

# ARCHIVED REPORT

For data and forecasts on current programs please visit

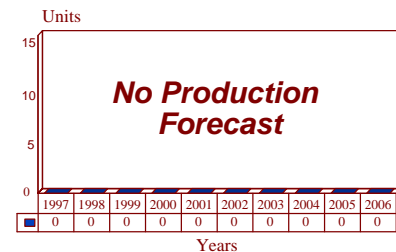
[www.forecastinternational.com](http://www.forecastinternational.com) or call +1 203.426.0800

## Stridsvagn 103 - Archived 2/98

### Outlook

- The production of the Stridsvagn 103 terminated in 1972.
- A total of 312 Stridsvagn 103 tanks was manufactured.
- This tank remains the only turretless design that is operational in the world.
- All Stridsvagn 103 tanks have been brought up to 103C standard.
- No additional significant modernization and retrofit is forecast.

10 Year Unit Production Forecast  
1997 - 2006



### Orientation

**Description.** A tank.

**Sponsor.** The development and procurement of the Stridsvagn 103 was sponsored by the Swedish Ministry of Defense, National Defense Research Establishment through the Swedish army.

**Contractors.** The Stridsvagn 103 was developed and manufactured by Bofors AB, Bofors, Sweden. Boeing, Bofors Aerotronics, Detroit Diesel Corporation, Jungner, Simrad Optronics and Volvo were the main subcontractors.

**Licensees.** None

**Status.** Production of the Stridsvagn 103 for the Swedish Army was completed in 1971 with the delivery of 312

tanks. All units of the basic model of the Stridsvagn 103 have completed modification to 103B and then C status. The last deliveries of the latest upgraded tank were made in late 1989.

**Total Produced.** A total of 312 Stridsvagn 103 tanks was manufactured.

**Application.** A tank for the projection of power as well as defensive missions. This tank has been the main offensive weapon of Sweden's mechanized land forces.

**Price Range.** In equivalent 1972 United States dollars, the Stridsvagn 103 had a unit price of \$618,000. The modification program to upgrade the existing vehicle to 103C status cost \$281,904 per vehicle in equivalent 1987 United States dollars.

### Technical Data

**Design Features.** The only turretless main battle tank in the world; the Stridsvagn 103 features a three-man crew, automatic loader, and a gas turbine for additional power.

**Crew.** Three: commander, gunner and driver.

**Armor.** Conventional; the turretless design in itself is the greatest protection factor of the Stridsvagn 103. In early 1993, a secret armor suite for the Stridsvagn 103

was revealed. This consists of a bar armor screen, available in two versions, mounted vertically in front of the glacis. The base version of this armor is composed of 32 bars, each 3 centimeters (1.18 inches) in diameter placed seven centimeters (2.76 inches) apart. Attachment is by inserting the tapered end of the bar into tapered holes on the tank.

**Dimensions.** The following data are for the modernized Stridsvagn 103C; the width is with the side skirts. In time of war, an additional 18 fuel containers, each holding 22 liters (5.85 United States gallons) can be fitted to the tank.

	<b>SI units</b>	<b>US units</b>
Length	8.98 meters	29.46 feet
Width	3.63 meters	11.91 feet
Height	2.43 meters	7.97 feet
Combat weight	39.7 tonnes	43.76 tons
Fuel capacity	960 liters	255.31 gallons

**Performance.** The maximum speed and range figures are on a metalled road.

Maximum speed	50 kilometers per hour	31.05 miles per hour
Maximum range	390 kilometers	242.19 statute miles
Step	90 centimeters	1.97 feet
Trench	2.3 meters	7.54 feet
Slope	70%	70%
Gradient	58%	58%
Fording	amphibious	amphibious

**Engine.** For the main power plant, the Stridsvagn 103 was originally equipped with the Rolls-Royce K60 multifuel six cylinder diesel engine rated at 179.04 kilowatts (240 horsepower) at 62.5 revolutions per second (3,750 revolutions per minute). The engine was geared to a Boeing 553 gas turbine (for cold weather starts) which is rated 365.54 kilowatts (490 horsepower) at 633.34 revolutions per second (38,000 revolutions per minute). The Stridsvagn 103C model converted to a Detroit Diesel Corporation 6V-53T diesel engine which is rated at 216.34 kilowatts (290 horsepower) at 46.67 revolutions per second (2,800 revolutions per minute). The power to weight ratio for the Stridsvagn 103C is 5.74 kilowatts per tonne (6.97 horsepower per ton). A 24 volt 2.85 kilowatt generator and two 114 ampere hour batteries is the standard electrical fit for all Stridsvagn 103 tanks.

