Volvo Cars

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For other uses, see Volvo (disambiguation).

This article is about the Volvo Car Corporation. For commercial vehicles otherwise known as the Volvo Group, see Volvo.

Volvo Personvagnar AB
Volvo Car Corporation

<table>
<thead>
<tr>
<th>Type</th>
<th>Subsidiary</th>
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<tbody>
<tr>
<td>Industry</td>
<td>Automotive</td>
</tr>
<tr>
<td>Founded</td>
<td>1927</td>
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<tr>
<td>Founder(s)</td>
<td>SKF, Assar Gabrielsson and Gustav Larson</td>
</tr>
<tr>
<td>Headquarters</td>
<td>Gothenburg, Sweden</td>
</tr>
<tr>
<td>Key people</td>
<td>Li Shufu (Chairman)</td>
</tr>
<tr>
<td></td>
<td>Hakan Samuelsson (President and CEO),</td>
</tr>
<tr>
<td></td>
<td>Hans-Olov Olsson (Vice-Chairman)</td>
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<tr>
<td>Products</td>
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<td>Revenue</td>
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Volvo Car Corporation, or Volvo Personvagnar AB, is a Swedish automobile manufacturer founded in 1927, in Gothenburg, Sweden. It is owned by Zhejiang Geely Holding Group. Volvo was originally formed as a subsidiary company to the ball bearing maker SKF. When Volvo AB was introduced on the Swedish stock exchange in 1935, SKF sold most of the shares in the company. Volvo Cars was owned by AB Volvo until 1999, when it was acquired by the Ford Motor Company as part of its Premier Automotive Group. Geely Holding Group then acquired Volvo from Ford in 2010.

Volvo manufactures and markets a range of SUVs, station wagons (estates), and sedans (saloons), compact executive sedans and coupes. With approximately 2,300 local dealers from around 100 national sales companies worldwide, Volvo Cars’ largest markets are the United States, Sweden, China, Germany, the United Kingdom, and Belgium. In 2011, Volvo recorded global sales of 449,255 cars, an increase of 20.3% compared to 2010.

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Volvo company was founded in 1927 in Gothenburg, Sweden. The company was created as a subsidiary company 100% owned by SKF. Assar Gabrielsson was appointed the managing director and Gustav Larson as the technical manager.

"Cars are driven by people. The guiding principle behind everything we make at Volvo, therefore, is and must remain, safety", Assar Gabrielsson and Gustav Larson 1927.

The trademark Volvo (which is Latin for I roll) was first registered by SKF the 11 May 1915 with the intention to use it for a special series of ball bearing for the American market (however in the application for the trademark, it was also designated for the purpose of automobiles), but it was never used for this purpose. SKF trademark as it looks today was used instead for all the SKF-products. Some pre-series of Volvo-bearings stamped with the brand name 'Volvo' were manufactured but was never released to the market and it was not until 1927 that the trademark was used again, now as a trademark and company name for an automobile.

The first Volvo car left the assembly line April 14, 1927, and was called Volvo ÖV 4. After this the young company produced closed top and cabriolet vehicles, which were designed to hold strong in the Swedish climate and terrain. In the registration application for Volvo logotype in 1927, they simply made a copy of the entire radiator for ÖV4, viewed from the front.

In 1964 Volvo opened its Torslanda plant in Sweden, which currently is the one of its largest production sites (chiefly large cars and SUV). Then in 1965 the Ghent, Belgium plant was opened, which is the
company's second largest production site (chiefly small cars). Finally in 1989 the Uddevalla plant in Sweden was opened, which is now jointly operated by Volvo Car Corporation and Pininfarina of Italy.
A collection of Volvo's most important historical vehicles are now housed in The Volvo Museum, which opened in a permanent location in Arendal at Hisingen on May 30, 1995. For several years, the collection had been housed at "The Blue Hangar," at the then closed Torslanda Airport.

In the early 1970s, Volvo acquired the passenger car division of the Dutch company DAF, and marketed their small cars as Volvos before releasing the Dutch-built Volvo 340, which went on to be one of the biggest-selling cars in the UK market in the 1980s.

