

# The new BMW C 400 X. Table of contents.



<b>1. Overall concept.</b> (Short version) .....	2
<b>2. Drive.</b> .....	6
<b>3. Chassis.</b> .....	9
<b>4. Electrical system and Connectivity.</b> .....	12
<b>5. Design, ergonomics and colour concept.</b> .....	15
<b>6. Equipment program.</b> .....	19
<b>7. Engine output and torque.</b> .....	21
<b>8. Technical specifications.</b> .....	22

# 1. Overall concept. (Short version)



P90280373

## **The new BMW C 400 X: the dynamic BMW Motorrad mid-size scooter for maximum riding fun in an urban setting.**

BMW Motorrad established its new product category in the area of urban mobility in 2011 with the debut of the BMW C 600 Sport and the BMW C 650 GT as premium vehicles for the maxi scooter segment. Now BMW Motorrad goes one step further and presents the new BMW C 400 X – a premium vehicle for the mid-size scooter segment.

But the new BMW C 400 X is not just a smart mid-size scooter designed to avoid constant urban traffic congestion and allowing faster movement through the traffic jungle from A to B: the new mid-size scooter also demonstrates that urban mobility can be a lot of fun, too. In short, the new BMW C 400 X transforms a ride into the city or to the workplace from a lowlight to a highlight: in fact instead of choosing a sensible shortcut, the rider will be tempted to take the long way round – purely for the extra riding fun.

## **Powerful, efficiency-optimised single-cylinder engine combined with CVT transmission, vibration decoupling and ASC.**

In terms of drive technology, the BMW C 400 X provides this new dynamic access to the urban environment by means of a newly developed efficiency-optimised single-cylinder engine with an output of 34 hp (25 kW). Power transmission is via a CVT (Continuously Variable Transmission) gearbox and a torsionally stiff drivetrain swing arm with innovative swing arm bearing for minimum vibration and therefore maximum comfort. Automatic Stability

Control ASC ensures increased safety during acceleration, especially on slippery surfaces.

**Rugged tubular steel frame, telescopic fork and high-performance brake system with ABS as standard.**

In the chassis area, the new BMW C 400 X sports a rugged tubular frame made of steel. Suspension and damping are taken care of by a telescopic fork at the front and two spring struts at the rear. The set-up and spring travel have been selected so as to ensure that sporty, dynamic riding fun is combined with a very high level of comfort. Supreme brake performance and outstanding safety are provided by the twin disc brake at the front in conjunction with a single disc brake at the rear, along with ABS as standard.

**LED lighting technology as standard and BMW Motorrad Connectivity as an ex-works option.**

In addition to standard lighting technology in highly luminous LED technology, the new BMW C 400 X also offers a range of highlights in the area of connectivity which is new to the segment. A multifunctional instrument cluster with 6.5-inch full-colour TFT screen is available as an ex-works option, for example. In conjunction with the further advanced BMW Motorrad Multi-Controller offering integrated operation, this means the rider can access vehicle and connectivity functions quickly and without being distracted from what is happening on the road. In addition to the convenience of being able to use the phone and listen to music during travel, there is also the benefit of effortless navigation by means of a practical system of arrows.

**Modern, innovative design with excellent wind and weather protection as well as an ingenious storage concept including Flexcase.**

In terms of its styling, the new BMW C 400 X can be instantly identified as a member of the BMW Motorrad C family: its appearance is modern, future-oriented and functional. Viewed from the front, the dominant feature is its iconically styled LED headlight with distinctive daytime riding light design (optional) in the form of fibre optic elements. This sets the new BMW Motorrad mid-size scooter clearly apart from its competitors, giving it a particularly sporty and dynamic look. With excellent wind and weather protection, a carefully conceived storage concept comprising two integrated compartments and the Flexcase under the comfortable, single-section seat, the new mid-size scooter offers everything that is needed to meet the demands of everyday practicality and touring suitability.

