

# BUILD YOUR OWN E-BIKE

CONCEPTS



## The desire to have your own e-bike:

No other trend has dominated the bicycle industry more intensively in recent years than the e-bike! In 2020, sales records were set across Europe, making the e-bike segment the strongest bicycle segment in the individual countries. Almost 2 million e-bikes were sold in Germany alone. Quantitative market shares of + 40 % are no longer uncommon and a further increase is seen as very realistic.

The e-bike is both a problem solver and an expression of a new sense of mobility that is simply fun, environmentally friendly and healthy.

With our almost 100 years of expertise in the development, procurement and marketing of bicycle components, we have developed a holistic concept that combines the latest state of the art in a wide range of possible variations and a high degree of customization.

The Messingschlager E-Mobility Solutions address the specific consumer and market needs of a wide variety of target groups in the international markets and offer the bicycle manufacturer maximum flexibility in terms of design, procurement and production.

Our e-mobility solutions are based on the legal EU directives and regulations for pedelecs and guarantee our customers legal security.

This enables our customers to enter the number 1 growth market in the bicycle industry in an uncomplicated, cost-efficient and faster than average manner!

Another important component of this concept was the introduction of the Messingschlager PartFinder in 2020. The range of parts, which will be significantly expanded for 2022, makes it easier for OEMs, dealers and end users alike to find the right load-appropriate bicycle part for the required application. Our recommended bicycle parts are tested and categorized according to the valid ISO 4210 / EN 15194 standards up to 120 kg and sometimes even up to 160 kg.

The long-standing experience of the company Messingschlager gives you assistance, market-driven answers and important reliability in a time when the international supply chains are heavily

stressed and product availability is characterized by great uncertainties and long lead times.

The e-bike has arrived in the middle of society. Don't let the dynamics of this product segment and its opportunities slip by!

We are happy to support you!

## Your Team Messingschlager

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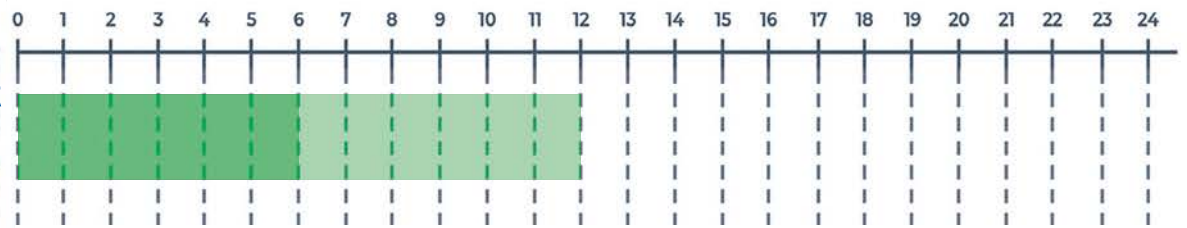
# BUILD YOUR OWN E-BIKE

EVERYTHING FROM A SINGLE SOURCE



## YOUR BENEFIT

TIME TO MARKET IN MONTHS



MANUFACTURER  
+  
*messingschlager*

Go to market: **Approx. 6-12 months** | € investment | Manpower

MANUFACTURER  
IN-HOUSE  
DEVELOPEMENT



Go to market: **At best 18-24 months** | €€€€€ investment | Manpower

⌚ LESS TIME

€ LESS MONEY

👤 LESS MANPOWER

CONTACT OUR  
E-MOBILITY SOLUTIONS TEAM  
TO FIND OUT MORE ABOUT...

OUR DIFFERENT CONCEPTS

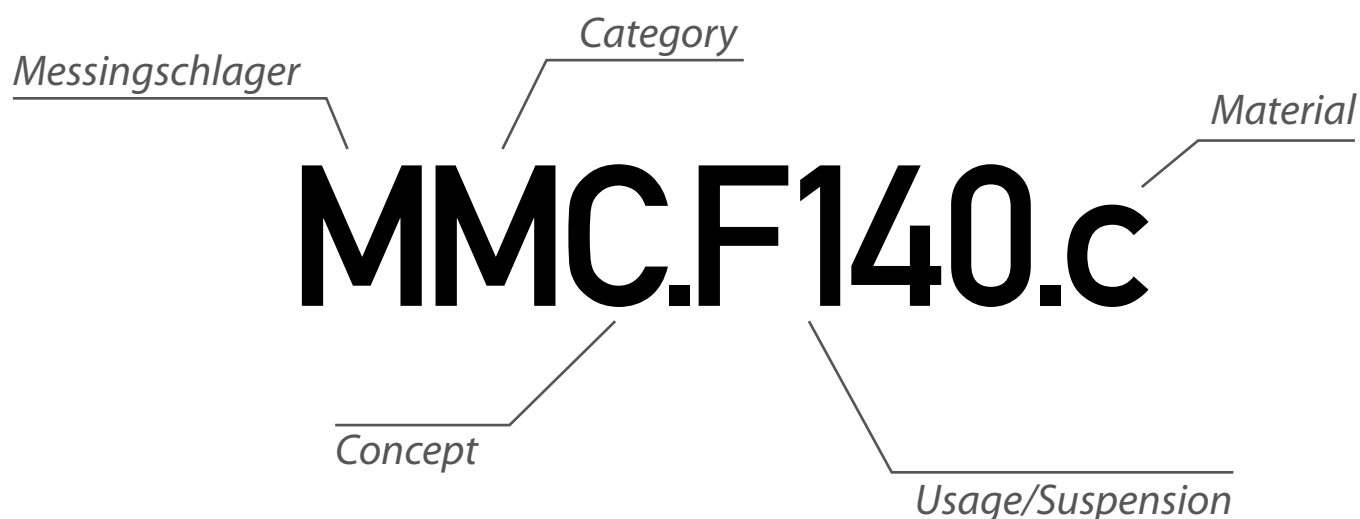
BASED ON **brose** & **BAFANG** DRIVE TRAINS

HOW WE CAN SUPPORT YOU

DEVELOPING THE ENTIRE BOM OF YOUR BIKE

OUR UNIQUE FULL-SERVICE-OFFERING

CONSULTANCY, PRODUCT MANAGEMENT, SOURCING,  
LOGISTICS SERVICE & FINANCING



## New classification system at Messingschlager

With the emergence of further, new frame platforms, the need for a new designation formula arose to develop and re-categorise our product range accordingly. From this season on we will name our e-bike kits as follows:

- **MMC.F170.al** / *Messingschlager Mountain Concept – Fullsuspension (170 mm) – Aluminium frame*
- **MMC.F140.c / SUV** *Messingschlager Mountain Concept – Fullsuspension (140 mm) – Carbon frame*
- **MMC.HT.al** / *Messingschlager Mountain Concept – Hardtail – Aluminium frame*
- **MUC.T.al** / *Messingschlager Urban Concept – Trekking-E-Bike – Aluminium frame*
- **MUC.C.al / SUV** *Messingschlager Urban Concept – City und SUV-E-Bike – Aluminium frame*
- **MUC.C.al** / *Messingschlager Urban Concept – City-E-Bike – Aluminium frame*
- **MUC.L.al** / *Messingschlager Urban Concept – Light-E-Bike – Aluminium frame*
- **MRC.G.al** / *Messingschlager Road Concept – Gravel-E-Bike – Aluminium frame*
- **MMC.Y.al** / *Messingschlager Mountain Concept – Youth – Aluminium frame*

# SYSTEMS



## Brose

Messingschlager and Brose have a longstanding partnership. The variability of the two motor platforms, aluminum or magnesium housing, enables a wide range of applications.