Volvo Group, as one of the largest manufacturers of commercial vehicles in the world, took the initiative to sell its automobile manufacturing in 1999 in order to fully focus its efforts on the market for commercial vehicles.

Ford, on the other hand, saw advantages in acquiring a profitable prestige mid-size European automobile manufacturer, well renowned for its safety aspects, as an addition to its Premier Automotive Group. The buyout of Volvo Cars was announced on January 28, 1999, and in the following year the acquisition was completed at a price of $6.45 billion USD. As a result of the divestiture, the Volvo trademark is now utilized by two separate companies:

- **Volvo Group** – a manufacturer of commercial vehicles, etc. owned by Swedish interests.
- **Volvo Car Corporation** or **Volvo Cars** – a manufacturer of automobiles owned by Zhejiang Geely Holding Group and formerly owned by Ford Motor Company.

**Ford management**

Volvo Car Corporation was part of Ford Motor Company's Premier Automotive Group (PAG), along with Jaguar, Aston Martin and Land Rover. While part of the PAG, the company grew in its range of vehicles significantly.

After Ford sold Jaguar Land Rover to Tata Motors of India in 2008, the company initially decided to keep Volvo Cars despite mounting losses and gross economic downturns. Ford decided to restructure plans for Volvo Cars, pushing it further upmarket alongside the lower end of Mercedes and BMW sedans, wagons, and SUV crossovers. The outcome was the luxurious second generation Volvo S80 and the new small premium crossover Volvo XC60.
When the global economic crisis of 2008 threatened the US automakers, Swedish authorities became concerned about the fate of Volvo if Ford would file for bankruptcy. These concerns mounted after repeated mass-layoffs at Volvo. Ford announced in December 2008 that it was considering selling Volvo Cars. Initially, a sale price of US$6 billion was reported. Ford reported it was also looking into the possibility of spinning off Volvo as an independent company. The Swedish government was asked to look into a possible state ownership of Volvo, or a financial bailout for Volvo Cars and SAAB of GM. Former parent AB Volvo agreed to help Volvo cut costs through partnerships, and suggested taking part in a shared ownership of Volvo Cars amongst a larger consortium. Other rumored candidates to purchase Volvo Cars included BMW AG of Germany, Investor AB of Sweden, Chinese investors, or Russian investors.

Despite initial denials, Chinese company Geely Holding Group was ultimately selected to takeover the Swedish automaker. Geely Group Holdings Co., allegedly bid between US$-1.5 billion to take over Volvo, with Goldman Sachs investing HK$2.59 billion (334 million USD) to the holding company.

Geely acquisition

Ford Motor Company offered Volvo Cars for sale in December 2008, after suffering losses that year. On October 28, 2009, Ford confirmed that, after considering several offers, the preferred buyer of Volvo Cars was Zhejiang Geely Holding Group, the parent of Chinese motor manufacturer Geely Automobile. On December 23, 2009, Ford confirmed the terms of the sale to Geely had been settled. A definitive agreement was signed on March 28, 2010, for $1.8 billion. The European Commission and China's Ministry of Commerce approved the deal on July 6 and July 29, 2010, respectively. The deal closed on August 2, 2010 with Geely paying $1.3 billion cash and a $200 million note. Further payments are expected with a later price "true-up". It is the largest overseas acquisition by a Chinese automaker.

Stefan Jacoby, formerly chief executive of Volkswagen of America, became Volvo Car Corporation's President and Chief Executive on August 16, replacing Stephen Odell, who became chief executive of Ford Europe. Li Shufu became Volvo Cars' Chairman of the Board. His board members include Vice-Chairman Hans-Olov Olsson, a former president and chief executive of Volvo Cars, and Håkan Samuelsson, formerly chief executive of MAN.

Safety

Volvo cars have long been marketed and stressed their historic reputation for solidity and reliability. Prior to strong government safety regulation Volvo had been in the forefront of safety engineering.