**Attractive paint finishes for distinctive character qualities.**

There is a choice of two paint finishes for the new BMW C 400 X. Zenith Blue metallic gives the new BMW C 400 X a pronounced modern appearance and underscores its athletic properties. In the paint finish Alpine White non-metallic, the distinctive styling of the new BMW C 400 X comes into its own, making it look more technical, compact and light. The contrasting single seats in grey-black or red-black emphasise the BMW Motorrad mid-size scooter's dynamic appearance, as well as underscoring its additional strengths of agility, easy accessibility and effortless handling.



P90281115

## **The highlights of the new BMW C 400 X:**

- Efficiency-optimised single-cylinder engine with a capacity of 350 cc, high torque and CVT gearbox.
- Highly compact design with wet sump lubrication.
- 25 kW (34 hp) at 7 500 rpm and 35 Nm at 6 000 rpm.
- Electronic fuel injection, digital engine control and ASC.
- Suspension with rugged tubular steel frame.
- Torsionally stiff drivetrain swing arm with innovative swing arm bearing for minimum vibration.
- Telescopic fork at front and two spring struts at rear with ample spring travel.
- Powerful braking system with ABS as standard.
- LED lighting technology as standard.
- Connectivity: Multifunctional instrument cluster with 6.5-inch full-colour TFT screen and numerous features as an ex-works option.
- Distinctive, dynamic design.
- Excellent wind and weather protection and sophisticated ergonomics.
- Generous storage space with two storage compartments and Flexcase.
- Attractive paint finishes with distinctive character qualities.

## 2. Drive.



### **Powerful, compactly designed single-cylinder engine for an ideal combination of dynamic riding fun and a high level of efficiency.**



P90281134

The entire drive unit of the new BMW mid-size scooter has been completely newly developed and includes a directly integrated CVT gearbox as well as a secondary drive in the form of a drivetrain swing arm. The liquid-cooled single-cylinder engine has a capacity of 350 cc, derived from an 80 mm bore and a 69.6 mm stroke.

Its rated power output is 25 kW (34 hp) at 7 500 rpm and the maximum torque of 35 Nm is reached at 6 000 rpm. The maximum engine speed is 8 800 rpm.

Like all BMW Motorrad drives, the engine of the new mid-size scooter features a carefully conceived overall design as well as a space-saving arrangement of all ancillary units and the integrated CVT (Continuously Variable Transmission) gearbox. With the aim of providing a highly compact scooter drive with optimum mounting position, a liquid-cooled single-cylinder engine has been created with a horizontal, forward-facing cylinder. This makes for a low installation position of the engine which is favourable in terms of the vehicle's overall centre of gravity while at the same time allowing for the step-through in the rider's leg area that is typical of a scooter.

With an output of 25 kW (34 hp) and a maximum torque of 35 Nm, the drive of the new BMW C family member provides the perfect basis for dynamic riding performance and excellent pulling power. Aimed at achieving optimum efficiency, its design also results in a pleasantly low engine speed level, high gas velocities, efficient combustion and minimised friction. This thoughtfully designed overall conception makes the new single-cylinder engine highly efficient.

### **Counterbalance shaft and vibration-decoupled engine mount for excellent running smoothness and a high level of comfort.**

A high level of running smoothness is ensured by a counterbalance shaft positioned above the camshaft which is powered directly by the latter via a

spur gear. It rotates in the opposite direction to the camshaft, thereby counterbalancing the forces of inertia almost perfectly and therefore reducing vibration to an absolute minimum. In addition, the entire drive unit is connected to the suspension by means of silent blocks for vibration decoupling so as to meet best-in-class standards in terms of both running smoothness and vibrations.

### **Compact cylinder head with 4-valve technology, overhead camshaft and forked rocker arms.**

The four valves in the compactly designed combustion chamber are controlled by means of an overhead camshaft powered by a roller chain and two forked rocker arms. The roller chain is guided by a slide rail, with a manually adjustable mechanism ensuring the correct tension. On the intake side the valve angle is 13 degrees while on the exhaust side it is 14.5 degrees to the longitudinal axis of the cylinder. The compression ratio is 11.5:1. The diameter of the valve heads is 32.5 mm on the intake side and 27.2 mm on the exhaust side.