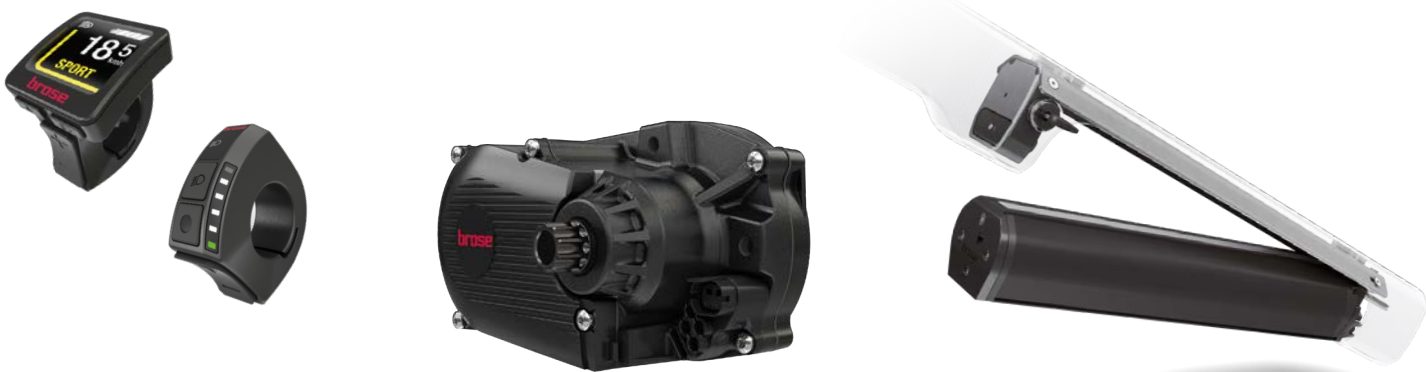
Messingschlager is one of the first manufacturers to install the complete Brose motor system - consisting of a motor, newly developed 630 Wh battery and smart display. Maximum flexibility is the key to success, which is reflected in the new E-MTB Fully and Gen2 (City, Trekking, Hardtail MTB) concepts.

For the high-performance E-MTB MMC.F140.c we rely on the 90 Nm strong Drive S Mag from Brose with a magnesium housing. With our city platform Gen2, a Brose Drive C, T or S is optional. The different performance features ensure the best possible adaptation to the respective market.

We also install Brose displays to match the engine. Depending on the model, the compact remote or the smart Brose Allround display is used here.

For long ranges, we mount the newly developed Brose battery with 630 Wh in our E-MTB. State of the art cell technology and a high level of power density are used. In our new city concept Gen2, we offer either a 522 Wh or 630 Wh battery.

It goes without saying that the battery is fully integrated in the down tube of each of our e-bikes, giving a streamline and slick appearance!





## Bafang

Bafang is a well-known manufacturer of motor systems for e-bikes of all types. The company occupies a leading position worldwide in hub motors, and, with its open system architecture, enables the greatest possible freedom of design for OE customers. Regardless of whether it is a rear, mid,

front or cargo engine, Bafang has products to fit all markets. There are also displays of all quality levels and suitable batteries. The entire Bafang range is available from Messingschlagel.

This is reason enough to equip the product range of our light e-bikes with selected new hub motors of Bafang.

These compact motors fit in with the 360 Wh battery - which, are equipped with the latest 21700 cell technology and fit seamlessly with the clean design of our light e-bikes. Depending on the application, we install the sporty compact DP C11 or the clear DP C240 displays.



**MMC.F170.al** / Messingschlag Mountain Concept Fully Aluminium

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*„No construction crew  
is complete without  
a wrecking ball“*

Pushing up, lifting or shuttling  
are a thing of the past. Welcome to  
the „wrecking ball“ of your future  
trail shred. Our new e-enduro.







# MMC.F170.al





## MMC.F170.a1 – for the really big things

If you combine modern geometry, reliable technology and the latest equipment details, you get a perfect enduro platform. Not only does it offer the rider maximum safety, speed and fun going downhill, but it also moves him comfortably and dynamically uphill.

That was the goal in the development of the new e-enduro full suspension MMC.F170.a1, which complements our e-mobility portfolio with a solution for the really big things. Regarding the riding gear, next to the extremely robust aluminum frame we put everything into the specifications that guarantees sporty enduro enjoyment.

Geometry? Sporty and yet downhill oriented, with the possibility of mullet tires. Travel? 170mm front and rear. The seat post? Thanks to the straight seat tube designs fully retractable via remote trigger, with a diameter of 34.9 mm designed to be stable. Stress-free design? Thanks to fully integrated cable and chain routing implemented perfectly.

The proven Brose S-Mag drive ensures strong and reliable propulsion in all riding situations. With its torque of up to 90 Nm, it ensures superior power in all situations and especially uphill. The weight of the engine also remains in the S-Mag version pleasingly low. We install the 725 Wh battery to guarantee a long range. Thanks to the latest cell technology it still takes up little space. The MMC.F170.a1 is an e-enduro that leaves nothing to be desired!

**Categorization:**



# MMC.F170.al



The integrated headset with block lock enables cable routing that is fully integrated into the frame for lasting durability.



The same applies to the chain guide elegantly integrated into the frame, which reliably prevents the chain from falling off in all situations.



Lots of capacity for long ranges: by using 21700 cell technology, capacities of over 700 Wh are possible without any technical changes.

## Key Facts

**27.5"/29"**  
Variable

To ensure the greatest variability our E-Enduro was designed so that both 27.5" and 29" wheels can be mounted.

**170**  
mm

With 170 mm at the front and rear, the enduro achieves a balanced mix of full suspension travel and sporty handling.

**90**  
Nm

The heart of our full suspension is formed by the Brose Drive S Mag, which has achieved a maximum torque of 90 Nm with a weight of only 2.9 kg.

**725**  
Wh

This powerful unit is supplied with electricity by a fully integrated battery, which has a capacity of over 700 Wh and guarantees the best range.

# System

Brose Remote Display



Brose Drive S Mag

BMZ Battery with 725 Wh



In our newly developed enduro platform, we rely on Brose technology for the drive and display. The light S-Mag drive provides a strong 90 Nm of torque.

With the compact remote display, the rider always has all important data in view.

New, compact batteries with 21700 cell technology and capacities of over 700 Wh ensure long ranges.