In 1944, laminated glass was introduced in the PV model. In 1958, Volvo engineer Nils Bohlin invented and patented the modern 3-Point Safety Belt, which became standard on all Volvo cars in 1959, and then made this design patent open in the interest of safety and made it available to other car manufacturers for
Additionally, Volvo developed the first rear-facing child seat in 1964[20] and introduced its own booster seat in 1978.[20]

The 960 introduced the first three-point seat belt for the middle of the rear seat and a child safety cushion integrated in the middle armrest.[20] Also in 1991 it introduced the Side Impact Protection System (SIPS) on the 940/960 and 850 models, which channelled the force of a side impact away from the doors and into the safety cage.[24]

To add to its SIPS, in 1995 Volvo was the first to introduce side airbags and installed them as standard equipment needed in all models in 1996. At the start of the 1995 model year, side impact protection airbags were standard on high trim-level Volvo 850s, and optional on other 850s. By the middle of the production year, they were standard on all 850s. In Model Year 1996, SIPS airbags became standard on all Volvo models.[citation needed]

In 1998 Volvo also developed and was the first to install a head-protecting airbag,[citation needed] which was made standard in all new models as well as some existing models. The head-protecting airbag was not available on the 1996 C70 since the initial design deployed the airbag from the roof and the C70, being a convertible, could not accommodate such an airbag. A later version of the C70 featured a head-protecting airbag deploying upwards from the door, avoiding this problem. It has been stated by many testing authorities that side head protecting curtain airbags can reduce the risk of death in a side impact by up to 40% and brain injury by up to 55%, as well as protecting during a rollover.[25]

In 1998, Volvo introduced its Whiplash Protection System (WHIPS), a safety device to prevent injury to front seat users during collisions.[25] In 2004, Volvo introduced the BLIS system, which detects vehicles entering the Volvo’s blind spot with a side-view-mirror-mounted sensor, and alerts the driver with a light. That year also saw Volvos sold in all markets equipped with side-marker lights and daytime-running lights. Much of Volvo's safety technology now also goes into other Ford vehicles. In 2005 Volvo presented the second generation of Volvo C70, it comes with extra stiff door-mounted inflatable side curtains (the first of its kind in a convertible).[citation needed]

In 2006 Volvo’s Personal Car Communicator (PCC) remote control has been launched as an optional feature with the all-new Volvo S80. Before a driver enters their car, he or she can review the security level and know whether they have set the alarm and if the car is locked.[citation needed] Additionally, a heartbeat sensor warns if someone is hiding inside the car. The S80 is also the first Volvo model to feature Adaptive cruise control (ACC) with Collision Warning and Brake Support (CWBS).[citation needed]

Since 2004 all Volvo models except for the coupes (C70 and C30) are available with an all-wheel drive system developed by Haldex Traction of Sweden.[26]
Even though Volvo Car Corp has been owned by the Ford Motor Company, the safety systems of Volvo are still standard on all Volvo vehicles. Volvo has patented all their safety innovations, including SIPS, WHIPS, ROPS, DSTC, and body structures. Some of these systems were fitted to other Ford vehicles in forms similar to those of Volvo systems, only because Volvo has licensed the FOMOCO and other PAG members to utilize these features. [citation needed]

A 2005 FOLKSAM report[27] puts the 740/940 (from 1982 on) in the 15% better than average category, the second from the top category. [citation needed] The Volvo 745 was also recalled due to that the front seatbelts mounts could break in a collision.[28][29]

In 2005, when the American non-profit, non-governmental Insurance Institute for Highway Safety (IIHS) released its first annual Top Safety Picks vehicles list, none of Volvo’s offered vehicles in the U.S. was included on the list.[30] According to Russ Rader, a spokesman for IIHS, Volvo lagged behind its competitors.[31] Dan Johnston, a Volvo spokesman, denied that the company’s vehicles are any less safe than the Institute's top-rated vehicles, adding that

"It's just a philosophy on safety that is different from building cars to pass these kinds of tests."[32]

According to the Insurance Institute for Highway Safety (IIHS), Volvo's S80 became one of 2009 Top Safety Picks Award winner, but Volvo's S40 and S60 (both 2005–09 models with standard side airbags) failed to attain the highest rating in their side impact test. Volvo's C30 has not yet been tested by IIHS,[33][34] but received 5 star safety in EuroNCAP.[35]

However, according to the IIHS, in recent years Volvo Cars have still managed to maintain their high class safety ratings as seen in test results. [36] The Volvo XC90,[37] S80[38] and C70[39] all score top scores in these rated crash tests.

