



May 1, 2008



## ESCAPE THE CROWDS WITH KOLEOS, RENAULT'S NEW 4X4 CROSSOVER

Renault's first ever crossover, Koleos, will go on sale from June 6, 2008. Ideal for escaping the everyday routine, Renault Koleos is comfortable, easy to drive and boasts genuine off-road ability. Its distinctive, expressive lines combine familiar 4x4 styling cues with the dynamic styling associated with the world of saloon cars, while its contained dimensions and intuitive equipment ensure that drivers require no time at all to familiarize themselves with its use.

Meanwhile, Renault Koleos delivers the same standard of comfort as that expected of a saloon car, as well as cabin space worthy of a compact MPV. Unlike vehicles essentially committed to off-road use, Koleos comes with a raft of comfort-enhancing equipment, including a hands-free card, front and rear parking assist, voice recognition navigation with Bluetooth® connectivity and automatic dual-zone climate control.

Its split-opening tailgate, automatically-folding rear seat and 70 litres of stowage space highlight the practical side of Koleos' highly modular interior.

Koleos has been designed to be versatile, too. It offers the same reassuring drive when motoring in and

about town, on open roads or on motorways as it does when taken off the beaten track. For the latter, it benefits from all-wheel drive Alliance-developed transmission. The 4x2 and 4x4 modes are automatically controlled by the 'All mode 4x4-i' system first seen on Nissan's new X-Trail. The 4x2 and 4x4 modes can also be selected manually.

To cater for all types of use, Renault Koleos is available with either 150 or 175hp versions of the 2.0 dCi diesel engine, or with a 2.5 170hp petrol engine. Whether manual or automatic, transmission is systematically six-speed.

Like all Renault models, Koleos boasts segment-leading active and passive safety credentials. The all-wheel drive transmission also contributes to active safety by correcting loss of grip even before the ESP can deploy.

Renault Koleos comes in one of three or four equipment levels (depending on market) and can be readily customized thanks to a comprehensive range of accessories (depending on market) that can either be ordered at the same time as the car or as an after-sales fitment.

Like all the brand's upper-range vehicles, Renault Koleos comes with a three-year or 150,000km warranty in Europe. Koleos is produced in Busan, Korea, and is the first Renault to be manufactured by Renault Samsung Motors, a 80.1%-owned Renault subsidiary.

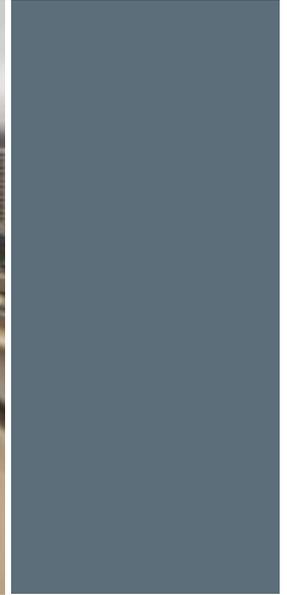
Production-related capital outlay, including adapting the factory to Koleos production and investment with suppliers, was kept to just €178 million.





**KOLEOS IS RENAULT'S FIRST 4X4 CROSSOVER. DESIGNED FOR ESCAPING THE EVERYDAY ROUTINE, THIS NEW MODEL WAS DEVELOPED TO BE EASY TO USE AND COMFORTABLE, WITH GENUINE OFF-ROAD ABILITY.**

**RENAULT KOLEOS COMBINES THE GENES OF THE FOLLOWING THREE VEHICLE CATEGORIES:  
THE DYNAMIC LINES OF A SALOON,  
THE INTERIOR SPACE OF AN MPV,  
THE ALL-WHEEL DRIVE EFFICIENCY OF A 4X4.**



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# 01

## LOOKS THAT COMBINE 4X4 CUES WITH THE DYNAMIC STYLING OF A SALOON CAR

The lines of Renault Koleos were designed to be both distinctive and expressive. Koleos is unmistakably a 4x4, yet its looks are in no way aggressive and its styling is appealing without being ostentatious.

The front-end of Koleos features the logo of the brand flanked by air intakes and modern elliptical headlamps, especially in the case of the module that incorporates Xenon headlamps and additional cornering lights.

The side design of Renault Koleos – including high ground clearance and prominent wheel arches – betrays its 4x4 calling and ruggedness. Seen from a raised vantage point, the arrow that flows from the rear lights along the car's flanks to the front gives Koleos a particularly assertive character. The distinctive lines of its hatch form a movement that spills from the bottom of the rear window to converge on the logo which sits on a gloss black finish plaque. "Koleos has a strong personality. In our programme, it is a unique model that stands out from its rivals by its raked rear screen which suggests forward movement," notes Renault's Director of Design, Patrick Le Quément.

The cabin and drive station are purposely intuitive and the interior design is based on a series of elegantly flowing curves. The bottom of the dashboard forms a wave-like line which gives the impression that the cowling is actually floating on the dashboard. The form of the centre console, which houses all the vehicle's main functions, contributes to an inescapable sense of well-being. Its design and dimensions also contribute to the perceived quality that emanates from the cabin. "The interior of Koleos confirms the impression of robustness suggested by the exterior styling," observes Patrick Le Quément. "The carefully-honed interior is also of a very high quality. Its graphic design is very pleasing, and special attention has been paid to perceived quality." This impression is emphasized by the quality of the materials employed, as well as by the careful attention that has been paid to the fit and finish of panels and components.



# 02

## RENAULT KOLEOS: THE EASY-TO-ASSIMILATE CROSSOVER

One of the key features of Koleos is the speed and ease with which drivers feel at home behind its wheel. Its contained dimensions ensure that it copes as effortlessly with city motoring as it does when taken off the beaten track. The practical dashboard design intuitive controls allow drivers to swiftly familiarize themselves with the different equipment.

While 4x4 models are frequently associated with bulky volumes and considered complex to use, the length and width of Renault Koleos are 4.52m and 1.85m respectively and these contained dimensions ensure that it copes as effortlessly with city motoring as it does when taken off the beaten track. Indeed, despite the presence of styling cues from the world of 4x4s, Renault Koleos is a crossover that offers a successful blend of dynamic and balanced lines. Meanwhile, in addition to its all-terrain attributes such as high ground clearance and skidplates, the impression of ruggedness exuded by Koleos gives it a reassuring feel.

It takes drivers no time at all to feel at home in Koleos. The practical dashboard design and development logic behind the easy-to-operate man-machine interfaces allow drivers to swiftly familiarize themselves with the different controls, while use of the navigation system, radio, heating and climate control is intuitive. Controls for the navigation system, hands-free telephone, audio system and automatic parking brake are all positioned either on the steering wheel or within easy reach of the driver.

Information relating to the navigation system and radio is displayed centrally on the upper part of the dashboard to make sure that it is both

clearly legible for the driver and easy to read for other occupants. The drive station itself couldn't be more driver-friendly. Careful attention has been paid to ensuring that Renault Koleos boasts segment-leading head-up visibility (31°) and forward field of vision (36.3°), while its rearward angle of vision figures amongst the best available in the segment (27.5°).

The driving position can be precisely adjusted thanks to the adjustable seat and height- and reach-adjustable steering column.



