



*Volvo C70 convertible*

P R E S S   I N F O R M A T I O N

**VOLVO**



Volvo Car Corporation

## Press Information

### Volvo C70 convertible - the European head turner this summer

This spring, the sky becomes the limit for the Volvo car buyers when the Volvo C70 convertible makes its European debut.

Volvo's target is to sell between 2,500 and 3,000 convertibles in Europe during 1999 with sales starting in June.

The Volvo C70 convertible will be sold in 14 European countries this year - with Germany, United Kingdom, Italy, Switzerland, Spain, Holland and France as the expected top markets.

"It's no secret that it has taken us longer than planned to make the Volvo C70 convertible available to the European customers. So far, the convertible has only been available in the USA, but this spring the Uddevalla plant has gained enough capacity to make it available in Europe, too", says Bo Annvik, head of marketing at Volvo Cars Market Area Europe.

He adds:

"The Volvo C70 convertible is definitely worth waiting for. The true convertible owner expects a comfortable car with lots of flair as well as well as a powerful image. The C70 has it all. Very attractive and distinctive design, exiting and comfortable handling, plenty of room for four adults and a boot which swallows a couple of golf bags. Plus first class safety systems which makes it a true Volvo."

" It is, of course, not a high volume car. Bu we are convinced that our convertible will be one of the top head turners in the European traffic this summer."

#### **New target groups**

The Volvo C70 convertible is an important asset in Volvo's quest for new target groups, people who earlier couldn't find what they were looking for in the Volvo range. Open cars also attract a higher share of female buyers.

"By adding the coupe and now the convertible to the Volvo range we have attracted a growing interest from new customer groups. Many of them have never owned a Volvo before", says Bo Annvik.

"The power and the sheer driving pleasure of the Volvo C70 coupe. Or the beauty and comfort of the Volvo C70 convertible. Well, it might not be the cars you need, but is definitely the cars that you desire..."

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### Volvo C70 convertible - a historical design challenge

For the first time ever, Volvo's design department has tackled the delicate challenge to create a convertible.

It is 40 years since Volvo last produced an open car and it was not designed within the company.

The Volvo C70 convertible, on the other hand, was designed under the leadership of Volvo's design director Peter Horbury.

The first open Volvo, known as the OV4, was produced in 1927 and was largely the work of the artist Helmer Mas-Olle, who presented a number of proposals for the way the first series-manufactured cars should be designed.

The second open Volvo, the Volvo Sport from 1956, had a body made of plastic. The car was designed by the US company Glasspar, which pioneered fibreglass car bodies and boat hulls.

So the production of the Volvo C70 convertible was historical - and a challenge that was very much out of the ordinary for Volvo's design department.

In principle, the assignment was formulated as four requests:

- Create plenty of room for four adults in a car that looks like a two-seater
- Make sure the car is equally attractive with the soft top up or down
- No bulky soft top above the bodywork
- Clear, elegant lines, just like the coupé model

Just as in the development of the C70 coupé, it was a question of creating a car customers want rather than a car they need.

Horbury's team designed both the C70 coupé and the C70 convertible at the same time to obtain total harmony between their designs. The C70 convertible imposed perhaps even greater demands when it came to the genuine cohesion of the lines, as the vital design element of the roof is missing.

#### **New image calls for new lines**

The Volvo C70 coupé and convertible have been created to expand Volvo's business by attracting new customers, customers who have not been reached by previous Volvo models.

For this reason, both the C70 models have to be seen as totally new cars. Modified versions of the Volvo 850 would have made people think of previous Volvo coupés, like the 262 or 780, both of which were unmistakable two-door versions of saloons.

However, a four-seater car which gives the impression of being a two-seater dramatically modifies that image. The C70 is sporty, elegant and different, while refining the identity of the Volvo brand name at the same time; a number of striking features, a mixture of innovation and tradition.

The bonnet is a fine example of the way the family affiliation is underlined. It is a perfect match for the C70's shape and lines and blends in elegantly with the new language of design. At the same time, it has an unmistakable Volvo look as a result of its upright grille.

Even if the Volvo C70 differs from other Volvo cars in every other respect, the resemblance can most definitely be seen in the front section.