### **Electronic fuel injection and digital engine control.**

Carburation is taken care of by an electronic fuel injection system in conjunction with a desmodromically activated 40 mm throttle valve unit and a very compact BMS-E2 engine control. This engine management system takes account of numerous parameters, and its striking features include a low level of power consumption and optimum cold start response.

The control system is based on the volume of intake air which is determined indirectly via the throttle valve angle and the engine speed. Drawing on additional engine and environmental parameters (including engine temperature, air temperature and ambient air pressure), the engine control calculates individual figures for injection quantity and ignition timing. The fuel used is premium unleaded with at least 95 octane (RON 95) including E10 compatibility. The fuel tank has a capacity of 12.8 litres (four litres reserve). Together with the efficient design of the engine, this makes for extremely favourable fuel consumption and emission levels.

### **Carefully conceived overall design with wet sump lubrication and effective cooling system.**

The engine housing is compact in design and made of die-cast aluminium. An oil pump driven by a spur gear takes care of lubricant circulation: an electronic oil warning alert provides feedback when the lubricant reaches minimum level. The oil level can also be checked using a dipstick. The total oil quantity is approximately 1.8 litres. The drive unit as a whole weighs some 47 kg. A sophisticated cooling concept designed to BMW Motorrad standards ensures

an optimum thermal balance in the single-cylinder engine. Coolant flows through the cylinder head, entering at the front of the cylinder head on the hotter exhaust side. The intensive cooling effect rapidly dissipates the heat precisely at the point of maximum thermal stress, thereby ensuring excellent temperature compensation. The water pump positioned on the right-hand side of the engine ensures circulation of 1.6 litres of coolant (50 % water, 50% glycol).

The aluminium water radiator with plastic tanks and integrated thermostat is located at the bottom front in the area of the frame downtubes, benefiting both centre of gravity and aerodynamics. Due to its high degree of efficiency as well as excellent air intake and through-flow, a relatively small surface is sufficient for operationally reliable heat dissipation in all conditions. In the event of prolonged stop-and-go operation or stationary idling, an electrical fan is automatically activated in addition.

**Convenient CVT gearbox, virtually maintenance-free secondary drive and Automatic Stability Control ASC.**

On the left-hand drive side, the power flow within the drive unit runs from the camshaft to a continuously variable gearbox (CVT) with automatic radial centrifugal dry clutch on the output shaft. Secondary power transmission to the rear wheel is taken care of by a gear stage that is positioned directly at the output shaft. – The new BMW Motorrad mid-size scooter is additionally fitted with the automatic stability control system ASC, ensuring extra safety during acceleration even in adverse road conditions.

**High-quality stainless steel exhaust system with closed-loop catalytic converter.**

The exhaust system is fitted with a rear silencer and is made entirely of rust-proof stainless steel. Noise reduction is effected by means of an elaborate combination of absorption and resonance damping. The mid-size scooter features a closed-loop catalytic converter and oxygen sensor in the exhaust manifold and meets the EU4 emission requirements.

## 3. Chassis.



### **Newly developed chassis with rugged tubular steel frame for excellent handling as well as outstanding comfort and ride stability.**

The foremost aim in developing the suspension of the new BMW Motorrad mid-size scooter 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 use.

The frame is a torsionally stiff tubular construction supplemented with a solid cast iron unit in the area of the swing arm bearing. This gives the overall combination of this hybrid structure an extremely high degree of stability.

With a wheelbase of 1 565 mm, a steering head angle of 63.6 degrees and a castor of 81 mm, the new mid-size scooter has basic geometrical suspension data that are quite similar to those of a motorcycle. On the road, the sophisticated overall conception of the suspension is reflected in easy manoeuvrability – 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.