# 03

## COMFORT AND SPACE WORTHY OF AN MPV

Everything inside Renault Koleos has been carefully thought through to offer the ultimate in comfort. The silent drive, vast cabin space, practical heating system and automatic dual-zone climate control all contribute to an overriding sense of wellbeing whatever the type of surface, and beg for Koleos to be used as a daily driver.

Renault Koleos has everything required to travel in outstanding comfort, and particular attention has been paid to one of the most essential comfort-related preconditions: effective damping of both mechanical and road noise. Thanks to its balancer shafts and twin-mass flywheel damper, the diesel engine stands out as a benchmark when it comes to minimizing vibrations and noise.

Meanwhile, road noise has been further slashed thanks to a package of special features, including an acoustic windscreen and engine subframe filtering, as well as the presence of effective soundproofing materials between the engine compartment and cabin, under the floor and in the wheel arches. These solutions combine to give Renault Koleos a genuine edge on the acoustic comfort front.

Renault Koleos passengers are also pampered in terms of cabin space, including record front headroom (946mm) in the SUV/4x4/crossover category, while rear passengers benefit from a pleasing balance between vertical and lateral space. Given Renault Koleos' contained overall length, access to both the front and rear seats is astonishingly simple, with ample room for legs and hips alike.

As a vehicle capable of taking both long journeys and excursions off the beaten track in its stride, Koleos offers outstanding comfort for front and rear occupants alike. The design of the seats and the choice of materials permit long distances to be covered with ease, while the rake of the rear seatback can be adjusted, a feature rarely found in the segment (depending on version).

The driving comfort provided by Koleos is unrivalled in the SUV/Crossover/4x4 segment and can be enjoyed on all types of road surface thanks to the extensive work that has gone into the size of the bump stops, damper travel, springs and damper calibration. On poor quality roads, the progressivity of the bump stops ensures that compression loads and vertical movements are efficiently absorbed.

The Renault range has long boasted the biggest panoramic opening sunroofs available on the market and the Koleos sunroof features a total transparent glazed area of 0.75 square metres which is unmatched in the SUV/crossover market. For optimal thermal comfort, the high density-weave sunblind can be pulled shut to any position.



The sunroof itself comes with an anti-pinch function and, thanks to the hands-free card, automatically closes if the driver walks away from the car. The combination of a brightly-lit cabin and the promise of hair-in-the-wind motoring with clear views of the sky overhead stands out as one of Renault Koleos' truly appealing features.

To ensure first class travelling comfort for all occupants, Koleos is equipped with an automatic dual-zone heating and climate control system incorporating specific vents for the rear seats. The driver and front passenger can consequently select the cabin temperature of their choice, while rear passengers, who also benefit from sunblinds incorporated in the doors, can adjust ventilation settings by means of the control located at the rear of the centre console.

Music lovers will be won over by the comprehensive range of audio systems that is available for Renault Koleos, including a top-of-the-range Bose®-developed system which comprises a digital amplifier, seven loudspeakers and a woofer. Its outstanding hi-fi quality enables occupants to profit from their favourite music whether delivered by the radio, the six-CD/MP3-compatible multi-changer or an external source such as an iPod connected to the fascia-mounted jack plug.



A raft of equipment aimed at taking the stress out of motoring underpins how effortlessly Koleos fits into the Renault family. Such features include the hands-free card and keyless starting functions, automatic headlamp and wiper activation, a tyre pressure monitoring system and cruise control/speed limiter, while the controls for the power windows, electronic child locks and adjustment of the exterior mirrors are all located on the driver's door.

Driving pleasure is taken to new heights thanks to an array of comfort-enhancing features, from front and rear proximity sensors for easier parking to the automatic parking brake which is applied whenever the engine is switched off, and then automatically released when the vehicle pulls away again.

Renault Koleos is equipped with a Carminat Navigation Bluetooth® DVD Bose® sound system which incorporates three functions: a GPS navigation system complete with 3D perspective birds-eye view, 16/9, seven-inch screen and DVD atlas, a radio and six-CD multi-changer, plus controls for a hands-free Bluetooth® telephone. The controls for all these functions are positioned within easy reach on the centre console. Koleos can also be equipped with the new Carminat CD Bluetooth® navigation system first seen on New Laguna, a solution which combines all the basic multimedia features with a 2D display and voice recognition.





### Bose® sound system

- 1** Haut-parleur médium-aigu au néodyme de 8 cm (voie centrale)  
One 8cm (3.25-inch) neodymium mid/high-range speaker (centre channel)
- 2** Haut-parleurs aigus 3,5 cm  
Two 3.5cm (1.5-inch) tweeters
- 3** Haut-parleurs large bande au néodyme de 16,5 cm  
Four 16.5cm (6.5-inch) neodymium wide-range speakers, one in each door
- 4** Haut-parleur de grave Richbass® 13 cm dans un caisson bass-reflex de 7 litres, alimenté par un amplificateur compact  
One 13cm (5.25-inch) Richbass® woofer housed in a 7-litre custom-engineered enclosure
- 5** Amplificateur numérique 8 canaux avec système de traitement numérique du signal Bose®  
A Bose® digital amplifier with eight channels and digital signal processing



The Bose® audio system is the first of this prestigious brand to be fitted in a Renault. Engineers from Renault and Bose® worked together to create a bespoke audio system adapted to the specific acoustic properties of Koleos. To do this, they carried out a detailed analysis of the cabin layout to deliver a balanced, hi-fi sound for all passengers. The system was designed using the process known as the Clean Sheet Approach. Instead of adding components once the vehicle's basic design had been completed, design and analysis tools were used to take approximately one thousand readings inside the cabin to produce a global acoustic model.

Even before the first car has been built, Bose's engineers had worked with Renault's design staff to determine the ideal position for each loudspeaker. Practically all the decisions concerning the audio system were based on this acoustic analysis, from the specification and position of the different loudspeakers to signal processing and equalization.

As a result, the sound of each voice and instrument is very close to that wished for by the composer. The music is pure and detailed, with a quality similar to that of a live performance.

# 04

## THE PRACTICAL, MODULAR CROSSOVER

Renault Koleos boasts a raft of practical features, including a split-opening tailgate and an easy-to-use system for folding the rear benchseat. Numerous stowage solutions and the carrying capacity of its boot and make it the ideal vehicle for family journeys.

The versatility of Koleos concerns not only its on-road ability but also the comprehensive list of clever features and equipment to be found in the cabin. To assist loading, Renault Koleos comes with a split-opening, 'clamshell'-type tailgate. The upper part of the hatch permits access to the boot in cramped spaces and allows items of more than one metre wide to be carried. When lowered, the bottom part of the tailgate permits heavy or bulky items to be loaded without getting dirty. It also serves as a handy seat for two adults (up to 200kg) when the vehicle is parked, to put on put ski boots, for example, or to provide a sheltered spot for getting changed after a day of watersports, hiking, cycling or any other outdoor activity.

Modularity-enhancing features include the so-called 'easy estate' system which enables the 60/40-split rear benchseat to be folded from either inside the cabin or from the boot thanks to two levers accessible without having to open the rear side doors. With the benchseat in the folded position, the boot floor becomes entirely flat to further facilitate loading. The boot volume of 450dm<sup>3</sup> (VDA) with all five seats in the upright position extends to a very generous 1,380dm<sup>3</sup> (VDA) once the benchseat has been folded. The available space can also be compartmented thanks to the presence of several hooks which enable the multipurpose retention net to be fixed in a choice of ways.