# Geometry



Enduro

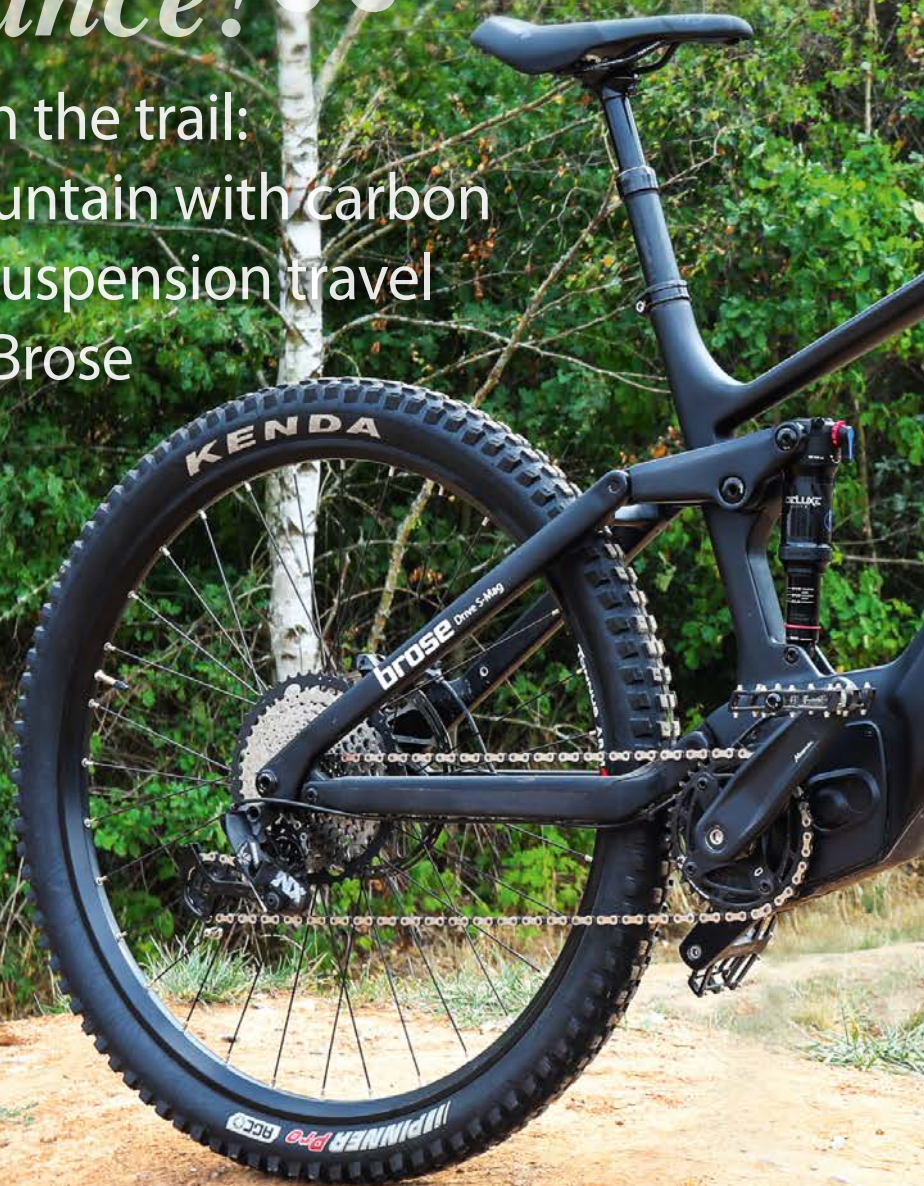
Enduro	S/M	M/L	L/XL
Seat tube length	400 mm	420 mm	480 mm
Top tube length horizontal	589.5 mm	621.6 mm	653.7 mm
Steerer tube	135 mm	145 mm	155 mm
Chain stay	465 mm	465 mm	465 mm
Steerer tube angle	66°	66°	66°
Seat tube angle	77°	77°	77°
Wheelbase	1246 mm	1280 mm	1314 mm
Reach	435 mm	465 mm	495.1 mm
Stack	672 mm	681 mm	690.2 mm
Fork installation height	586 mm	586 mm	586 mm
Seat post Ø	34.9 mm	34.9 mm	34.9 mm

MMC.F140.c / Messingschlag Mountain Concept Fully Carbon

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“Generous full suspension on travel & an impressive performance!”

For sporty use on the trail: high-end all-mountain with carbon frame, 140 mm suspension travel and a complete Brose drive system.



# MMC.F140.c



# MMC.F140.c







## MMC.F140.c – developed for high-end-E-MTBs

When developing this new platform, Messingschlager was concerned with designing a carbon frame based on the most modern geometric approaches for all-mountain/trail applications. We followed a clear goal: to develop a modern carbon design at an attractive price. Interesting fact about our MMC.F140.c: as well as the main frame, the rear end and shock absorber rocker are also made of carbon to ensure a low overall weight.

With this frame as a basis, complete bicycles weighing less than 22 kg can be built. In addition to its low weight, the use of mixed wheel sizes with 29", 27.5" or Mullet system are possible. For the motor, we opted for the high performance and power of the Brose Drive S Mag with a maximum torque of up to 90 Nm. The new Brose battery with 630 Wh is fully integrated in the down tube. For the display we recommend minimalist solutions with the Brose Display Remote or Allround.

### Categorization:



# MMC.F140.c



The frame, shock absorber and rear end are made of high-quality carbon fibers. This guarantees a low weight with optimal rigidity.

When it comes to the built-in components of the motor system, we rely on the entire Brose product range.

Design and formal language are modern and independent, but do not have a polarizing effect on the viewer.

## Key Facts

**27.5"/29"**  
Variable

To ensure the greatest variability our E-All Mountain was designed in a way that both 27.5" and 29" wheels can be mounted.

**140**  
mm

When coordinating the suspension travel of up to 140 mm, our developers paid attention to a progressive characteristic curve for perfect performance.

**90**  
Nm

The heart of our full suspension is formed by the Brose Drive S Mag, which has achieved a maximum torque of 90 Nm with a weight of only 2.9 kg.

**630**  
Wh

This powerful unit is supplied with electricity by a fully integrated battery, which has a capacity of 630 Wh and guarantees the best range.

# System

Brose Remote Display



Brose Drive S Mag



Brose battery with 630 Wh

In our newly developed e-all-mountain with a carbon frame, we are one of the first providers to install the complete system from Brose.

This complete package includes the Brose Drive S Mag motor, the newly developed Brose battery with 630 Wh and the extremely compact Remote Display, also from Brose.

This system underlines the sporty approach of our frame platform and enables the construction of strong and smooth performance E-MTBs.

# Geometry



Fully

FULLY	S/M	M/L	L/XL
Seat tube length	400 mm	420 mm	480 mm
Top tube length horizontal	600 mm	632 mm	664 mm
Steerer tube	118 mm	140 mm	162 mm
Chain stay	465 mm	465 mm	465 mm
Steerer tube angle	66°	66°	66°
Seat tube angle	74.9°	74.7°	74.6°
Wheelbase	1219 mm	1252 mm	1286 mm
Reach	434 mm	460 mm	485 mm
Stack	610 mm	630 mm	650 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40
Fork installation height	551 mm	551 mm	551 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm

# MMC.F140.c SUV



With our integrated mudguard - luggage carrier - combinations, transport requirements find elegant solutions without any effort.



Modern 6 - 16 V LED lights blend perfectly into the overall picture of handlebar and carrier and ensure clear visibility and perspective.



The high-torque Brose drives guarantee superior propulsion in every riding situation and on every terrain.

## Key Facts

**27.5"/29"**  
Variable

To ensure the greatest variability our E-All Mountain was designed in a way that both 27.5" and 29" wheels can be mounted.

**140**  
mm

When coordinating the suspension travel of up to 140 mm, our developers paid attention to a progressive characteristic curve for perfect performance.

**90**  
Nm

The heart of our full suspension is formed by the Brose Drive S Mag, which has achieved a maximum torque of 90 Nm with a weight of only 2.9 kg.

**630**  
Wh

This powerful unit is supplied with electricity by a fully integrated battery, which has a capacity of 630 Wh and guarantees the best range.

