

Husqvarna Motorcycles – Minicycles Model Year 2024

Media Information

Designed to excel at the highest levels of youth motocross racing, Husqvarna Motorcycles' TC 50, TC 65, and TC 85 are 2-stroke machines that are fully equipped with the latest technology and a comprehensive list of quality, race-tested components.

Enhanced with multiple technical upgrades and now adjustable in size for the first time ever, the all-new 2024 TC 50 and TC 65 once again raise the bar for high performance minicycles. Each model is expertly assembled, offers improved ergonomics, and utilises much of the same technology found on the full-size machines, creating a pair of motorcycles that are built for winning.

Completing the minicycle line-up is the popular and proven TC 85. Continuing to offer youngsters the perfect platform as they progress from the TC 65 before advancing to the TC 125, the performance of this competitive machine was underlined in 2023 when it was raced to victory in the FIM Junior Motocross World Championship.

All three machines are finished with quality, race-tested components including Formula brakes, Maxxis tyres, ODI grips, and Twin Air filters to create models that set a new standard for top-level 2-stroke performance.

2024 Technical Highlights:

- Striking new white, grey, and yellow graphics highlight Husqvarna Motorcycles' Swedish heritage
- New, scaled down bodywork replicates the look and feel of the full-size models
- Improved TC 50 and TC 65 engines – broader and stronger power delivery
- New TC 50 and TC 65 frames – significantly improve handling characteristics
- New aluminium handlebars on the TC 50 and TC 65 – updated bend for a modernised feel
- Adjustable ergonomics – allow the TC 50 and TC 65 to be customised for each rider
- Premium components – improves the quality, performance, and durability of each machine
- Easily adjustable WP XACT forks and XACT PDS shock – optimal performance and low weight
- MAXXIS MAXXCROSS MX-ST tyres for exceptional straight-line stability and excellent traction
- Formula brake components give each machine best-in-class stopping power
- Formula hydraulic clutch assembly on the TC 65 and TC 85 – consistent action and durability
- High-grip seat cover on all models – maximum comfort and control
- Black Excel rims and CNC-machined hubs for TC 85 – low unsprung weight and greater stability

TC 50

Modelled after the full-size motocross machines, the TC 50 features the same striking looks and ergonomic feel but in a reduced size to suit the future stars of tomorrow.

Utilising a new concept during the development of motorcycles for youth riders, using scientific statistical data introduces for the very first time, a real scaled down full-size machine for the 50cc class. As children have different body proportions to adults, this was considered throughout the design and development phase of the new TC 50.

The similarities between the TC 50 and the larger motocross range do not end with the appearance. A long list of quality components, as well as the attention to detail during the assembly process, make the TC 50 the highest performing 50cc motocross machine on the market.

Top level performance is critical in the competitive 50cc class with the TC 50 expertly constructed around an advanced steel frame. The chassis houses the most powerful engine in its class with the machine equipped with multiple racing focused components including the 35 mm WP XACT AER fork, the WP XACT shock, and the Formula brake systems.

The proven base geometry of the 50cc model is unchanged compared to the previous generation (steering head, swingarm pivot point), however, adjustability of the bodywork, shock mounting, subframe, handlebar, and fork position in the triple clamps allow the TC 50 to be customised to suit the height of each individual rider.

Frame

The high strength chromium-molybdenum steel frame is a completely new design for 2024. For the highest level of strength and reliability, it is constructed using the same process as the full-size machines and is finished with a glossy, dark blue metallic powder coating.

For the first time, the TC 50 frame features forged parts integrated into the frame where sheet metal was used previously. The frame offers carefully calculated parameters of longitudinal flex and torsional rigidity to enhance handling and suspension functionality, which ensures precise cornering and outstanding stability.

The rear shock is now mounted separately from the main upper frame tube to replicate the full-size models. The benefit of this concept comes into play on big jumps, hard impacts, and on rough racetracks as less energy is transferred through the rear shock into the frame and towards the steering head. The result is a more stable and planted feel which allows youngsters to ride fast, even in the most demanding conditions.

The TC 50 now features frame protectors as standard. These allow riders to enjoy a heightened level of grip with their feet and lower legs thanks to the innovative surface texture. Additionally, they protect the glossy, dark blue powder coated frame from unwanted wear.

Polyamide glass fibre reinforced steel subframe

Using a polyamide glass fibre reinforced steel 2-piece subframe reduces weight and safely houses the electronics. Specific rigidity was engineered into the light and robust subframe, which contributes to outstanding handling and rider feedback.

