

**Media Information**

July 7, 2021

**The New 2022 BMW CE 04**

- BMW Motorrad's new futuristic electric scooter
- Estimated range of 130 kilometres
- MSRP starting from \$15,000 CAD
- Expected market launch in Q1 2022

**Richmond Hill, ON.** BMW Motorrad is proud to announce the addition of the new CE 04 electric scooter to its 2022 lineup. With its electric drive, a forward-looking design and innovative connectivity solutions, the new scooter merges transport and communication functions into a new brand of personal urban mobility.

“The new BMW CE 04 is the logical and, at the same time, rethought continuation of BMW Motorrad’s electromobility strategy. Urban areas are its element. This is where it sets a new benchmark – in terms of both technology and visual style,” said Florian Römheld, Project Manager BMW CE 04.

With a maximum output of 42 hp, the new BMW CE 04 has a powerful motor for an exciting riding experience. A maximum speed of 75 mph means the CE 04 is ready not only for the city but for highways as well.

The new BMW CE 04 has a battery cell capacity of 60.6 Ah (8.9 kWh), providing an estimated range of 130 kilometres. This enables day-to-day emission-free commuter riding and for smaller-scale fun tours on the weekend – with complete peace of mind.

**Additional BMW CE 04 Highlights include:**

- Short charging times and charging technology based on automotive systems.
- Increased riding stability thanks to slip control by means of ASC (Automatic Stability Control). DTC (Dynamic Traction Control) is available as an option.
- Three standard riding modes “ECO”, “Rain” and “Road” for efficient, day-to-day use. “Dynamic” riding mode for further riding enjoyment available as an option.

- Directionally stable suspension with one-piece tubular steel main frame.
- Powerful braking system with ABS. ABS Pro with banking capability optional.
- 10.25-inch TFT color screen with integrated navigation and extensive connectivity.
- Standard LED lighting units all round. Adaptive Headlight Pro optional.
- Storage compartments at the side and front. The side helmet compartment can now be accessed while seated.
- Actively ventilated mobile phone charging compartment with USB-C charging port.

### **Electric Drivetrain Technology**

“The new vehicle architecture with flat storage battery in the underbody is what enables the numerous smart solutions that make the CE 04 so distinctive,” said Clemens Pinnekamp, Project Manager Development BMW CE 04.

The new BMW CE 04 is a practical and forward-looking everyday vehicle for the journey from home to the office or to an evening get-together with friends. In short: it is a perfect vehicle for day-to-day use. BMW Motorrad has worked closely on the design of the ride concept to suit this purpose.

Maximum output is 42 hp @ 4,900 rpm and 44 lb-ft of torque @ 1,500 rpm. The new BMW CE 04 offers effortless riding in urban environments, as well as on longer trips – even when carrying two people.

BMW Motorrad has drawn on cross-over technology with BMW automobiles as part of the development process. For example, the new BMW CE 04 uses a lithium-ion battery module manufactured exclusively with green power, as with the current BMW iX and i4. Other components for controlling the high-voltage battery system also derive from the passenger car sector.

Engineers paid particular attention to the quality and durability of the batteries to ensure the rider is able to make full use of the range even after many years of service life.

One of the main technological challenges here was to achieve optimum cooling of the high-voltage battery. On the one hand it was necessary to avoid excessively low temperatures due

to the fact this results in an enormous increase in the cells' internal resistance, thereby reducing power. On the other hand, high temperatures must be prevented since this would negatively impact cell lifetime. In the BMW CE 04, this is taken care of by an air-cooling system. Here, heat is dissipated from the high-voltage battery via a cooling plate with longitudinally arranged cooling fins on the underside of the vehicle.

### **Innovative Electric Drive**

Drive power in the new BMW CE 04 is provided by a permanent magnet EMP 156 electric motor mounted in the frame between the battery and the rear wheel. The electric motor is liquid-cooled, and the radiator is installed at the front of the vehicle.

Torque is transmitted via a single-stage primary gearbox and from there via the secondary drive with maintenance-free toothed belt to the rear wheel. The total gear ratio is 10.5.