**321130 THRU AXLE**



**BOOST**

- OLD 148 mm
- M12 x length 186 mm
- flat axle
- allen screw fixation
- thread pitch: 1.0 mm
- thread length: 12.7 mm
- with inner thread M5 x P0.8 on both sides
- OEM



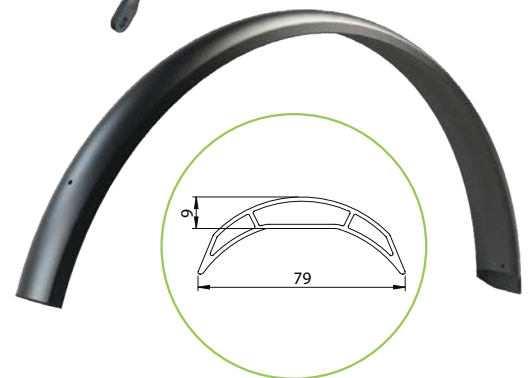
**446102 CARRIER**

- for Fully e-bikes MMC.F140.c
- aluminium
- for rear lights with hole distance 50 mm



**386232 MUDGUARD**

- aluminium
- 79 mm
- for Fully e-bikes MMC.F140.c
- with pre-drilled holes, suitable for art. 446102 and fully e-bike MMC.F140.c



**613408 FENDER MOUNTING BRIDGE**



**613411 E-bike Fully kickstand adapter**

- CNC machined aluminium
- black



MMC.HT.al / Messingschlager Mountain Concept Hardtail Aluminium

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„*Powerful e-hardtail  
with a wide  
range of uses*“

At home on all trails with Brose Generation 2, whether after work or for the weekend ride.





# MMC.HT.al







## MMC.HT.al – Powerful e-hard-tail with a wide range of uses

An E-MTB for all situations - our MMC.HT.al comes pretty close to this ideal. Whether on the narrow single trails of German low mountain ranges or on alpine gravel roads, the MTB hardtail meets all requirements perfectly.

Driven by proven Brose Mag generation 2 drives, the MMC.HT.al is designed for a wide range of uses in the touring sector and is recommended for suspension forks with 100–120 mm travel on 29" wheels or 120–140 mm travel on 27.5" wheels.

The advantage of the concept lies in its great variability with useful details: Boost thru-axle standard, the option of mounting a dropper post with internal cable routing, flexible battery capacity from 522 Wh or 630 Wh for maximum range. The lightweight battery is elegantly integrated into the frame and ensures a clean, harmonious look. As a display, we recommend the universal and informative allround display from Brose for all relevant information during an E-MTB tour.

### Categorization:



# MMC.HT.al



Optimal full integration into the frame: lightweight batteries with 522 Wh for attractive price points or 630 Wh for maximum range.



Elegantly integrated and still informative with all important tour data: the Brose LCD color display Allround.



High flexibility: rearend with 12x148mm Boost thru axles and for tire widths up to 29" x 2.4" or 27.5" x 2.8".

## Key Facts

**27.5"/29"**  
Variable

In order to guarantee the greatest possible variability, our E-MTB hardtail was designed in a way that both 27.5" and 29" wheels can be mounted.

**90**  
Nm

Powerful Brose Drive S Mag drive with a maximum torque of 90 Nm and a weight of only 2.9 kg.

**120/140**  
mm

Flexible suitability for suspension forks up to 120 mm (29") or 140 mm (27.5") for a wide range of applications.

**522/630**  
Wh

Optionally with 522 Wh or 630 Wh for maximum range or attractive price points.

# System

Brose Allround Display



Brose Drive S Mag

Battery with 522 Wh or 630 Wh

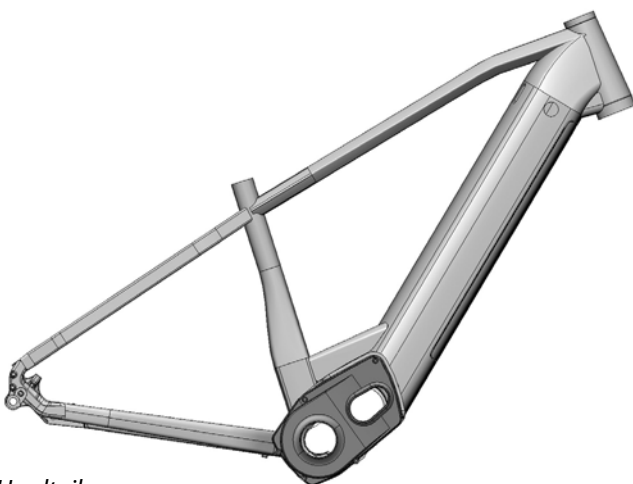


Our MTB hardtail frame is designed for the best possible all-round properties. It can optionally be equipped with Brose Drive C, S or T drives, depending on the desired driving dynamics and also on the Mag version.

The Brose Allround Display keeps the driver up to date with all important tour data at all times. Depending on the desired range and pricing, the hardtail platform can be specified with a 522 Wh or 630 Wh battery.

Both the drive and the batteries are always ideally integrated into the frame. Perfect for a quick evening round or a long weekend tour.

# Geometry



Hardtail

HARDTAIL	S/M	M/L	L/XL
Seat tube length	420 mm	460 mm	500 mm
Top tube length horizontal	606 mm	637 mm	659 mm
Steerer tube	160 mm	160 mm	170 mm
Chain stay	480 mm	480 mm	480 mm
Steerer tube angle	68°	68°	68°
Seat tube angle	73°	73°	73°
Wheelbase	1178 mm	1198 mm	1218 mm
Reach	405 mm	435 mm	455 mm
Stack	658 mm	663 mm	668 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40
Fork installation height	503 mm	503 mm	503 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm

**MUC.T.al** / Messingschlager Urban Concept Trekking Aluminium

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„Go for the next discovery tour with powerful 90 Nm.“

Contemporary design and the whisper-quiet Brose drive for high-quality travel and trekking fun.





# MUC.T.al





## MUC.T.al – the perfect basis for an attractive trekking e-bike

"The journey is the reward" - hardly any other model in our e-mobility program applies this motto as much as it does with MUC.T.al. It is quite possible that the rider would like to cover the route again when he or she has arrived. Uphill? None noticed. Headwind? Can't be at all. Heavy baggage? Could have been more. Arrive relaxed! At any time. Our recipe for success: an aluminum frame suitable for touring, which impresses with its geometry suitable for long journeys and is compatible with all Brose Mag generation 2 drives. Its quiet and high-torque characteristics - whether Drive T with 70 Nm or Drive S with 90 Nm of torque - make the Brose drive the perfect, unobtrusive but powerful partner for long trekking tours.

We also offer batteries with a capacity of up to 630 Wh. Maximum variability is the motto for the drive. Due to the open construction of the frame triangle, both belt and chains drives can be installed. The modern Brose all-round display in smartwatch design offers the discerning rider good readability and a large number of useful functionalities and rounds off the overall drive concept.

### Categorization:



*upper picture: women's version*

*left picture: men's version*

# MUC.T.al



The geometry, construction and details of the new trekking frame provide the best prerequisites for touring specifications.



The new Allround display from Brose impresses with its functionality and the clean look of a smart watch.



Flexibility with the motor: this model can optionally be equipped with Brose Drive C, T or S - with a belt or chain drive.

## Key Facts

**50/70/90**  
Nm

Driven by Brose Drive C, T or S motors, the customer has the option of 50, 70 or 90 Nm max. torque.

**MAX**  
Vario

Maximum variability: thanks to the frame lock and construction, chain, hub and belt drives can be installed.

**522**  
**630**  
Wh

The battery with 522 Wh or 630 Wh is fully integrated into the frame and enables long ranges or low price points.

**TREK**

Men's or trapeze frames with trekking-specific details and geometry for long-distance comfort.