The lower subframe spars and frame mounts are made from steel which is both robust and reliable. The upper subframe is made from injection moulded polyamide which offers specific flex characteristics and creates a lightweight construction.

This new hybrid design was initially introduced on the full-size TC models for 2023 and now, after proving to be highly reliable, finds its way onto the minicycle line up.

The subframe is also height adjustable (2 positions) to raise or lower it depending on the height of the rider.

Footrests

The all-new, “no-dirt” design footrests offer better grip while being less susceptible to hook on deep ruts, take offs when scrubbing, and trackside barriers. The result is better control of the machine in all conditions, and this was achieved by the new mounting concept which is integrated into the frame design which additionally, saves overall weight.

- New, topology optimized, die cast footrests with reduced weight and less chance of dirt build up
- Footrest mounting integrated into the frame design, less susceptible to hook on deep ruts
- Big benefit on tracks with deep ruts from big motorcycles → no more catching of the foot pegs on the sides

WP XACT forks

Featuring the latest in suspension technology, the TC 50 is fitted with state-of-the-art WP XACT AER forks. Besides being very light weight, the 35 mm, upside down (USD) forks offer exceptional damping and comfort which allows riders 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 using the supplied air pump based on rider preference, weight, and the track conditions. This underlines the versatile character of the new TC 50 and the wide range of usability it offers to children regardless of their size or weight.

For 2024, a WP Pro Components cartridge kit which transfers the air fork into a conventional spring fork is available as a Technical Accessory.

Triple clamps

The forged triple clamps align the fork tubes perfectly to ensure a highly responsive and smooth fork action and feature a more forgiving flex character when compared to CNC machined triple clamps. The overall design of the triple clamps is unchanged to the previous generation with the only change being a new mounting position for the new front number plate.

A triple clamp protector has been added to the new front number plate which covers the lower triple clamp to protect it from wear received from roost. This feature has been also brought over from the TC full size line-up.

For 2024, a CNC machined black triple clamp is available as a Technical Accessory.

WP XACT rear shock

The upper part of the WP shock has been revised to work with the new mounting design which transfers less force towards the front part of the frame and the steering head.

Linked directly to the swingarm, the WP XACT shock features a new setting that is matched perfectly to the front forks to create a perfectly balanced machine and offers improved damping characteristics. Additionally, the rear shock travel is 190.5 mm and it is fully adjustable (preload, high/low speed compression, and rebound) which means it can be tailored to suit rider preferences and track conditions.

Swingarm

The hollow, die-cast aluminium swingarm is designed to offer optimal stiffness and reliability at the lowest possible weight. The topology has been optimized for precise rigidity while an improved casting process reduces weight. To optimize and match the new flex characteristics of the new chassis, a 12 mm rear axle is fitted.

The chain guard and chain slider are designed for maximum durability. The design also prevents dirt build up around the swingarm and chain guard in extremely muddy conditions.

New swingarm bolts offer improved quality.

Adjustable ergonomics

To make sure taller or shorter youngsters can ride in complete comfort, the TC 50 can be adjusted in multiple ways with each one implemented based on statistical scientific data.

- Adjustability of suspension
 - rear shock position: standard high position > alternative low position
 - difference 16 mm
 - front fork (pull up/drop down through the triple clamps)
 - difference 3 mm
- Adjustability of handlebar position
 - handlebar mount (four positions available) moved forwards towards front wheel, or rear towards rider
- Adjustability of bodywork and subframe
 - bodywork and subframe - standard low position → alternative high position
 - bodywork, including fuel tank and seat can be raised by positioning the supplied adapter under the fuel tank
 - subframe can be mounted in alternative position to support the higher bodywork position
 - intake boot (carburettor/airbox) can be fitted in a position to suit both height options
 - difference 30 mm
 - from 645 mm to 675 mm

- Wheelbase - 1023.5 mm to 1035.6 mm (standard 1029.2 mm)
- Ground clearance - 227.3 mm to 210 mm (standard 227.3 mm)

Adjustable configurations

- Seat height range – 626 mm to 675 mm (standard 645)
- Difference 49 mm

Additional adjustability options using Technical Accessories:

- Handlebars
 - Interchangeable between TC 50, TC 65, and TC 85 models
 - Handlebar riser from 32 mm to 52 mm
- Levers (clutch and front brake)
 - interchangeable between TC 50 and TC 65
- ODI grips
 - Interchangeable between TC 50 and TC 65
- Seats
 - Low, mid-height, and high options

Handlebars and grips

The tapered handlebar (black, unbranded) is made of high-quality aluminium alloy ensuring stability, vibration damping, and safety. Its diameter reduces in size from the central, 28 mm clamping area to 22 mm in the bends through to the bar ends which measure 18.1 mm.