The drive electronics are located directly above the electric motor. This system not only takes care of controlling the electric motor within a range of 100 to 150 volts, it also feeds in rider commands such as throttle position. In addition, it decides whether to recuperate energy and how much recuperation torque, if any, is applied to the rear wheel.

A notable comfort feature of the new BMW CE 04 is the reversing aid. It is activated from a left-hand handlebar-mounted switch, and the rider's attention is drawn to it by the relevant indication in the TFT display. When the activation switch is pressed down, the BMW CE 04 can reverse at a walking pace, making it easier to maneuver.

### **Automatic Recuperation During Coasting**

BMW Motorrad conducted extensive riding tests to develop a specific type of energy recuperation for each riding mode, giving the rider a high-level of convenience and choice. The BMW CE 04 is ridden in exactly the same way as a scooter with an internal combustion engine. The vehicle recuperates energy automatically whenever possible. As such, the energy recovery system extends the range and increases efficiency.

For example, recuperation starts when the throttle is closed, kinetic energy is converted into electrical energy and – as in a combustion engine – the generator function of the electric motor creates a drag torque which depends on the degree of recuperation. The drag torque generated by the electric motor is like the familiar "engine braking" that takes effect when rolling off the throttle in a vehicle powered by a combustion engine.

### **Automotive-based Charging Technology**



The 147.6-volt lithium-ion battery is charged via the integrated charging device, either via a Level 1 household socket, a Level 2 Wallbox or a Level 2 public charging station. The charging socket is based on automobile standards and is located underneath a cover in the front right-hand leg area. A storage compartment on the right-hand side of the vehicle houses the standard Level 1 charging cable. If the BMW CE 04 is equipped with the optional Level 2 quick charging cable, charging times are significantly reduced. A DC-DC converter converts high voltage to low voltage to feed the 12-volt vehicle power system, the 12-volt battery (12 V/5 Ah) and the control units.

Charging times for 0 to 100 percent battery capacity, take 4 hours and 20 minutes with the supplied Level 1 (2.3 kW) charging cable. With the optional Level 2 charging cable (6.9 kW) charging time is reduced to just 1 hour and 40 minutes. From 20 to 80 percent, the charging time is just 45 minutes with the Level 2 charging cable.

### **Latest Generation ABS and Optional ABS Pro with Banking Capability**

The front twin disc brake ensures secure deceleration, supported by a rear single-disc system. Standard BMW Motorrad ABS ensures a high level of active safety. The front 265 mm twin-disc brakes and 4-piston fixed calipers ensures powerful, safe deceleration. At the rear there is a single 265 mm disc and single-piston floating caliper. In order to achieve stable pressure and optimum controllability, all brake lines are steel-wrapped. The standard parking brake is activated automatically when the side stand is folded out.

BMW Motorrad ABS ensures a high level of active safety. The Bosch 9.3 2-channel ABS allows for independent regulation of the front and rear brake circuits. The optional ABS Pro provides even greater safety when braking. By means of a banking sensor, ABS Pro also controls braking when leaning in corners, thereby offering the greatest possible safety.

### **Increased Riding Stability through Slip Control by Means of ASC**

This traction control system in the new BMW CE 04 is comparable to the Automatic Stability Control in other BMW motorcycles. ASC limits engine torque in relation to rear wheel slip. To enable optimum controllability of the drive torque, the power electronics of the electric motor monitors the motor speed of the rear wheel and reduces drive torque when the grip level is exceeded. In this way, ASC supports the rider when accelerating from a stop, preventing uncontrolled spinning of the rear wheel on road surfaces with a reduced friction coefficient such as wet cobblestones. In addition, ASC serves to prevent blocking of the rear wheel during times of intense recuperation and the resulting drag torque, especially on roads with a low friction coefficient.



Optional Dynamic Traction Control (DTC) provides even greater riding safety resulting from excellent traction. DTC enables safer acceleration, especially in a leaning position.

### **One-piece Tubular Steel Frame**

The goal of BMW Motorrad in developing the suspension of the new BMW CE 04 was to combine excellent handling qualities and a high level of comfort with directional stability at high speeds and the robustness required for day-to-day commuter use.