### **Open cars step up the design requirements**

An open car like the Volvo C70 convertible must have a design which produces soft, clean lines with the soft top up and which does not create an impersonal impression with it down.

Anyone looking at the Volvo C70 convertible will immediately see how this is counteracted by the positive line across the body which "raises" the rear.

A gentle curvature makes the car appear to "lift" behind the door, without being too high. This has the opposite effect to the appearance of a flat bath tub.

The design makes effective use of the "hips" which convey an impression of tense muscles and forward movement. A great deal of the power and inherent energy of the car is gathered in the rear section, the muscles around the rear wheels.

This is important as it is these parts of the car which are responsible for a great deal of the visual impression created by an open car, as it has no roof and rear roof pillars. A soft top does not have the same ability as a roof to hold a design together. It is up to the rear of the car to convey the feeling of power and movement.

### **Scandinavian character**

Inside, the C70 is characterised by its Scandinavian design heritage. The interior radiates a sense of elegant simplicity, top-class quality and functionality. The aim has been to create harmony and balance between the interior and exterior.

The lines are clean and the overall design is uncomplicated. Fine quality in every material. The idea is that everything should be pleasant to touch, while creating a sense of beauty and elegance at the same time. The leather is superb and many of the interior colour schemes are light - with darker alternatives for people who prefer them.

To extend the range of choice still further, the soft top comes in a number of colours to match the exterior paintwork.

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### **Volvo C70 convertible - a new safety dimension for open cars**

The Volvo C70 convertible is very definitely also a car for our sixth sense - common sense.

It sets a new safety standard for open cars, by being the first car on the convertible market with automatic seatbelt pretensioners on all four seats, for example.

The Volvo C70 convertible has a structure which is based on the Volvo S70 and has basically the same safety features, with the same high level of safety in frontal, rear and side impacts.

However, for natural reasons, roll-overs are the greatest challenge when it comes to the safety design of an open car. One or more systems have to take over the supporting function performed by the roof.

In the Volvo C70 convertible, the A-pillars and windscreen frame are reinforced with special steel and, in combination with the automatic roll-over hoops at the rear, they provide top-class protection if the car turns over.

This system is known as ROPS, Roll Over Protection System.

The roll-over hoops are concealed behind the standard head restraints. They are activated if the car turns over. A special sensor ensures that these hoops shoot up above head height. At the front, the strong A-pillars and windscreen frame function as a roll-over hoop.

#### **Four pretensioners**

The ROPS system also includes four seatbelt pretensioners which are activated by the same sensor which triggers the front airbags. This sensor is situated in the centre console between the front seats.

All the belt pretensioners are pyrotechnical. A powder charge pulls a wire which then tightens the belt on the reel. The pretensioner is located next to the reel.

By tightening the belt at lighting speed in an accident, the pretensioner eliminates slack in the belt. If the car rolls over, it is naturally very important that the occupants are held firmly in place in their seats.

ROPS is part of the Volvo C70 convertible's total protection system, which also includes a powerful basic structure, one or two front airbags, the SIPS side impact protection system with its associated SIPS bags, and the new Whiplash Protection System, WHIPS.

### **Protective horseshoe and new side airbags**

The SIPS system functions in the same way as it does in other models, but its appearance differs. As the roof is included in the SIPS system in other Volvo cars, different design solutions have to be used to do the corresponding work in the convertible. As a result, the structure round the passenger compartment is shaped like a horseshoe and absorbs and dissipates the collision energy very effectively.

The Volvo C70 convertible is equipped with the new second-generation side airbag, the SIPS bag. This is larger than the previous bag and protects both the chest and head.

The SIPS bag is fitted in the outer edge of the front-seat backrest and has long been standard on all Volvo models. Since it is integrated in the seat, the side airbag is always beside the occupant regardless of how the seat is adjusted, thus ensuring optimum protection.

The original purpose of the side airbag was to reduce the risk of chest and abdominal injuries by providing a cushion between the occupant and the intruding car side.

The new airbag, which offers extended protection, is really two in one. A lower section still protects the chest and abdomen while a new upper section protects the head in most types of side impacts.