The complete bend has been revised with the specific needs of young riders in mind (more like a full-size handlebar now with a less steep bend). Riding will now feel and look much more modern with a completely different body position on the machine.

Thin diameter ODI grips are a major benefit to young riders as they will enjoy a better grasp while riding which increases their control and drastically reduces fatigue. The bar pad on the handlebar protects the rider in the event of a heavy impact.

Alternative grips, levers, and handlebars are available as Technical Accessories and allow riders to further refine the ergonomics of the TC 50.

Brakes

Equipped with the same level of technology offered on Husqvarna Motorcycles' full-size motocross model range, the TC 50 features hydraulically operated brake calipers and waved, state-of-the-art front and rear brake discs. The system ensures an advanced braking feeling and stopping power in all conditions.

For 2024, the overall functionality of the brake system has been improved which is particularly noticeable when riding in extreme conditions (wet/rainy weather, muddy, dusty tracks). Additionally, the durability of the system has been improved which leads to longer lasting performance.

The brake hose routing to the rear brake calliper no longer interferes with the rear shock reservoir which maintains performance and increases durability. A new, forged rear brake lever features the same tip as found on the full-size models which offers greater grip for improved control.

Wheels and tyres

Mirroring the full-size motocross range, the TC 50 uses lightweight, black anodised, aluminium rims. Together with the redesigned front and rear hubs, a high level of strength and reliability is assured. MAXXIS MX-ST tyres deliver outstanding performance on a variety of terrain with the pattern and rubber compound combining to offer exceptional straight-line stability and excellent traction.

- New MAXXIS MAXXCROSS MX-ST tyres - exceptional straight-line stability and excellent traction
- Lightweight, black anodised, aluminium rims with redesigned hubs (front/rear) → higher level of strength and reliability

Radiator

Featuring state-of-the-art technology, the TC 50 uses a liquid cooling system to cool the cylinder as well as the crank cases. The TC 50 now uses one large radiator with a larger capacity instead of two smaller separate ones.

The radiator louvres prevent damage from roost and channel air through the cooling fins efficiently to ensure superior cooling in all conditions. Together with a simplified routing of the radiator hoses, the running temperature of the TC 50 remains constant, even in slow speed, heavy conditions.

A cleverly designed radiator protector (left and right side) works as radiator holder, vibration dampener, and crash protector. The overflow hose is also integrated into the radiator protector.

The bodywork surrounding the fuel tank and the radiator protector connects with simple but efficient snap locks.

Air box and filter

The new airbox concept is produced by using a new technology - mirror welding. The base material of the air box is polyamide instead of the rubber found on the old generation.

The air filter mounting system now features snap locks for easy and intuitive mounting. The filter itself is provided by Twin Air and has a much bigger surface area, allowing more air into the intake which boosts power. It also features "Poka-Yoke" design for failproof mounting.

The air filter is placed under the seat and is accessible without using tools by removing the seat (quick release on seat).

Tank

The fuel tank capacity remains largely unchanged despite it being redesigned to work together with the new frame and bodywork.

Hourmeter

The hour meter now is mounted in the same position as found on the full-size models behind front number plate for easier reading and a lower risk of dirt and/or water intrusion.

Bodywork

The all-new bodywork of the TC 50 is the perfect example of Husqvarna Motorcycles' commitment to minicycles. A carefully balanced, scaled down design of our full-size TC bodywork finds its way onto the TC 50. This not only gives the bike the ultimate look, but it also gives young riders the ultimate feel.

The front number plate features an integrated lower triple clamp protector to prevent damage from roost. The tank spoiler features a bicomponent technology, featuring the Husqvarna specific texture on the upper part. Side number plates are kept as close as possible to the frame and subframe concept for unrestrictive ergonomics.

The general seat line is slightly flatter compared to the old generation and the bodywork is slimmer. The side panels now work much better with young riders' boots which allows them to grip the machine tighter with their legs when riding stood up. This inspires confidence and allows youngsters to ride with their full focus on the track ahead.

The bodywork including the seat can be raised to a higher position for taller children who outgrow the standard configuration.

Husqvarna Motorcycles side covers/number plates (2 in1), smaller plastic part can be removed as on full size models.

