



**The new Audi 100.**



# The engineering i

**A chassis developed from 2,100 hours on machines that simulated the world's worst roads.**

How you feel at the end of a journey depends not just on the roads you've been driving on, but on the car you've been driving in.

That's why we spent a great deal of time developing a suspension and chassis that can smooth away the ups and downs that make a journey tiring. We found, for example, new ways to isolate the suspension system so fewer vibrations are passed on to the passenger compartment.

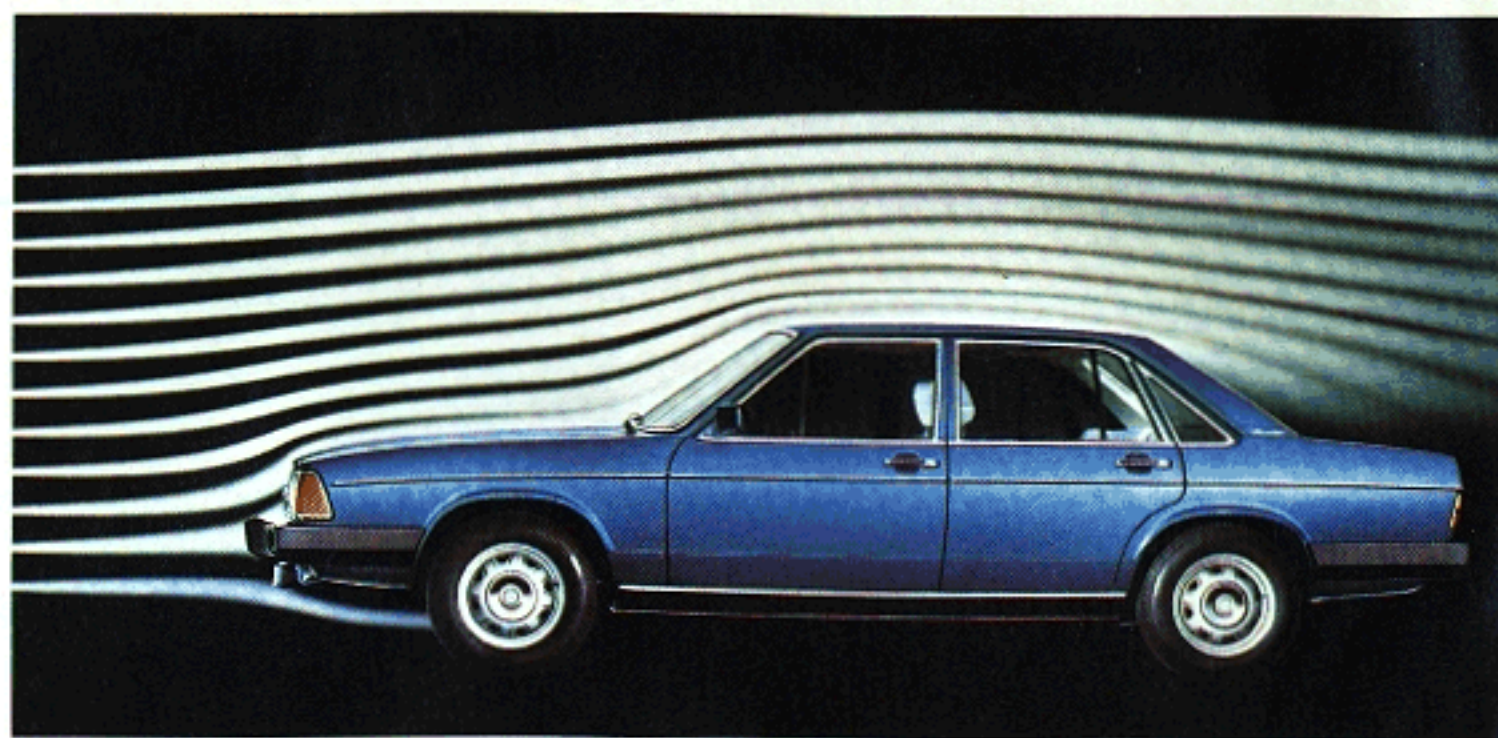
We developed new rubber buffers that allow the suspension to be "soft", yet still absorb hard bumps.

We lengthened the wheel base and widened the track, to give extra stability to the car.

