

BMC



Roadmachine AMP

Product Information

Roadmachine AMP Innovation

Tuned Compliance Concept (TCC) Endurance

The most capable version of our TCC technology: take the edge off the roughest roads to push harder and ride further. The ultimate balance between comfort and performance for a ride that is both forgiving and fast.

Roadmachine AMP Innovation

Integrated Pedal Assist

The seamlessly integrated Mahle X20 drive unit provides 25Nm of sensor-tuned assistance for a natural ride feel, and its smart battery optimizes power delivery, giving you a range of up to 140 Km with 3000 meters of elevation.

This ultra compact and lightweight premium rear hub drive system with a total weight of 3Kg is designed to provide ideal rider-oriented performance.



Roadmachine AMP Innovation

Iconic Silhouette

Featuring Roadmachine's renowned geometry to deliver incredibly poised handling, with clean lines and integrated cable routing, maintaining that iconic Roadmachine silhouette.



Roadmachine AMP Innovation

Tire Versatility

Supplied with 28mm wide tires, the Roadmachine AMP has frame clearance for tires with a measured width of 33mm when installed allowing riders to venture into mixed-terrain riding.



Roadmachine AMP Innovation

D-Shape Seatpost

The D-Shape compliance post's carbon layup was designed using TCC Endurance technology for tailored comfort.

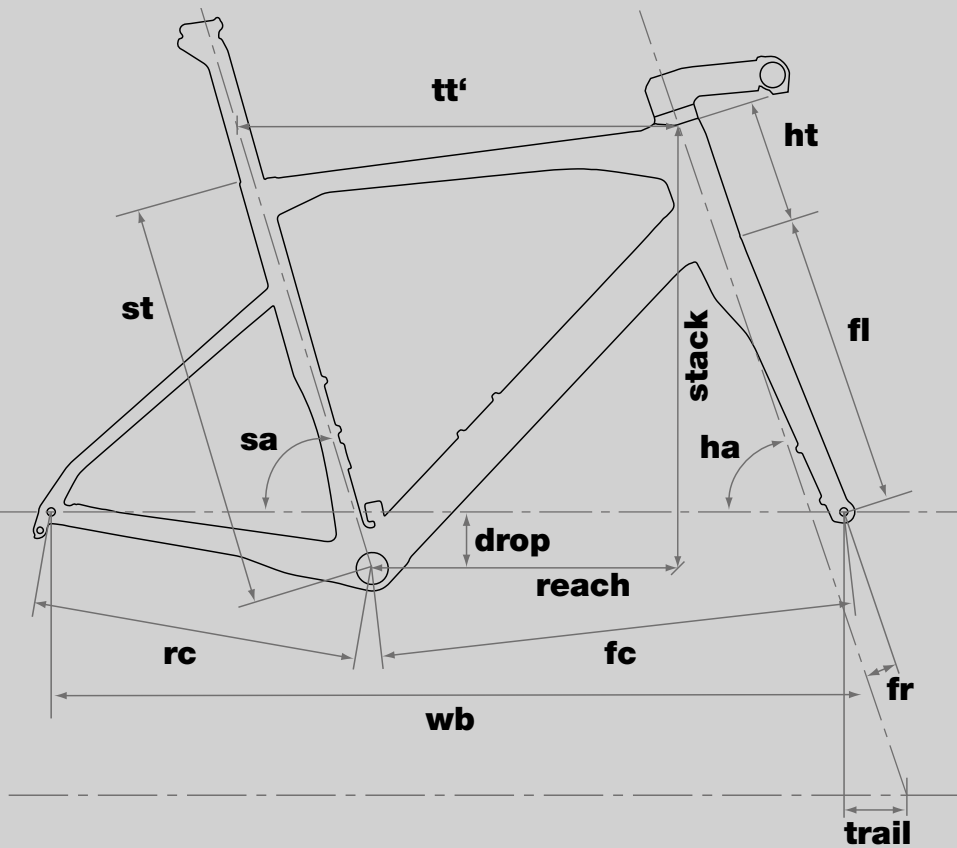
Integrated Seat Clamp

The seamless and functional integrated seatpost clamp is hidden within the frame.





Roadmachine AMP Geometry



Size	47	51	54	56	58	61
Rider Height cm	<166	166-174	172-180	178-186	184-192	>190
Stack mm	516	541	562	586	610	644
Reach mm	374	382	386	390	394	398
Seat Tube mm	420	457	500	522	539	573
Top Tube mm	522	532	546	556	568	583
Head tube mm	112	139	156	181	206	242
Seat angle°	74.2	74.2	74.2	74.2	74.2	74.2
Head Tube Angle°	71.2	71.2	72.0	72.0	72.0	72.0
Rear Center mm	410	410	410	410	410	410
Front center mm	583	599	597	609	621	635
Wheelbase mm	982	999	997	1008	1020	1035
BB drop mm	71	71	71	71	71	71
Fork length mm	375	375	375	375	375	375
Fork rake mm	50	50	45	45	45	45
Trail mm	63	63	63	63	63	63
Standover Height mm	719	750	782	805	825	859
Crank Length mm	170	170	172.5	172.5	175	175
Stem Length mm	90	90	100	110	110	120
Stem Angle° mm (ICS01 Stem)	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5
Bar Width mm	400	420	420	420	420	440
Bar Drop mm	125	125	125	125	125	125
Bar Reach mm	70	70	70	70	70	70
Seatpost Length mm	330	380	380	380	380	430
Seatpost Offset mm	15	15	15	15	15	15