Graphics

Modelled after the full-size motocross bikes, the TC 50 features striking, Swedish-inspired grey and yellow livery. Additionally, the graphics are applied using an in-mold process to ensure the best durability and quality.

Rounded off is this neat looking beauty with many parts featuring as specific Husqvarna brand texture for the ultimate look and grip. (e.g., seat cover and tank spoiler with same texture as on full-size models).

Engine

The modern and compact engine features the latest in 2-stroke technology to offer class leading performance and rideability. By using a 3-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 to deliver top level performance. Additionally, the engine is fitted with an automatic centrifugal clutch which reduces the complexity for younger riders.

An independent cylinder casting allowed for a redesigned cylinder. With a peak power of 15 hp, the big advantage of the new engine is its wide and usable powerband which will benefit all levels of rider. Further improvements could be achieved with the flow-optimization and thermodynamics, the general packaging, and the total weight which has been reduced by 60 g. (new 666 g - old 726 g).

The TC 50 is now, for the first time, a real 50cc (49.9cc) model thanks to its increased stroke. In the past the model featured a 49.0cc cylinder, which is 2% less capacity when compared to the new generation.

Of course, ignition timings needed to be adapted to the new longer stroke and the ignition itself is also new and now digital.

The mounting concept of the crankshaft is now simplified and much easier in the rare case the engine will need to be opened.

Crankcases and engine covers

The crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity at the lowest possible weight. The cases are manufactured using a high-pressure die cast production process, which results in a thin wall thickness while retaining exceptional strength and reliability.

Draining noses for liquids and added service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past. Also, Nm markings clearly show how tight to tighten the corresponding bolts to avoid overtightening. Many of the bolts for the engine cases are the same length for faster assembly.

For the first time, the crankcase is machined in the crankshaft area which leads to a tighter tolerance between the crankcase and crankshaft.

Husqvarna Motorcycles specific clutch covers:

- Husqvarna brand logo and brand specific finish in a Beige Grey powder coating

Integrated into the new clutch cover is the clutch spring preload adjuster and offers the ability to check the oil level. A new ignition cover comes with an optimized labyrinth sealing concept to prevent water ingress.

Cylinder head

The redesigned combustion chamber inserts are now made from two separate parts.

As a result, heat conduction is significantly improved. Mixing up inserts from different Husqvarna Motorcycles models (e.g., TC 65) is not possible. Generally, the design follows the same logic as the full-size TC range which ultimately results in simplified maintenance.

Ignition

A new digital ignition finds its way onto the new TC 50 and offers much more power and longer durability over time.

Individual ignition timings over the whole rpm range (as on full size models) have been introduced. This is one of the significant advantages of the digital ignition, as it wasn't possible with the old analog ignition set-up.

The ignition timings are all new as well. This of course was needed due to the revised engine layout, featuring the longer stroke and other updates.

Spark plugs

The TC 50 features a new spark plug from BRISK which is easier to remove and re-install during routine maintenance.

Carburettor

The well-known and proven Dell'Orto type PHBG 19 BS carburettor is unchanged from the previous generation. Inside, an updated setting was needed to make the new engine, exhaust, and air intake work perfectly to deliver strong and controllable power.

Exhaust

A completely new exhaust system, manufacturing using the same process as the full-size motocross machines improves the quality and performance. Thanks to the removal of welding seams on the inside of the exhaust pipe the flow is optimized which results in massive improvements when it comes to thermodynamics and ultimately, performance.

The silencer has been updated and now comes with a black anodized finish. On top of this visual change, a performance improvement comes from a much better sealing of the silencer end cap.

A new rubber connector between the header pipe and silencer improves sealing to maintain performance.

Clutch

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

The clutch system for the new generation has been reworked and received several major updates.

The clutch basket is reinforced, and the number of carriers/fins is increased. This leads to a better durability, wear, and consistent performance.

The high-quality sintered clutch discs remain while the gasket is now made from an improved rubbery material with a central core made from metal.

The clutch is also simpler to disassemble than in the past as torx bolts are now used instead of hexagonal head bolts.

Power reduction kits (Technical Accessories)

For absolute beginners the engine power can be reduced to a moderate and controllable 4 hp which is equivalent to the level three setting on the EE 5.

An additional power reduction kit offers 8 hp which is equivalent to the highest setting on the EE 5 for intermediate riding levels.

Cooling circuit

The cooling system has been significantly improved for 2024. The water pump concept now features a new diecast cover and TC 50 specific impeller. Both parts are carefully designed to work perfectly with the new cylinder and cooling circuit. All sealings come with the tightest tolerances possible for maximum efficiency.