In 2008 a French court found Volvo partially responsible for causing the death of two children and serious injuries of one in Wasselonne on June 17, 1999, when the brakes of a 1996 Volvo 850 failed. The court subjected Volvo to a 200,000 Euro fine.[40][41][42][43]

[edit]Safety milestones

| ![The Amazon was noted for its safety features, with a padded dashboard, front and rear seat belts and a laminated windshield.](image) |

The Amazon was noted for its safety features, with a padded dashboard, front and rear seat belts and a laminated windshield.[44]
(This list is not necessarily Volvo innovations, but dates when Volvo incorporated the technology into its cars)

- 1944 Safety cage
- 1944 Laminated windscreen
- 1957 Anchor points for 2–point safety belts front
- 1958 Anchor points for 2–point safety belts rear
- 1959 3–point front safety belts standard
- 1964 First rearward–facing child safety seat prototype tested
- 1966 Crumple zones front and rear
- 1966 Safety door–locks
- 1969 Inertia reel safety belts
- 1971 Reminder safety belt
- 1972 3–point safety belts – rear
- 1972 Rearward–facing child safety seat
- 1974 Multistage impact absorbing steering column
- 1974 Bulb integrity sensor
- 1975 Braking system with stepped bore master cylinder
- 1978 Child safety booster cushion
- 1982 "Anti–submarining" protection
- 1986 Three–point safety belt centre rear seat
- 1990 Integrated child safety cushion in centre rear seat
- 1991 Side Impact Protection System (SIPS)
- 1991 Automatic height adjusting safety belt
- 1992 Reinforced rear seats in estate models
- 1995 Integrated child safety cushion outer rear seats
- 1997 ROPS – Roll Over Protection System (C70)
- 1998 WHIPS – Whiplash Protection System
- 1998 IC – Inflatable Curtain
- 2001 SCC – Volvo Safety Concept Car
- 2002 RSC – Roll Stability Control
- 2003 New Front Structure called Volvo Intelligent Vehicle Architecture (VIVA, S40, V50)
- 2003 Rear seat belt reminders (in S40 and V50)
- 2003 IDIS – Intelligent Driver Information System (in S40 and V50)
- 2003 Inauguration of Volvo's Traffic Accident Research Team in Bangkok
• 2004 BLIS – Blind Spot Information System (in S40 and V50)
• 2005 Introduction of DMIC (Door Mounted Inflatable Curtain, new Volvo C70)
• 2006 PCC – Personal Car Communicator (S80)
• 2006 CWBS – Collision Warning with Brake Support (S80)
• 2007 PPB – Power Park Brake (S80)
• 2007 DAC – Driver Alert Control (V70, XC70)
• 2009 City Safety – Automatically stop car at speeds below 19 mph (31 km/h) if obstruction is detected in front of car (XC60)
• 2010 Pedestrian Detection with auto brake (New S60)
• 2012 Pedestrian airbag, covering half the windscreen in case of collision with pedestrian which debuted on the new Volvo V40 hatchback model

Car models

1927 Volvo ÖV 4
1987 Volvo 740, one of the few European passenger cars that can harbor a Europallet in its luggage compartment.