In keeping with Koleos' calling as a vehicle designed for outdoor leisure activities, its rear benchseat is equipped with a ski flap. The back of the front passenger seat can also be folded down to either form a table or permit the transport of items of up to 2.60m in length.

There are plenty of cubbies all around the cabin. The dashboard includes a chilled, 15-litre glovebox, while the stowage space in the centre console is equipped with a removable bin. Extra space is provided in a drawer located beneath the front passenger seat, the lower front door bins will take a 500ml bottle and the lidded stowage space incorporated in the armrest is ideal for CDs. Rear passengers benefit from stowage space in the rear part of the centre console, plus two underfoot lidded compartments of five litres each. The rear door bins can house either a 500ml bottle or up to five CDs, while stowage space and drinks-can holders are available in the rear central armrest, too. Underfloor stowage in the boot provides a further 28 litres which takes the total stowage capacity of Renault Koleos to a vast 70 litres. Rear passengers benefit from folding tables complete with cup-holder incorporated in the backs of the front seats.





# 05

## VERSATILITY

Equally at home whatever the type of road surface, Renault Koleos combines the best of what the saloon car, MPV and 4x4 vehicle have to offer. Its chassis benefits from Nissan's experience of all-wheel drive transmission, while its 'All mode 4x4-i' control system, Hill Start Assist and Hill Descent Control not only enhance safety performance but also deliver genuine off-road ability.



The sensation of being in control is felt as soon as the driver settles behind the wheel of Koleos. The power steering is precise, progressive, and accurately feeds back information from the road. Despite its higher ground clearance, Koleos handles more like a saloon car thanks to its chassis which was expressly engineered to provide an optimal trade off between comfort and handling, both of which are of a remarkably high standard. Special attention was paid to cornering performance with a view to minimising body-roll, which is so often a feature of this type of vehicle, without detracting from the vehicle's off-road ability.

Renault Koleos is a crossover whose roots can be traced back to the worlds of the saloon car, the MPV and 4x4 vehicles. It successfully blends the best of all three categories to deliver outstanding versatility and driving pleasure whatever the type of road. In built-up areas, on motorways and on non-sealed surfaces, Koleos' chassis exudes a real sense of safety and being in control.

The MacPherson-type front suspension combines with the

fully-independent multilink rear suspension to deliver comfort and directional stability in all situations. Meanwhile, the dampers and springs have been tuned to match Koleos' specific dimensions and contribute to the targeted balance between comfort and handling. The rear dampers are mounted at an angle in order to free up as much space as possible between the wheel wells (an extra 100mm compared with vertically mounted dampers).

Ground clearance of 206mm (diesel version: 188mm) and approach and departure angles of 27 and 31 degrees respectively are further illustrations of Koleos' off-road credentials.

Koleos is the first Renault model to feature four-wheel drive from launch. In 'auto' mode, the electronically-controlled torque split between the front and rear is automatically calculated as a function of available grip.

In normal conditions, torque is delivered to the front wheels only. Should less grip become available, however, some of the torque is instantly

diverted to the rear. In extreme conditions, up to 50 per cent of torque can be transferred to the back wheels in this way. For optimal pullaway from standstill however much grip is available, the system delivers engine torque to all four wheels.

This front-rear split is ensured by an electronic coupler and controlled by the latest-generation 'All mode 4x4-i' system developed by Nissan for New X-Trail.

The coupler's bespoke control unit uses data communicated by the engine control unit and by different sensors (wheel speed, yaw, longitudinal and lateral acceleration, steering wheel angle, accelerator pedal position) to instantly optimize traction in all conditions. This system has already been widely acclaimed on New X-Trail and contributes significantly to Renault Koleos' outstanding 4x4 ability.

The same all-wheel drive management system also plays a part in the vehicle's active safety performance. The instant it detects even a small amount of oversteer or understeer, it immediately modifies the front/rear torque split, even before a possible intervention from the ESP deploys.

When grip is at a premium, such as on snow, mud, dirt or sand, the driver only has to flick a switch on the dashboard to electronically lock the transmission in 4x4 mode and thereby direct 50% of torque to the rear. Alternatively, should the driver so wish, the transmission can be locked in front-wheel drive mode.

Renault Koleos will also be available in permanent two-wheel drive form for those customers who are drawn by its adventurer, crossover looks but who have no call for all-wheel drive transmission.

Renault Koleos is equipped with a Hill Start Assist function which can prove a particularly useful asset during everyday motoring. This system is automatically activated on gradients of more than 10 per cent to prevent the vehicle from slipping back down the slope. It also does away with the need for the driver to switch rapidly from the brake pedal to the accelerator pedal which is inherent in all other vehicles.

Similarly, Renault Koleos is equipped with a Hill Descent Control system for even safer off-road motoring. This function is activated via a switch on the central fascia and automatically holds the vehicle's speed at a maximum of 7kph on downhill gradients of 10 per cent or more without calling for use of the brakes. Particularly useful when Koleos is used off-road, this system also contributes to active safety since it allows the vehicle's downhill speed to be controlled on steep, snowy or icy slopes. The function works in reverse gear, too.

Koleos' navigation system has a number of specific off-road features, including an altimeter and barometer. The vehicle's angle of inclination, the slope and an altitude graph are equally displayed, while a digital compass takes the stress out of finding the correct heading when there are no signposts about. This system uses data transmitted by elements already used for other functions, including the ESP sensors.





# 06

## LATEST-GENERATION POWERTRAINS

To cater for all types of use, Renault Koleos is available with either 150 or 175hp versions of the 2.0 dCi diesel engine, or with a 2.5 170hp petrol engine. Whether manual or automatic, transmission is systematically six-speed.

Renault Koleos will be available with two types of Alliance engine. The latest-generation 2.0 dCi Euro 4 diesel engine (M9R) is available in a choice of two power outputs, namely 110kW (150hp) or 127kW (175hp). Alternatively, a 2.5-litre petrol powerplant (TR25) delivering 126kW (170hp) can be specified.

The 1,995cc two-litre diesel engine, which has already been seen on other upper-range Renault vehicles (Mégane, Nissan's Qashqai and New X-Trail, Renault Samsung Motors' QM5), features the very latest diesel engine technologies, including piezoelectric injectors, common-rail 1,600-bar fuel injection, special-design pistons and a variable-geometry turbo which all combine to make this the most efficient four-cylinder diesel of its class.