Sprocket (front)

The front sprocket is now installed using a bolt like on the full-size models. The old lock ring is no longer required and the new solution is much safer and more durable.

TC 65

Moving up from the 50cc class, the TC 65 will be the first time many youngsters will experience riding a competition-focused motorcycle with a manual clutch and gearbox. The performance as well as manual gearbox of the TC 65 bring it as close to the full-size motocross machine as possible. The TC 65 features the same level of build quality as found on the larger motocross models with premium components fitted as standard.

For the first time, the development of the TC 65 was conducted using a variety of international test riders. These children were racing the new generation model at different stages of its development in national and international championships during the last two years.

The new model is considerably better in terms of handling and riders jumping from the old to the new platform will immediately feel more confident on it. Together with the improvements on the engine side, children will also immediately be faster in terms of lap times but even more in terms of pace over the distance of a race.

Frame

The high strength chromium molybdenum steel frame integrates carefully calculated parameters of longitudinal flex and torsional rigidity to benefit handling and suspension functionality. Incorporated sheet metal parts allow tailormade stiffness where needed. Together with forged connecting parts an unprecedented quality of the minicycle frame could be achieved. That all was achieved without changing the base frame geometry (steering head angle).

The rear shock is now mounted separately from the main upper frame tube to replicate the full-size models. The benefit of this concept comes into play on big jumps, hard impacts, and on rough racetracks as less energy is transferred through the rear shock into the frame and towards the steering head. The result is a more stable and planted feel which allows youngsters to ride fast, even in the most demanding conditions.

Another improvement of the new TC 65 frame design is the wider steering angle, allowing to manoeuvre the bike around much easier than in the past.

The TC 65 now features frame protectors as standard. These allow riders to enjoy a heightened level of grip with their feet and lower legs thanks to the innovative surface texture. Additionally, they protect the glossy, dark blue powder coated frame from unwanted wear.

Polyamide glass fibre reinforced steel subframe

Using a polyamide glass fibre reinforced steel 2-piece subframe reduces weight and safely houses the electronics. Specific rigidity was engineered into the light and robust subframe, which contributes to outstanding handling and rider feedback.

The lower subframe spars and frame mounts are made from steel which is both robust and reliable. The upper subframe is made from injection moulded polyamide which offers specific flex characteristics and creates a lightweight construction.

This new hybrid design was initially introduced on the full-size TC models for 2023 and now, after proving to be highly reliable, finds its way onto the minicycle line up.

The subframe is also height adjustable (2 positions) to raise or lower it depending on the height of the rider.

Footrests

The all-new, “no-dirt” design footrests offer better grip while being less susceptible to hook on deep ruts, take offs when scrubbing, and trackside barriers. The result is better control of the machine in all conditions, and this was achieved by the new mounting concept which is integrated into the frame design which additionally, saves overall weight.

- New, topology optimized, die cast footrests with reduced weight and less chance of dirt build up
- Footrest mounting integrated into the frame design, less susceptible to hook on deep ruts
- Big benefit on tracks with deep ruts from big bikes → no more catching of the foot pegs on the sides

WP XACT forks

Featuring the latest in suspension technology, the TC 65 is fitted with a state-of-the-art WP XACT AER fork. 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 215 mm of wheel travel, the air unit in the left fork leg can be adjusted easily using the supplied air pump for rider preference, weight, or track conditions. This is again underlining the versatile character of the new TC 65 and the wide range of usability it offers to children regardless of their size or weight.

For 2024, a WP Pro Components cartridge kit which transfers the air fork into a conventional spring fork is available as a Technical Accessory.

Triple clamps

The forged triple clamps align the fork tubes perfectly to ensure a highly responsive and smooth fork action and feature a more forgiving flex character when compared to CNC machined triple clamps. The overall design of the triple clamps is unchanged to the previous generation with the only change being a new mounting position for the new front number plate.

A triple clamp protector has been added to the new front number plate which covers the lower triple clamp to protect it from wear received from roost. This feature has been also brought over from the TC full size line-up.

For 2024, a CNC machined black triple clamp is available as a Technical Accessory.

WP XACT rear shock

Linked directly to the swingarm, the all-new WP XACT monoshock is matched perfectly to the front forks for the perfect balance and damping characteristics. The new rear shock mounting point is very different to the old concept due to the updated frame design. This allowed a more compact rear shock design and as a result, the spring rate needed to be adapted.

The rear shock now offers 253.5 mm of suspension travel and is fully adjustable. This allows it to be tailored to rider preferences or track conditions without the need of expensive suspension upgrades.