**Early years**

- Volvo ÖV 4, a.k.a. Jakob
- Volvo PV650 Series
- Volvo TR670 Series
- Volvo PV 36 Carioca
- Volvo PV51
- Volvo PV800 Series (civilian (PV801, PV802, PV810, PV821, PV822 and PV831) and military (TP21/P2104, P2104))
- Volvo PV 60
- Volvo PV444/544
- Volvo Duett (Volvo PV445, P210)
- Volvo P1900
- Volvo Amazon/Volvo 122
- Volvo P1800
- Volvo 66
- Volvo C202
- Volvo C3-series (C303, C304 and C306)

**Tri-digit nomenclature**

Starting with the 140 series in 1966, Volvo used a tri-digit system for their cars. The first number was the series, the second number the number of cylinders and the third number the number of doors; so a 164 was a 1-series with a 6-cylinder engine and 4-doors. However, there were exceptions to this rule—the 780 for example, came with turbocharged I4 and naturally aspirated V6 petrol engines and I6 diesel engines, but never an eight-cylinder, as the 8 would suggest. Similarly, the 760 often was equipped with a turbocharged I4 engine,
and the Volvo 360 only had four cylinders. Some 240GLT had a V6 engine. The company dropped the meaning of the final digit for later cars like the 740, but the digit continued to identify cars underhood on the identification plate.

- **Volvo 140** (Volvo 142, Volvo 144, Volvo 145)
- **Volvo 164**
- **Volvo 240** (Volvo 242, 244, 245)
- **Volvo 260** (Volvo 262C, 264, 265)
- **Volvo 340** (Volvo 343, 345)
- **Volvo 360**
- **Volvo 440/460**
- **Volvo 480**
- **Volvo 740**
- **Volvo 760**
- **Volvo 850**
- **Volvo 940**
- **Volvo 960**

**Post tri-digit models**

- Released in 1998
  - **Volvo C70**
  - **Volvo S70** Replaced the 850 saloon version
  - **Volvo S90** Replaced the 960 saloon version
  - **Volvo V70** Replaced the 850 wagon version
  - **Volvo V90** Replaced the 960 wagon version
- Released in 1999
  - **Volvo S80**
- Released in 2000
  - **Volvo S40**
  - **Volvo V40** Small wagon
- Released in 2004
  - **Volvo V50**

**Current models**
Today, the company uses a system of letters denoting body style followed by the series number. S stands for saloon or sedan, C stands for coupé or convertible (including 3-door hatchback aka shooting brake) and V stands for versatile as in estate car. XC stands for cross country originally added to a more rugged V70 model as the V70XC and indicates all wheel drive paired with a raised suspension to give it a mock SUV look. Volvo would later change the name to the XC70 in keeping with its car naming consistent with the XC90. So a V50 is an estate ("V") that is smaller than the V70.

Originally, Volvo was planning a different naming scheme. S and C were to be the same, but "F", standing for flexibility, was to be used on station wagons. When Volvo introduced the first generation S40 and V40 in 1995, they were announced as the S4 and F4. However, Audi complained that it had inherent rights to the S4 name, since it names its sporty vehicles "S", and the yet-introduced sport version of the Audi A4 would have the S4 name. Volvo agreed to add a second digit, so the vehicles became the S40 and F40. However, that led to a complaint from Ferrari, who used the Ferrari F40 name on their legendary sports car. This led to Volvo switching the "F" to "V", for versatile.

As of January 2012, all coupes (C30 and C70) are based on Volvo P1 small car platform.

- Small Cars (Volvo P1 platform)
  - Volvo C30 2006–present (M/Y 2007–)
  - Volvo C70 2006–present (M/Y 2005–)
  - Volvo V40 2012–present (M/Y 2013–)

- Large Cars (Volvo P2 platform)
  - Volvo XC90 2002–present (M/Y 2003–)

- Large Cars (Volvo P3 platform)
  - Volvo S60 2010– (M/Y 2011–)
  - Volvo V60 2010– (M/Y 2011–)
- **Volvo S80** 2006–present (M/Y 2007–)
- **Volvo V70** 2007–present (M/Y 2008–)
- **Volvo XC60** 2008–present (M/Y 2009–)
- **Volvo XC70** 2007–present (M/Y 2008–)

### Future models

According to *MotorAuthority* in October 2011, Volvo are happening to be working on these models:

- Volvo XC40, to be based on the new **Volvo V40** (Q1 2013–)