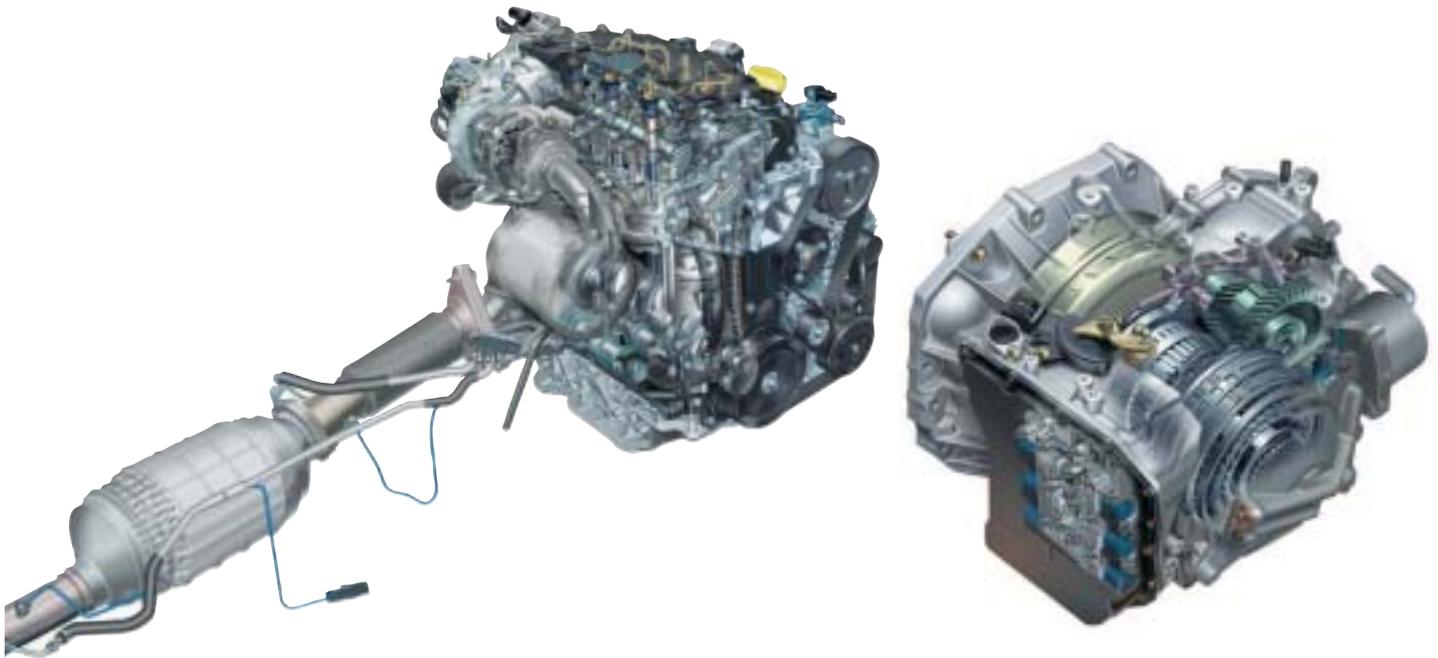
The 2.0 dCi is equipped with two balancer shafts to favour low vibrations and acoustic performance very close to that of a petrol engine. It also has a periodic regeneration particulate filter which has the advantage of running without additives. Particulates accumulated in the filter are burnt off every 300 to 1,200km depending on use. For quick getaways, the 2.0 dCi engine uses sparkplugs that minimize the time required for pre-heating.

The 150hp (110kW, at 3,750rpm) version of the 2.0 dCi boasts torque of 320Nm, which is available from as low as 2,000rpm.

Mated to a six-speed manual gearbox (type ND), it has a broad useful rev-band and all the necessary ingredients to guarantee driving

pleasure combined with outstanding dynamic and acoustic performance. Renault Koleos 2.0 dCi 150 returns homologated fuel consumption of 7.2 litres/100km with 4x2 transmission and 7.4 litres/100km with 4x4 transmission, equivalent to CO<sup>2</sup> emissions of 191 and 197g/km respectively. The 2.0 dCi 150hp engine is also available with a six-speed automatic transmission (type AJ8 for the 4x4 version, AJ0 for the 4x2 version) developed within the framework of the Renault-Nissan Alliance. Its latest-generation technology and six speeds deliver silky gear changes and smooth acceleration response.

The association of the 2.0 dCi engine and the AJ8 transmission enables Renault Koleos to return combined cycle fuel consumption of just 8.3 litres/100km, equivalent to CO<sup>2</sup> emissions of 221g/km. Also available also in 127kW (175hp)/360Nm form, with peak power and torque reached at the same engine speeds as the 150hp version, this engine provides incomparable driving pleasure for its size. Mated to a six-speed manual gearbox, Renault Koleos 2.0 dCi 175 records fuel consumption of 7.7 litres/100km, for homologated CO<sup>2</sup> emissions of 209g/km.



Koleos is also available with a 2.5-litre Euro 4-compliant petrol engine (Nissan TR25) which delivers peak power of 126kW (170hp) at 6,000rpm and maximum torque of 226Nm at 4,400rpm. Depending on market, it will be available with a manual six-speed gearbox and/or continuously variable transmission (CVT).

		4x4 (4WD)		4x2 (2WD)	
Diesel	2.0 dCi 110 kW	Six-speed manual	Six-speed automatic	Six-speed manual	Six-speed automatic
	2.0 dCi 127 kW	Six-speed manual	-	-	-
Petrol	2.5 l 126 kW	Six-speed manual	CVT*	Six-speed manual	CVT*

\* Available in certain markets only

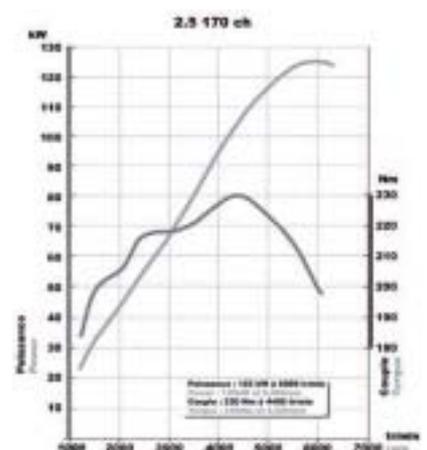
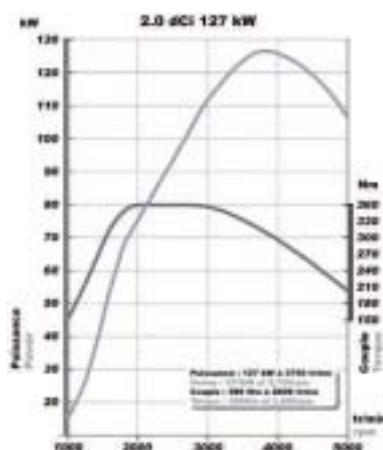
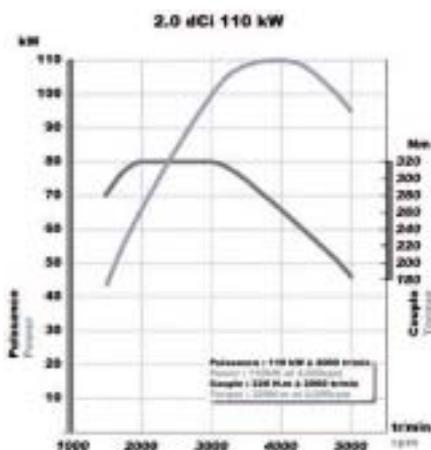
The control unit of the AJ8 automatic six-speed flick-shift transmission analyses a range of parameters – such as vehicle speed engine speed, torque, pedal position, etc. – to select the ideal gear. It communicates permanently with the engine control unit to maintain optimal torque during gear changes.