### **Torsionally stiff drivetrain swing arm with innovative swing arm bearing for minimum vibration.**

Rear wheel control is taken care of by the double-sided drivetrain swing arm made of chill cast aluminium. It is a single unit supplemented with a bolted side cover for additional torsional stiffness. The innovative connection between the engine or drivetrain swing arm and the frame is specifically designed to achieve maximum comfort: it consists of two attachments bolted on to the left and right-hand side of the frame via hard, rigid rubber elements. The latter ensure vibration decoupling while at the same time providing the necessary stiffness and stability.



P90281136

On their lower surface, the two attachments each have a soft rubber element to support the engine or drivetrain swing arm. This makes for additional vibration decoupling, reducing any perceptible vibrations to a minimum in the interests of maximum comfort. An additional link element that is rigidly bolted to the frame between the two attachments ensures the necessary extra stiffness of this connection.

This elaborate form of engine mounting was developed so as to achieve optimum comfort in terms of vibration reduction. As a result, the very soft engine mount set-up combines optimum vibration suppression with high rigidity – for performance, agility and stability. The innovative design of this decoupling system allows the vibration sources from all directions to be separated while at the same time ensuring the required stability.

Entirely in line with rigorous BMW Motorrad quality standards, this vibration decoupling system is designed to be durable and maintenance-free so as to ensure uncompromising comfort and performance throughout the entire lifetime of the vehicle. As a result, excellent rideability and stability on both straight roads and bends can be enjoyed without irritating vibrations, making for particularly pleasurable and comfortable riding fun on a lasting basis.

**Telescopic fork at front and two spring struts at rear with ample spring travel. 15-inch tyre at front, 14-inch tyre at rear.**

The job of suspension and damping is performed by two directly articulated spring struts. Generous spring travel of 112 mm provides not just a perfect basis for comfort and ride stability but also the necessary reserves for carrying a passenger and luggage. Front wheel control consists of a telescopic fork with a tube diameter of 35 mm and a spring travel of 110 mm.



P90281137

At the front, the new BMW Motorrad mid-size scooter rolls on a light alloy die-cast wheel with a size of 3.5 x 15 inches. The tyre size is 120/70-15. The dimensions of the rear wheel are 4.25 x 14 inches and it is fitted with a tyre size of 150/70-14. The reduced rear wheel diameter of 14 inches at the rear allows the use of the Flexcase for ample storage space.

**High-performance brake system with twin disc at the front, single disc at the rear and ABS as standard.**

The generously designed brake system in conjunction with the standard BMW Motorrad ABS ensures maximum active safety. The latter is a Continental MK 100 MAB 2-channel ABS unit weighing just 700 g; it allows independent control of the two brake circuits for the front and rear wheel.

At the front, a twin disc brake with a diameter of 265 mm and two radially bolted 4-piston floating calipers with a piston diameter of 28 mm ensure powerful and stable deceleration. Meanwhile, rear wheel deceleration is taken care of by a single disc brake with a diameter of 265 mm and a single-piston floating caliper with a piston diameter of 32 mm. High-quality braided steel brake lines are used to achieve a stable pressure point and optimum controllability.

**Convenient side stand and stable centre stand with kinematics for ease of use.**

The new BMW Motorrad mid-size scooter is equipped with both a side stand and a centre stand. The latter has a cleverly devised kinematic system that makes propping up the motorcycle simple and effortless.



P90280380

## 4. Electrical system and Connectivity.



### **High-performance electrical system in CAN bus technology.**

The electrical system of the new BMW Motorrad mid-size scooter is based on the well-established system to be found in other BMW Motorrad models. It is a CAN (Controller Area Network) bus system. This means that the instrument cluster, the ABS and engine control unit, the electronic immobiliser and the optional alarm system (DWA) are all interconnected.

