

H&R Monotube Coil Overs

Representing the top of our coil-over product range, H&R Monotube Coil-Overs offer race-bred performance without sacrificing ride comfort. German-made gas shock absorbers built to H&R's rigid specifications are combined with H&R Sport or Race progressive rate springs for optimum ride quality on the street and uncompromising performance at the track. Like all H&R coil-overs, these Monotube coil-overs feature a threaded shock body that allows virtually infinite ride height adjustments to suit street or track use.

Product benefits:

- *Monotube gas shock absorbers for precise handling response*
- *Inverted design reduces unsprung weight for precise handling*
- *Trapezoid threaded shock body for virtually infinite height adjustment*
- *Zinc-phosphate coated shock tubes offer an attractive finish and corrosion protection*
- *H&R precision wound coil springs*
- *Adjustment wrenches included*
- *Special applications available on request (without type approval)*
- *Extensive testing in accordance with the German TÜV*
- *Engineered and manufactured in Germany*

ORDERING AND MOUNTING GUIDELINES

To enable us to correctly process orders we need the following information

- Motor/Vehicle type and version and/or year of manufacture,
- Engine type
- Axle load,
- Self levelling – yes or no.

Please note that all measurements regarding lowering are approximate and can differ depending on the age of the vehicle and fittings.

Installation

Additional information regarding the installation can be found in the **H&R warranty passport**, which is supplied with each set of springs. Before fitting please check that the contents of the carton match the enclosed TÜV-approval. (Colour and stamp of the spring) The vehicle must be re-aligned after the installation of an H&R-spring/suspension-system. When the spring is fitted the stamp markings on the spring should be readable, i.e. not upside down. The extension of lowering has to be reduced by the series lowering.

Axle/Wheel Alignment

For wheel alignment after fitment refer to the vehicle manufacturer's data. If this data can not be achieved (e.g. at low ride height) try to approach the data as close as possible.

Self Levelling/Sensors

H&R springs can be used on vehicles fitted with a factory self levelling suspension. The self levelling system needs to be reset at an authorised garage. If an aftermarket self levelling kit is fitted to the car, it is unlikely the H&R springs can be used. To avoid damage of the self-levelling system and/or headlight height adjustment these connecting links should be untightened before removing the shock absorber.

Servo Brake Adjuster

The setting of the rear brake adjuster needs to be checked, where applicable.

ABS (Anti-Lock Brakes)

Please note that the brake sensors might need re-adjusting (on some models) VAG = VW, Audi.

Shock Absorbers

If the existing shock absorbers are not in good condition, we recommend that you change them for new OE parts. However, best suited for all sport springs is the use of sport shock absorbers which H&R offers for most spring sets. These will offer optimum performance and handling.

Notes regarding Mercedes-Benz vehicles

H&R offers different sport springs for each type of vehicle, to allow differences in equipment. The lowering can be adjusted even further by using original MB rubber spring inserts with different thickness levels (8 – 23 mm).

Trailer Coupling

With use of a trailer coupling the distance between the top of the trailer coupling and the road must be 350-420 mm.

Base Version

The mentioned car-type is always for the base-version only. Other types like 4WD, convertible, station wagon, sport-versions etc. are not included if not specially mentioned.

Product-Return + Reclamations

Returning and claim products have to be released in writing! You can get the necessary forms to fill out on request. These products have to be in an impeccable and marketable condition. A copy of the delivery note is necessary and the products have to be sent in f.o.c.. The credit will be made over the value of goods less 15 % storage replacement costs. Returned products have to be new, not mounted.

Coil Over

For some cars extensive chassis-work may be required to reach the maximum possible lowering of the coil overs. Please ask your H&R dealer or workshop about the costs before installation.

With use of LPG, trailer coupling, bike racks, other additional weight, heavy accessory in the trunk, e.g. HiFi the (statistic) heights may vary depending on the general weight and center of gravity. Please note special suspension components offered for these cars and/or contact us prior to ordering and fitment.