Roadmachine AMP ONE



Specifications & Price

Frame	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">Integrated Removable BatteryInternal Cable RoutingPF86 Bottom BracketFlat Mount Disc12x142mm Thru-Axle		
Fork	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">Internal Cable RoutingFlat Mount Disc12x100mm Thru-Axle		
Seatpost	Roadmachine AMP Premium Carbon D-Shaped Seatpost <ul style="list-style-type: none">15mm Offset		
Drive Unit	Mahle X20		
Battery Pack	iX350 - 350 Wh		
Drive Unit Control	Mahle X20		
Charger	Mahle X20 Active Charger		
Handlebar	BMC RAB 02, Ergo Top Shape, Compact Bend		
Stem	BMC ICS01		
Saddle	Fizik Taiga		
Gears	2x12		
Crankset	SRAM Force AXS 46-33T		
Cassette	SRAM Force XG-1270 10-36T		
Chain	SRAM Force 12 Speed		
Front Derailleur	SRAM Force eTap AXS		
Rear Derailleur	SRAM Force eTap AXS		
Shifters	SRAM Force eTap AXS HRD		
Brakes	SRAM Force eTap AXS HRD, Centerline X Rotors (160/160)		
Rims, Rim Depth	CRD-321 Carbon, Tubeless Ready, 35mm		
Hubs (F/R)	CRD-321, Mahle X20		
Tires	Vittoria Rubino Pro, 28 mm		
Sizes	47,51, 54, 56, 58, 61		
Tire Clearance	33mm (Measured Width)		
ASTM Classification	Level 2		
Weight Limit	120 Kg		
Color	Pet Tur Blk		
Price	EUR 7'999	USD 8'499	CHF 8'499

Roadmachine AMP TWO



Specifications & Price

Frame	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">• Integrated Removable Battery• Internal Cable Routing• PF86 Bottom Bracket• Flat Mount Disc• 12x142mm Thru-Axle		
Fork	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">• Internal Cable Routing• Flat Mount Disc• 12x100mm Thru-Axle		
Seatpost	Roadmachine AMP Premium Carbon D-Shaped Seatpost <ul style="list-style-type: none">• 15mm Offset		
Drive Unit	Mahle X20		
Battery Pack	iX350 - 350 Wh		
Drive Unit Control	Mahle X20		
Charger	Mahle X20 Active Charger		
Handlebar	BMC RAB 02, Ergo Top Shape, Compact Bend		
Stem	BMC RSM01		
Saddle	Fizik Taiga		
Gears	2x12		
Crankset	SRAM Force AXS 46-33T		
Cassette	SRAM Rival XG-1250 10-36T		
Chain	SRAM Rival 12 Speed		
Front Derailleur	SRAM Rival eTap AXS		
Rear Derailleur	SRAM Rival eTap AXS		
Shifters	SRAM Rival eTap AXS HRD		
Brakes	SRAM Rival eTap AXS HRD, Centerline X Rotors (160/160)		
Rims, Rim Depth	XRD-522, Tubeless Ready, 25 mm		
Hubs (F/R)	XRD-522, Mahle X20		
Tires	Vittoria Rubino Pro, 28 mm		
Sizes	47,51, 54, 56, 58, 61		
Tire Clearance	33mm (Measured Width)		
ASTM Classification	Level 2		
Weight Limit	120 Kg		
Color	Yel Blu Wht		
Price	EUR 6'999	USD 7'299	CHF 7'499

Roadmachine AMP THREE



Specifications & Price

Frame	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">• Integrated Removable Battery• Internal Cable Routing• PF86 Bottom Bracket• Flat Mount Disc• 12x142mm Thru-Axle		
Fork	Roadmachine AMP Premium Carbon with Tuned Compliance Concept Endurance <ul style="list-style-type: none">• Internal Cable Routing• Flat Mount Disc• 12x100mm Thru-Axle		
Seatpost	Roadmachine AMP Premium Carbon D-Shaped Seatpost <ul style="list-style-type: none">• 15mm Offset		
Drive Unit	Mahle X20		
Battery Pack	iX350 - 350 Wh		
Drive Unit Control	Mahle X20		
Charger	Mahle X20 Active Charger		
Handlebar	BMC RAB 02, Ergo Top Shape, Compact Bend		
Stem	BMC RSM01		
Saddle	Fizik Taiga		
Gears	2x11		
Crankset	SHIMANO 105 50-34T		
Cassette	SHIMANO 105 11-32T		
Chain	SHIMANO 10501		
Front Derailleur	SHIMANO 105		
Rear Derailleur	SHIMANO 105		
Shifters	SHIMANO 105		
Brakes	SHIMANO 105, RT70 Rotors (160/160)		
Rims, Rim Depth	XRD-522, Tubeless Ready, 25 mm		
Hubs (F/R)	XRD-522, Mahle X20		
Tires	Vittoria Rubino Pro, 28 mm		
Sizes	47,51, 54, 56, 58, 61		
Tire Clearance	33mm (Measured Width)		
ASTM Classification	Level 2		
Weight Limit	120 Kg		
Color	Red Blu Pet		
Price	EUR 5'999	USD 6'299	CHF 6'499