### Concept cars

- **Volvo Venus Bilo** (1933)
- **Volvo Philip** (1952)
- **Volvo Margarete Rose** (1953)
- **Volvo Elisabeth I** (1953)
- **Volvo VESC** (1972)
- **Volvo 1800 ESC** (1972)
- **Volvo EC** (1977)
- **Volvo City Taxi** (1977)
- **Volvo Tundra** (1979)
- **Volvo VCC** – Volvo Concept Car (1980)
- **Volvo LCP2000** (1983)
- **Volvo ECC** – Environment Concept Car (1992)
- **Volvo ACC** – Adventure Concept Car (1997)
- **Volvo SCC** – Safety Concept Car (2001)
- **Volvo PCC** – Performance Concept Car (2001)
- **Volvo PCC2** (2002)
- **Volvo ACC2** (2002)
- **Volvo VCC** – Versatility Concept Car (2003)
- **Volvo YCC** – Your Concept Car (2004)
- **Volvo T6** (2005)
- **Volvo 3CC** (2005)
- **Volvo C30 Design Concept** (2006)
- **Volvo XC60 Concept** (2006)
- **Volvo ReCharge Concept** (2007)
Volvo S60 Concept (2008)
C30 DRIVe Electric (2010)
Volvo Universe Concept (2011)
Volvo Concept You (2011)

Alternative propulsion

The 2005 Volvo FlexiFuel S40 was one of the first E85 flex cars launched in the Swedish market by a domestic automaker. The Volvo FlexiFuel is now offered on the European market.

The Volvo C30 DRIVe Electric concept car was exhibited at the 2010 Paris Motor Show.

Flexible-fuel vehicles

Further information: flexi-fuel vehicle

In 2005 Volvo introduced to the Sweden market the company's first E85 flexfuel models. Volvo introduced its S40 and V50 with flexible-fuel engines, joined in late 2006 by the then new C30. All Volvo models were initially restricted to the Sweden market, until 2007, when these three models were launched in eight new European markets. In 2008 Volvo launched the V70 with a 2.5-litre turbocharged flexifuel engine.

Plug-in hybrids

Further information: Volvo ReCharge and Volvo V70 Plug-in Hybrid

The Volvo ReCharge is a plug-in hybrid concept car with an all-electric range (AER) of 60 miles (97 km). It was officially unveiled at the 2007 Frankfurt Auto Show.
On June 1, 2009, Volvo announced the launching of series production diesel-electric plug-in hybrids by 2012.[47][48] The company plans to sell a series hybrid with the goal of achieving emissions of less than 50 grams of CO₂ per kilometer.[49][50] As part of a joint venture with Vattenfall, a Swedish energy company, Volvo converted two Volvo V70 to plug-in hybrid demonstrators that have been in field testing in Göteborg, Sweden since December 2009.[51] Vattenfall offered customers participating in this trial the supply of renewable electricity generated from wind power or hydropower.[51] Among other challenges, this test has allowed to experience the all-electric range at low temperatures, which has been a disadvantage of plug-in vehicles.[49][50][51]

[edit]Electric car

Further information: Volvo C30 DRIVe Electric

The Volvo C30 DRIVe Electric concept car was exhibited at the 2010 Paris Motor Show and Volvo announced that field testing will begin in 2011 in the U.S., Europe, and China.[52] The C30 DRIVe electric car has a lithium-ion battery, a top speed of 130 km/h (81 mph), and an all-electric range of up to 150 kilometres (93 mi). Field testing began in 2010 with 10 units in Göteborg, Sweden.[53]

[edit]Gas-turbine Hybrid

Further information: Volvo ECC

The Volvo ECC (Environmental Concept Car) was exhibited at the 1992 Paris Motor Show. The vehicles range on batteries alone was 90 miles (140 km), and when combined with a full tank of fuel for the turbine, about 415 miles (668 km).