A power socket in the right-hand storage compartment comes as a standard feature. A mobile phone can be charged here during travel, for example, while at the same time being connected to the BMW Motorrad Communication System in the rider's helmet via Bluetooth. The alternator with an output of 316 watts ensures an efficient and stable power supply in all operating conditions. The 12-volt battery has a capacity of 9 Ah, thereby offering considerable reserves. The wiring harness of the new BMW Motorrad mid-size scooter is designed in such a way that all optional electrical equipment features such as heated grips and the alarm system can easily be retrofitted ex works; this also applies in the case of optional accessories or individual optional equipment items.

### **Highly luminous lighting technology as standard.**

Seeing and being seen is particularly crucial for scooter riders. This is why the lighting technology of the new BMW Motorrad mid-size scooter features highly luminous LED technology. The LED daytime riding light is available as an optional equipment item. – The front turn indicators are organically integrated in the trim panel while their rear counterparts are separately mounted stem indicators.



P90281132

### **Multifunctional instrument cluster with on-board computer.**

The instrument cluster in the new BMW Motorrad mid-size scooter comprises a considerably wider range of functions than is commonly found in this category of vehicle. It has a large, easily readable LCD screen with integrated engine speed display and an analog speedometer with a scale that is perfect for reading. In addition, all indicator lights such as the ABS, engine and oil level lamps are integrated in the instrument cluster.

Particular importance was attached to excellent readability, as well as avoiding reflections on the screen. For this reason, the lighting of the analog speedometer and LCD screen is orange-coloured for easy readability. When the daytime riding light is switched on, the speedometer lighting is deactivated. In addition to showing the fuel level by means of eight bar symbols, the instrument cluster also draws on the on-board computer – which comes as standard – to provide information on routes travelled as well as figures such as remaining distance and outside temperature.

### **Connectivity – the multifunctional instrument cluster with 6.5-inch full-colour TFT screen and numerous features as an ex-works option.**



P90281124

Fast, clear information for the rider with minimum distraction from the road based on a unique operating concept – this is provided by the new optional equipment item Connectivity, featuring an instrument cluster in the form of a 6.5-inch full-colour TFT screen. In conjunction with the further advanced **BMW Motorrad Multi-**

**Controller** offering integrated operation, it allows the rider to access vehicle and connectivity functions.

This means it is possible to enjoy the convenience of making a phone call or listen to music during travel. If a smartphone and a helmet with the BMW Motorrad Communication System are connected via Bluetooth to the TFT screen, for example, the rider can conveniently access **media playback** and **telephone** functions. These functions can also be used without the need to install an app. With an active Bluetooth connection to any standard smartphone, the rider can enjoy the pleasures of listening to music during travel.

In addition, the freely available **BMW Motorrad Connected App** offers handy **arrow-based navigation** suitable for day-to-day use directly via the TFT screen. The BMW Motorrad Connected App can be downloaded free of charge from the Google and Apple app stores. It also comprises attractive additional functions such as route logging and the display of other travel statistics and information. This basic navigation system will be of particular interest to scooter riders for convenient organisation of day-to-day travel and short trips without the need for additional equipment.

## 5. Design, ergonomics and colour concept.



### Dynamic, distinctive styling by BMW Motorrad.



P90280368

The new BMW C 400 X features the unique BMW Motorrad styling. Modern and future-oriented in appearance, it perfectly exemplifies the BMW Motorrad design philosophy. The front silhouette is dominated by the iconic LED headlight with the distinctive design of the LED daytime running light (optional) in the form of fibre optic elements. This sets the new BMW Motorrad mid-size scooter clearly apart from its competitors, giving it a particularly sporty and dynamic look.

The new BMW C 400 X features the unique BMW Motorrad styling. Modern and future-oriented in appearance, it perfectly exemplifies the BMW Motorrad design philosophy. The front silhouette is dominated by the iconic LED headlight with the distinctive design of the LED daytime running light (optional) in the form of fibre optic elements. This sets the new BMW Motorrad mid-size scooter clearly apart from its competitors, giving it a particularly sporty and dynamic look.