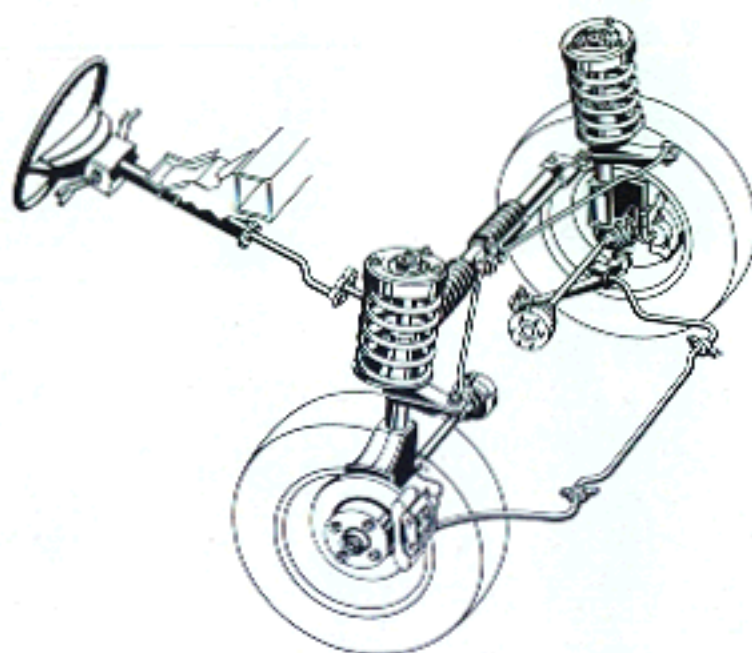
**A shape created by 260 hours in the wind tunnel.**

The lines of the Audi 100 were finally decided not by a stylist, but by the laws of aerodynamics. Little by little, in 260 hours of wind tunnel testing, we developed a shape that had a drag coefficient unbeaten by any other car in its class.

We reduce, for example, air turbulence at the rear end of the car to new minima. And by doing so, help make this possibly the most economical saloon you can buy for high speed cruising.



*A drag coefficient of 0.39: even lower than several sports cars.*



*We developed a new type of spring to improve the suspension.*

And we made the car even easier to handle by using Teflon on major components on the rack and pinion steering, so the new car needs 30% less steering effort.

**A car whose advantages have been thoroughly proven in 875,000 miles of reliability testing.**

Though new, the Audi 100 is not unproven. We've driven it up to the Arctic and down to the Equator to see if it works as well in practice as it does in theory.

We discovered, for example, the life-span of all the major components in the car, and we strengthened those that didn't meet our durability standards. (The suspension now has a design life of 175,000 miles.)