# System

Brose Allround Display



Brose Drive C/T or S

Battery with 522 Wh or 630 Wh



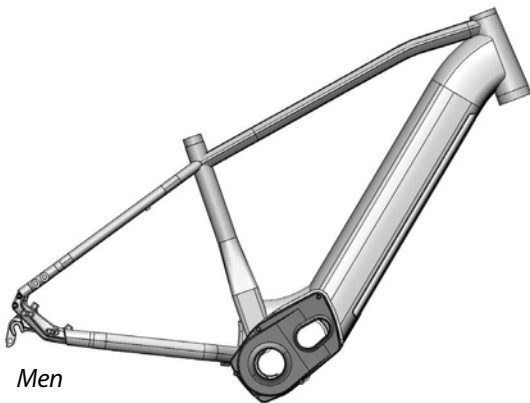
Cover long distances with the best possible comfort and reliable, quiet pedal assistance - this is ensured by our new frame concept and the powerful Brose Drive C, T or S drives with 50, 70 or

90 Nm maximum torque. This makes riding uphill an easy task.

For the cockpit, we opted for the Brose all-round display with the look of a

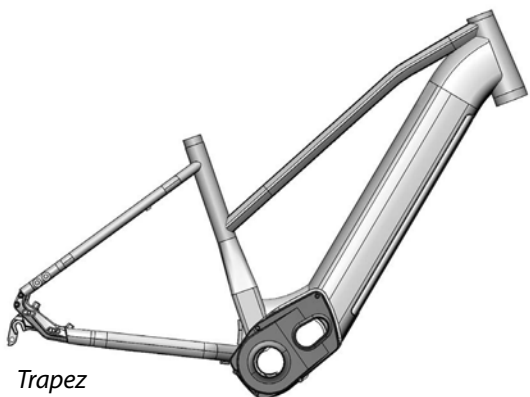
smartwatch and elegant integration. For trekking applications, we recommend the 630 Wh battery, ideally suited for a long weekend tour or the stages of bike travelling.

# Geometry



Men

TREKKING MEN	S	M	L	XL
Seat tube length	450 mm	500 mm	550 mm	600 mm
Top tube length horizontal	608 mm	615 mm	623 mm	628 mm
Steerer tube	170 mm	180 mm	190 mm	190 mm
Chain stay	475 mm	475 mm	475 mm	475 mm
Steerer tube angle	71°	71°	71°	71°
Seat tube angle	73°	73°	73°	73°
Wheelbase	1122 mm	1130 mm	1139 mm	1144 mm
Reach	408 mm	413 mm	418 mm	423 mm
Stack	653 mm	662 mm	671 mm	671 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40
Fork installation height	460 mm	460 mm	460 mm	460 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm	31.6 mm



Trapez

TREKKING TRAPEZ	S	M	L
Seat tube length	450 mm	500 mm	550 mm
Top tube length horizontal	599 mm	609 mm	620 mm
Steerer tube	170 mm	180 mm	190 mm
Chain stay	475 mm	475 mm	475 mm
Steerer tube angle	71°	71°	71°
Seat tube angle	73°	73°	73°
Wheelbase	1104 mm	1124 mm	1136 mm
Reach	400 mm	407 mm	415 mm
Stack	653 mm	661 mm	671 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40
Fork installation height	460 mm	460 mm	460 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm

MUC.C.al<sup>SUV</sup> / Messingschlagel Urban Concept City Aluminium SUV

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“*Our interpretation  
of a real SUV!*

*Perfect for on- and offroad*”

A city e-bike can be hardly score when used aside from on the road? That's wrong! With our SUV concept we have made an on-road bike absolutely suitable for off-road use.

**Totally versatile, totally sexy,  
totally SUV**





# MUC.C.a | SUV





## MUC.C.al<sup>SUV</sup> – this is how we imagine a real SUV

City e-bikes have many advantages, but are inferior to the normal eMTB in terms of off-road suitability. Messingschlagel has taken on this subject and presents an interpretation of an all-road e-bike, ideal for on- and off-road use. It unites the advantages of a low-entry bike with more off-road mobility.

The geometry and seating position promises a high degree of comfort and suitability for touring in urban areas, as well as on gravel or forest paths.

Our SUV is equipped and well prepared for all eventualities that may come up on an e-bike on a weekend tour or on a shopping trip to the weekly market. This is thanks to a powerful lighting system, elegant integration of mudguards and luggage racks as well as thick knobby tires.

The aluminum frame with comfortable geometry and low step through entry is compatible with all Brose motors - Drive C, T or S - compatible.

To increase flexibility to a maximum, we also offer here the option of a 522 Wh battery - for implementation of particularly cheaper price points - or a range extending 630 Wh battery.

Open frame triangle for maximum flexibility (chain drive as well as belt drives possible without any problems).

### Categorization:



# MUC.C.a | SUV



Our variable city platform makes a wide range of applications possible. With a bright lighting system and chunky, bulky tires this e-bike turns into a real SUV.



Our aluminum mudguard luggage rack systems give you a clean, tidy look. With only a few struts and supports, the system can still be fixed stably and easily to the rear structures.



Flexibility with the engine: this model can be equipped optionally with a Brose Drive C, Drive T or Drive S.

## Key Facts

**50/70/90**  
Nm

Driven by Brose Drive C, T or S motors, the customer has the option of 50, 70 or 90 Nm max. torque.

**MAX**  
Vario

Maximum variability: thanks to the frame lock and construction, chain, hub and belt drives can be installed.

**522**  
**630**  
Wh

The battery, optionally in 522 Wh or 630 Wh, is fully integrated in the frame and enables large ranges in an urban environment.

**SUV**

Coarse, voluminous tires up to 2.35", elegantly integrated mudguard / luggage rack unit, 80-100 mm suspension travel, high-quality lighting system – our interpretation of an SUV!

# System

*Brose Allround Display*



*Brose Drive C/T oder S*

*Battery with 522 Wh or 630 Wh*

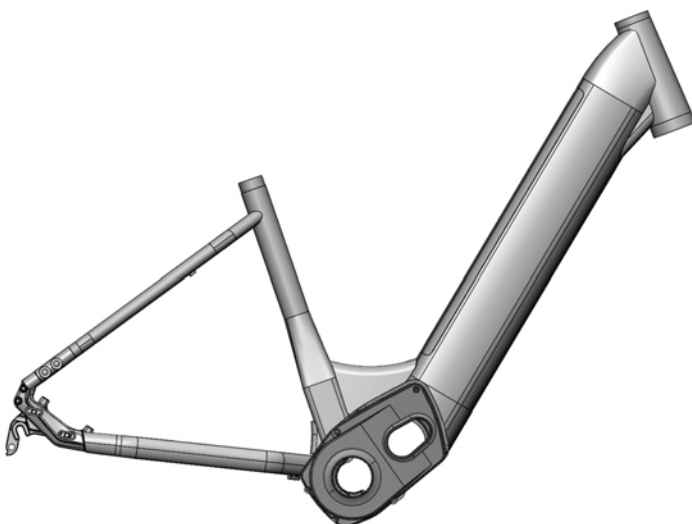


With this frame platform, we offer the greatest possible variability and flexibility. Equipped with either Brose Drive C, T or S, the driving dynamics can be adapted to different purposes. With a maximum torque of 90 Nm, this e-bike feels at home in any area.

We opted for the Brose Allround Display as the information center. It keeps the rider up to date on all important tour dates at all times and still takes up little space on the handlebar.

For good ranges in urban areas, we offer two different batteries with 522 Wh or 630 Wh for this platform. This means that nothing stands in the way of a long tour at the weekend or the daily commute to the office.

