

# Audi quattro: enhanced driving every day

[Home](#)

[Introduction](#)

[What is quattro?](#)

[Technically speaking...](#)

[Q&As](#)

[Exit](#)



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# The advantages for your fleet

Home

**Introduction**

What is quattro?

Technically speaking...

Q&As

**Exit**



**Audi quattro all-wheel-drive** technology is the epitome of *Vorsprung durch Technik*. It's brought worldwide success for Audi in motorsport, with numerous wins at Le Mans and in saloon car racing, not forgetting the 1981 World Rally Championship won by the original Audi quattro (*above*).

From those momentous victories, quattro is developing.

Sophisticated new technology derived from that competition success is building benefits not only for driver enjoyment but also in enhanced confidence, handling and control in all conditions.

Now, there are quattro derivatives in every Audi model range, meaning superior all-weather traction and grip is available for all drivers from one of the pioneers of all-wheel-drive for the road.

# What is quattro?

Home

Introduction

**What is quattro?**

Technically speaking...

Q&As

Exit

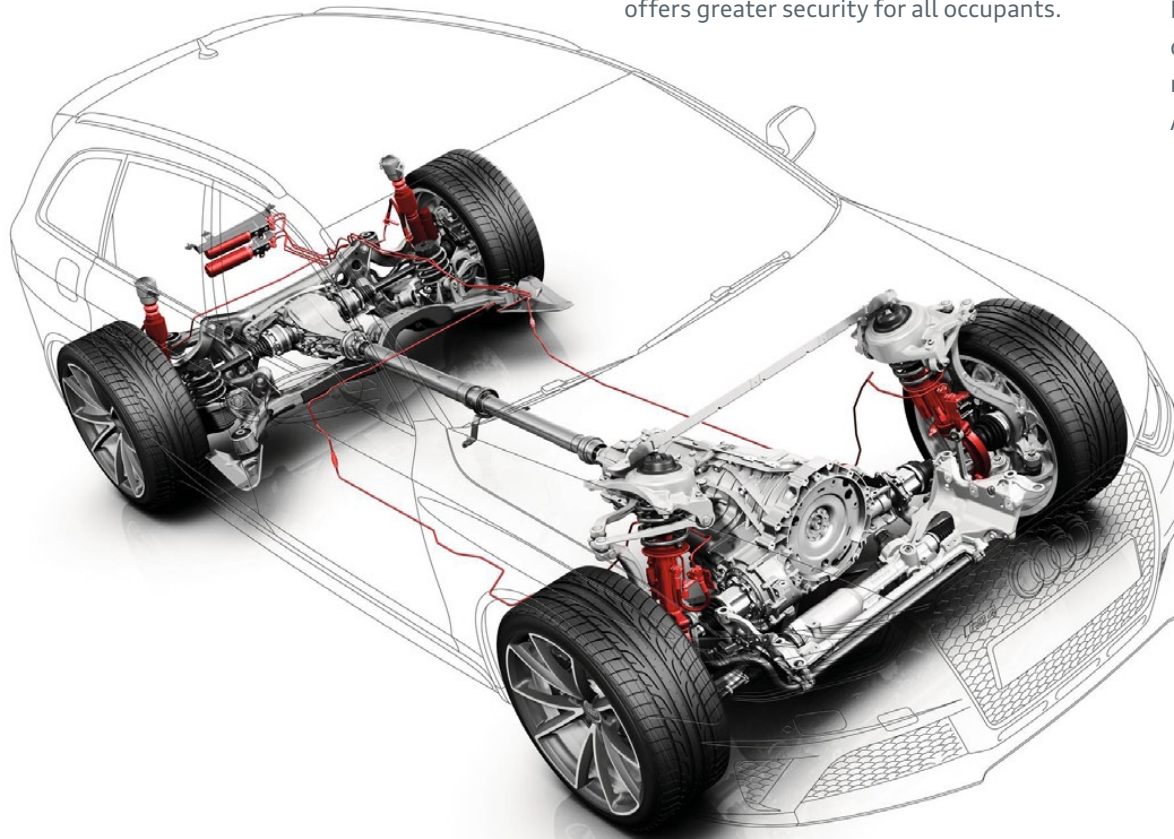
**quattro** is Audi's intuitive, all-wheel-drive technology, delivering drive to where it's needed most across all four wheels. Just as our hands adjust their grip depending on the object being held, quattro adapts to changing surfaces beneath the wheels to keep the driver firmly in control.