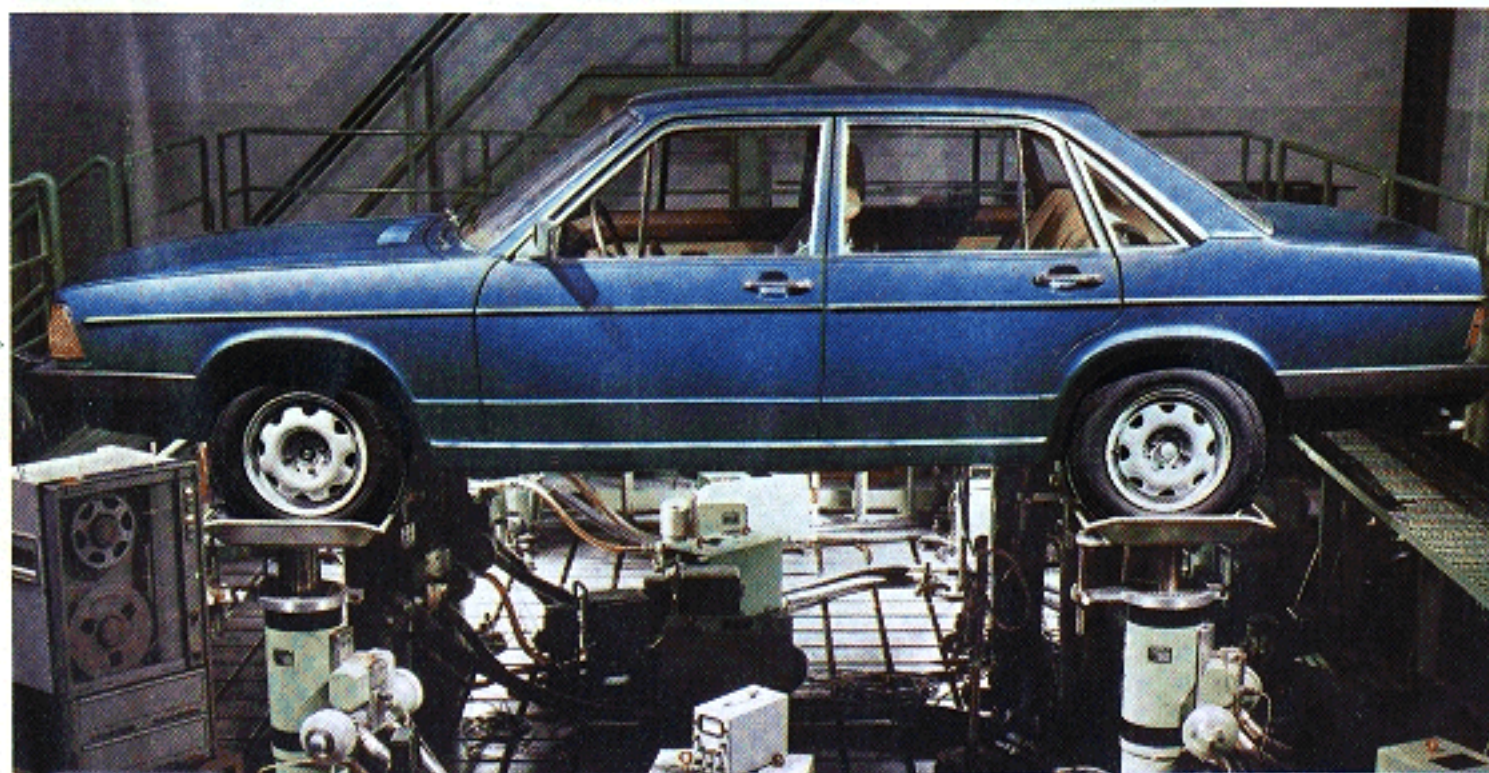
As we drove we discovered, with fine adjustments, now we could reduce still further the fuel consumption and bring the interior noise level down to even lower levels.

And, most important of all, we proved that a car consisting of thousands of completely new components was completely reliable.

**One of the most advanced car engines in the world.**

The Audi 100 has a new 115 bhp 2 litre engine, which is also being used to power the new Porsche 924.

This engine produces up to 20% more power per litre than less advanced designs. It's quieter than older designs. It's more flexible. It needs less maintenance (a full service is only needed every 10,000 miles).



*Testing a car on the simulator is the equivalent of driving for hours on end over bad roads.*



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And combined with the aerodynamic shape of the body, it provides a unique combination of economy and acceleration, as you can see from the table.

Consumption of the new Audi 100:  
Audi 100/115 bhp 29.4 mpg (DIN);  
0-60 mph 10.8 secs.

Two further points underline the careful design of the 2 litre Audi 100. It only uses 15% more petrol at 70 mph than at 50 mph. And at 70 mph in top gear it's only running at two thirds of maximum revs – keeping plenty of power in reserve.

## A standard of safety that gives you 70% more protection



*No car in its class will give you a lower fuel bill.*

## than offered by most other cars on the road.

As a result of new discoveries in increasing the energy absorption of metal by Audi engineers, the new Audi 100 offers a degree of passive safety far ahead of most other cars. In crash barrier tests, it is able to safely absorb 70% more impact than the standard required by the American safety regulations. In terms of torsional rigidity – a good measure of the basic strength of the bodywork – the new Audi 100 has up to twice the strength of other new cars on the road today.

The new Audi 100 is also ahead of other cars in terms of the active safety it offers you. It is the only car in its class with a steering and braking system that can keep you on course if a front wheel skids or punctures. This system also keeps the car straight when you land on a soft shoulder or in the unlikely event of one brake circuit failing.



*With oil on one side of the road, the Audi 100 with its steering stabilising and braking system stays straight on course. The car with a conventional braking system veers to one side.*



*A surprisingly economical car to run.*





**The new Audi 100: the most**





refined car we've ever built.



# The driving environme



*The elegant interior of the new Audi 100.*

**A team of architects designed its interior to enable you to drive with undivided concentration.**

The interiors of most cars are designed by engineers. The interior of the new Audi 100 range was designed by a team of architects lead by Professor Nestler, professor of fine arts at Munich University.