Thanks to the electronic sensors, the system provides an precise activating of the SIPS bag in different types of side impacts. The lower section is inflated after a hundredth of a second and the upper section after just over two hundredths of a second.

### **New whiplash protection system**

Volvo has developed a new car seat which is designed to reduce the injuries from year-end collisions at low and moderate speeds. The WHIPS (Whiplash Protection System) seats were introduced in the Volvo S80 last year and they are now a standard feature in both front seats in all Volvo models, including the C70 convertible.

The WHIPS seat is activated when the occupant is forced back against the backrest and head restraint in rear impact.

The entire upper body and head is cushioned in a balanced, gentle manner as the backrest and head restraint move backwards in a parallel movement in this way, the distance between the head and head restraint is kept as short as possible. This is highly important, as the risk of a whiplash injury is reduced if the head movement is minimised.

When the initial cushioning process is complete, the backrest is tipped backwards while absorbing energy to enable the body to continue being cushioned in a balanced manner. This also reduces the forward rebound which takes place in the end of the collision.



The design work has focuses on minimising three things. The first is the collision pulse to which the occupant is subjected, the second is movements in the spine and the third is the forward rebound. Three vital areas in the aim to reduce the whiplash problem.

**Basic safety principle**

The basic principle for the safety level of open cars was established back in the 1950s, when the open car known as the Volvo Sport was planned.

"If Volvo is going to build an open car, it has to be safe."

The fact that the Volvo C70 convertible is the modern response to this challenge can be seen here. Flair, comfort and driving pleasure in an elegant, safe packaging.

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## **Press Information**

### **A Volvo C70 convertible - a special listening experience**

The Volvo C70 coupé and convertible are equipped with one of the most advanced and sophisticated factory-fitted, in-car audio system on the market.

Right back at the concept stage, it was decided that the C70 was to be a rolling concert hall and the audio features were incorporated as part of the complete car.

For accessibility and quality reasons, the best solution is to fit an advanced audio system when the car is built.

The C70 convertible is equipped with no fewer than ten loudspeakers of different types in the standard version. Anyone who so wishes can specify a package with 12 or 13 speakers as an option.

These speakers have been specially developed, adapted and positioned to match the car perfectly both acoustically and mechanically. At the same time, they have also been adapted to one another to produce the best possible results with uniform frequency and low distortion.

The loudspeakers have been developed in collaboration with Danish Dynaudio, one of the world's leading companies in the hi-fi field.

#### **Dual three-way system can be heard and felt**

The loudspeaker system in the Volvo C70 convertible has the following design. A three-way system is used at both the front and rear. At the front, there are two 8" woofers, two 4" mid-range speakers and two 1" tweeters to produce a clean sound with a wide frequency range.

At the rear, there are two 6.5" bass/mid-range speakers and two tweeters. Two 9" bass speakers - also known as sub-woofers - can be specified as an option.

These large sub-woofers can be muted by rear-seat passengers as the sub-woofers are positioned behind the backrest. So it is a question of feeling the sound as much as hearing it in the convertible's rear seat.

#### **High performance in terms of sound as well**

However, these speakers cannot achieve anything on their own. They have to be fed by amplifiers, radios and other sources of sound.

The signals reach the speakers via an amplifier of either 4 x 60 W or 4 x 100 W. Both types are characterised by high voltage capacity, low interference and wide dynamic range. A high output calls for first-class components.

The radio section features Volvo's unique, easy-to-operate big front radio with its theft-protection code and complies with all Volvo's requirements in areas such as safety, ergonomics, design, quality and reliability.

The radio section features an advanced RDS tuner. It has a built-in CD changer for one or three discs, depending on equipment level.

The RDS radio automatically adjusts the tone curve to suit the car in which it is fitted and the position of the soft top - in other words, whether it is up or down. The volume control is automatically adjusted to the speed; the volume increases as the speed rises. The tone curve is also speed controlled.

Optional equipment includes a CD changer with room for six discs with an elegant concealed location in the luggage compartment and a remote control unit is available as an accessory.

### **Surrounded by music**

Another exciting option involves extending the radio section with a world first in a car, a Dolby Surround ProLogic system. With this system installed, the C70 can compete with any live concert.