EU-guidelines

Version	height above the driveway (mm)	
	maximum	minimum
passing light	1200	500
clearance light	1500, (2100)	
driving light	-	-
fog light	< passing light	<250>
flash lamp (f/r)	1500, (2100)	<350> 400
sidewise	1500, <(2300)>	<350> 400
parking lamp	1500, (2100)	
backup lamp	1200,	<250> -
stop light	1500, <(2100)>	350
tail lamp	1500, (2100)	350
rear fog lamp	1000, (2100)	250
reflex reflector (not triangular)	900, <2100>	<250> -

Numbers in <> brackets according to 76/756 EWG deviant of the federal motor vehicle safety standards.

Numbers in () brackets = alternatives for special cases.

The measurement of the heights is taken at the unloaded, fully fueled car without driver.

Usually the reference is the lowest edge of the actual emission-opening of the optical system (reflector, ending panel).

Height of the official license number (§60 StVZO) front >200mm, rear >300mm.

trailer coupling: upper edge coupling ball - driveway: 350mm.

This new catalogue supersedes all previous catalogues and price lists. We accept no responsibility for typographical and photographic errors.
All data contained in this catalogue is subject to change where necessary.
The relevant approval certificates are important for the homologation.

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MOUNTING-INSTRUCTIONS SUSPENSION-PROGRAM

Important product information – must be read before installation!

H&R suspension components are developed and designed from a sporting viewpoint and have more sporting and tighter handling characteristics than original manufacturer products. The amount of lowering was measured on the vehicle made available to us for test conversion and for testing by TUV (German Inspection Organization), and was confirmed by TUV. Nevertheless, the details on lowering should be treated only as approximate guidelines, and on each vehicle are influenced by the following factors:

- Different engine size, e.g. 4 cylinder or 6 cylinder
- Extra equipment or special aftermarket parts which may increase vehicle weight (gas fuel conversions/HiFi conversions/trailers)
- Accessory deadweight can add up very quickly
- Original vehicle model tolerances
- Type and construction of the installed shock absorbers
- Variations in fuel level
- Age and condition of stock springs

Because of these outside influences, we can not accept any liability for the degree of lowering.

H&R suspension components are manufactured under constant quality control and with the greatest of care; nevertheless, even top-quality products may become defective. To avoid damage to the product, please note the following information:

- Do not overload the vehicle, and do not exceed the axle loading prescribed by the manufacturer or TUV.
- Avoid unusual and aggressive driving maneuvers which place excessive demands on the vehicle (racing events, etc.)
- Because of the reduced ground clearance, avoid off-road use.
- Watch your speed to avoid hitting the undercarriage on speed bumps, etc.

H&R suspension components are intended exclusively for use in vehicles which are permitted for use on public roads, and which fulfill the applicable legal requirements. You are unconditionally advised against any other use.

Make sure that the components are installed only by an authorized mechanic/workshop. Only these authorized mechanics have the necessary specialized knowledge and equipment.

1. Before installation:

- Please compare the item delivered with the delivery note
- Please compare the content of the delivery with the parts approval/vehicle type approval
- Please also compare the parts approval/vehicle type approval with the vehicle papers
- Check that the delivery is complete
- Please check that the appropriate tools are available for fitting
- Order any additional parts which may be necessary
- Measure all dimensions relevant to the conversion
- If there are disagreements or deviations, please contact your vendor

2. During installation:

- Work as per the vehicle's factory service manual or workshop manual
- Comply with all details in the technical tips provided with product (installation or mounting instruction)
- Please check that all parts removed function correctly
- Replace defective original parts with new original parts
- Use only suitable tools and equipment for installation and disassembly
- Do not carry out extra work on parts or adapt them to fit

If products do not match, stop the installation or conversion immediately. The installation of products into vehicles for which they are not suitable can result in severe material damage and physical injury.

In this case, contact your dealer and explain the problem to him. Keep the vehicle papers and/or technical documentation on hand, so that you can answer any questions which arise. Please ensure that after a conversion is complete, there are not more parts left over than you replaced.