It's designed to take the stress out of motoring, and make the task of driving a car more pleasurable. You'll find the interior unusually relaxed: it bears no relationship, as with some cars, to the interior of an aircraft cockpit. There's no black or chrome, but a beautiful combination of browns and beiges. But, of course, it takes more than carefully considered furnishings to make an outstanding interior.

There's an inch more legroom and 2½ inches more shoulder room than in the previous Audi 100, already the roomiest car in its class. There's a revolutionary heater system that provides layers of different temperatures inside the car, so your head can be kept cool but your feet can be kept warm. Once you've set a temperature, irrespective of fluctuations in the temperature of the engine, the temperature inside the car doesn't change. So there's no need to keep adjusting the heat as is the case with most other systems.

And to help you keep cool on warm days, the air in the car can be changed every 15 seconds, even when the car is completely stationary.



*The instrumentation has been kept uncomplicated – deliberately.*



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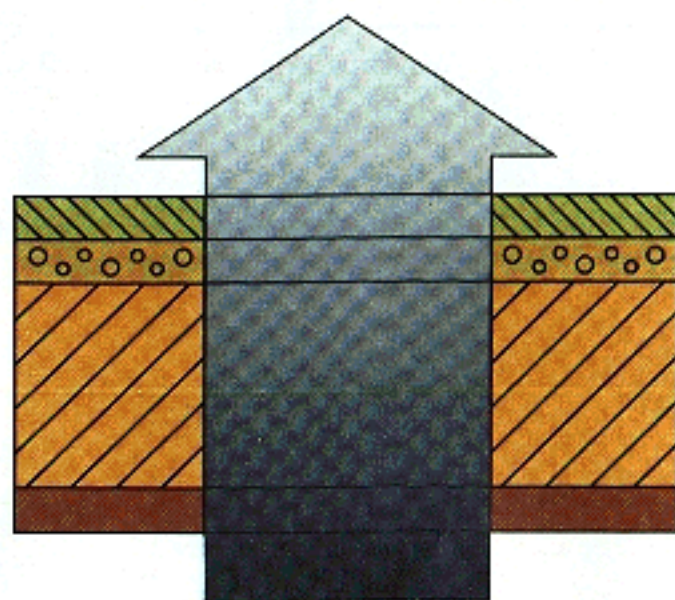
**A level of quietness developed by 2 years of intensive noise tests.**

We decided that a car can be really comfortable only if it is very quiet as well. That's why we spent 2 years on exhaustive testing to develop new ways to reduce noise.

We found new ways to "tune" the bodywork to a frequency level that is less audible to the human ear. We developed new ways of constructing bodywork so that "booming" becomes impossible. The suspension for engine gears and axles has been doubly insulated against noise. And the interior is protected from noise by a new type of flooring. This consists of a layer of bitumen-based sound deadener, a layer of acoustic wadding, a layer of PVC matting and a layer of special carpet. And of course, the aerodynamic shape helps keep wind noise to an unusually low level.



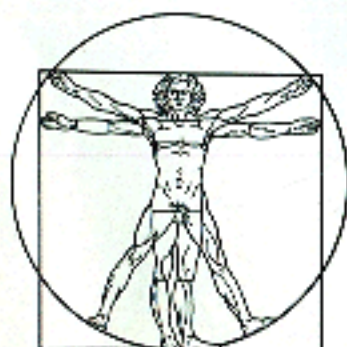
*Machines like these help us develop major sound reduction innovations.*



*4 layers of sandwich-type sound deadening material provide an effective acoustic barrier.*

**10 new colours, they stand out on the road, but they don't shout.**

A new range of colours was developed with the help of Professor Nestler for the Audi 100. They are more muted, and less aggressive than is normal for a car. And they have the additional advantage of reflecting well and being readily visible even from far away. And even in bad weather.



**The humanization of the interior of the car, as demonstrated with the new Audi 100, by Professor P. Nestler of Munich University.**

*"The difference between the interior of the Audi 100 and other car interiors would be immediately apparent. We made a point of being unusually lavish with comfort and warmth. Beautiful colour combinations*

*and lines give visual breadth so that you will not feel cramped even on long journeys. The colours are delightfully toned, the fabrics pleasantly soft. But we did not neglect function. Anatomically designed seats give you excellent support and prevent stiffness. You will stay relaxed, and this will improve your driving concentration. If you are accustomed to driving long distances, you will know what I mean."*





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Success through engineering.