



Strong. Agile. Evolutionary.

CV90

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**BAE SYSTEMS**

# CV90 The most versatile vehicle for all military missions, now and in the future

**Strong** armoured for crew survivability  
**Agile** performs across all terrain  
**Evolutionary** designed for scalable upgrades

## Survivability

The CV90 has one of the most advanced survivability solutions available in the world, providing flexible and modular solutions for any mission requirements. The platform provides crew protection from heavy weaponry including IEDs and anti-tank mines.

The CV90 protects occupants from Chemical, Biological, Radiological, and Nuclear (CBRN) threats with its integrated CBRN/ HVAC-system.

To meet modern battlefield threats, the vehicle can be fitted with further protection including:

- Armour against shaped charge warheads for example RPG-s
- Defensive Aid Suite (DAS) that classifies targets, gives threat warnings, maneuvering instructions, while simultaneously deploying countermeasures, for hit avoidance.
- The CV90 DAS-system is up-scalable from soft-kill through jammers to highly capable hard-kill system achieving a high degree of survivability even against an advanced opponent
- ADAPTIV camouflage, offering active multi-spectral cloaking, rendering the vehicle appearance to match its environment or to mimic other objects to further increase crew survivability and freedom to move.

## Mobility

The CV90's effective protection suite does not render in reduced mobility. Powered by a highly reliable, fuel-efficient high torque V8 diesel engine, the CV90 accomplishes agile sprints in challenging terrain and enduring long-range patrol missions.

The vehicle's road range is constantly improving, with new variants capable of travelling up to 900 km.

The platform's active damping increases the off-road speed and at the same time benefits to:

- Increasing the gunner's hit probability and ability to find targets
- Increased life expectancy for sub systems and components
- Higher all-terrain speeds
- Reduced fatigue for crew and squad

## Lethality

To be the first to fire is crucial. As a first class combat vehicle, the CV90 is compatible with a range of armaments to suit any customer requirements. The vehicle is normally fitted with a two-man turret equipped with the well proven 25-35 mm Bushmaster cannon product range. The platform can support different configurations such as manned and unmanned turrets and integration of missile systems. The CV90 incorporates a Munition Programmer for Air Burst Munition (ABM) and has a target-driven gunner Man Machine Interface (MMI) and excellent Anti-Aircraft capabilities.

The Fire Control System autonomously sets:

- Type of ammunition
- Lead- and super elevation angles
- Fuse setting – air burst, impact or delayed detonation
- Burst- and dispersion patterns

This significantly decreases operator workload allowing the gunner to focus and engage on commander determined targets, significantly reducing sensor to shooter time.

The vehicle's hunter-killer function features an independent sight system for the commander, enabling him to search, engage or hand over targets to the gunner.

## C4ISTAR

The CV90 represents the future of Armoured Fighting Vehicles (AFV), providing best-in-class, all-weather Intelligence, Surveillance, Target Acquisition and Recognition (ISTAR) capabilities. Its range of variants will allow for conduct sustained, expeditionary, full-spectrum and network-enabled operations with a reduced logistics footprint

CV90 is fully digitized and General Vehicle Architecture (GVA)-compliant, providing accurate and timely information to support decision-making at all levels. It integrates a range of leading-edge technologies to provide an optimized and lethal ISTAR.

The open and GVA compliant electronic architecture can seamlessly integrate both current and future open C4ISTAR and communication products.

The vehicle C4ISTAR capability can further be upgraded with Battleview 360 which brings an advanced mix between Augmented and Virtual Reality offering 360 degree see through armour with conformal augmented battle management information.

## CV90 is a proven solution, under continual development

- 1,300 sold to 7 European user nations, 4 NATO members
- 8 million R&D hours invested
- Combat proven in Afghanistan and Liberia
- 15 different CV90 variants in service
- Rubber tracks technology proven in theatre



# CV90

## Combat Proven

CV90 is designed with a clear vision: to be a vehicle that provides high tactical and strategic mobility, air defence, anti-tank capability, high survivability and protection in any terrain or tactical environment. The CV90 family gives unrivalled performance in the 20-37 ton class. CV90 has a pedigree of successful worldwide operations including UN and NATO collaborative missions.