3. After the conversion:

- Use only the tightening and fixing values provided by the vehicle's factory service manual
- Test and adjust the correct securing of all loosened and fitted parts
- Test and adjust the ease of movement of the wheel/tire combination (loaded/unloaded)
- Test and adjust the ease of movement of all axle and steering parts (for all steering movements)
- Test and adjust the ease of movement of all brake parts and brake hoses (for all steering movements)
- Test and adjust the braking system and the adjustment of the load-dependent brake force compensator
- Test and adjust the setting of the headlights
- Test and adjust the setting of the level adjustment
- Test and adjust the setting of the axles
- Measure all dimensions relevant to the conversion

Comply with the authorization permissions and regulations applicable in your country. The following minimum clearances from the road surface are defined in EU test standard ECE 48: edge of headlight opening: 500mm, daytime headlights: 250mm, brake and tail lights: 350mm, fog lights front/rear: 250mm, indicators front, rear, side: 350mm, number plate front 200mm, number plate rear 300mm. The clearance of the trailer connection at the permitted axle loading must be 350mm to the midpoint of the ball head. Ensure that a vehicle acceptance is carried out immediately by an authorized testing organization.

Non-compliance with this test and adjustment work can result in failure of vehicle systems, material damage and physical injury with severe consequences.

4. Test drive

- Installing H&R products will alter the handling of your vehicle.
- Therefore, drive with care until you have become accustomed to the altered vehicle characteristics.
- Unexpected vehicle handling characteristics can indicate that the products installed are not suitable for your vehicle, or that there are errors in installation and/or in adjustment to the suspension geometry. In this case, please have the vehicle inspected immediately in a specialist workshop.

Failure to do so can result in severe material damage and physical injury.

With some vehicles, lowering of the front axle can result in noises at full steering lock. Noise can also occur due to tolerances when the shock absorbers are extended to their full length. These potential noises are design-related. They may not necessarily indicate a defect which affects driving safety. Installation of noise damping sleeves may help to correct this; they are available from your specialist dealer.

If you have complaints after purchase and/or installation of H&R products, please contact your dealer.

ACCESSORIES/SPARE PARTS/EXPERT

All parts of our shocks can be ordered separately.
For an exact description of the parts, see the picture below.

860 6875 02 Spanner Wrench, small
860 8090 02 Spanner Wrench, large



HR 80-K-X012A01
Locating ring for coil overs
(Austria)



