



Sheer  
Driving Pleasure

# CHASSIS.

FOR AN UNCOMPROMISINGLY SPORTY DRIVING STYLE.

 **PERFORMANCE PARTS**

## CHASSIS.

# FOR AN UNCOMPROMISINGLY SPORTY DRIVING STYLE.

Amateurs often attribute the sportiness of a vehicle to its engine performance. Professionals know: Although a powerful engine is the basic requirement for sporty driving, on the racetrack it quickly becomes apparent that other parameters are just as decisive for a good lap time.

The key factors here are low weight, weight distribution, road holding, aerodynamics and, last but not least, the performance of the braking system.

That's the reason why M Performance Parts offers sporty flair on every bend and stability up to the threshold range. For drivers who wish to perfect the handling properties of their BMW for absolute driving pleasure.

BMW M Performance spring struts, shock absorbers and brake systems guarantee exceptional agility and aesthetic appeal, as well as top-class precision and an optimum response.

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# CHASSIS – BASICS.

Although a strong engine is the basic requirement for sporty driving, on the race track it quickly becomes apparent that other parameters are just as crucial when it comes to putting in a good lap time. The key factors here are low weight, weight distribution, road holding, aerodynamics – and not least the performance of the braking system.

## **OPTIMUM BRAKE PERFORMANCE AND VISUAL DIFFERENTIATION**

The M sports brake system in red consists of an upgrade of the brake size on the front and rear axle as compared to the standard brake. With six pistons at the front and four at the rear, it significantly improves thermal performance under extreme conditions. The M sport brake system is even more uncompromising in its approach with M Performance sport brake pads:

- Short braking distances – even in the event of high thermal stress
- Aluminium fixed caliper with perforated and grooved brake discs for maximum braking performance
- Inner-vented lightweight construction sports brake discs
- High performance capacity and resilience
- Striking visual differentiation of the caliper and brake disc
- All products bear the BMW M logo

## **OPTIMUM INTERPLAY OF ALL COMPONENTS**

BMW M Performance suspension products meet the highest standards of driving dynamics, comfort and safety. Retrofitting offers outstanding possibilities for individual suspension set-up.

- Development by BMW engineers based on original data
- Tests and validation according to BMW standards
- Stress and durability tests have to be passed on the race track
- Reduced roll movements and higher cornering speeds are possible
- Separate damper adjustment for rebound and compression
- Comfortable everyday driving – in spite of increased driving dynamics

## **LOWER CENTRE OF GRAVITY – ENHANCED DYNAMIC PERFORMANCE**

The BMW M Performance suspension is up to 20 mm lower than the standard suspension and 10 mm lower than the BMW M sport suspension. In this way it improves direct steering response, increases sporty driving response and gives the body maximum stability.

## **CARBON-CERAMICS IS MORE DURABLE**

The carbon-ceramic brake system saves up to 8 kg in weight as compared to the standard brake as well as being more powerful and, above all, considerably more stable on the racetrack. In normal use, it lasts an entire car lifetime because its silicon carbide friction coating is virtually wear-free.

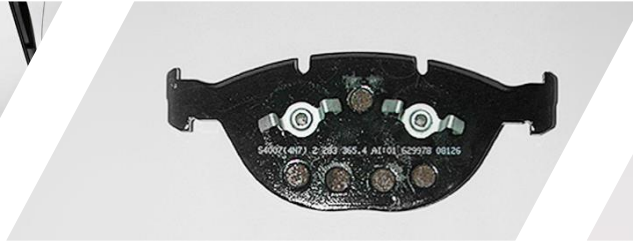


# OVERVIEW OF CHASSIS PRODUCTS.

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M PERFORMANCE BRAKE SYSTEMS



BMW M PERFORMANCE SPORT BRAKE  
PADS



M PERFORMANCE BRAKE DISCS



BMW M PERFORMANCE LIMITED SLIP  
DIFFERENTIAL



BMW M PERFORMANCE SUSPENSIONS

# CHASSIS – PRODUCTS.

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## BMW M PERFORMANCE BRAKE SYSTEMS

The sport brake is an upgrade to the brake size on the front and rear axles compared to the standard brake and significantly improves the deceleration effect in extreme conditions.