Crew survivability is of primary importance to every force. Each aspect of the CV90, from its armour to its driving dynamics, is dedicated to protecting personnel.

Danish Army  
in Afghanistan



Swedish Army in  
Liberia and Afghanistan



Norwegian Army  
in Afghanistan



# Selected variants

BAE Systems Hägglunds, in response to customer demand, has created a family of specialist variants designed for specific mission and customer requirements. CV90 is versatile and scalable with new capabilities like ADAPTIV, rubber tracks, active damping, BattleView360 and integrated Active Protection Systems (APS).



## The CV90 family

Ready for any mission, the modular CV90, ensures freedom of design for a wide variety of variants. The CV90 family includes:

### Turreted

- IFV (Infantry Fighting Vehicle) – 30mm, 35mm & 40mm
- RECCE (Reconnaissance)
- C2 (Command & Control)
- AAV (Anti-Aircraft Vehicle)
- Mortar – AMOS 2x120mm & Mjölner 2x120mm
- Combat Repair
- Forward Observer

### Non-turreted

- APC & VIP transport
- Combat Engineer
- CASEVAC
- ARV (Armoured Recovery Vehicle)
- LOG – (Logistic carrier)
- EW (Electronic Warfare)
- DTV (Driver Training Vehicle)
- Mortar – 81mm

### Coming attractions...

- Direct Fire – 105mm & 120mm
- Engineer
- Bridge layer
- Artillery – 155mm

## CV90120

### Equipped with sensor-based protection

The medium tank CV90120 provides crews with greater lethality, higher mobility, advanced identification capability and state-of-the-art stealth protection.

With its lightweight design, the CV90120 is more manoeuvrable on the battlefield than traditional tanks; however it can still match them in terms of firepower.

The CV90120 is equipped with a modern 120 mm gun which enables it to handle any contemporary battlefield threats.



# In country set up CV90

Real partnership – real advantage

Tailorised industrial set up  
depending on customer requirements



A set up contributing to  
National Sovereignty, Security of Supply  
& further Export opportunities to domestic industry

Local production



To BAE Systems, industrial cooperation is a vital part of the partnerships we are building with our customers – a strong partnership that provides each party with long-term and strategic advantages.

Given the requirements, development, design, production, assembly and support services can be done locally in the customer country. These are outstanding tools for the development of all involved parties: local industries, the economy in the customer countries, the customers themselves, and BAE Systems Hägglunds.

We have developed a creative and innovative approach toward industrial cooperation including technology transfer, marketing support and support to small-medium enterprises, as well as our long term cooperation with our partners present in the international market. This approach supports further export opportunities for domestic industry, increasing security of supply and contributing to national sovereignty.

In other words – cooperation for long term security.

## Industrial cooperation (IC) track record

- For more than 20 years, we have fulfilled our Industrial Cooperation commitments on time or ahead of schedule
- Successful performance in a11 countries
- Delivering industrial capability to customer country is business as usual.



# CV90 industrial cooperation track record

Across the group of nations operating the CV90, BAE Systems Hägglunds has successfully fulfilled all industrial requirements. BAE Systems' well-proven industrial model has been implemented for CV90 industrial commitments in Norway, Finland, Switzerland, the Netherlands and Denmark. The value of completed industrial co-operation BAE Systems Hägglunds has successfully delivered programmes as part of CV90 procurements is as follows:



## IC delivered Country

- EUR 970 M The Netherlands (2013)
- EUR 240 M Denmark (2009)
- EUR 170 M Finland (2009)
- EUR 470 M Switzerland (2006)
- EUR 170 M Norway (2001)



## IC track record in figures

- Totally committed IC-obligation ~3 Bn EURO
- Accomplished within stipulated time frames 100%
- Whereas ahead of stipulated time frames ~90%
- Delayed IC-obligation fulfilments 0%
- Legal contractual court processes 0
- Number of CV90 programs fulfilled in time and exceeding contracted IC-obligation 4

# CV90 history and development



Norwegian contract signed for 104 vehicles.

1994

The CV9030 MkII, is delivered to the Swiss Army. Between 2002 and 2005, over 186 vehicles are supplied.

2002

Denmark orders 45 CV9035 vehicles.

2005

CV90s are used by ISAF-forces of the Norwegian Army's Telemark Battalion during Operation Karez in the Badghis Province.