**Gearbox.** This tank uses a Bofors modified Volvo three-step automatic gearbox designated DRH-1M with two forward and two reverse gear ratios coupled to a Volvo torque converter designated FBTV 2B.

**Suspension and Running Gear.** This tank uses a hydro-pneumatic suspension system with four dual rubber tired road wheels. The first and fourth road wheels are mounted on leading suspension arms while the second and third road wheels are mounted on trailing suspension arms. Hydraulic fluid can be pumped between these units as required for altering the length of ground contact or the height of the hull. The suspension system can be locked to provide a stable firing platform. Two return rollers are used.

**Armament.** The Stridsvagn 103 uses a 105 millimeter rifled cannon designated L74 manufactured by Bofors Ordnance. The L74 is a longer (62 calibers) variant of the Royal Ordnance L7 series tank cannon; it uses twin vertical sliding breech-blocks with center cranks. The cannon is fed automatically from 10 magazines which hold five rounds each of either Armor Piercing Discarding Sabot, High Explosive or smoke ammunition. The maximum rate of fire is 15 rounds per minute. The cannon has a muzzle velocity of 1,500 meters per second (4,921.2 feet per second) and range varies, dependent upon the projectile, from 2,000 meters (2,187.22 yards) to 5,000 meters (5,468.05 yards). Manual operation is provided in case of failure of the automatic loading and extraction and ejection system. Elevation is +16° and depression is -11°. Three model ksp 58 7.62 millimeter machine guns, two rigidly and one flexibly mounted, are provided, as are eight 5.3 centimeter smoke dischargers.

**Fire Control.** Due to the Stridsvagn 103's unique design, no stabilization of the main armament is required. Bofors Aerotronics supplies the fire control computer and some related components. Jungner supplies the gunner's OPS-1L combined periscope and binocular sight with integral LV 300 laser rangefinder provided by Simrad; the commander is provided with the same instrument but without the laser rangefinder. The commander's OPS-1 is fully stabilized in elevation from -11° to +16°; his cupola also has a traverse of 208° and is fitted with four periscopes. All periscopes on this tank are fitted with armored shutters.

## Variants/Upgrades

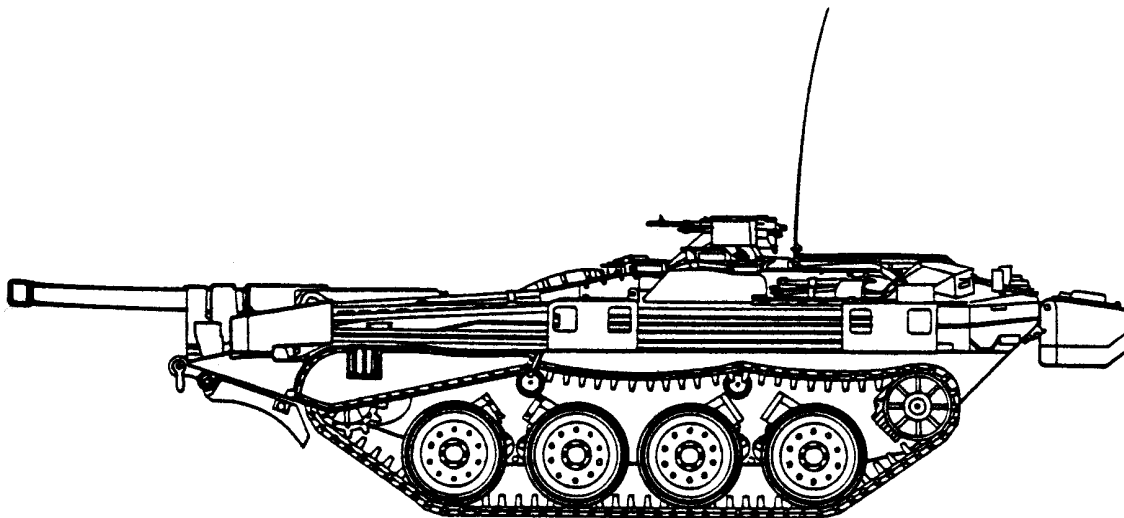
**Variants.** There are no variants of the Stridsvagn 103 developed to production status.