In automatic mode, the control unit selects the ideal gear based on three parameters: driving style (medium, sport, eco), road type (uphill, downhill, flat) and the driver's real-time reactions to favour fluidity and smoothness without compromising either punch or acceleration pick-up. In manual mode, it is the driver who chooses his or her own driving style thanks to the flick-shift lever. This mode notably comes into its own in the case of a dynamic driving style, for example, or along mountain roads. It also incorporates automatic functions designed to facilitate driving (automatic selection of first gear when the car comes to a standstill) and to protect the gearbox and engine against over-revving.

To favour driveability and fuel efficiency, particular care has gone into the gearshift quality of this cable-controlled, three-shaft transmission, as well as into minimizing friction.

An especially welcome feature when motoring around town is the disengagement of the transmission when the vehicle is at a standstill to reduce creep and thereby minimize residual vibrations and fuel consumption at idle. Meanwhile, the active slip function developed for this transmission has resulted in a significant reduction in the phenomenon of booming at low revs for enhanced driving comfort, notably when re-accelerating.

Special attention has been paid to acoustic performance, while booming, growl and whine have all been combated thanks to the design of the casing and the hydraulic converter damping system.



# 07

## KOLEOS BENEFITS FROM THE ALLIANCE'S EXTENSIVE ACTIVE AND PASSIVE SAFETY EXPERTISE

Koleos boasts segment-leading active and passive safety credentials. The all-wheel drive transmission contributes significantly to active safety by correcting loss of grip even before the ESP can deploy. And when it comes to occupant protection, Koleos benefits from the same expertise that has seen nine Renault models secure five-star EuroNCAP crash test ratings.

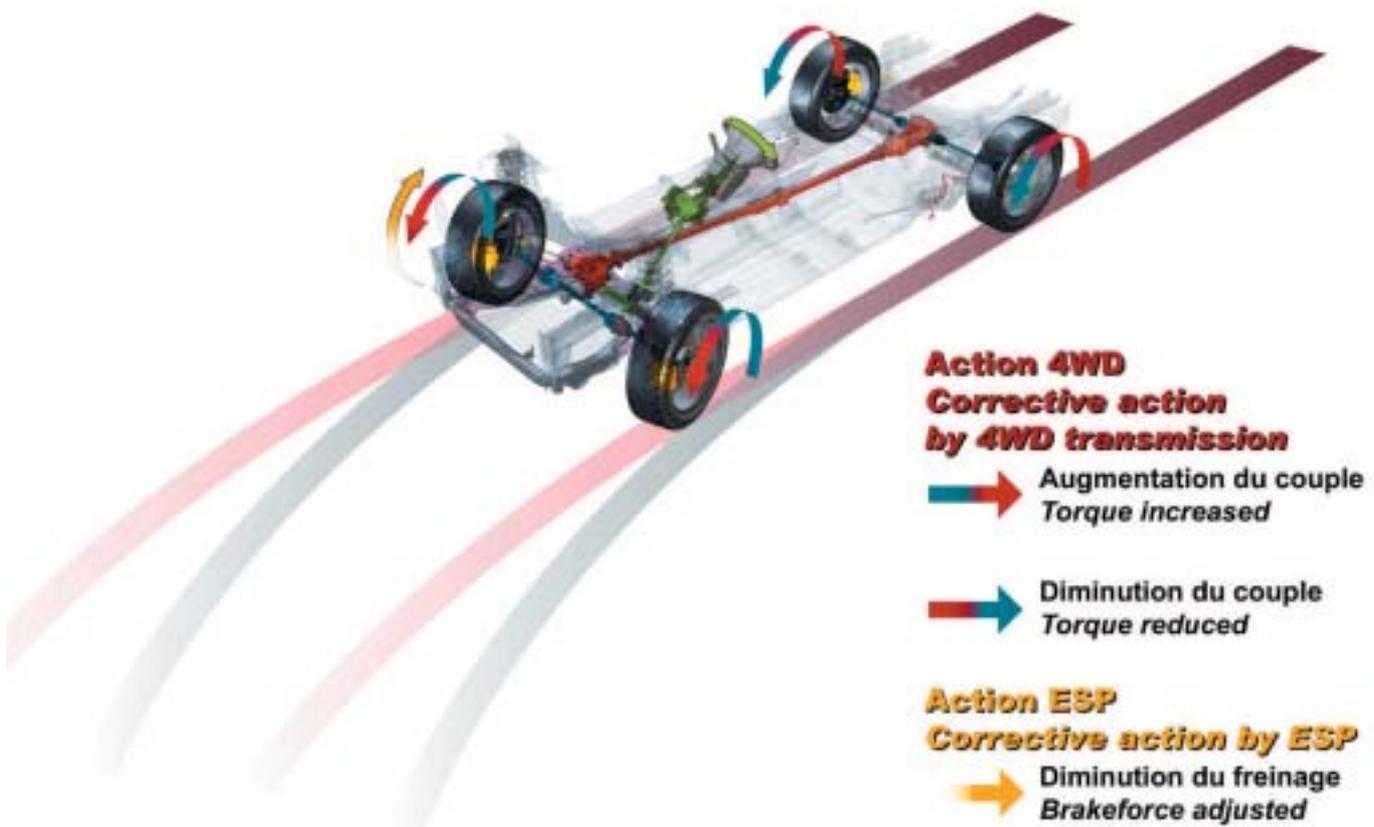
Safety is a fundamental feature built into all Renault models, and Koleos has been engineered to provide impeccable performance on both the active and passive safety fronts.

Its active safety credentials are founded on its carefully engineered chassis and big brakes. The 320mm diameter front discs and 292mm rear discs bring the model to a standstill from 100kph in just 42 metres, one of the shortest stopping distances to be found in the SUV/crossover segment.

In emergency braking situations, when taking avoidance action or when grip is lost, Renault Koleos drivers can count on ABS with electronic brakeforce distribution, emergency brake assist and ESP with understeer control. Even before the latter kicks in, the all-wheel drive transmission control system intervenes to adjust the front/rear torque split as soon as the first signs of oversteer or understeer are detected.

For enhanced night-time vision, Renault Koleos is available with bi-xenon headlamps and fixed bending lights. These additional lights illuminate the inside of corners, thereby permitting the driver to spot a possible hazard or obstacle much sooner. This feature vastly improves the field of vision in risk situations (junctions, corners) and consequently enhances night-time safety and driving comfort.

The fact that the Renault range includes nine models that have been awarded the maximum five-star EuroNCAP crash-test rating speaks volumes for the brand's expertise when it comes to passive safety.



It goes without saying that Renault Koleos has benefited from the years of extensive research that have gone into studying real-life accidents. Its very structure has been engineered to include programmed crumple zones both at the front and rear, while the design of the cabin's structure enables it to serve as a protective cell in the case of an accident. Furthermore, Renault Koleos comes with a long list of equipment committed to optimizing occupant protection, including six airbags, load limiters for the front and outer rear seatbelts, front seatbelt pretensioners and Isofix child seat anchorage for the outer rear seats. In case of rear impact, the seats and headrests of Renault Koleos guarantee a very high level of protection against cervical whiplash.