The system produces a highly sophisticated level of sound reproduction with natural soundstage and will satisfy even the most demanding hi-fi enthusiast with its sound quality.

It is up to the customer to decide whether Bruce Springsteen, Bela Bartok or an Argentinian tango fills the car. Volvo has created the optimal conditions to ensure that the sound experience is as complete as it can possibly be. A sensation for the senses.

Dolby and ProLogic are registered trademarks belonging to Dolby Laboratories.

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### Volvo C70 convertible - a car for all six senses

The Volvo C70 convertible is a car for all the senses.

Sight, hearing, smell, touch and taste are all stimulated to a very high degree by the first convertible Volvo has produced for 40 years.

What is more, the Volvo C70 convertible is one of the few open cars which appeals to the sixth sense - common sense.

Using a combination of in-depth competitor analyses and customer surveys in countries including the USA and Germany, Volvo has created a picture of the properties that are required to attract the modern and demanding people who buy exclusive open cars.

People who drive open cars have no wish to conceal themselves inside a discreet car body. They want a comfortable car, full of flair, with a powerful image. As a result, the choice of colour is often daring and the list of individual options is comprehensive.

When it comes to convertible owners, the number of women is relatively high, but male customers are in a majority, just as they are among coupe purchasers.

The Volvo C70 convertible has been designed and developed to offer flair, comfort and driving pleasure in an elegant package, which matches Volvo's safety standards and traditions.

The Volvo C70 convertible was introduced at the Detroit Auto Show at the beginning of 1997. Sales started in North America at the beginning of 1998 and from this spring the convertible is available for European car buyers. Production is taking place alongside that of the C70 coupe in Uddevalla.

A car for all the senses - including common sense.

#### **The sense of sight**

In terms of design, the powerful, cohesive lines of the car are reminiscent of the C70 coupe. This open car has its own special personality and yet, at the same time, its Volvo identity is underlined by a number of specific characteristics.

An open car like the Volvo C70 convertible must have a shape and a sufficiently large number of lines to ensure that it does not become impersonal with the soft top down. Volvo's design director Peter Horbury and his team have tackled and overcome this challenge by introducing lines which raise the rear of the car in a distinct yet balanced manner. This gives the car a dynamic and muscular character.

The Volvo C70 convertible gives the impression of being a two-seater, even though it has room for four adults with a wide and inviting entrance to the rear seat.

### **The sense of touch and smell**

The interior of the car is characterised by Scandinavian design. Light colours and elegant, clean lines and form create a feeling of genuine quality, especially to the touch.

The choice when it comes to materials and colours is impressive. Two new colours, Venetian Red and Moondust, and a new dashboard inlay known as black marble effect, are introduced this year.

Mother Nature's fragrances on a warm day with the top down, combined with the special scent of the leather upholstery, make the Volvo C70 convertible a wonderful experience for the sense of smell as well.

The soft top is fully automatic. It is operated and locked in place with one press of a button. There are no hooks, no attachments - and no manual work requiring strong wrists. When it is folded down, the soft top is concealed behind the rear seat. The electrically-heated rear window is made of glass.

The soft top comes in four colours to match the paintwork and is hardwearing, quiet and windproof. A windblocker which can be fitted behind the front seats is optional.

The climate unit is flexible. With the soft top up, it is fully automatic. When the soft top is folded down, the unit changes to manual operation, as the sensors are unable to measure and regulate the temperature.

### **The sense of hearing**

Like the Volvo C70 coupe, the Volvo C70 convertible has what is probably the most sophisticated audio system on the market.

This system is an important and integrated part of the total experience. For quality reasons, the loudspeakers are fitted at the factory. Their position and size have been carefully chosen to enhance the sound experience to concert level, to do complete justice to every kind of music, no matter whether it is hard rock or the world-famous Vienna Boys' Choir.

Ten loudspeakers are standard. A package with 12 or 13 speakers is available as an option. These speakers have been developed in collaboration with Danish Dynaudio, one of the world's best-known companies in this field. The radio section features an RDS tuner and an integrated CD changer for three discs. The tone curve is adapted automatically, depending on whether the soft top is up or down.