# Geometry



*Wave*

	<b>S</b>	<b>M</b>	<b>L</b>
Seat tube length	440 mm	490 mm	540 mm
Top tube length horizontal	612 mm	629 mm	645 mm
Steerer tube	170 mm	185 mm	200 mm
Chain Stay	475 mm	475 mm	475 mm
Steerer tube angle	67°	67°	67°
Seat tube angle	70°	70°	70°
Wheelbase	1124 mm	1141 mm	1159 mm
Reach	390 mm	402 mm	414 mm
Stack	644 mm	658 mm	671 mm

MUC.C.al / Messingschlager Urban Concept City Aluminium

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“*Modern e-bikes  
belong in the city  
like gondolas on the  
Grand Canal*”

Contemporary design and high  
variability, consistently and  
smart appearance.







# MUC.C.a





## MUC.C.al – the perfect basis for an attractive city e-bike

E-bikes have become indispensable in urban areas. It is time for Messingschlagel to use the experience gained and to further develop our well-known city and trekking line of the first generation. The aluminium frame with comfortable geometry and low entry is compatible with all Brose motors - Drive C, T or S. This also applies to the trekking concept. In order to increase the range, we also offer the option of using a 522 Wh battery - for particularly low-cost price points - or a long-range 630 Wh battery.

The battery removal was designed in a way that the cover and battery can be removed upwards without any tools and in a way that important ergonomic aspects are taken into account. We also have the greatest possible variety of power transmissions and, like the first generation, we use an open frame triangle so that both chain and belt drives can be installed without any problems.

### Categorization:



# MUC.C.a



The construction and design of our new city platform is modern, variable and ergonomic.



The new Allround display from Brose: high functionality with the clean look of a smart watch.



Flexibility in the drive: chain, hub and belt drives are possible thanks to a frame lock construction.

## Key Facts

**50/70/90**  
Nm

Driven by Brose Drive C, T or S motors, the customer has the option of 50, 70 or 90 Nm max. torque.

**MAX**  
Vario

Maximum variability: thanks to the frame lock and construction, chain, hub and belt drives can be installed.

**522**  
**630**  
Wh

The battery, optionally in 522 Wh or 630 Wh, is fully integrated in the frame and enables large ranges.

**WAVE**

Practical and elegant wave frame shape with deep entry and geometry for the challenges of the city.

# System

Brose Allround Display



Brose Drive C/T or S

Battery with 522 Wh or 630 Wh

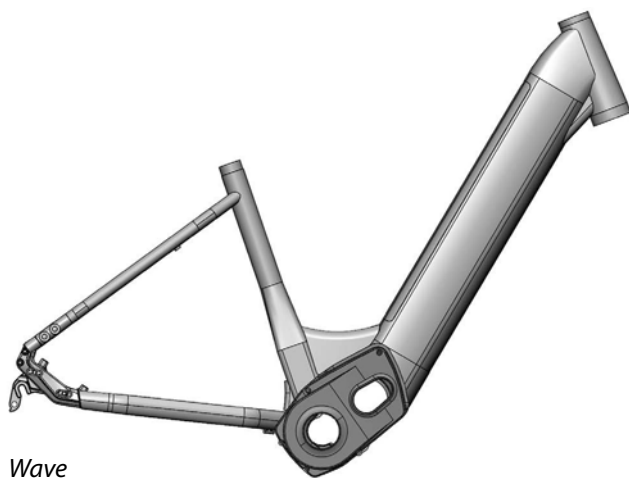


With this frame platform, we offer the greatest possible variability and flexibility. Equipped with either Brose Drive C, T or S, the driving dynamics can be adjusted for different purposes.

With a maximum torque of 50, 70 or 90 Nm, this e-bike feels at home anywhere. We decided on the Brose Allround Display as information center, which impresses with its smart watch-like design and high functionality.

For high ranges in urban areas, we offer two different batteries with 522 Wh or 630 Wh for this platform. This means that nothing stands in the way of a long weekend tour or the daily commute to the office.

# Geometry



Wave

WAVE	S	M	L
Seat tube length	440 mm	490 mm	540 mm
Top tube length horizontal	612 mm	629 mm	645 mm
Steerer tube	170 mm	185 mm	200 mm
Chain stay	475 mm	475 mm	475 mm
Steerer tube angle	69°	69°	69°
Seat tube angle	71°	71°	71°
Wheelbase	1124 mm	1141 mm	1159 mm
Reach	390 mm	402 mm	414 mm
Stack	644 mm	658 mm	671 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40	ZS44/28.6 ZS56/40
Fork installation height	460 mm	460 mm	460 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm

MUC.L.al / Messingschlager Urban Concept Light Aluminium

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“*Stylish & slim,  
nobody spots an  
e-bike here!*”

The e-bikes in our Light series combine timeless bicycle design with the latest e-technology and light weight.





# MUC.L.a1







## MUC.L.al – light and stylish through the city

Equipped with a stylish design and variability, this concept speaks for itself. Messingschlagel offers two frame platforms: urban/gravel and wave. Our light e-bike can be equipped with various Bafang motors and thus has a maximum of 30, 42 or 45 Nm torque. The fully integrated 360 Wh battery with 21700 cell technology is installed seamlessly in the slim down tube.

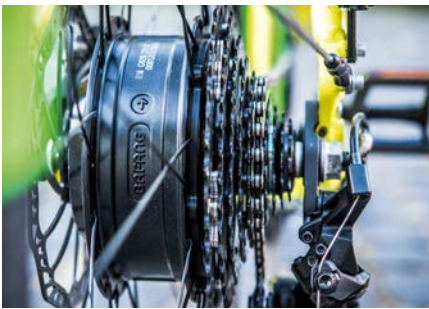
Thanks to this integration and the successful design, it is almost impossible to tell from our light model that it is a real e-bike with a possible weight of less than 15 kg. For more flexibility, we have equipped this frame with an open dropout to keep all options open in terms of chain or belt drive.

### Categorization:



*upper picture: Urban/Gravel frame concept  
left picture: City Wave frame concept*

# MUC.L.a



Our light e-bike is driven by a compact and powerful Bafang hub motor, which blends inconspicuously into the slim appearance.



The DP C240 Remote display is easy to use and is also from Bafang.



The on / off button has been integrated inconspicuously in the bottom bracket area, creating a clean design.

## Key Facts

**30/42/45**  
Nm

Driven by compact Bafang hub motors, our light e-bike has torques of 30, 42 or 45 Nm.

**MAX**  
Vario

Maximum variability: thanks to the frame lock and construction, chain and belt drives can be installed.

**360**  
Wh

The battery with the latest 21700 cell technology, which has a capacity of 360 Wh, is fully integrated in the slim down tube.

**<15**  
kg

Stylish and smart, that's exactly how we design our light e-bike. In addition, the name suggests that low weights of less than 15 kg are possible.

# System

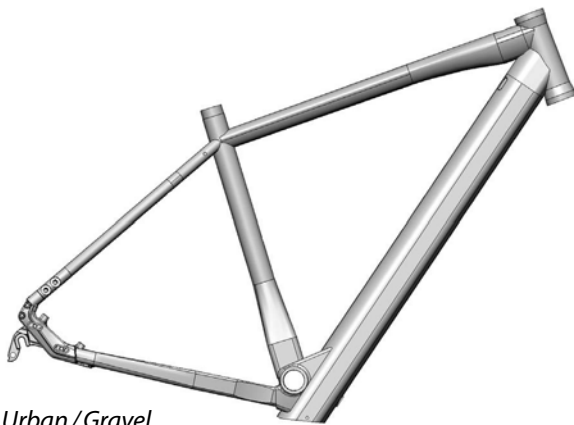


The urban version of our light e-bike can be equipped with three different rear engines, which have a maximum torque of 45 Nm.