Top spring seat

Bump stop

Dust cover

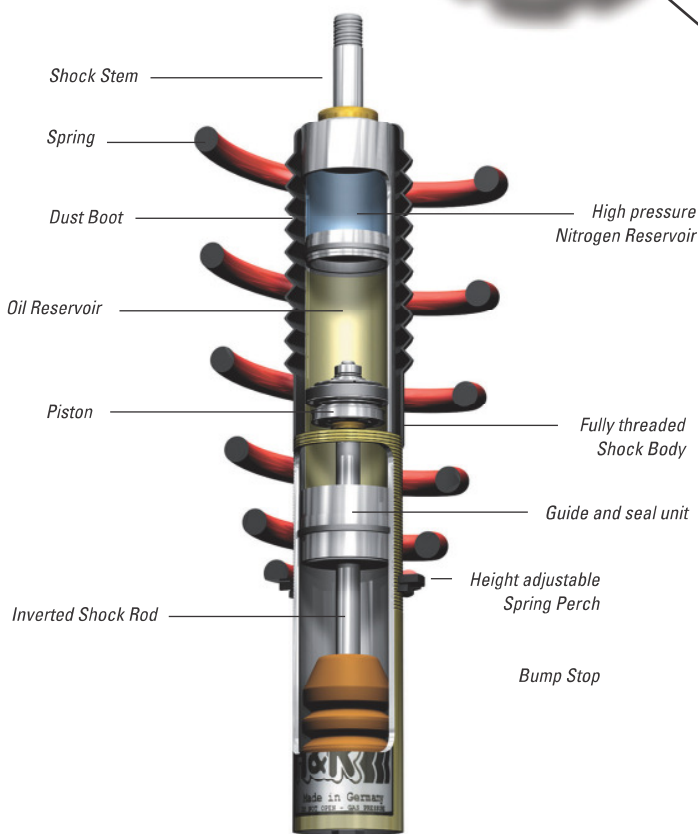
Main spring

Distance ring

Helper spring

Spring seat

Counter nut



Shock Stem

Spring

Dust Boot

Oil Reservoir

Piston

Inverted Shock Rod

High pressure
Nitrogen Reservoir

Fully threaded
Shock Body

Guide and seal unit

Height adjustable
Spring Perch

Bump Stop

GKM-M50-1000-01 black
counter nut
(thread)

GKM-TR52-1000-01 red
counter nut
(TR52x1,5, trapezoid)

GFT-M50-1000-01 black
spring seat
(M50 thread)

GFT-TR52-1000-01 red
spring seat
(TR52x1,5, trapezoid)

H&R TRIPLE C CAMBER ADJUSTMENT BOLTS

Whenever you lower a vehicle's ride height, negative camber is increased – how much depends on the vehicle and the reduction in ride height. H&R Triple C Camber Adjustment Bolts are a simple, yet very effective means of removing excessive camber, adjusting your vehicle's camber settings, or even correcting small side-to-side camber variations for precise alignment.

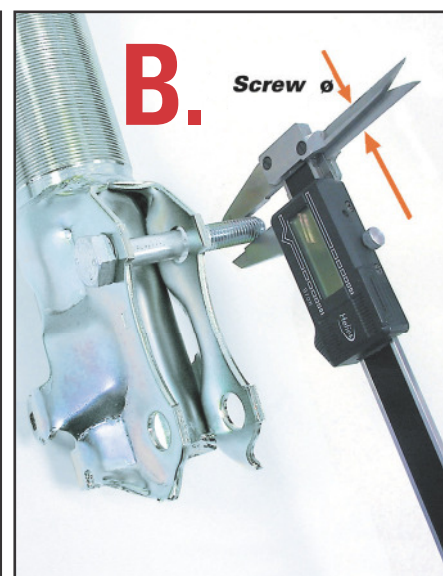
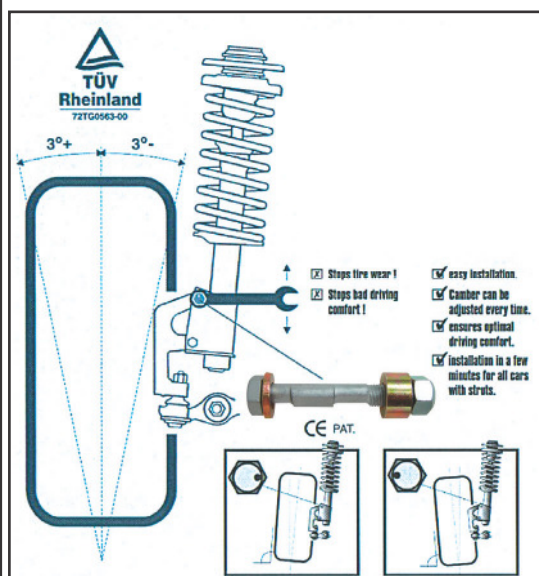
Consisting of a pair of specially-designed bolts, H&R patented Triple C Camber Adjustment Bolts replace the original upper fastening bolts on McPherson strut applications. As the bolt is turned, a small cam eccentric alters the vehicle's camber, allowing adjustments from 0-3 degrees, positive or negative. Installation takes only minutes with readily available hand tools.

1. Measurement A =

Take measurement from outside of bracket

2. Measurement B =

Measure the diameter of the bolts. Then you can choose the right Triple C (camber correction kit).