### Sales features / benefits

- The attractive appearance of the red M Performance brake perfectly matches the design of the car and accentuates its sporty character.
- A separate code variant of the DSC (Dynamic Stability Control) allows the function of safety-related stability systems and of all the driver assistance systems dependent on them.
- The design and stability of the brake perfectly highlight the sporty nature of the car.
- The solid presence of the perforated sport brake discs is specially accentuated by the open wheel design.

## BMW M PERFORMANCE SPORT BRAKE PADS

The brake pad S4007 or TX4007 (new product designation as from F90 cars) is derived from a long distance racing pad which is used and has proven itself in motorsport. It has been specifically developed for enhanced thermal performance and meets the requirements of ECE-R 13H (statutory requirement in many countries). The Sport brake pad differs markedly from the standard brake pad with regard to the following characteristics, which must be borne in mind:

- The braking force distribution is configured on the basis of motorsports. This means dynamic cornering whilst braking is supported, and this differs significantly from the series production configuration.
- Increased stress on the brake discs: the brake disc wears more rapidly due to the modified friction mechanisms. As a result, we recommend that the brake disc should be replaced when this brake pad is fitted. The brake disc must be replaced if it contains cracks measuring 13 mm or more, even if the brake pad is not worn.
- Reduced comfort: The brake pad can give rise to significantly more noise. This does not restrict the function, however.

### Sales features / benefits

- Shorter braking distance.
- Better brake response.
- Greater thermal loading capacity.

**! IMPORTANT:** Only for M Models and not in connection with the carbon-ceramic brake system!



# CHASSIS – PRODUCTS.

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## BMW M PERFORMANCE BRAKE DISCS.

The M Performance sport brake delivers enhanced braking performance in extreme conditions with its larger, internally ventilated, perforated and grooved lightweight brake disks. It also provides a unique combination of design, package integration and interaction with control and driver assistance systems.

### Sales features / benefits

- The brake's design and strength enhances performance in demanding, dynamic situations and highlights the car's sporty credentials.

## BMW M PERFORMANCE LIMITED SLIP DIFFERENTIAL

The BMW M Performance limited slip differential is a mechanical rear axle differential which prevents slip when one of the wheels has low traction. The limited slip differential ensures that the wheel receives more torque from improved traction. The M Performance limited slip differential thus improves traction and ensures more controlled and precise handling in borderline driving situations. A real highlight for challenging and sporty driving situations.

### Sales features / benefits

- Turns curves into an experience: The M Performance limited slip differential is ideal for a sporty driving style on a race track. It helps ensure excellent handling of curves and faster acceleration out of bends.
- Whether it's rainy, snowy or dry conditions – traction is improved for any type of road condition. If the driver disables all control systems, however (display: DSC deactivated/DSC off), careful driving is required in wet and snow conditions and is only recommended for closed-off areas.
- The limited slip differential is an additional, self-contained component that can be removed again at any time. Therefore, if the vehicle is resold, for example, it can be reequipped with standard equipment.
- The limited slip differential has been fully developed and tested. It meets BMW's high quality requirements.
- Simple installation: The M Performance limited slip differential can be easily replaced by a BMW dealer.





# CHASSIS – PRODUCTS.

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## BMW M PERFORMANCE SUSPENSION

The M Performance suspension enhances the driving dynamics performance of standard vehicles. The additional vehicle lowering not only provides a more dynamic driving experience, it also enhances the sporty appearance of the vehicle.

The standard shock absorber components and damper settings are retained (also for vehicles with adaptive "Electronic Damper Control" shock absorbers\*).

### Sales features / benefits

- Individual vehicle lowering by means of height-adjustable spring plates on front and rear axle (up to 20 mm\*).
- Especially sporty suspension tuning for excellent road holding.
- Distinctly neutral driving response and significantly reduced rolling movements of the vehicle body.
- Much more direct connection of the vehicle body to the road to increase driving dynamics.
- Remaining comfort still applies, sufficient in combination with up to 20-inch tyres.
- Increased performance, especially in conjunction with highly dynamic driving.
- Attractive red coil springs and blue spring plates.