The new BMW C 400 X has a functional, neatly trimmed, athletic appearance that impressively conveys its sporty, dynamic character. A light-footed, dynamic style is also embodied by the slim, upward-flowing rear section and pronounced body edges. The BMW C 400 X features individual turn indicators at the rear in line with its sporty, dynamic sporty character.

Meanwhile so-called bash plates – side trim elements at the front – underscore the new mid-size scooter's membership of the BMW Motorrad family: the LED turn indicators are integrated in these, too – another unique styling feature. The twin-tipped engine spoiler with integrated radiator grille is also a clear reference to BMW motorcycle design. The distinct, dynamic styling of the new mid-size scooter is also to be seen in its uncluttered cockpit layout.

### **Excellent wind and weather protection and sophisticated ergonomics.**

The windshield was developed with the aim of providing the best possible wind and weather protection as well as reducing wind noise to a minimum. It is rigidly mounted on the trim and provides perceptible relief for the rider's upper body, thereby enabling lengthier rides at higher speeds.



P90281133

The optional accessory program also allows the new BMW C 400 X to be fitted with a higher windshield.

The seat height of the new BMW C 400 X is 775 mm: here the aim is to ensure perfect integration of taller riders, too. – The seats feature a contrasting two-colour finish in either grey-black or red-black, depending on the scooter paint finish. A seat with a reduced height of 760 mm is available as an optional accessory.

In conjunction with a favourably designed step-through and broad, ergonomically shaped handlebars, this makes for very simple and straightforward controllability and a focused, sporty seating position oriented towards the front wheel for dynamic scooter fun. While the rider's feet rest on footboards integrated in the body, separate fold-out footrests are provided for the passenger.

### **Generous storage space with two storage compartments and Flexcase.**

Although it is intentionally designed in an athletic style, the generous storage space of the new BMW C 400 X also makes it perfect for shopping trips into town, riding to work and even lengthier tours.

The Flexcase under the seat provides ample room for storage. It comprises a flap in the rear base which can be opened to provide a downward extension of the storage space. This versatility is enabled by the use of a highly rigid but pliable material based on Kevlar that creates a flexible yet dirt-resistant, waterproof and more durable connection between the flap and the rear base. This unique storage solution developed and patented by BMW Motorrad is able to accommodate an integral helmet and a jet helmet when the scooter is parked. The BMW Flexcase is closed during travel.

In the front section of the step-through there are two additional storage compartments, each of which is opened by means of a button. In conjunction with the optional equipment item Keyless Ride, both compartments are locked automatically with the scooter itself. The optional Keyless Ride controls the following lock functions: ignition, handlebars, seat, fuel filler cap and storage compartments. In the right-hand storage compartment – large enough to hold an iPhone 6/7, for instance – there is a 12-volt power socket for electronic devices. A USB adapter is also available as an optional accessory.

The new BMW C 400 X can also be fitted with a luggage bridge (optional accessory) for transportation purposes that enables attachment of a topcase (also an optional accessory).



P90281138

**Attractive paint finishes with distinctive character qualities.**

The new BMW C 400 X is sporty and functional in appearance while still embodying emotional flair. The contrasting colours of its trim sections convey a strikingly compact styling. At its market launch, the new BMW Motorrad mid-size scooter will be available in two different paint finishes.

In Zenith Blue metallic the new BMW C 400 X has a pronounced modern look that emphasises its sporty style. The combination of this with dark surface elements and the contrasting seat in grey-black serves to reinforce the impression of dynamic performance, while the contrasting colours of the side trim elements and the air filter housing trim create an effective visual transition between the surfaces.

The paint finish Alpine White non-metallic lends intense emphasis to the scooter's distinctive styling, giving the new BMW C 400 X a very technical, compact and light appearance. Here the contrasting seat in red-black brings out the scooter's dynamic character, underscoring the agility, easy accessibility and effortless handling of the new BMW Motorrad mid-size scooter.