The physical proximity of the electric motor output shaft and the swing arm axle minimizes the moment of inertia around the swing arm center of rotation, thereby enabling an optimum suspension/damping set-up and a sensitive response.

With a wheelbase of 66-inches, a steering head angle of 63.5 degrees and a castor of 4.7-inches, the new BMW CE 04 has basic geometrical suspension data that is similar to that of a motorcycle. On the road, easy maneuverability – especially in urban traffic – and a high level of ride stability when travelling swiftly along country roads or at even faster speeds on the motorway is experienced by the rider.

In urban traffic in particular, the riding experience is characterized by extremely light handling and excellent slow-speed properties.

Wheel control, in addition to suspension and damping, is taken care of at the front by a single-bridge telescopic 35 mm fork. The rear wheel suspension consists of a single-sided swing arm. At the rear, suspension and damping is performed by a spring strut placed on the left-hand side, directly controlled and adjustable at the spring mount. The spring travel is 4.3-inches at the front and 3.6-inches at the rear, thereby offering a high degree of comfort.

At the front, the new BMW CE 04 rolls on a 3.5 x 15-inch light alloy cast wheel while at the rear is a 4.5 x 15-inch light alloy disc wheel. The new BMW CE 04 is fitted with a 120/70 R15 67H tire at the front and a 160/60 R15 56H tire at the rear.

### **Avant-garde Exterior Design**

“The new BMW CE 04 is the link between the user’s analogue and digital worlds. It is both a means of transport and a means of communication for the big city commuter. With its forward-looking design thanks based on an innovative package, it sets out to redefine the scooter segment,” said Edgar Heinrich, Head of Design for BMW Motorrad.



The new BMW CE 04 embodies a forward-looking design philosophy for urban two-wheeled mobility featuring an innovative style that showcases the electric drivetrain technology while instantly identifying the scooter as a member of the BMW Motorrad family. It is an avant-garde urban design statement. Not following traditional styling, the BMW CE 04 offers a synthesis between the lightness of a scooter and the technology of a motorcycle.

Clear lines, generous surfaces with elaborate details underscore the future-oriented first impression. The low, long body and the diagonally rising front section form a modern, uncluttered silhouette. At the same time, the flat battery in the underbody provides new freedom of design, such as the side-hinged and illuminated storage compartment with emergency release, giving the rider easy access to the helmet as well as the charging cable. Like the storage compartment at the front of the leg area, this storage space can be reached from a sitting position if necessary – a first among scooters.

A slim rear end – making for an iconic design that is unique among scooters – is possible thanks to the swing-arm-mounted number plate holder with lighting. In addition, the side stand is integrated into the styling.

The avant-garde design stands in contrast to technology that is partially visible yet well integrated into the design. In the rear section of the BMW CE 04, for example, the motor, single-sided swing arm, suspension strut and toothed belt are deliberately designed to be open and visible.

The standard modern surface finish is in a striking Light White, complemented by matt black sections in the front and side areas as well as the “floating” seat. This underscores the visual lightness of the BMW CE 04.

The wheels - in a black matt finish with a disc-wheel look - blend harmoniously with the overall image. The new BMW CE 04 in optional Avantgarde Style is a striking, future-oriented colorful statement of contemporary urban mobility. In this style, Magellan Grey metallic – a warm, refined grey tone – is supplemented with a black/orange seat, an orange wind deflector and several graphics.

### **Standard 10.25” TFT Color Screen with Integrated Map Navigation**

The new BMW CE 04 comes equipped with a standard 10.25-inch TFT color display screen with integrated map navigation and smartphone connectivity. Its excellent readability and clear menu navigation put the new BMW CE 04 at the top of the scooter segment. For the first time, the new 10.25-inch color display makes it possible to display a navigation map in the instrument cluster, so no additional navigation display is needed.



For day-to-day use, the screen is fitted with a hardened and extremely tough glass cover. It is anti-reflective for optimum display and protected from soiling and scratches by means of an anti-fingerprint coating. The full HD resolution screen with 1920 x 720 pixels offers excellent detail and sharpness.