\*Depending on model



## BMW M PERFORMANCE SUSPENSION – Technical Description

Exemplary image of F87 / F87 Competition



- 1 Adjustable spring plates to change vehicle height settings\*
- 2 Specially matched bumpstops to minimize shock and vibrations during extreme driving conditions
- 3 High quality materials and surface finishes for improved durability and longevity
- 4 Performance tuned springs matched to the vehicle axle weights
- 5 Tuned dampers to match the specifications of the performance springs
- 6 Mounting & adjustment accessories

\*Only for select offerings

# CHASSIS – PRODUCTS. SUSPENSION – OVERVIEW.

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BMW M Performance sports suspensions offer a wide range of options for individual suspension tuning. Since suspensions consist of a wide variety of different components (see page 7), we offer M Performance Parts that are perfectly matched to each model.

M Performance Suspension	Model	Partnumber		Series features				M Performance Parts Components				Adjustability	
		4-cyl.	6-cyl.	RWD	xDrive	Without 2VF – M Adaptive Suspension	With 2VF – M Adaptive Suspension	Lowering Range	Springs	Dampers	Bumpstops	Height	Dampening
Lowering Kit	F22 M235i	-	33 50 2 411 196	X	-	-	-	0 – 20mm	X	X	X	X	X
Coilover Kit	F20 / F21 / F22 (up to 07/15)	33 50 2 320 928	33 50 2 320 928	X	-	X	X	0 – 15mm	X	Series	X	X	X
	F20 / F21 / F22 (from 07/15)	33 50 2 409 926	33 50 2 409 926	X	-	X	X	0 – 15mm	X	Series	X	X	X
	F30 (up to 07/15)	33 50 2 320 980	33 50 2 320 981	X	-	X	X	0 – 15mm	X	Series	X	X	X
	F30 (from 07/15)	33 50 2 409 927	33 50 2 409 928	X	-	X	X	0 – 15mm	X	Series	X	X	X
	F32 (up to 07/15)	33 50 2 357 632	33 50 2 357 631	X	-	X	X	0 – 15mm	X	Series	X	X	X
	F32 / F36 (from 07/15)	33 50 2 409 927	33 50 2 409 928	X	-	X	X	0 – 15mm	X	Series	X	X	X
Adjustable Coilover Kit	F87 / F87 Comp.	-	33 50 2 413 033	X	-	-	-	0 – 20mm	X	X	X	X	X
Adjustable Sleeve Kit	F80 / F82	-	33 50 2 414 216	X	-	X	X	5 – 20mm	X	Series	X	X	X
Adjustable Coilover Kit	F90 / F90 Comp.	-	33 50 2 456 208	X	X	-	-	0 – 15mm	X	Series	Series	X	X



# CHASSIS – PRODUCTS.

## SUSPENSION – LOWERING KIT.

The **BMW M Performance auxiliary springs kit (for F22)**, while maintaining the functionality of the adaptive M chassis special equipment (SA 2VF), offers improved driving dynamics and a real presence on the road.

### Sales features / benefits

- Improved driving dynamics and a real presence on the road.
- BMW M Performance suspension is up to 10 mm lower than the standard suspension.
- Low centre of gravity, resulting in improved vehicle performance.

### Supplied package

- 2 x front auxiliary springs
- 2 x rear auxiliary springs

See EPC for details of the kit's contents.

### Technical information

- 2 red bearing springs per axle are also required as per the EPC.
- Installation is as per the installation instructions.

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# CHASSIS – PRODUCTS.

## SUSPENSION – COILOVER KIT.

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The **coilover kit for the F20, F21, F22, F30, F32 and F36 models** significantly increases the driving dynamics performance of series cars. The additional lowering of the car not only produces a more dynamic driving feel, but also reinforces the car's sporty appearance. To visually differentiate the sporty look, the M Performance coil springs are painted red.