P90281112



P90281113



## 6. Equipment program.

Optional equipment items and original BMW Motorrad accessories for a wide range of customisation opportunities.

Optional equipment is supplied directly ex works and integrated in the production process. Optional accessories are installed by the BMW Motorrad dealer or by customers themselves. These are features which can be retrofitted, too.

### **Standard features.**

- BMW Motorrad ABS.
- 12V socket.
- LED lighting (headlight, tail light, brake light, turn indicators).
- Flexcase.
- Traction control (ASC).
- Centre stand.
- Storage lighting.
- Side stand.

### **Optional equipment packages.**

- Comfort package (heated grips, heated seat).
- Connectivity (colour TFT screen, Multi-Controller).

### **Optional equipment items.**

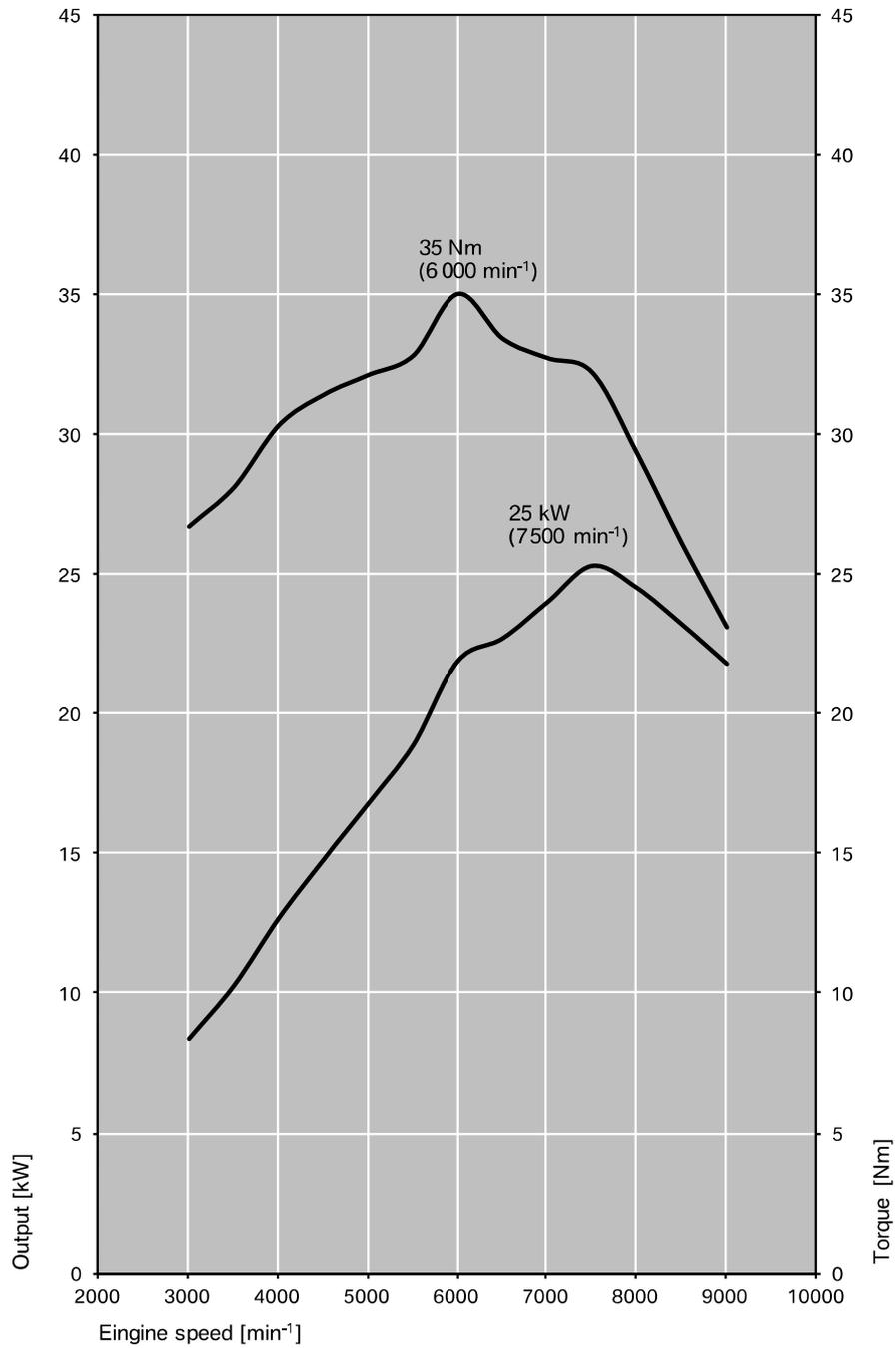
- Alarm system.
- LED daytime riding light.
- Keyless Ride.