It means surefooted cornering and superior traction in rain, on ice, mud or loose surfaces – or simply on the road when the sun is shining.

With quattro, your drivers benefit from an increased sense of driving confidence, while positive roadholding and reassuring handling offers greater security for all occupants.

- ▶ Enhanced traction on corners and uneven surfaces
- ▶ Improved handling and acceleration
- ▶ Combines the best of front and rear-wheel-drive for confidence in all situations
- ▶ If one wheel loses grip – for example, in rain, ice or snow – the others compensate

Even on perfect roads, quattro works to combine precise control with the sporty responsiveness that makes driving an Audi so rewarding.



The Audi RS 4 uses quattro with Sport differential, which biases the drive towards the rear wheels for a more sporting driving. See *Technically speaking...* on the next page

# Technically speaking...

[Home](#)

[Introduction](#)

[What is quattro?](#)

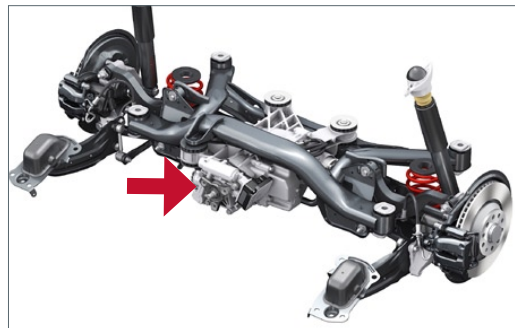
[Technically speaking...](#)

[Q&As](#)

[Exit](#)

There are three different types of quattro system tailored to each model in the Audi range. Each one works slightly differently, but the result is always the same: exceptional handling when you need it most.

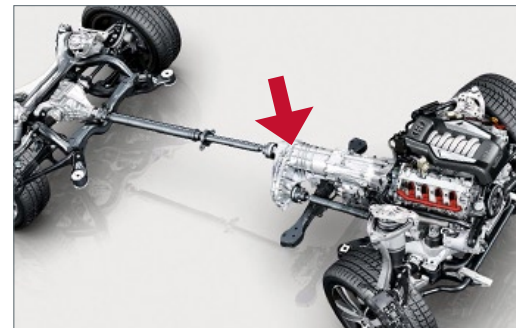
## Hydraulic multi-plate clutch



Hydraulic multi-plate clutch quattro is specifically designed for models where the engine is mounted across the chassis rather than lengthways. It constantly adapts to the road conditions and in the new TT, together with the standard Audi Drive Select you can adapt the characteristics of quattro further.

**Models:** A3/Q3/TT

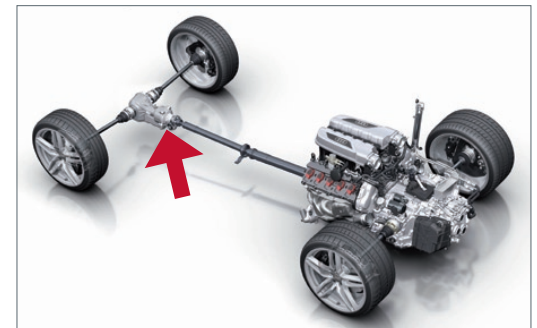
## Self-locking centre differential



Self-locking centre differential quattro is designed for models with a lengthways-fitted engine. In normal conditions, the drive is biased to the rear wheels for sportier handling. But by sensing the drive requirements of each wheel, the system splits power asymmetrically to achieve the perfect balance between all four wheels.

**Models:** A4/A5/A6/A7/A8/Q5/Q7

## Viscous coupling



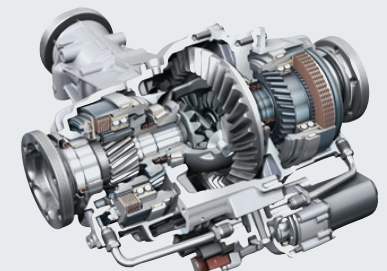
Light and compact, the viscous coupling system is ideal for sportier models such as the R8 – sending drive mainly to the rear wheels in normal driving conditions. When needed, additional power is also directed to the front wheels to handle difficult conditions and challenging bends.

**Model:** R8

## quattro® with Sports differential

Available on selected models from the A4 upwards, quattro with Sports differential further enhances the quattro system's abilities by splitting the drive variably between each of the rear wheels for an even more agile and dynamic driving experience.