### Sales features / benefits

- The Sport chassis has been developed by BMW Group chassis specialists and tested and verified in accordance with internal requirements.
- This even sportier chassis coordination achieves an excellent road position with outstandingly neutral driving properties. Coordinated and optimised on the Nürburgring's north loop.
- The shorter and newly coordinated coil springs lower the car by approx. 10 mm compared to the M Sport chassis and by approx. 20 mm compared to the series chassis.
- Outstandingly neutral driving behaviour and significantly reduced rolling movements of the car's superstructure.
- Significantly more direct connection of the car's superstructure to the road markedly increases the driving dynamics.
- Residual comfort that is adequate even when combined with up to 20 inch tyres remains.
- Improved performance, particularly in highly dynamic driving situations.
- Visually appealing red coil springs.

### Supplied package

- 2 spring struts
- 2 shock absorbers
- 2 spring pads top
- 4 spring pads bottom
- 4 auxiliary springs
- Small parts (screws & nuts)

See EPC for details of the kit's contents.

### Technical information

- 2 red bearing springs per axle are also required as per the EPC.
- Installation is as per the installation instructions.
- The best lap times are achieved in combination with 19 inch tyres.
- On cars with the series chassis, the front and rear stabilisers from the M Sport chassis must be retrofitted (see EPC).



# CHASSIS – PRODUCTS.

## SUSPENSION – ADJUSTABLE SLEEVE KIT.

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The **adjustable sleeve kit for M3 / M4** models significantly increases the dynamic performance of standard cars. The additional lowering of the car not only produces a more dynamic driving feel, but also reinforces the car's sporty appearance. The standard shock absorber components shock absorber settings are retained.

### Sales features / benefits

- This even sportier chassis coordination achieves an excellent road position.
- Markedly neutral handling and significantly reduced rolling movements of the car's body.
- Significantly more direct connection of the car's superstructure to the road enhances driving dynamics.
- Visually appealing black spring strut with red coil springs and blue spring plates.

### Package

- 2 spring struts with height-adjustable spring plates for the front axle
- 2 individual springs with height-adjustable spring plates at the rear
- Installation accessories

See EPC for details of the kit's contents.

### Technical data

- The height adjustment offers a range of between 5 and 20 mm.





# CHASSIS – PRODUCTS.

## SUSPENSION – ADJUSTABLE COILOVER KIT BMW M5.

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The **adjustable coilover kit for M5** models enhances the dynamic performance of standard cars. The additional lowering of the car not only produces a more dynamic driving feel, but also reinforces the car's sporty appearance. The standard shock absorber components and damper settings are retained (even on cars with adaptive "Electronic Damper Control").

### Sales features / benefits

- Individual lowering of the car using height-adjustable spring plates on the front and rear axles.
- Particularly sporty suspension tuning for an outstanding road position.
- Extremely neutral handling and significantly reduced rolling movements of the car's body.
- Significantly more direct connection of the car's body to the road to enhance driving dynamics.
- Attractive red coil springs and blue spring plates.

### Package

- 2 single springs with height-adjustable spring plates for the front axle
- 2 single springs with height-adjustable spring plates for the rear axle
- Installation tool

See EPC for details of the kit contents.

### Technical data

- Recommended lowering: -15 mm (compared to standard).



# CHASSIS – PRODUCTS.

## SUSPENSION – ADJUSTABLE COILOVER KIT BMW M2.

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The **adjustable sleeve kit for BMW M2 models** significantly increases the driving dynamics performance of series cars. The additional lowering of the car not only produces a more dynamic driving feel, but also reinforces the car's sporty appearance. The adjustment in shock absorbing capacity is made separately for the tension and compression stage. The adjustable shock absorber components offer different customised driving properties for drive dynamics and comfort.

### Sales features / benefits

- This even sportier chassis coordination achieves an excellent road position.
- Outstandingly neutral driving behaviour and significantly reduced rolling movements of the car's superstructure.
- Significantly more direct connection of the car's superstructure to the road markedly increases the driving dynamics.
- Improved performance, particularly in highly dynamic driving situations.
- Visually appealing black stainless steel shock absorber with red coil springs and blue spring plates.

### Supplied package

- 2 stainless steel complete spring struts with height-adjustable spring plates for the front axle
- 2 shock absorbers for the rear axle
- 2 individual springs with height-adjustable spring plates at the rear
- Installation accessories

See EPC for details of the kit's contents.