The display can be used in full screen mode or, alternatively, in a split-screen view which allows several functions to be shown simultaneously. The main display – the “Pure Ride Screen” – shows the speedometer along with the basic functions and selection menu. The navigation map is displayed if navigation is active via the BMW Motorrad Connected app. The additional split screen shows either the on-board computer, the on-board trip computer, arrow navigation, a current phone call or media.

The screen offers a wealth of additional information, including display of the battery charge state (SOC = State of Charge) and the energy balance. It shows whether energy is currently being converted into propulsion or recuperated. This information helps the rider in their efforts to ride as efficiently as possible.

Vehicle functions such as “Settings”, “Navigation” and “Communication” are operated using the standard handlebar Multicontroller. The tiles shown can be used to select the “My Motorcycle”, “Navigation”, “Media”, “Phone” and “Settings” menus. There is seamless integration of the display and operation of the optional extras such the Dynamic riding mode (part of the optional Ride Modes Pro) and standard functions.

With its 10.25-inch TFT color screen provides the perfect platform for using a full interactive map view in conjunction with the navigation system of the BMW Motorrad Connected App. The navigation map is “mirrored” onto the screen via wireless LAN. As such, the new BMW CE 04 offers an unprecedented dimension of map navigation. The 10.25-inch TFT color screen allows a particularly wide range of integrated navigation options to be operated via the Multicontroller. Thanks to the smartphone-based architecture, navigation is always on board: it couldn’t be simpler to make route changes during a coffee break or share a route with friends.

The smartphone app provides the rider of the new BMW CE 04 with the latest navigation software and maps on an ongoing basis, as well as offering the latest functions. The app allows maximum planning flexibility: it can be used for route planning itself, importing planned routes from Basecamp or downloading route suggestions from websites.

The BMW Motorrad Connected App can be downloaded free of charge from the Google and Apple app stores. It also provides additional functions such as route saving and the display of



other travel statistics and information. In this way, saved routes can also be shared directly with other motorcyclists via the Rever community.

### **Smartphone Charging Compartment**

A smartphone can be securely accommodated in a storage compartment on the left-hand inner side that is protected from the elements and ventilated by an electric fan, and its battery can be kept ready for use via USB connection.

The hinged storage compartment lid is automatically locked with the central locking system. Inside the storage compartment there is a holding device in which a smartphone can be securely fastened during travel by means of a flexibly sized fixture. Up to 1.5A charging current (charging capacity up to 12W) is available at the USB-C socket located in the storage compartment, which also enables quick charging depending on the smartphone type. A ventilation system reduces the heat generated when the smartphone is in use, while a seal on the storage compartment lid protects it from outside elements.

### **Standard LED Lighting. Adaptive Headlight Optional**

The state-of-the art LED lighting technology on the new BMW CE 04 includes the high/low beam headlamp, the rear light, brake light and turn signals. Even greater safety at night is offered by the optional turning light - Adaptive Headlight. The adaptive turning light works by switching on additional LED elements in the main headlight that are fitted with their own reflectors, depending on banking angle. The turning light switches on automatically from a banking angle of more than 10° and at speeds above 6 mph. The additional lighting effect can be experienced up to a banking angle of 25°.

In the new BMW CE 04, a U-shaped LED light guide, which also functions as the LED daytime running light provides the characteristic image of a BMW Motorrad vehicle, ensuring a high level of recognizability.

The lighting functions on the BMW CE 04 deliver more than just the required excellent down-the-road illumination. There are practical benefits, too: when the ignition is switched on, a "Welcome" light is activated. The main headlamp and rear light go on, remain on for a short time and then fade into standby mode before the motor is started. Here, the transitional fading involves a dimming process in stages. After being switched off, the front and rear lights are switched on to "Goodbye" for a brief moment before finally darkening slowly.

Another new function is the "Follow me home". After being switched off, the riding light can be activated by briefly pressing the high beam button. Other non-guidance functions and light



sources remain switched off. This function ensures optimum visibility at night, for example when maneuvering in parking spaces or opening the garage at home.