When cornering, the drive is biased to the outside rear wheel as it is turning through a larger radius reducing the need for steering corrections. Sports differential also helps to avoid wheel-slip when braking, improving fuel consumption and reducing brake wear.



# Q&As: quattro

[Home](#)

[Introduction](#)

[What is quattro?](#)

[Technically speaking...](#)

[Q&As](#)

[Exit](#)

## What is quattro?

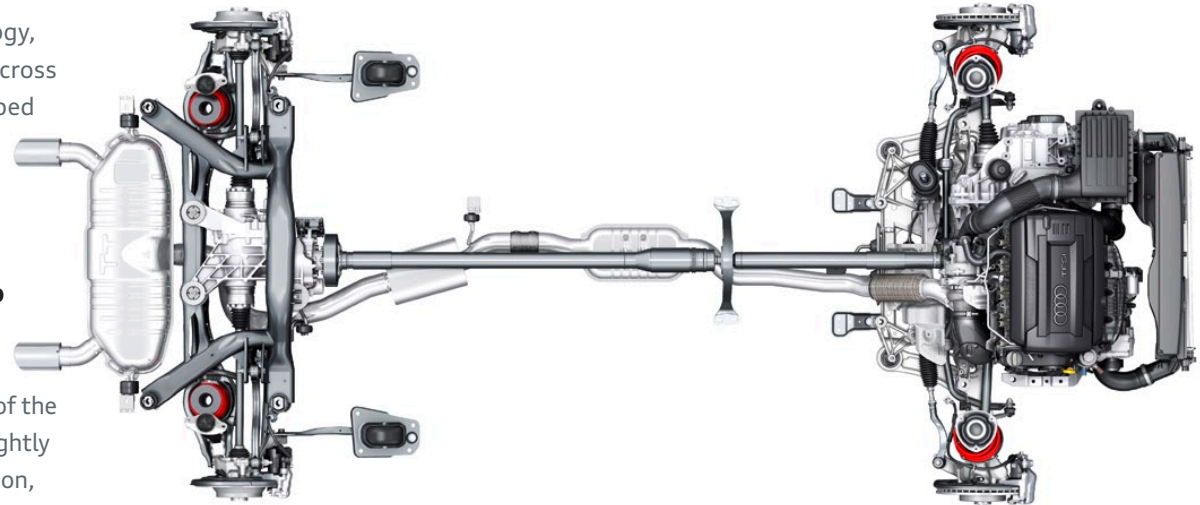
quattro is Audi's all-wheel drive technology, that delivers drive to where it's needed across all four wheels. Audi has steadily developed the quattro system for over 30 years, and it is currently available to order on every model in the range.

## Why is there more than one quattro system fitted to the range?

The three types of quattro system are tailored to the dynamics and performance of the models they are fitted to, so each works slightly differently. All offer superior grip and traction, without compromising on comfort or cabin space. You can read about the different types of quattro in *Technically speaking...* above.

## What does Sports differential do?

Sports differential assists performance and driver enjoyment by transferring drive to either of the rear wheels depending on road conditions. When approaching a corner, it allows the outside rear wheel to turn more quickly than the inside rear wheel, maintaining drive, grip and traction. Sports differential enhances the benefits of the quattro system by sharpening the car's responsiveness according to the available grip during a change in direction or speed.



Transverse-engined models, such as the A3, Q3 and TT, use a hydraulic multi-plate clutch to achieve up to a 50/50 front/rear drive split

## What's the difference between quattro and BMW's xDrive system?

BMW uses all-wheel-drive technologies that are similar to quattro on the xDrive models, but the application is different. xDrive uses a system that's similar to Audi's hydraulic multi-plate clutch layout, but, in line with BMW's rear-wheel-drive philosophy, the drive balance is 100% biased toward the rear axle. The system then transfers drive to the front axle when required, with a maximum 50/50 split front to rear.

## And how does quattro compare with Mercedes-Benz' 4MATIC system?

4MATIC has a centre differential integrated with the transmission casing. A multi-plate clutch, which functions like a limited slip differential, allows the front wheels to rotate faster than the rears as the car enters a corner for safety, rather than sporting, bias. All 4MATIC passenger cars incorporate a 45:55 front/rear torque split, though as much as a 30:70 bias toward the rear tyres is possible, depending on road conditions.