### **Original BMW Motorrad accessories.**

- Windshield, high.
- Luggage bridge.
- Topcase 2, small (as for R 1200 R, 30L).
- Topcase Light (29L).
- Variotopcase (as for R 1200 GS, 25-35L).
- Liners for topcase.
- Holder for BMW Motorrad Navigator/smartphone cradle.
- Scooter cover.
- Safety bar incl. holder for additional LED headlight.

- Additional LED headlight.
- Front wheel cover extension.
- Seat, low.
- BMW Motorrad Navigator 7, Navigator Street.
- BMW Motorrad dual USB charger.

## 7. Engine output and torque.



— C 400 X

## 8. Technical specifications.



<b>BMW C 400 X</b>		
<b>Engine</b>		
Capacity	cc	350
Bore/stroke	mm	80/69.6
Output	kW/hp	25/34
at engine speed	rpm	7,500
Torque	Nm	35
at engine speed	rpm	6,000
Type	Water-cooled single-cylinder 4-stroke in-line engine, four valves per cylinder with rocker arm, overhead camshaft, wet sump lubrication	
Compression/fuel		11.5/1
Valve control		OHC (overhead camshaft)
Valves per cylinder		4
Ø intake/outlet	mm	32.5/27.2
Throttle valve diameter	mm	40
Carburation		Electronic injection BMS-E2
<b>Electrical system</b>		
Alternator	W	316
Battery	V/Ah	12/9
Headlight		High beam/low beam: LED
Rear light		LED brake light/rear light
Starter	kW	500
<b>Power transmission - gearbox</b>		
Clutch		Centrifugal force dry clutch
Gearbox		Continuously variable CVT belt transmission
Secondary drive		Gear reduction cog wheel pairing
<b>Suspension</b>		
Frame construction type		Tubular spaceframe
Front wheel control		Telescopic fork, Ø 35 mm
Rear wheel control		Aluminium double-sided swing arm, double spring strut, adjustable spring preload
Spring travel, front/rear	mm	110/112
Wheel castor	mm	81
Wheelbase	mm	1 565
Steering head angle	°	63.6

<b>BMW C 400 X</b>		
Brakes	front	Rigid twin disc brake, diameter 265 mm, 4-piston floating caliper
	rear	Rigid twin disc brake, diameter 265 mm, 1-piston floating caliper
ABS		BMW Motorrad ABS
Wheels		Die-cast aluminium wheels
	front	3.50 x 15"
	rear	4.25 x 14"
Tyres	front	120/70 ZR15
	rear	150/70 ZR14

#### **Dimensions and weights**

Total length	mm	2 210
Total width	mm	835
Seat height (without rider)	mm	775
Inside leg length	mm	1,760
DIN unladen weight, road ready	kg	204
Permitted total weight	kg	405
Fuel tank capacity	l	12.8
Reserve	l	4.0

#### **Performance figures**

Fuel consumption		
Fuel consumption over 100 km according to WMTC	l	3.5
Acceleration		
0-50	s	3.1
0-100	s	9.5
Top speed	km/h	139