- ① **Prétensionneur de boucle ventrale**  
*Lap belt pretensioner*
- ② **Enrouleur-prétensionneur-limiteur d'effort thorax**  
*Thorax pretensioner and load limiter*
- ③ **Enrouleur-bloqueur limiteur d'effort thorax**  
*Rear thorax load limiter*
- ④ **Réglage en hauteur des ceinture avant**  
*Seat belt height adjustment*

- ⑤ **Airbags latéraux thorax avant**  
*Front thorax side airbags*
- ⑥ **Airbags frontaux adaptatifs**  
*Adaptative front airbags*
- ⑦ **Airbags rideaux**  
*Side curtain airbags*
- ⑧ **Bosses anti-sous-marriage intégrées aux sièges**  
*Anti-submarining beam on seat frame*

- ⑨ **Appui-têtes anti whiplash**  
*Anti-whiplash headrests*
- ⑩ **Inhibition côté passager des airbags frontal et thorax**  
*Deactivation of front and thorax side passenger airbags*
- ⑪ **Paddings de pieds**  
*Footwell padding*
- ⑫ **Calculateur de chocs ECU**  
*ECU*
- ⑬ **Capteurs de choc latéral**  
*Side impact sensors*
- ⑭ **Capteur de choc frontal**  
*Front impact sensor*
- ⑮ **Attaches Isofix**  
*Isofix anchorage*
- ⑯ **Crochets pour sièges enfants top-tother**  
*Child seat top tether anchorage*



# 08

## CUSTOMIZATION ACCESSORIES FOR KOLEOS

(AVAILABILITY DEPENDING ON MARKET)

Renault Koleos can be readily customized thanks to a comprehensive range of accessories (depending on market) that can either be ordered at the same time as the car or as an after-sales fitment. The catalogue of body kits and multimedia equipment enables each Koleos to be made unique.

SUV and 4x4 customers frequently employ accessories to personalize their vehicle. In response to this demand, Renault Koleos comes with a range of exterior and interior, decorative or driving enjoyment-enhancing accessories (availability depending on market). These were developed at the same time as the car itself and perfectly match the model's spirit and style. The exterior accessories allow owners to give their Koleos an even more 4x4 or urban SUV feel according to their personal taste. The more adventurous Koleos customers will be especially interested in the bumper guards, mudguards and a body kit comprising sill and bumper extensions. The comprehensive accessory catalogue also includes a hatch spoiler, chrome-effect front and rear skidplates, exhaust tailpipe trim, exterior mirrors and foglamp trims.

The interior of Renault Koleos can be personalized thanks to items like the aluminium door sill trims (with illuminated Koleos badging) and gearlever knob.

Koleos also heralds the arrival of new line of portable video equipment. The package features two eight-inch screens, a DVD player incorporated

in one of the screens, two infrared headsets and remote control. The DVD player reads Div-X, CD and CD MP3 compatible discs, while its RCA socket permits items such as a TV/DVB-T, game console, video camera or laptop computer to be connected. The system fits in place of the aviation-style tables on the front seatbacks and was validated in crash tests conducted by Renault.

The system takes the form of a pack that can be ordered either at the same time as the vehicle or from the network as one of the many retro-fitment accessories available for all Renault models.



# 09

## A GENUINE RENAULT, MADE IN KOREA

Koleos is produced in the ultramodern factory at Busan, Korea, and is the first Renault to be manufactured by Renault Samsung Motors. Production-related capital outlay, including adapting facilities to Koleos production and investment with suppliers, was kept to just €178 million. The Busan plant benefits from ISO 9001, ISO 14001 and ISO 17025 certification, and uses the Renault Production Way which is based on the best practices employed by the Renault-Nissan Alliance. Like all the brand's upper-range vehicles, Renault Koleos comes with a three-year or 150,000km warranty in Europe.

For the first time in its history, Renault Samsung Motors has been entrusted with the responsibility of manufacturing a vehicle from the Renault range which will be sold in almost 40 countries. With more than one-third of production intended for the Korean market, the Busan factory naturally prevailed as the choice for the sole production site for Renault Koleos. The investment necessary to adapt the plant was minimized through the fact that Busan already featured on the list of the Renault Group's most modern factories.

### BUSAN, AN ULTRA-MODERN FACTORY

The Renault Samsung Motors facility is located in Busan's Shinho Industrial Complex in South Korea. Building of the factory began in April 1995 and was completed by the end of 1996. Its total surface area is 1,650,000 sq. metres, including 531,000 sq. metres of buildings, and its annual production capacity is 240,000 vehicles.

The thinking behind the plant's architecture complies with the concept that 'the product is made by the employees' and the factory accordingly offers an optimal working environment and conditions. Workers benefit from large shafts of natural lighting, while the beige walls and floor also contribute to a sense of comfort. The complex melts in perfectly with its surroundings and includes a water treatment centre, while its paintshop employs hydrosoluble paints.



Production is extensively automated. The press shop has four lines of presses plus a shearing line and is fully automated. The 95%-automated body shop is equipped with 515 robots. The factory is based on a flexible, entirely robotized general assembly system of Nissan origin – the Intelligent Body System (IBS) – which allows up to eight body types to be assembled at the same time.

The supplier network is made up of 241 companies, 89 of which (one-third) are located outside of Korea. This proportion of overseas sourcing is due to the diversity of the parts required for Renault Koleos, the majority of which are more associated with the world of Renault models and are consequently not made by local suppliers. The other two-thirds of suppliers are based in Korea, and more than half of these companies are situated within an hour of the factory.

Production at the Samsung facility was relaunched with the 1,600 staff working at the plant in 1999. RSM's employees are essentially young (the average age is 32) and benefit from excellent basic training. Some 70% of them left school with a qualification at least equivalent to France's baccalaureate, and many of them have benefited from professional training in Japan. They are motivated and rigorous, and share the values of the company – reliability and safety – with a single objective: to be a 'clean company'.

### PERFORMANCE BASED ON FLEXIBLE PRODUCTION

Preparing for the production of the Renault Group's first 4x4 crossover represented a genuine challenge for the staff at Busan. Not only is Koleos the first such model to be manufactured by the factory but it is also the first Renault to be produced by Renault Samsung Motors.

The capital outlay was split between investment with suppliers (€100 million) and factory-related investment (€78 million). The majority was spent on producing the necessary specific tooling – both in the factory and at suppliers – for the Renault range's first 4x4 crossover, on extending the body shop building and acquiring a Nissan-designed flexible body shop to permit the production of different body types. Reorganization of the plant has improved the factory's productivity and performance by optimizing the exploitation of its total production capacity.

The presses form and stamp up to 34,000 parts every day from reels of sheet steel. A set-up comparable to that employed at Renault's Sandouville factory in France, which produces New Laguna, permits laser welding of body components which ensures an optimal thickness of metal using lighter gauge steel sheeting. This equipment permits the proportion of very high elastic limit steels (VHEL), which contribute to enhanced safety performance, to be increased. The process is soundproofed thanks to shielding of the lines.

The investment of €52 million has provided Busan with a world class body shop capable of producing several body types at the same time. The chassis and bodywork are assembled on a flexible line using pallets adapted to each type and which permit the robots to weld different body types. The new body shop's processes and tooling are based on Nissan technology and stand out as an eloquent illustration of cooperation within the Alliance.

To produce the different bodysells, body shop floorspace was extended by 25% with a view to introducing a new distinct line to build models from the RSM range with one overriding objective: flexibility.

The use of hydrosoluble paints in the highly-robotized paintshop has seen a reduction of almost 30% in Volatile Organic Compounds (VOCs) without detracting from quality in any way.