The Volvo C70 convertible can also be equipped with a Dolby Surround ProLogic system, which produces a highly sophisticated level of sound reproduction with an "all-round-experience".

### **The sense of taste**

A number of comfort features give the owner a taste for the good life. Open or covered. With or without passengers. Regardless of the situation, the Volvo C70 convertible offers the kind of comfort and driving pleasure that is truly out of the ordinary.

The Volvo C70 convertible is introduced in Europe with a range of five-cylinder turbo engines: the 2.5-litre light-pressure turbo engine with an output of 193 bhp and the 2.3-litre turbo with 240 bhp. In certain markets, the convertible is also available with 2.0-litre turbos (163 or 225 bhp).

When the chassis was developed, the emphasis was placed on comfort, with well-preserved characteristics when it comes to driving and road performance. There are three different chassis settings: a comfort chassis, a dynamic chassis and an optional low dynamics chassis.

The STC (Stability and Traction Control) stability system, which prevents the driving wheels spinning when starting, accelerating and driving, is available for the convertible.

The Volvo C70 convertible has the following tyres/wheels: 225/55 x 16" as standard on the 193 bhp, light pressure turbo version, 17" wheels are standard on the 240 bhp turbo. 18" wheels are available as option.

The wheels and tyres help to create the comfortable and dynamic overall picture. The customer's personal taste determines the choice, just as it does with the engine and chassis settings. The common denominator when it comes to every alternative is that it has been carefully tested to ensure that it functions, regardless of the combination.

#### **The sixth sense - common sense**

The Volvo C70 convertible is very definitely also a car for our sixth sense - common sense. It has set a new safety standard for open cars, by being the first car on the convertible market with automatic seatbelt pretensioners on all four seats, for example.

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The convertible is now equipped with the new second-generation side airbag, the SIPS bag. This is larger than the previous bag and protects both the chest and head.

WHIPS (Whiplash Protection System), the front seat which actively counteracts whiplash injuries in rear-end collisions by cushioning the body in a soft, controlled movement, is also standard equipment.

For natural reasons, roll-overs are the greatest challenge when it comes to the safety design of an open car. One or more systems have to take over the supporting function performed by the roof.

In the Volvo C70 convertible, the A-pillars and windscreen frame are reinforced with high-strength steel and, in combination with the automatic roll-over hoops at the rear, they provide top-class protection if the car turns over. The roll-over hoops are concealed behind the standard head restraints. They are activated if the car turns over. A special sensor ensures that these hoops shoot up above head height.

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### **Volvo C70 coupe - now with naturally-aspirated engine**

Buyers of the Volvo C70 coupe can now choose another engine alternative.

The five-cylinder turbocharged engines are being joined by a five-cylinder, naturally-aspirated engine.

The 2,5-litre, 165-bhp engine has been available to car buyers since early spring. In June it will be replaced by a new and revised 2,4-litre version with 170 bhp and a maximum torque of 230 Nm.

This engine, just like its predecessor, is a member of Volvo's five-cylinder engine family and is being produced at the engine plant in Skövde in Sweden.

The revised engines have several advantages:

- Higher torque in the lower part of the engine speed range gives normal motorists a more lively car
- Lighter crankshaft movements and reduced friction between the moving parts of the engine result in quieter operation
- A number of new technical design solutions help to reduce fuel consumption by up to 8 per cent
- Lower emissions

#### **Same chassis and wheels**

The basic version of the latest coupe has the same chassis and wheels as the 2.5-litre version with a light-pressure turbocharger.

With acceleration from 0-100 km/h in 8.6 seconds (manual) and a top speed of 215 km/h, this 170 bhp engine also guarantees the dynamic driving pleasure which characterises the Volvo C70 coupe.

The Volvo C70 coupe is also available with:

a five-cylinder, 2.3-litre turbocharged engine with an output of 240 bhp and maximum torque of 330 Nm

a five-cylinder, 2.5-litre engine with a light-pressure turbocharger, an output of 193 bhp and maximum torque of 270 Nm

In certain markets, the coupe is also available with 2.0-litre turbos (163 or 225 bhp).

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