[edit]Production locations

- Gothenburg, Sweden (Volvo Cars Headquarters and Safety Center)
- Hällered, Sweden (Volvo Test Track)
- Torslanda, Sweden (Volvo Cars Torslanda - Torslandaverken) 1964–present
  - Volvo V70, Volvo XC70, Volvo S80, Volvo XC90, Volvo V60.
- Uddevalla, Sweden (Pininfarina Sverige AB) 1989–present, since 2005 the factory is operated by Volvo Cars and Pininfarina
  - Volvo C70
- Ghent, Belgium (Volvo Cars Ghent) 1965–present
  - Volvo C30, Volvo V40, Volvo S40, Volvo V50, Volvo S60, Volvo XC60
- Skövde, Sweden (Engines)
- Floby, Sweden (Engines)
- Olofström, Sweden (Body Components)
Assembly locations around the world:

- Kuala Lumpur, Malaysia (Swedish Motor Assemblies SDN BHD)
- Chongqing, China (the Volvo S40 and the Volvo S80L are produced in Ford's Chinese joint-venture plant with Changan Motors for the local market)

Volvo Cars have previously had production facilities on these locations:

- Pretoria, South Africa (Production cancelled in 2006 due to disputes in trade agreements between the EU and South Africa as well as decreased demand).
- Halifax, Canada (Volvo Halifax Assembly)
- Kalmar, Sweden (1972–1994)
- Köping, Sweden (Sold to Getrag GmbH)
- Samutprakarn, Thailand (Thai-Swedish Assembly Company Limited) Sold in 2008 to AB Volvo
- Arica, Chile. (Nun & German Assembly plant for Volvo, Simca, Dodge and Chevrolet. 1962-1973)
- Melbourne, Australia Motor Producers Limited, part owned by Volkswagen. Assembly plant for VW, Audi, Nissan and Volvo.

There are reports that, after being acquired by Geely, Volvo is looking into building a new plant in China that could double its annual global production.[54]

**Engine types**

Volvo uses in-line, or straight engines in their production vehicles. Volvo is also known for the application of the in-line 5-cylinder engine to its vehicle line up since its introduction in 1993 in the Volvo 850.

- See also: List of Volvo engines
- Side valve six – fitted into the PV651/2, TR671/4, PV653/4, TR676/9, PV658/9, PV36, PV51/2, PV53/6, PV801/2, PV821/2, PV831/2 and PV60 from 1929 to 1958
- B4B and B14A – fitted into the Volvo PV and Volvo Duett from 1947 to 1956
- B16 (A and B) – fitted into the PV, Duett and Volvo Amazon from 1957 to 1960
- B18 and B20 – 1.8 L/2.0 L OHV 8v fitted into all Volvo models from 1961 to 1974 except 164 (and 1975 U.S. Spec 240 models).
- B19, B21, and B23 – fitted from 1975
- B200 and B230 – 2.0 L and 2.3 L, respectively, SOHC 8v fitted to 240, 360, 700, 940 series cars from 1985
- B204 and B234 – 2.0 L and 2.3 L DOHC 16 valve engines
- B27/B28 and B280 – 2.7 and 2.8 L SOHC 12v developed together with Renault and Peugeot
- B30 – fitted to all 164 models

[edit] Transmissions

Volvo automatic transmissions in the past were made by the ZF Friedrichshafen company, but now the transmissions are co-developed with Aisin of Japan. Geartronic is Volvo Cars' name for its manumatic transmission.

- Volvo AW70 transmission
- Volvo AW71 transmission
- Volvo AW72 transmission
- Volvo M30 transmission
- Volvo M40 transmission
- Volvo M400 transmission
- Volvo M410 transmission
- Volvo M41 transmission
- Volvo M45 transmission
- Volvo M46 transmission
- Volvo M47 transmission
- Volvo M50 transmission
- Volvo M51 transmission
- Volvo M56 transmission
- Volvo M58 transmission
- Volvo M59 transmission
- Volvo M66 transmission
- IB5
- MTX-75
- MMT6
- Volvo M90 transmission
- Volvo ZF4HP22 transmission[citation needed]
- AW50-42 (4-speed automatic, FWD/AWD)
- AW55-50/51 (5-speed automatic, FWD/AWD)
- GM4T65EV/GT (4-Speed GM automatic, FWD/AWD)
Volvo Cars sales during 2010 (2009).[1]