### **Standard Ride Modes “ECO”, “Rain” and “Road”**

In developing the BMW CE 04, BMW Motorrad focused on providing the rider with the choice between maximum efficiency and maximum riding fun. Accordingly, the new BMW CE 04 features three riding modes “ECO”, “Rain” and “Road” as standard. An additional “Dynamic” riding mode is available, enabling the scooter to accelerate even quicker.

**ECO mode:** In this mode, drag torque during coasting is significantly increased, while maximum recuperation combined with a limitation on acceleration and therefore energy consumption allows for an extension of the range. The rider feels the increased drag torque as a slight intensification of deceleration torque when releasing the accelerator. This riding mode supports an energy-efficient riding style when there are a few more miles to cover than expected.

**Rain mode:** In this riding mode, there is a reduction in drag torque while coasting and during acceleration. In practice, the rider benefits from a smoother and therefore very safe response of the electric drive, especially in adverse road conditions – for example when it is raining.

**Road mode:** Here, full acceleration is available. The standard range is available in this mode.

**Dynamic mode:** In this optional mode, full acceleration is combined with intense recuperation via a direct set-up of the performance characteristic curve, creating a powerful “motor brake” for highly dynamic riding. In this riding mode, the new BMW CE 04 shows its sporty, dynamic side and exudes all the fascination of forward-looking electric mobility.

### **Specifications**

		BMW CE 04
Drive type		Liquid-cooled permanent magnet synchronous
Rated power	hp	20 @ 4,900 rpm
Maximum power	h	42 @ 4,900 rpm
Torque	lb-ft.	46 @ 1,500 rpm
Maximum motor speed	rpm	12,000



High-Voltage battery type		Air-cooled lithium-ion
Battery capacity	Ah (kWh)	60.6 (8.9)
Battery voltage	volts	147.6
Charging capacity	kW	2.3 / 6.9
Charging time 0-100%		4:20 hours @ 10A / 2.3 kW 1:40 hours @ 30A / 6.9 kW
Charging time 0 – 80%		3:30 hours @ 10 Ah / 6.9 kW 1:05 hours @ 30A / 6.9 kW
Charging time 20 – 80%		00:45 hours @ 30A / 6.9 kW
Generator		DC/DC integrated converter
Headlight		LED high/low beam, LED daytime riding and parking
Rear light		LED brake light and rear light
Drive type		Toothed belt
Total gear ratio	:1	10.5
Frame type		Tubular steel frame
Front suspension		Telescopic fork, 35 mm
Rear suspension		Single-sided swingarm with shock absorber and adjustable spring base
Spring travel, front/rear	mm	110 / 92
Wheel castor	mm	120
Wheelbase	mm	1,675
Steering angle	deg.	63.5
Brakes, front	inches (mm)	Hydraulic twin-disk brake 10.4 (265) 4-piston calipers
Brake, rear	inches (mm)	Hydraulic single-disk brake 10.4 (265) single-piston caliper



ABS		BMW Motorrad ABS
Wheel, front	inches	3.50 x 15 die-cast aluminum
Wheel, rear	inches	4.50 x 15 die-cast aluminum
Tires, front / rear		120/70R15 / 160/60R15
Length	mm	2,285
Width with mirrors	mm	855
Height	mm	1,150
Seat height	mm	780
Unladen weight	kg	231
Permitted total weight	kg	410
Top speed	Kph (mph)	120 (75)
Acceleration, 0 – 30 mph (50 kph)	seconds	2.6
Acceleration, 0 – 62 mph (100 kph)	seconds	9.1

### **BMW Group in Canada**

BMW Group Canada, based in Richmond Hill, Ontario, is a wholly-owned subsidiary of BMW AG and is responsible for the distribution of BMW luxury performance automobiles, Sports Activity Vehicles, Motorcycles, and MINI. BMW Group Financial Services Canada is a division of BMW Group Canada and offers retail financing and leasing programs and protection products on new and pre-owned BMW and MINI automobiles, as well as retail financing for new and pre-owned BMW Motorcycles. A total network of 51 BMW automobile retail centres, 21 BMW motorcycle retailers, and 31 MINI retailers represents the BMW Group across the country.

**BMW  
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**Corporate Communications**



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