Most of the work to the assembly line has focused on the production of complementary equipment necessitated by the specific needs of producing a 4x4 model, including the fitment of a rear differential.

## GUARANTEED TOP QUALITY FROM START-UP

### By enhancing operational reliability

Renault Koleos is made in Busan, Korea. The factory is ISO 9001-, ISO 14001- and ISO 17025-certified. To ensure segment-leading quality for Renault Koleos from the word go, Busan applies the methods and tools specified in the Renault Production Way and has also profited from the successful production start-ups of New Twingo (Novo Mesto) and New Laguna (Sandouville).

### Eight concrete measures applied in the factory to guarantee top level quality:

- The use of a standard flexible Nissan line for body in white production
- Incorporation in the production line of laser inspection of all body shells that leave the body shop for quality control in real time
- The supply of collections of components alongside the line (strike zone) for reliable assembly operations that eliminate the risk of fitting the wrong part
- The establishment of a 'strike zone' in the body shop alongside the opening panels station with a view to improving productivity by shortening the line
- The use of hydrosoluble paint has led to a 30% reduction in VOC discharges without detracting from quality
- The use of assisted choice practices to ensure that operations are carried out correctly (Poka Yoke)
- More stringent inspection procedures during assembly, chiefly with checkmen and repairers whose job is to detect and rectify incorrect operations on the line and identify their cause with a view to eradicating them
- Dynamic track testing of every vehicle that comes off the line

### By training staff

To ensure segment-leading quality from launch, a programme comparable to that introduced for the range's most recent models (New Twingo, New Laguna) was implemented. The principal initiatives employed throughout the H45 project (Renault Koleos and QM5) included preparatory work with Engineering at a very early stage, more extensive training of operators and increased inspection and responsabilisation of suppliers.

When the very first prototypes were made, a team of operators from Busan was tasked with drawing up of more than 6,400 Standard Operation Sheets which spell out how parts are to be assembled in the production of Renault Koleos. Similarly, teams from Nissan and Renault engineering worked at the Busan factory to liaise when questions arose concerning the demands of Renault's brief, Nissan engineering's response and their application on the Renault Samsung Motors production line in Korea.

Qualified operators also contribute to the quality of Renault Koleos. Almost 60,000 hours of training was given out, focusing on three factors essential to excellence, namely rigour, reactivity and responsibility.

The performance of the factory is also dependent on the quality of the work produced upstream and suppliers were involved at a very early stage in the project to ensure their ability to commit to an exacting, pre-established standard of component conformity. 136 companies attended bespoke training courses to ensure not only a high standard of quality for the parts they delivered but also correct use of specific tooling

introduced for the production of Renault Koleos parts.

Like all the brand's upper-range vehicles, Renault Koleos comes with a three-year or 150,000km warranty in Europe.



Koleos has seen Renault continue its policy of organizing the localisation of the production of its range to optimize the production capacity of the Group's factories. This approach is based on a commercial strategy intended to develop brand loyalty and win over new customers, thereby accelerating Renault's presence on the international scene and developing international sales while adhering to the brand's key values: reliability, proximity and enthusiasm.

**The launch of Koleos marks a decisive step in the development of the Renault brand, both in Europe and the rest of the world. Renault's first 4x4 crossover demonstrates that it has the capacity to express its unique approach and be a real player in segments from which it has traditionally been absent and to which it can bring new ideas.**



Koleos specifications are available on-line at  
[www.media.renault.com](http://www.media.renault.com) > Products and Brands > Renault > Passenger Cars: Koleos

High resolution photos can be downloaded from  
[www.media.renault.com](http://www.media.renault.com) > Photo Library > Renault Range > Passenger Cars > Koleos

Videos of Koleos can be downloaded from  
[www.media.renault.com](http://www.media.renault.com) > Video Library > Renault Range: Passenger Cars > Koleos

The adventures of Laurent Granier, his team and their Koleos can be followed at  
[www.koleos-adventure.com](http://www.koleos-adventure.com).

Sales-related information concerning Renault Koleos is available at  
<http://www.koleos.renault.com/>

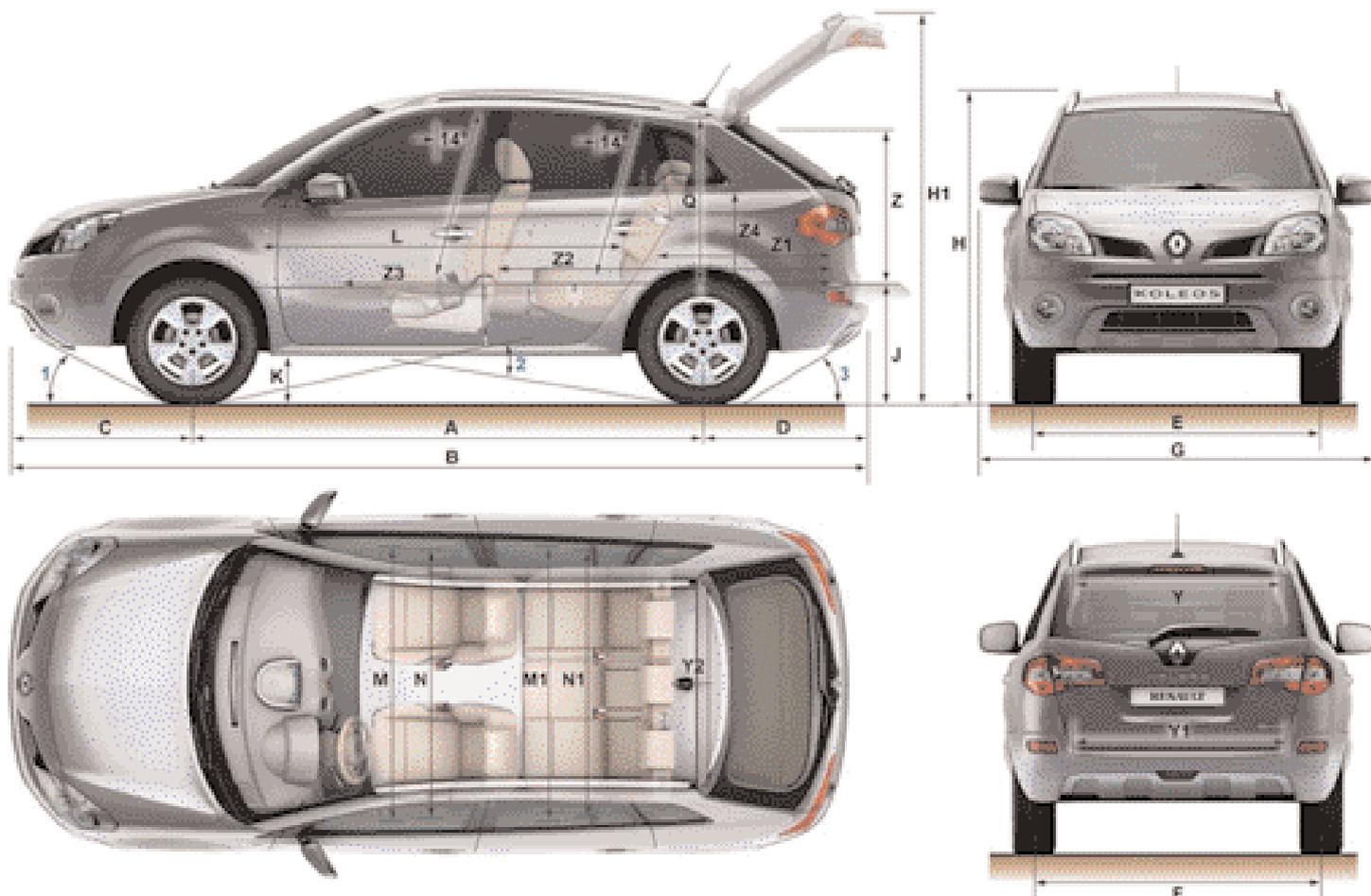
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# RENAULT KOLEOS DIMENSIONS