The internally installed, almost invisible, slim battery supplies the system with sufficient energy. The battery is equipped with the latest 21700 cell technology.

As for display, we rely on the easy-to-use and clearly designed DP C240 from Bafang, which is operated with a remote unit.

# Geometry



Urban/Gravel

URBAN / GRAVEL	S	M	L	XL
Seat tube length	460 mm	500 mm	540 mm	580 mm
Top tube length horizontal	560 mm	570 mm	580 mm	590 mm
Steerer tube	150 mm	160 mm	170 mm	180 mm
Chain stay	445 mm	445 mm	445 mm	445 mm
Steerer tube angle	69°	69°	69°	69°
Seat tube angle	73°	73°	73°	73°
Wheelbase	1065 mm	1075 mm	1086 mm	1097 mm
Reach	379 mm	386 mm	393 mm	402 mm
Stack	592 mm	601 mm	611 mm	620 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30
Fork installation height	430 mm	430 mm	430 mm	430 mm
Seat post-Ø	31.6 mm	31.6 mm	31.6 mm	31.6 mm



Wave

WAVE	S	M	L
Seat tube length	460 mm	520 mm	580 mm
Top tube length horizontal	565 mm	596 mm	627 mm
Steerer tube	165 mm	185 mm	205 mm
Chain stay	445 mm	445 mm	445 mm
Steerer tube angle	69°	69°	69°
Seat tube angle	73°	73°	73°
Wheelbase	1071 mm	1103 mm	1135 mm
Reach	380 mm	405 mm	430 mm
Stack	606 mm	625 mm	644 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30
Fork installation height	430 mm	430 mm	430 mm
Seat post-Ø	31.6 mm	31.6 mm	31.6 mm

MRC.G.al / Messingschlager Road Concept Gravel Aluminium

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“Riding a gravel bike  
is even more fun with  
an engine!”

We have consistently expanded our innovative Light series to include the Road style: An e-gravel bike with an almost invisible 360 Wh battery and a powerful motor at the rear.









## MRC.G.al – Gravel fans will be thrilled

Light e-bikes do not only work in urban areas, they also work very well off the beaten track. With our MRC.G.al, we have designed a light e-bike that is indispensable on extended bike tours. It is perfect for commuters or fitness session in your free time. We recommend two models from Bafang for the motors:

- **H400** for longer, powerful climbs
- **H600** for optimal lightweight construction (2 kg!)

Both motors are compactly integrated in the rear wheel hub and, with the optional torque sensors, offer similar support characteristics. The internally built-in battery has a compact design, is equipped with the latest cell technology and has a capacity of 360 Wh and is integrated seamlessly into the down tube. In conjunction with the low-profile tires, impressive ranges are possible.

### Categorization:



# MRC.G.al



The light e-gravel bike is powered by a compact Bafang hub motor, which is inconspicuously integrated into the slim appearance.



The control unit DP C11 also comes from Bafang and ensures a harmonious, sporty operating concept.



In order to maximize the intended use, the rear end and fork were designed so that tires up to max. 29x2.1 can easily fit into it.

## Key Facts

**30/42/45**  
Nm

Driven by compact Bafang hub motors, our light e-bike has torques of 30, 42 or 45 Nm.

**MAX**  
Performance

Thanks to different motors, there are multiple options with this light e-bike. Light or powerful - the choice is up to you.

**360**  
Wh

The battery with the latest 21700 cell technology and a capacity of 360 Wh, sits in the slim down tube.

**15**  
kg

Stylish and smart, that's exactly how we call our light e-bikes. In addition, the name suggests the sensationally low weight of approx. 15kg.



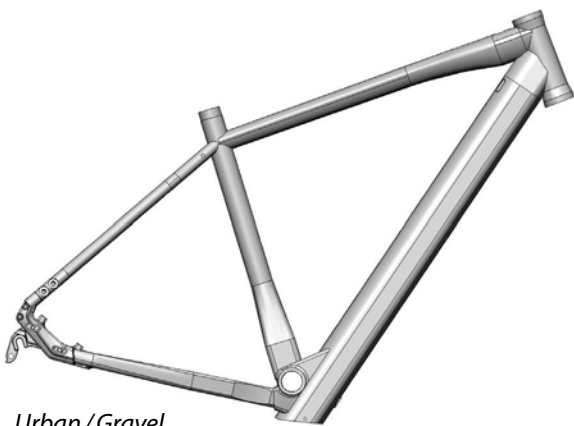


Sporty e-bikes need the right motor! Bafang supplies us with the right motors which, depending on the model, have a maximum torque of up to 45 Nm.

For improved performance and an even more sensitive sensor system, we use a special bottom bracket that makes the modulation of the engine characteristics very sensitive through the torque.

The inconspicuous Bafang DP C11 is used as a display, which blends harmoniously into the overall picture and clearly displays all important data.

## Geometry



Urban/Gravel

URBAN / GRAVEL	S	M	L	XL
Seat tube length	460 mm	500 mm	540 mm	580 mm
Top tube length horizontal	560	570	580	590
Steerer tube	150	160	170	180
Chain stay	445 mm	445 mm	445 mm	445 mm
Steerer tube angle	69°	69°	69°	69°
Seat tube angle	73°	73°	73°	73°
Wheelbase	1065 mm	1075 mm	1086 mm	1097 mm
Reach	379 mm	386 mm	393 mm	402 mm
Stack	592 mm	601 mm	611 mm	620 mm
Head set (S.H.I.S.)	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30	ZS44/28.6 ZS44/30
Fork installation height	430 mm	430 mm	430 mm	430 mm
Seat post Ø	31.6 mm	31.6 mm	31.6 mm	31.6 mm

MMC.Y.al / Messingschlager Mountain Concept Youth Alu

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*„Admit it! As a child, you also preferred your big brother's moped.“*

Our involvement in the latest Messingschlager project is aimed at the young. The abbreviation "Y" in the name stands for youth ... kids ... future and is the ideal addition to the modern, mobile family.









## MMC.Y.al – our children needs e-bikes, too.

Our youngsters in particular often lag behind when it comes to mobility, because there is a lack of strength in their legs and breath in their lungs.

With our children's e-bike, we at Messingschlager build the bridge between fitness and mobility and give the young a fun, full-fledged e-bike concept by which today's modern family can experience the mobility of tomorrow.

Geometry, seating position, proportions and engine power are adapted to the special needs of children and adolescents and generate a high level of riding pleasure from the very first moment.

In order to have enough agility and perfect handling, especially for our little ones, the children's e-bike from Messingschlager rolls on 24" or 26" wheels, weighs slim 16 kilograms and the installation of suspension forks is possible.

The frame is also prepared for the assembly of our new e-bike mudguard and luggage rack system.

The compact motor system from Bafang nestles - almost invisibly - to the dynamic silhouette, because the powerful hub motor is hidden, barely visible, in the rear wheel. And our compact, fully integrated 360 Wh battery with 21700 cell technology is perfectly concealed in the slim down tube and can be swiveled down and removed.



Our children's e-bike generates its propulsion with the support of the H600 hub-motor system, weighing just 2 kg, with a maximum torque of 42 Nm.



