is uncompromised for precise front wheel stability and rider feedback. Complete with the steering bearing installed, the clamps are ready to fit.

### **Factory Chain Guide**

Manufactured using high-strength plastic and featuring a replaceable chain track pad, the Factory Chain Guide is a high quality and incredibly long-lasting upgrade designed to withstand the toughest of offroad conditions.

### **Rear Sprocket**

Lightweight and strong, the Rear Sprocket is durable and manufactured to be vibration free and transmit maximum power to the rear wheel. The blue anodised finish improves overall aesthetics and provides a factory racing team appearance.

### **Lock-on Grip Set 'Jeff Emig'**

Install new grips in minutes with the Lock-on Grip Set. The clever design features a throttle side grip pre-fitted to a throttle tube while the left side grip is mounted to a thin sleeve, which requires the tightening of a small aluminium clamping ring for easy installation.

### **Factory Fuel Cap / Factory Fuel Cap Vent**

CNC-milled from high strength aluminium and anodised black for a sleek and effective appearance, the Factory Fuel Cap, together with the blue anodised Factory Fuel Cap Vent, enhances the overall look of any bike in the Husqvarna Motorcycles minicycles range.