2008

Denmark deploys 10 CV9035 DK to Afghanistan as reinforcements in Helmand Province. The units are from the Danish Royal Lifeguard Regiment, based in the Northern part of Seeland.

2010

1993

Production of the CV90 begins for the Swedish Armed Forces, with the following deliveries. Today the Swedish Armed Forces has 549 CV90 vehicles.

2000

Contract signed with Switzerland for 185 CV9030 vehicles. Finland orders 57 CV9030 vehicles.

2004

In December 2004, The Netherlands signs a contract for 184 CV9035 MkIII and eight CV9035 instruction vehicles. Finland orders more units, bringing the overall quantity to 102. As part of a UN contingent, 13 Swedish CV90s are sent to Liberia.

2007

The CV90 is engaged in combat operations for the first time when the Norwegian Army deploys units with 2nd Battalion. The vehicles are used during Operation Harekate Yolo and when Norwegian commandos respond to a Taliban attack on Afghan National Army forces in the Ghowrmach district.

2009

Sweden deploys CV9040s to Afghanistan.



Norway decides to modernize their CV90 fleet, giving Norway 144 state-of-the-art combat vehicles. A smart long term programme including both new and used vehicles.

2012

The Swedish government contracts BAE Systems to refurbish 262 CV90 for the Swedish Army and to install the vehicle mounted mortar system "Mjölner" on 40 CV90s in the Swedish Army fleet. The Dutch government contracts BAE Systems Hägglunds for testing and verification of Active Protection Systems on its CV90 Infantry Fighting Vehicles.

2016

CV90MkIV is introduced – a new step of the ever evolving CV90 with a new drive train comprising of the new 620 kW Scania DP diesel engine and the Caterpillar X-300 HD transmission. 4th generation electronic architecture providing significantly more computing power and compliance towards NGVA. Increased GVW-R of 37 t ensures capability insertion and future growth.

2018

Switzerland signs a life extension contract for the Swiss Army's CV9030, known as the "Schützenpanzer 2000." This will keep their 186 vehicle fleet in service until 2040 and significantly improve the platform's capacities.

2020

The Netherlands signs a contract for a Mid Life Upgrade of their CV9035 containing several significant enhancements such as a new turret for the 122 IFV's.

The enhancements include ergonomic improvements as well as equipping the vehicles with an Active Protection System (APS), Anti-Tank Guided Missile (ATGM), Electro-Optic Aiming System (EOPS), and upgrading its electronic systems.

2021

2011

"ADAPTIV" is launched, a patented technology based on sheets of hexagonal "pixels" that can change temperature very rapidly and allows a vehicle to blend into its surroundings. On-board cameras pick up the background scenery and display that infra-red image on the vehicle, allowing even a moving tank to match its surroundings. The Swedish Defence Materiel Administration (FMV) funds part of the work.

2012 JUNE

The Norwegian Defence Logistics Organisation and BAE Systems signs a contract for the production of the 41 new vehicles as well as upgrades to 103 of the Army's existing fleet of CV9030s. The upgrades include enhanced capabilities for protection, survivability, situational awareness, intelligence, and interoperability.

2017

Sweden procures the CV90 mortar system Mjölner. First delivery 2019 providing indirect fire capability to the Swedish CV90 fleet.

2019

Finalized delivery to the Norwegian Army, securing operational readiness and "Ready to fight tonight." The vehicles have increased lethality and survivability with the highest mobility, and are fully digitized to support the crew in the best way possible. CV90 is connected both to the sea and air domain, using the advantage of "systems of systems" approach. The upgraded CV9030 is prepared for incremental upgrades to ensure growth with new requirements adopting tomorrow's technology in order to meet future threats.

2021

Norway adds more vehicles to their CV90 fleet taking the total number to 164. The 20 new vehicles are designed for combat support such as engineering and multicarrier.



**3** MILLION KILOMETERS  
COVERED BY CV90 FLEET

**7** CV90 USER  
NATIONS IN THE CLUB

**8** MILLION R&D  
HOURS INVESTED

**15** DIFFERENT CV90  
VARIANTS IN SERVICE

**1 300** VEHICLES  
SOLD

**70 000** COMBAT  
DAYS

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