## BOOT CAPACITY (dm<sup>3</sup>)

To top of rear seatback	450
Rear seats folded, up to roof	1,380

## DIMENSIONS (mm)

A	Wheelbase	2,690
B	Overall length	4,520
C	Front overhang	955
D	Rear overhang	875
E	Front track	1,545
F	Rear track	1,550
G	Overall width (without exterior mirrors)	1,855
G1	Overall width (exterior mirrors folded/with exterior mirrors)	1,865/2,120
H	Unladen height (without/with roof rail)	1,695/1,710
H1	Unladen height with hatch open	2,061
J	Boot sill height (unladen)	750
K	Ground clearance (Diesel/petrol)	188/206
L	Cabin length	1,927
M	Front elbow width	1,451
M1	Rear elbow width	1,475
N	Front shoulder width	1,433
N1	Rear shoulder width	1,421
P1	Distance from H-point to roof at front at 14°	946
P2	Distance from H-point to roof at rear at 14°	885
Q	Boot height (perpendicular to centre-line of rear wheels)	810
Y	Upper boot aperture width	1,100
Y1	Lower boot aperture width	1,071
Y2	Boot width between wheel arches	1,071
Z	Boot aperture height	805
Z1	Maximum load length (rear benchseat upright)	908
Z4	Height up to parcel shelf	452
Z2	Maximum load length (rear benchseat folded)	1,585
Z3	Maximum load length with front passenger seat and rear tipped forward	2,600
1	Approach angle	27°
2	Ramp break over angle	21°
3	Departure angle	31°
4	Wading depth	450



# RENAULT KOLEOS TECHNICAL SPECIFICATION

Fuel	PETROL				DIESEL			
Engine Spécifications	TR25				M9R			
Axles	4x2	4x4	4x2	4x4	4x2	4x4		
Gearbox	six-speed manual	six-speed manual	CVT		six-speed manual	six-speed automatic	six-speed manual	six-speed manual
<b>REGISTRATION DATA</b>								
TW	VY0C06	VY0C0N	VY0C02	VY0C0V	VY0A06	VY0A0M	VY0A0N	VY0B0N
Administrative power rating (France)	11	12	NC	NC	9	10	9	11
Seat	5							
<b>ENGINE SPECIFICATIONS</b>								
Engine type	2TR B 700	2TR B 700	2TR A 703	2TR A 703	M9R G 832	M9R D 833	M9R G 832	M9R C 830
Capacity	2488				1995			
Bore x stroke (mm)	89 x 100				84 x 90			
Number cylinders / valves	4 / 16				4 / 16			
Compression ratio	9,6 : 1				15,7 : 1			
Maximum power kW CEE (ch)	126 (170)				110 (150)			
Engine speed at maximum power (rpm)	6000				4000			3750
Maximum torque CEE Nm	226				320			360
Engine speed at maximum torque (rpm)	4400				2000			2000
Injection type	Multipoint				Direct, common-rail + cooled turbocharger			
Fuel Type to CEE N° 93/116	Petrol ( 95 Octane )				Diesel			
Catalytic converter	Yes / standard				Yes / standard			
Particulate trap	n/a				Yes / standard			
<b>GEARBOX</b>								
Manual-Automatic- Continually Variable Transmission	manual		continually variable transmission		manual	automatic	manual	
Type	ND5	ND8	FK0	FK8	ND5	AJ8	ND8	ND8
Number of forward speeds	6		-		6			
Vehicle speed km/h at 1000rpm in first gear	7,23		8,79		7,65	8,42	7,65	7,65
In second gear	13,19		-		13,96	14,71	13,96	13,96
In third gear	19,36		-		21,57	22,34	21,57	21,57
In fourth gear	25,54		-		30,12	30,46	30,12	30,12
In fifth gear	31,15		-		39,45	41,36	39,45	39,45
In sixth gear	36,81		52,38		47,85	51,63	47,85	47,85
<b>PERFORMANCE</b>								
Topspeed (km/h)	186	185	183	181	180	173	179	189
0-100 km/h (s)	9,1	9,3	NC	NC	10,0	NC	12,0	9,9
1000 m from standstill (s)	30,4	NC	NC	NC	31,9	NC	NC	31,3
<b>FUEL CONSUMPTION TO CEE N°93/116</b>								
CO <sup>2</sup> (g/km)	230	237	223	228	191	221	197	209
Urban conditions l/100	13,0	13,2	11,8	12,0	9,0	10,5	9,5	9,6
Extra-urban conditions l/100	7,6	8,0	7,9	8,0	6,1	7,0	6,2	6,8
Mixed l/100	9,6	9,9	9,3	9,5	7,2	8,3	7,4	7,9
<b>STEERING</b>								
Power	Electric							
Turning circle diameter (m) between kerbs / walls	11,6							
Steering wheel turns	3							
<b>AXLES</b>								
Rear Axle	MacPherson type							
Front Axle	Multi-link							
Diameter of front / rear anti roll bar (mm)	23 /19,1							
<b>WHEELS &amp; TYRES</b>								
Standard wheels (")	17 x 6,5 J							
Standard Tyres	225/60R 17 99H							
Tyre Spare wheel	155/80 R 17 100M							
<b>BRAKES</b>								
Braking circuit type	X							
A.B.S Bosch 8.0	Standard							
Electronic brake distribution	Option							
Power brakes : single (S), double (D) - Diameter (")	S-NC							
Front : plain disk (DP), Vented disk (DV) Diameter (mm)	DV 320 / width: 11mm							
Rear : Drums (T), plain disk (DP), Vented disk (DV) Diameter (mm)	DP 292 / with: 8mm							
<b>AERODYNAMICS</b>								
C Da ( average 0,)	2,60 - 0,387 - 1,006							
Fuel tank capacity (l)	65							
<b>WEIGHTS (Kg)</b>								
Kerb weight	1564	1622	1595	1655	1649	1709	1655	1655
Gross vehicle weight (M.M.A.C.)	2100	2150	2150	2200	2200	2300	2300	2200
Gross vehicle weight, front (within limit of M.M.A.C.)	1200				1200	1235	1235	1235
Gross vehicle weight, rear (within limit of M.M.A.C.)	1120	1170	1180	1180	1170	1170	1170	1170
Gross train weight (M.T.R.)	4100	4150	4150	4200	4200	3650	4300	4250
Payload (C.U.)	452	432	NC		459	459	472	383
Unbraked trailer weight	2000				2000	1350	NC	2000
Braked trailer (within limit of MTR)					750			