### Technical information

The chassis settings recommended can be found in the installation instructions.



# ADJUSTABLE COILOVER KIT BMW M2. GENERAL SET UP INFORMATION.

In addition to adjusting the ride height of the M2, the M Performance suspension for the M2 also features damper force adjustability. Both damper compression (helps the suspension absorb bumps or road irregularity as the wheel moves upward in the stroke) and rebound damping (helps the suspension return to the proper position, after a bump or other irregularity) can be adjusted to suit driving style and driving conditions.

The M2 M Performance Suspension is delivered with the BMW M Performance recommended settings. Below is a general guideline regarding how Compression and Rebound will affect the vehicles riding behaviour. Further setup details and warnings are found in the Installation Instructions.

Compression Front Axle	Compression Rear Axle
<div><div></div><div>↑+ Aggressive and precise steering.</div></div>	<div><div></div><div>↑+ More stability when changing direction.</div></div>
<div><div></div><div>↓- More compliant handling.</div></div>	<div><div></div><div>↓- Enable the rear to have more steering effect.</div></div>

Rebound Front Axle	Rebound Rear Axle
<div><div></div><div>↑+ Improve front axle response, but can reduce grip.</div></div>	<div><div></div><div>↑+ Increased tendency for vehicle Oversteer.</div></div>
<div><div></div><div>↓- Improve comfort during slow driving. Decrease stability and steering precision when driving fast.</div></div>	<div><div></div><div>↓- Increased tendency for vehicle Understeer.</div></div>

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# ADJUSTABLE COILOVER KIT BMW M2. GENERAL SET UP INFORMATION.

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The M2 sport suspension **is delivered with the following settings.**  
These settings are best for a mixture of Comfort and Sport.

Axle	Rebound Damping	Compression Stage
FRONT	9 clicks open	6 clicks open
REAR	12 clicks open	6 clicks open

The following settings have been determined for **a flat race course.**  
These settings can be too harsh for street driving, but deliver a more direct feel.

Axle	Rebound Damping	Compression Stage
FRONT	7 clicks open	4 clicks open
REAR	10 clicks open	4 clicks open

**! IMPORTANT:** Never drive with one axle in soft settings while the other axle is in a hard setting.



# CHASSIS. PORTFOLIO OVERVIEW.

PRODUCT	1	2	3	4	5	6	7	8	X1	X2	X3	X4	X5	X6	X7	Z4	M2	M3	M4	M5	M8*	X3 M*	X4 M*	X5 M	X6 M
SUSPENSION	X	X	X	X													X	X	X	X					
BRAKE SYSTEM	X	X	X	X	X	X	X	X					X	X			X	X	X	X		X	X	X	X
SPORT BRAKE PADS																	X	X	X	X				X	X
BRAKE DISCS	X	X	X	X	X	X	X	X					X	X											
LIMITED SLIP DIFFERENTIAL	X	X	X	X																					

\*M Performance Parts for the M8, X3 M and X4 M will be available at the beginning of October 2019.

For more details, e.g. specific part numbers, product information, installation instructions, information to individual models, etc., please look up the **Excel version of the Product Highlight Chassis** or the **general M Performance Parts Product Overview**.

- ▶ TO PRODUCT HIGHLIGHT CHASSIS OVERVIEW (EXCEL)
- ▶ TO GENERAL M PERFORMANCE PARTS PRODUCT OVERVIEW

\*Links are only working within the S-Gate / M Performance Parts Info Center environment.



# CHASSIS. POWERFUL SELLING POINTS.

For further information on these products, see the BMW M Performance Parts Info Center and the “Chassis” module in the Web-based BMW M Performance Parts training program.



## **YOUR TOP SELLING POINTS:**

- Outstanding agility and safety combined with maximum driving dynamics
- Visual enhancement of the vehicle
- Resilience to thermal stress
- Added comfort in everyday driving, too
- Developed in Germany based on original vehicle data in collaboration with serial production development
- Extensively tested – also within the high-performance range
- BMW warranties are fully preserved