### By market
1. **United States** 53,952 (61,426)
2. **Sweden** 52,894 (41,826)
3. **United Kingdom** 37,940 (34,371)
4. **China** 30,522 (22,405)
5. **Germany** 25,207 (25,221)
6. **Belgium** 17,969 (13,223)
7. **Italy** 17,509 (15,896)
8. **Netherlands** 14,308 (14,035)
9. **France** 12,211 (11,596)
10. **Russia** 10,650 (6,894)
Others: 100,363 (87,915)

### By model
1. **XC60** 80,723
2. **V50** 56,098
3. **V70** 48,877
4. **XC90** 37,597
5. **C30** 35,981
6. **S40** 31,688
7. **XC70** 22,068
8. **S80** 19,162
9. **S60** 14,786
10. **S80L** 11,778
11. **V40** Unknown
The symbol for Mars has been used since ancient times to represent iron.

The name Volvo, is Latin for "I roll".

Logo

The Volvo symbol is an ancient chemistry sign for iron. The iron sign is used to symbolize the strength of iron used in the car as Sweden is known for its quality iron. The diagonal line (a strip of metal) across the grille came about to hold the actual symbol, a circle with an arrow, in front of the radiator.

A model of a Volvo XC90 made of Lego pieces on display at Volvo Ocean Race – 2006 in Baltimore Inner Harbor

Sponsorship

Volvo entered the European Touring Car Championship with the Volvo 240 in the mid-80s. The cars also entered the Guia Race, part of the Macau Grand Prix in 1985, 1986 and 1987, winning in both 1985 and 1986.

Volvo also entered the British Touring Car Championship in the 90s with Tom Walkinshaw Racing. This partnership was responsible for the controversial 850 Estate racing car, which was only rendered uncompetitive when the FIA allowed the use of aerodynamic aids in 1995. TWR then built and ran the works 850 Saloon, six
wins in 1995 and five wins in 1996, and S40, one wins in 1997 in the BTCC. In 1998, TWR Volvo won the British Touring Car Championship with Rickard Rydell driving the S40R.

In 2008 Volvo entered the Swedish Touring Car Championship with a C30 powered by bioethanol E85 fuel. Robert Dahlgreen and Tommy Rustad were the drivers, finishing 5th and 10th respectively in the championship. Volvo have also signalled their intentions to enter the 2009 British Touring Car Championship with the same car. [65]

The Volvo trademark is now jointly owned (50/50) by Volvo Group and Volvo Car Corporation. [56] One of the main promotional activities for the brand is the sailing Race Volvo Ocean Race, formerly known as the Whitbread Around the World Race. There is also a Volvo Baltic Race and Volvo Pacific Race, and Volvo likes to encourage its affluent image by sponsoring golf tournaments all over the world including major championship events called the Volvo Masters and Volvo China Open.

Volvo sponsored the Volvo Ocean Race, the world's leading round-the-world yacht race for the first time in 2001–2002. The next edition is taking place between 2011 and 2012. Volvo has also had a long-standing commitment to the ISAF and is involved in the Volvo/ISAF World Youth Sailing Championships since 1997.

In 2011, Volvo Cars is the main sponsor of the winter sports and music festival Snowbombing in Austria.

Volvo has since the 1950s had special international sales programs for customers assigned abroad, for example Diplomat Sales, Military Sales and Expat Sales.

In 2012, Volvo signed NBA star Jeremy Lin to an endorsement agreement. Over the next two years Mr. Lin will participate in Volvo's corporate and marketing activities as a "brand ambassador" for Volvo Car Corp. [57]

[edit]Volvo trademark lawsuit

In 1990, Volvo Cars filed a lawsuit against Hong Kong-based Club Volvo night club for infringement in Hong Kong High Court. The lawsuit ended with settlement where the night club paid 1 dollar to Volvo Cars. Since then, Club Volvo had been renamed to Club Borubo (which pronounced like Volvo in Japanese), and then Club Bboss (reference to Big Boss). [58][59][60]