**Modernization and Retrofit Overview.** The first production tanks were designated Stridsvagn 103A; with the addition of a flotation screen and dozer blade, the tank was designated Stridsvagn 103B. Previously, Sweden had studied several more revolutionary designs such as the articulated UDES-20 design for a new tank. However, in late 1983, it was decided to have the original prime contractor modernize and upgrade the Stridsvagn 103B for service through the nineties; the modernized tanks are designated Stridsvagn 103C (formerly REMO 103). It

should be noted that many of the future (1995 on) tank designs from the United States, Federal Republic of Germany and United Kingdom bear a great deal of similarity in design (turretless) to the Stridsvagn 103.

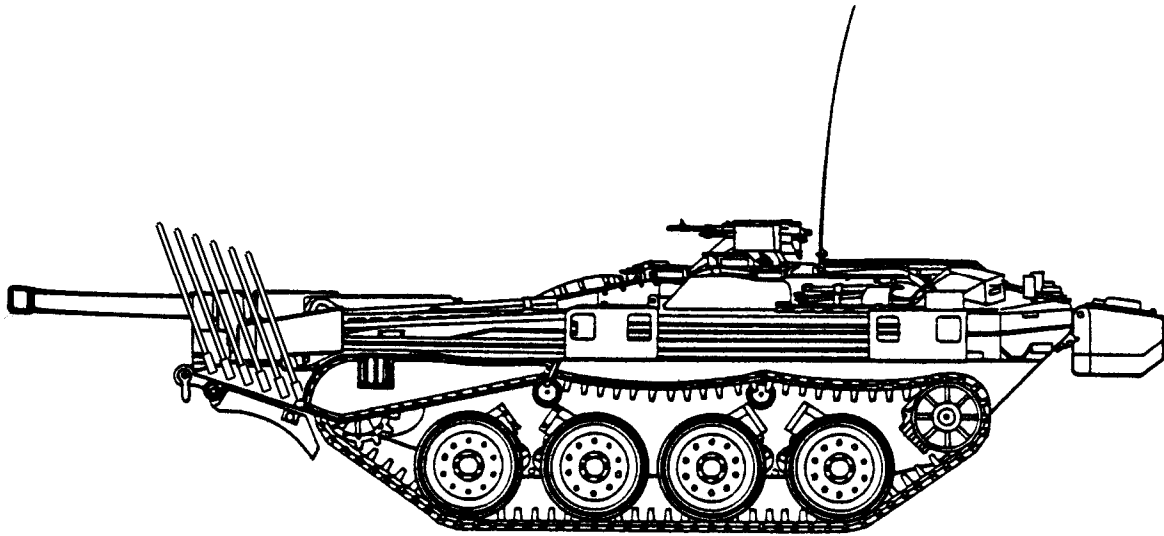
In late 1984, Bofors delivered the Stridsvagn 103C prototype to the Swedish Army for evaluation. The \$45.476 million contract covered modernization of 310 tanks from late 1985 through late 1989. The first completed rebuild was delivered in May of 1986. The final modernized tanks were delivered in late 1989.

Due to the procurement of the Leopard 2, no further modernization or retrofit of the Stridsvagn 103 is forecast.



STRIDSVAGN 103

Source: Forecast International



STRIDSVAGN 103 with Bar Armor

Source: Forecast International