On the previous generation TC 65, the rear suspension travel was significantly longer. What sounds like an advantage was the complete opposite. When comparing the old TC 65 and its suspension travel to our full-size models and their suspension travel, we realised it was way too high which led to uncontrolled bouncing and compression of the rear shock.

The new TC 65 has a much more planted feel, offering better traction, controllability, and handling thanks to its new rear shock design and the correct suspension travel for its size.

Swingarm

The hollow, die-cast aluminium swingarm is designed to offer optimal stiffness and reliability at the lowest possible weight. The topology has been optimized for optimal rigidity while an improved casting process reduces weight. To optimize and match the chassis flex characteristics, a 14 mm rear axle is fitted.

The chain guard and chain glider are designed to be more durable than the old generation. The design also prevents dirt build up around the swingarm and chain guard in extreme muddy conditions. New swingarm bolts offer improved quality.

Adjustable ergonomics

To make sure taller or shorter youngsters can ride in complete comfort, the TC 65 can be adjusted in multiple ways with each one implemented based on statistical scientific data.

- Adjustability of suspension
 - rear shock position: standard high position > alternative low position
 - difference 14 mm
 - front fork (pull up/drop down through the triple clamps)
 - difference 3 mm
- Adjustability of handlebar position
 - handlebar mount (four positions available) moved forwards towards front wheel, or rear towards rider
- Adjustability of bodywork and subframe
 - bodywork and subframe - standard low position > alternative high position
 - bodywork, including fuel tank and seat can be raised by positioning the supplied adapter under the fuel tank
 - subframe can be mounted in alternative position to support the higher bodywork position
 - intake boot (carburettor/airbox) can be fitted in a position to suit both height options
 - difference 30 mm
- Wheelbase - from 1129.8 mm to 1138.8 mm (standard 1134 mm)
- Ground clearance - from 241.2 mm to 259 mm (standard 254.9 mm)

Adjustable configurations

- Seat height (mm) standard 721.5 (from 706 to 751)
 - Difference 45 mm
1. HIGH VARIANT
 2. STANDARD VARIANT
 3. LOW VARIANT

Additional adjustability possibilities via Technical Accessory program:

- Handlebars
 - interchangeable between 50cc, 65cc, 85cc models
- Levers
 - interchangeable between 50cc and 65cc
- ODI grips
 - Interchangeable between 50cc, 65cc, full-size
- Seats
 - low, middle, high version

Handlebars and grips

The tapered handlebar (black, unbranded) is made of high-quality aluminium alloy ensuring stability, vibration damping, and safety. Its diameter reduces in size from the central, 28 mm clamping area to 22 mm in the bends through to the bar ends which measure 18.1 mm.

The complete bend has been revised with the specific needs of young riders in mind (more like a full-size handlebar now with a less steep bend). Riding will now feel and look much more modern with a completely different body position on the machine.

Thin diameter ODI grips are a major benefit to young riders as they will enjoy a better grasp while riding which increases their control and drastically reduces fatigue. The bar pad on the handlebar protects the rider in the event of a heavy impact.

Alternative grips, levers, and handlebars are available as Technical Accessories and allow riders to further refine the ergonomics of the TC 65.

Brakes

Floating brake calipers from Formula, with a 198 mm wave disc up front and 180 mm wave disc at the rear provide exceptional brake feel and consistent pad wear for confident braking in all riding conditions. The brake assembly introduced for 2023 reduces wear and ensures maximum reliability and durability. A new forged rear brake lever improves controllability.

- Brake calipers, clutch, and brake assemblies from Formula → superior stopping power and improved reliability
- New forged rear brake lever → improved controllability and quality

Wheels and tyres

Mirroring the full-size motocross range, the TC 65 uses lightweight, black anodised, aluminium rims. Together with the redesigned front and rear hubs, a high level of strength and reliability is assured. MAXXIS MX-ST tyres deliver outstanding performance on a variety of terrain with the pattern and rubber compound combining to offer exceptional straight-line stability and excellent traction.

- New MAXXIS MAXXCROSS MX-ST tyres - exceptional straight-line stability and excellent traction
- Lightweight, black anodised, aluminium rims with redesigned hubs (front/rear) → higher level of strength and reliability

Radiator

Featuring state-of-the-art technology, the TC 65 uses a liquid cooling system to cool the cylinder as well as the crank cases.

The new Pankl radiators are inspired by the full-size TC models, replicating the same design but reduced in size to fit the TC 65. The radiator protector is mounted directly onto the frame and the radiators are mounted onto the frame protectors.