Roadmachine AMP - Frequently Asked Questions

Can I replace the main battery?

Yes, the battery can be replaced by a trained retailer and fits both the original 350Wh battery or the smaller 250Wh. As the 250Wh weighs 1500g and the 350Wh 2250g, you could consider changing the battery for weight savings (saves 750g) or for future maintenance purposes.

Can I extend my battery’s capacity?

We chose the largest battery available today with a capacity of 350 Wh. You can further extend the capacity with Mahle’s optional Range Extender. The Range Extender has 173 Wh of capacity and weighs 1100g. It connects to the bike with an extra cable and fits into the Mahle bottle cage.

How much can I ride with a full battery charge and with the different motor assistance levels?

The battery capacity is 350Wh. The X20 hub consumes 250Wh nominal. The range can be described by maximum distance and/or elevation. This will vary depending on weather conditions (wind, temperature), rider weight and position on the bike, the terrain, tires, etc.

The examples listed below serve to help understand bike assist levels.

Terrain	Rider Weight	Support Level	Distance	Average Speed	Elevation
Low mountain / low difficulty	94 kg	Full assist	136 km	28.4 km/h	2050 m
Medium mountain / average difficulty	78 kg	Full assist	69 km	25.7 km/h	1678 m

Can I power other electronic equipment with the bike battery?

Yes, the Mahle X20 system allows you to power head- and taillights or connect a USB 2A/5V. Ask your retailer to install the necessary cables and mounts. This type of connectivity was not integrated on base specs of our Roadmachine AMP as it is a dedicated Road Endurance bike.

How long does it take to charge the bike?

A full charge of the stock 350Wh battery takes about 3h30’. When discharged to 20%, a full charge will take about 2h00’.

What bike sizes are available?

The Roadmachine AMP is available in the same sizes as our standard Roadmachine series: 47, 51, 54, 56, 58, 61. Thanks to our engineering team, we can even fit the 350Wh battery into a small 47 size frame.

What are the frame/geometry differences between the Roadmachine and Roadmachine AMP?

The geometry is the same as the traditional Roadmachine series and the tire clearance is identical: up to 33mm tire width (measured and inflated).

How much does it weigh?

The pre-production Roadmachine AMP ONE size 54 bike comes in at 11.8 kg without pedals. Weight may vary depending on components’ weight tolerance.

Roadmachine AMP - Frequently Asked Questions

How much is the Mahle system helping me out to pedal?

Numbers won't give you an answer. Go for a ride to figure that out ;-)! Mahle has communicated that the X20 holds a similar torq level as a 55Nm mid-drive system.

Is the bike equipped with a remote to change the assistance mode from the handlebar?

Not from our base specifications. However, you could get your Roadmachine AMP equipped with the optional Mahle E-shifters dropbar remote.

Is the bike equipped with a computer to display battery levels and other info?

The Roadmachine AMP can be connected to Mahle's PulsarONE display or to any other ANT+ LEV cycling computer.

Can I change the wheels to another set?

The X20 rear hub requires specific rear dropouts. Because of that, the Roadmachine AMP is not compatible with traditional wheels. The wheels cannot be easily changed, but we specified great rims for each bike level to ensure you get the best rolling efficiency straight out of the box. The rear rim is optimized for the X20 rear hub spokes lacing pattern.

How fast can I ride with the Mahle X20 assistance?

As fast as you can, as the drive unit doesn't drag you down when riding above the assistance level. The drive assist works up to the regulation maximum of 25 kph (or 20 mph for North America).

Is there a tuning kit available to get the assistance working above 25 kph?

We are sure that a tuning kit will exist at some point. We though cannot encourage you to use them as these components are not allowed on public roads and will void the warranty covered by Mahle.

Is the bottom bracket easy to replace?

The Mahle bottom bracket is part of the X20 system and measures pedaling torque. Yes, you can replace it by a new Mahle bottom bracket. The assembly requires special tools and Mahle's instructions must be precisely followed.

Is the bike weather resistant?

The X20 hub has an IP64 protection level. It is resistant to dust and water projections. No, it can't ride under water, it's not a submarine and, as always, refrain from using a high-pressure tool to clean your bike.

Can I update my bike by myself?

The Mahle Active Charger features a micro-USB port to allow you to connect your bike and run firmware updates by Mahle.