Simple in terms of operation and clean in terms of design: the compact DP-E161 display from Bafang fits harmoniously into the overall concept and impresses with its function.



We have integrated the on / off button in the bottom bracket area. Here it can be operated easily.

## Key Facts

**42**  
Nm

The Bafang H600 hub motor has a homogeneously modulated output of 42 Nm at its tip and weighs just 2 kg.

**1.30 m**  
**1.60**

Maximum variability: The geometry is suitable for children and adolescents from 1.30 to 1.60 m tall and can be used from around 9 years of age.

**360**  
Wh

In the slim down tube sits, fully integrated, the battery with the latest 21700 cell technology, which has a capacity of 360 Wh.

**16**  
kg

Children's e-bikes have to be very light. At just 16 kg, we can classify ourselves as an absolute lightweight in the market environment.

# System

*Bafang H600*



*Bafang DP-E161-Display*

*Battery with 360 Wh*



The children's version of our light e-bikes is equipped with the compact Bafang H600, which has a maximum torque of 42 Nm at its tip.

For the display, we rely on the compact LED display DP-E161 from Bafang, which shows all important information clearly and masters Bluetooth communication.

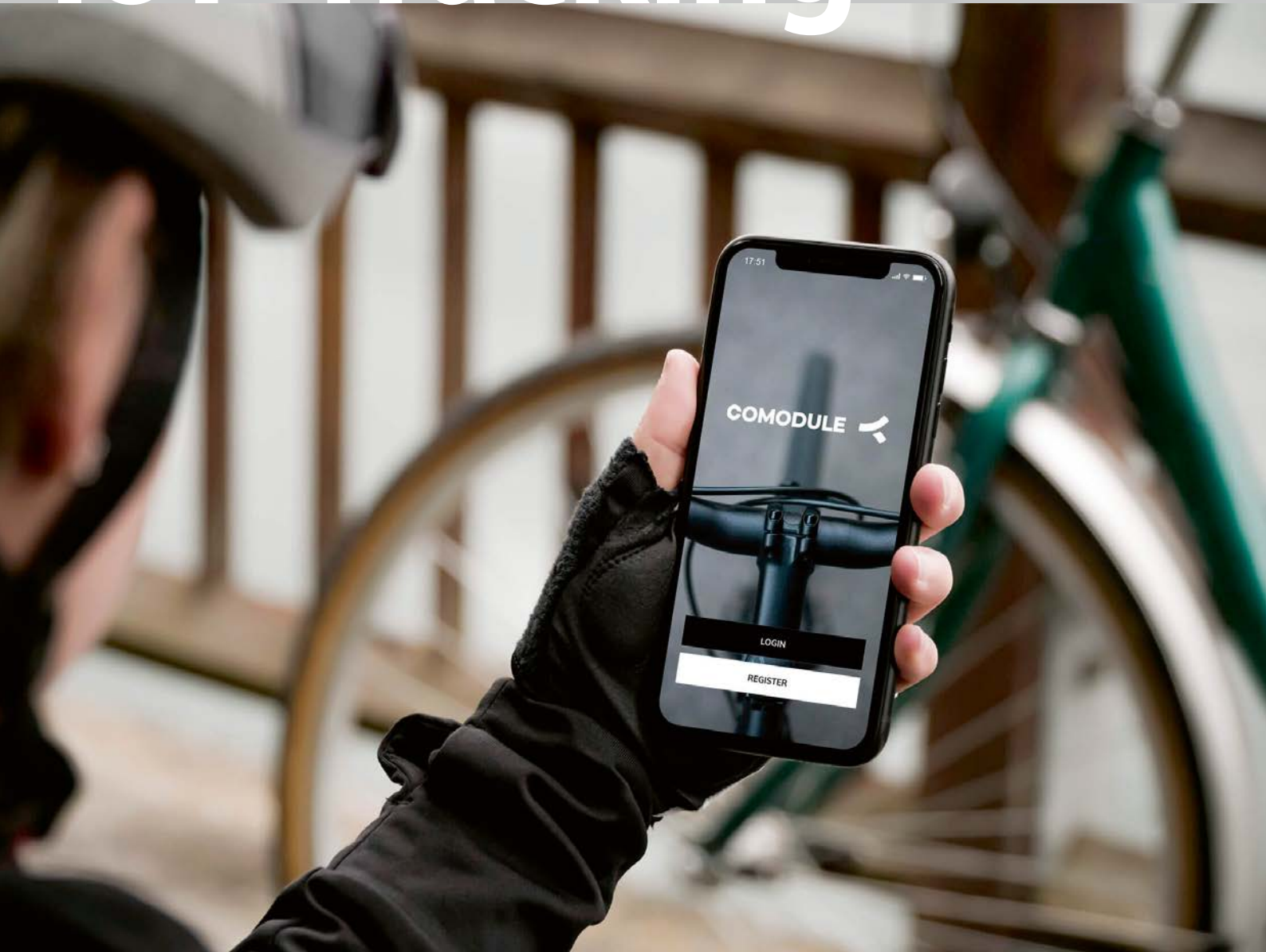
With 360 Wh of energy, the almost invisible, fully integrated battery provides the youth with ample energy for at least 80 - 100 km.

# Geometry



	24"	26"
Seat tube length	320 mm	350 mm
Top tube length horizontal	510 mm	540 mm
Steerer tube	130 mm	130 mm
Chain stay	410 mm	420 mm
Steerer tube angle	70,5°	69°
Seat tube angle	73°	73°
Wheelbase	974,6 mm	1024 mm
Reach	345,1 mm	357,1 mm
Stack	539,5 mm	595,7 mm

# IoT Tracking



## Big Data for Brose E-Bikes

Networking and IoT are the most important trends in the digital future - why shouldn't high-tech products such as e-bikes benefit from them? Comodule opens up completely new possibilities for the rider as well as for the service companies.

With Comodule „Bonnie & Clyde“ integrated in the frame, all Brose e-bikes can be connected via the specially developed app. Comodule records all riding data. What does this mean in practice? For the rider, the top priority is navigation with tracking of all riding data, which can be displayed individually on a dashboard. Thanks to the

integrated GPS tracking, a „Find my Bike“ live location is also possible if the bike has been stolen. The alarm is sent by an integrated motion alarm via push message. The automatic recording of all riding and engine data, such as temperature and power output, supports workshops in troubleshooting and can be used anonymously in fleet management. In this way, riders and technicians can use Comodule to maximize comfort, safety and information.





# System



*App Connection*



*Service Platform – Backend*



*All Bike data at a glance*

### One app for everything

Bike computer, GPS, anti-theft device, mobile phone and fitness tracker – all in one device! The Comodule app makes it possible and ensures a clean handlebar cockpit.

### Data reading made easy

Fast provision of information is essential for repairs or service work. Comodule can evaluate and export all engine data quickly and easily.

### Everything under control at all times

The rider can call up all the important information in just a few simple steps. The clear, customizable menu structure does not confront anyone with unsolvable tasks.

#### 245024 IOT MODULE ›BONNIE & CLYDE‹

- **GPS tracking module**
- direct **connection to engine system**
- customizable dashboard
- recording of all routes and **export to Strava**
- In-App Vehicle Profile
- live location and **motion alert via push notification**



# NOTES



A photograph of a forest path. The path is made of dirt and pine needles, winding through a dense forest of green trees. On the right side of the path, the rear wheel and part of the frame of a bicycle are visible. The lighting is natural, suggesting a sunny day with some shade from the trees.

***messingschlager***

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