The highlight of the new cooling concept, with the two all-new radiators, is the serial tubing. This way of connecting the two radiators has the significant benefit of raising the efficiency of the complete system. The “Y-fittings used in the past are not in place any longer.

Air box and filter

The new airbox concept features a conventional suction sleeve, connecting the airbox with the carburettor. The base material of the air box itself is polyamide and not rubber as found on the previous generation.

The system supports the height adjustment possibilities of the chassis as the suction sleeve can be fitted in different positions.

The air filter mounting system now features snap locks for easy and intuitive mounting. The filter itself is provided by Twin Air and has a much bigger surface area, allowing more air into the intake which boosts power. It also features “Poka-Yoke” design for failproof mounting.

The air filter is placed under the seat and is accessible without using tools by removing the seat (quick release on seat).

Tank

The fuel tank capacity remains largely unchanged despite it being redesigned to work together with the new frame and bodywork and features the same cap as the full-size models.

Hourmeter

The hour meter now is mounted in the same position as found on the full-size models behind front number plate for easier reading and a lower risk of dirt and/or water intrusion.

Bodywork

The all-new bodywork of the TC 65 is the perfect example of Husqvarna Motorcycles' commitment to minicycles. A carefully balanced, scaled down design of our full-size TC bodywork finds its way onto the TC 65. This not only gives the bike the ultimate look, but it also gives young riders the ultimate feel.

The front number plate features an integrated lower triple clamp protector to prevent damage from roost. The tank spoiler features a bicomponent technology, featuring the Husqvarna specific texture on the upper part. Side number plates are kept as close as possible to the frame and subframe concept for unrestrictive ergonomics.

The general seat line is slightly flatter compared to the old generation and the bodywork is slimmer. The side panels now work much better with young riders' boots which allows them to grip the machine tighter with their legs when riding stood up. This inspires confidence and allows youngsters to ride with their full focus on the track ahead.

The bodywork including the seat can be raised to a higher position for taller children who outgrow the standard configuration.

Husqvarna Motorcycles side covers/number plates (2in1), smaller plastic part can be removed as on full size models.

Graphics

Modelled after the full-size motocross bikes, the TC 65 features striking, Swedish-inspired grey and yellow livery. Additionally, the graphics are applied using an in-mold process to ensure the best durability and quality.

Rounded off is this neat looking beauty with many parts featuring as specific Husqvarna brand texture for the ultimate look and grip. (e.g., seat cover and tank spoiler with same texture as on full-size models).

Engine

Featuring the latest in 2-stroke technology, the TC 65 is highly competitive in its class and ahead of its competition.

Besides using the lightest and most durable materials, the engine features a pressure-controlled exhaust valve which contributes to delivering top level performance. Additionally, the engine features a manual 6-speed transmission and a hydraulic clutch which allows the rider to have full control of the power delivery.

The new mounting concept of the crankshaft is simplified and much easier in the rare case the engine will need to be opened.

Crankcases & Engine covers

The crankcases have been designed to house the internal components of the engine in the perfect position to achieve the ideal centre of gravity at the lowest possible weight. The cases are

manufactured using a high-pressure die cast production process, which results in a thin wall thickness while retaining exceptional strength and reliability.

Draining noses for liquids and added service markers on the engine (▲) clearly show where to use washers, making maintenance and servicing easier than in the past. Also, Nm markings clearly show how tight to tighten the corresponding bolts to avoid overtightening. Many of the bolts for the engine cases are the same length for faster assembly.

For the first time, the crankcase is machined in the crankshaft area which leads to a tighter tolerance between the crankcase and crankshaft.

Husqvarna Motorcycles specific clutch covers:

- Husqvarna brand logo and brand specific finish in a Beige Grey powder coating

The clutch cover is also much stronger to withstand the forces transferred from the clutch slave cylinder in a better way. An oil level check screw has been integrated onto the clutch cover as well for ease of use.

The also new black ignition cover comes with an optimized labyrinth sealing concept against water ingress.

Cylinder

The high-performance cylinder is made from lightweight and durable aluminium and incorporates a Pressure-Controlled Exhaust Valve (PCEV) which provides unrivalled performance. A new supplier has been chosen for this part and the cylinder head will stay the same.

Ignition

A new digital ignition finds its way onto the TC 65 for 2024.

The new CDI box from Hidria brings more processing power, a new ignition curve, and the potential to work in future with a so-called double spark ignition.