Part Nr.	Model/Type	Screw-diameter in mm	Bracket	EURO
❶ TC 110	Fiat, Lancia, Seat, Suzuki	10	36,0 – 48,0 mm	45,00
❷ TC 210	Auto Bianchi, Fiat, Lancia, Seat	10	45,5 – 48,0 mm	45,00
❸ TC 114	Audi, Renault, Subaru	14	35,0 – 48,0 mm	45,00
❹ TC 112	Austin, Fiat, Ford, GM/Holden, Lancia, Mazda, Nissan, Peugeot, Saab, Volvo, Kia, Toyota	12	40,0 – 48,5 mm	45,00
❺ TC 212	Daewoo, Daihatsu, Fiat, Ford, GM/Holden, Hyundai, Kia, Mazda, Mitsubishi, Nissan, Opel, Porsche, Proton, Renault, Seat, Suzuki, Toyota, Vauxhall, Subaru, Volkswagen, Volvo	12	30,0 – 39,0 mm	45,00
❻ TC 115	Chrysler, Toyota	15	35,0 – 43,0 mm	45,00
❼ TC 116	Ford Mustang, Renault	16	41,5 – 48,0 mm	45,00
❽ TC 117	Toyota	17	35,0 – 50,0 mm	45,00



CAR IDENTIFICATION PLATE

Alternatively you can find technical information on the car identification plate in the engine compartment or door panel or trunk.

Fahrzeugschein		Schlüsselnummern		Zulassung	
FL - XX 9999		zu 1 010230	zu 2 0583	zu 3 45600H	8
Das vorstehende amtliche Kennzeichen ist Vorname, Name (ggf. auch Geburtsname), Firma		1 PKW GESCHLOSSEN SCHADSTOFFARM D3		16 Zul. Adm. kg 775 m — n 1145	
Peter Mustermann		2 PORSCHÉ		17 Rider und Ordnungen 1 18 Zahl der Achsen 2 19 abgem. ange- geb. Achsen 1	
geb. am 01.08.1950		3 996		20 vom 205/50ZR17	
Postleitzahl, Wohnort/Firmensitz, Straße und Haus-Nr.		4 Fahrzeug-identifizierungsnummer WP0ZZZ99ZYB654321 X		21 mit u. 255/40ZR17	
Musterstraße 9		5 OTTO/GKAT 51 6 Höchstgeschw. 280		22 ab vom 225/40ZR18	
99999 Musterhausen		7 Leistung 8221/6800		23 mit u. 265/35ZR18	
ggf. (Sonder- oder Haus-Nr. Postleitzahl, Standort)		8 Hubraum cm³ 3387		24 Überdruck im Bremsenschalt 25 Betriebs- bremse — 26 Zueicherung- bremse —	
alt		9 Nutz- oder Anhängelast kg —		26 Anhänger- auslastung auf 12,4-Tonnen-Größe —	
Feld entfällt		10 Nutz- oder Anhängelast kg —		27 Anhänger- auslastung Prozentwert —	
Feld im alten Fz-Schein		11 Gesch.-Lageplan — / —		28 Anhängerlast kg bei Anhang mit überwiegender —	
		12 Maße über alles mm L 4430		29 Brandgeschw. dB (A) 00	
		13 Leergewicht in kg 1395		30 Tag der ersten Zulassung 20.03.2005	
		14 Zul. Gesamt- gewicht kg 1765		31 bei Anhänger- laste Bremse —	
		15 Zul. Gesamt- gewicht kg 1720		32 Fahr- gehalt —	
				33 Bemerkungen 7	

[illegible]

 SEAT S.A.
e9*2001/116*0052
VSSZZZ1PZ9R017023
1945 Kg
3345 Kg
1 - 1047 Kg
2 - 926 Kg
Typ 1P

- ☐ *manufacturer*
- ☐ *type approval number/egbe number*
- ☐ *chassis number*
- ☐ *technical gross vehicle weight*
- ☐ *technical gross vehicle weight incl. trailer load*
- ☐ *permissible axle load front*
- ☐ *permissible axle load rear*
- ☐ *vehicle type*