Spark Plugs

The TC 65 features a new spark plug from BRISK which is easier to remove and re-install during routine maintenance. Each machine also includes a spare spark plug. BRISK will be the new supplier for all Mini spark plugs. The part number is printed on the spark plugs for easy reading, even when the spark plug connector is mounted on.

Carburettor

The well-known and proven Mikuni type TM 24 carburettor is unchanged when compared to the previous generation. Inside, an updated setting was needed to make the new engine, exhaust, and air intake concept work in perfect harmony and to deliver the best performance.

Alternative jets in the by-pack are no longer needed for the TC 65 to run the way it should.

Exhaust

A completely new exhaust system, manufacturing using the same process as the full-size motocross machines improves the quality and performance. Thanks to the removal of welding seams on the inside of the exhaust pipe the flow is optimized which results in massive improvements when it comes to thermodynamics and ultimately, performance.

The silencer has been updated and now comes with a black anodized finish. On top of this visual change, a performance improvement comes from a much better sealing of the silencer end cap.

A new rubber connector between the header pipe and silencer improves sealing to maintain performance.

Clutch

The reliable and light hydraulic clutch system guarantees even wear, near maintenance-free operation, and perfect action in every condition. This means that 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.

A new clutch basket made from steel allows a better disengagement of the clutch over its life span. The old aluminium clutch basket wore out much faster which led to inconsistent performance.

The old clutch system also tended to be quite rough and sometimes hard to use. Thanks to the new Diaphragm Spring clutch (DS) this will be a matter of the past. The system, originally introduced on the full-size TC line up, allows for much better controllability, even after many hours of riding. The springs compensate for worn out clutch plates and keep the performance of the system on the same level for a much longer time.

The new Diaphragm Spring clutch (DS) together with the modern clutch plates supplied by Miba offer a much improved and more durable package.

Cooling circuit

The cooling circuit has been significantly optimized. The water pump features a new diecast cover and an updated impeller taken from the full-size models. Both parts are carefully designed to work perfectly with the updated cylinder and new radiators. All the seals offer the tightest tolerances possible for maximum efficiency.

Transmission

The complete transmission has undergone a careful investigation with intense calculations.

The general durability and quality of the transmission has been significantly improved while keeping the same performance and feel. This was achieved by using new materials together with an adapted production process.

Shift lever

The new forged shift lever offers an improved shifting and features a full-size inspired design. The tip is foldable and designed to prevent mud from building up.

Sprocket (front)

The front sprocket is now installed using a bolt like on the full-size models. The old lock ring is no longer required and the new solution is much safer and more durable.

The new sprocket cover features an opening to access the shift lever mounting bolt for easier adjustment of the shift lever. Also, access to the oil drain plug has been considered in the design of the cover.

Kickstart

A new, more ergonomic kickstart leads to easier starting for all riders.

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 racing stars of tomorrow.

Engine

The TC 85 engine uses the latest 2-stroke technology to deliver unrivalled performance and rideability in the 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 size of the average 85cc rider. The contact points and overall feeling allow youngsters 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 to soak 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 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 capsulated 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 Computational Fluid Dynamics (CFD) 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 offers exceptional straight-line stability and excellent traction and predictability.

- Black Excel wheels and CNC-machined hubs → low unsprung weight and great stability
- 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 lever tip prevents the build-up of dirt to ensure 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 reliable and light Formula hydraulic clutch system guarantees even wear, near maintenance-free operation, and perfect action in every condition. This means that 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.

Graphics

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

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 Railed Goggles

Featuring the latest goggle technology and with colours that perfectly match the Kids Railed Helmet, the Kids Railed Goggles feature a sweat absorbing, two-layer face foam and an anti-fog and anti-scratch lens for perfect vision at all times.

Kids Railed Shirt

A high-performance motocross 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 and manufactured by leading boot brand Sidi, 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 for improved performance, the FMF Fatty Expansion Chamber and FMF Powercore 2 Silencer work together to unlock maximum power from the engine. Made from extra-strong sheet steel and nickel plated for easy maintenance, the FMF expansion chamber produces a considerably higher peak power than the standard exhaust. Designed specifically for motocross, the silencer delivers a factory look and a rich exhaust note while its high-grade aluminium and stainless steel construction offers exceptional durability at a very low weight.

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.

Hinson Outer Clutch Cover

Offering the highest level of impact resistance at the lowest possible weight, the Hinson Outer Clutch Cover is CNC-machined from high-strength aluminium for durability, then hard-anodised for a long-lasting and distinctive finish.

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.

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.