

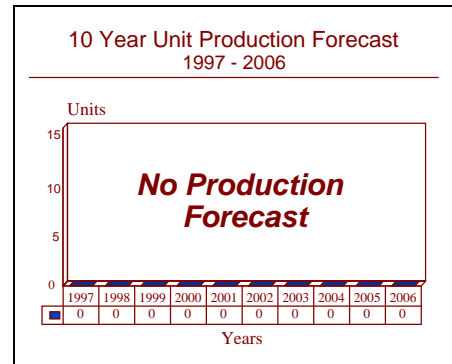
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SIBMAS - Archived 8/98

Outlook

- The production of the SIBMAS is dormant
- Any future production will be under a new contractor that will purchase the technical data package
- The modernization and retrofit for this vehicle is expected to be minimal in the coming years



Orientation

Description. A wheeled vehicle

Sponsor. The SIBMAS program is a private development effort, funded first by Brugeoise-Nivelles and now by the Belgian Mechanical Fabrication/SIBMAS Division of Cockerill Mechanical Industries.

Contractors. The vehicle was developed and manufactured by Constructions Ferroviaires et Metalliques, a department of Brugeoise-Nivelles, and marketed by SIBMAS Special Vehicles Department of this firm. In 1985, Cockerill Mechanical Industries acquired the production rights for this vehicle; the program now operates out of the Belgian Mechanical Fabrication/SIBMAS Department of Cockerill. Maschinenfabrik-Augsburg-Nurnberg and Zahnradfabrik Friedrichshafen are the principal subcontractors.

Licensees. None

Status. Since the recent fabrication of three additional developmental vehicles, the production of the SIBMAS

is dormant; the vehicle is in service with Malaysia. Any future production will be under some licensee as the original contractor is no longer manufacturing the vehicle and is offering to transfer or otherwise license the technical data package.

Total Produced. As of January 1, 1997, a total of 199 SIBMAS vehicles had been manufactured. This includes three original prototypes and ten additional developmental vehicles.

Application. A multipurpose armored personnel carrier optimized for use in the Third World. The basic vehicle has been modified into a number of variants.

Price Range. If production would be resumed, in equivalent 1997 United States dollars, the latest version of the SIBMAS has a unit price of \$307,800 for the basic unarmed vehicle.

Technical Data

Crew. Three: commander, driver and gunner, plus 11 infantrymen

Configuration. 6x6

Dimensions. The following data are for the basic vehicle in the latest production standard. The height figure is to the top of the hull. The weight can range up to 18.48 tonnes (20.37 tons) depending on the armament fit.

	<u>SI units</u>	<u>US units</u>
Length	7.32 meters	24.01 feet
Width	2.50 meters	8.20 feet
Height	2.24 meters	7.35 feet
Combat weight	14.5 tonnes	15.98 tons
Fuel capacity	400 liters	106.38 gallons

Performance. The maximum speed and range figures are on a metalled road. The maximum speed in water is 11 kilometers per hour (6.8 miles per hour).

Maximum speed	100 kilometers per hour	62.10 miles per hour
Maximum range	987 kilometers	612.93 statute miles
Step	75 centimeters	2.46 feet
Trench	1.5 meters	4.92 feet
Slope	40%	40%
Gradient	70%	70%
Fording	amphibious	amphibious

Engine. Maschinenfabrik-Augsburg-Nurnberg supplies the D 2566 MKF six-cylinder, in-line, liquid-cooled, supercharged diesel engine which is rated at 239 kilowatts (320.37 horsepower) at 31.67 revolutions per second (1,900 revolutions per minute) for this vehicle. The power-to-weight ratio (at the 14.5 tonne vehicle weight) is 16.48 kilowatts per tonne (20.05 horsepower per ton). With the higher vehicle weights, these figures decline somewhat. A 24 volt electrical system with four 12 volt 100 ampere-hour batteries is standard.

Gearbox. The 6 HP 500 fully automatic power shift gearbox with six gear ratios and a hydrodynamic torque converter is provided by Zahnradfabrik Friedrichshafen. Steering (on the first axle only) is power assisted.

Suspension and Running Gear. The 6x6 SIBMAS suspension combines lower longitudinal suspension arms with an above axle wishbone. Helical springs and hydraulic shock dampers are fitted to all wheel stations. Two tire sizes are offered; the 14.00x20 and 16.00x20 the tires are the run flat type.

Armament. For testing and competitive evaluations, the SIBMAS was equipped with the Cockerill CM90 90 millimeter turret with the Mark III cannon. This is now considered the standard fit. The SIBMAS can be fitted with a wide range of armament including various 20 millimeter cannon, various machine guns, HOT and MILAN anti-tank missile launchers, or a combination of cannon and missile systems.

Variants/Upgrades

Variants. The SIBMAS has been produced in the basic model and one variant; the Armored Fire Support Vehicle 90 and the Armored Recovery Vehicle. Several additional variants have been brought to production status.

A command post variant is available with additional communications equipment and a tent which is erected at the rear of the vehicle.

An armored ambulance that can accommodate two orderlies, four stretchers, and three seated patients.

A cargo carrier with a roof-mounted crane and a higher roof; this version has a four-tonne (4.41 ton) capacity.

An armored recovery vehicle is available with two stabilizing blades, an eight-tonne crane, and a 20-tonne winch.

An armored mortar carrier with an 81 millimeter mortar and 60 rounds of ammunition.

In addition, the SIBMAS has been developed and integrated with a number of differing weapon systems. The existing armament installations include:

The Cockerill CM-90 turret with the 90 millimeter Mark III cannon and two 7.62 millimeter machine guns.

The LCTS-90 turret from Cockerill fitted with the same armament as listed above.

The Electronique Serge Dassault turret with twin 20 millimeter cannon of various types.

The Hispano-Suiza Lynx 90 turret with the D921 or Mark III 90 millimeter cannon and two 7.62 millimeter machine guns.

The Hispano-Suiza CNMP Serval 60/20 turret with a 60 millimeter breech loading mortar, a 20 millimeter cannon (a French M693 or an Örlikon-Contraves KAD-B16) and a 7.62 millimeter machine gun.

The Vickers two man 20 millimeter turret with an Örlikon-Contraves 20 millimeter KAA-001 cannon and a 7.62 millimeter machine gun.

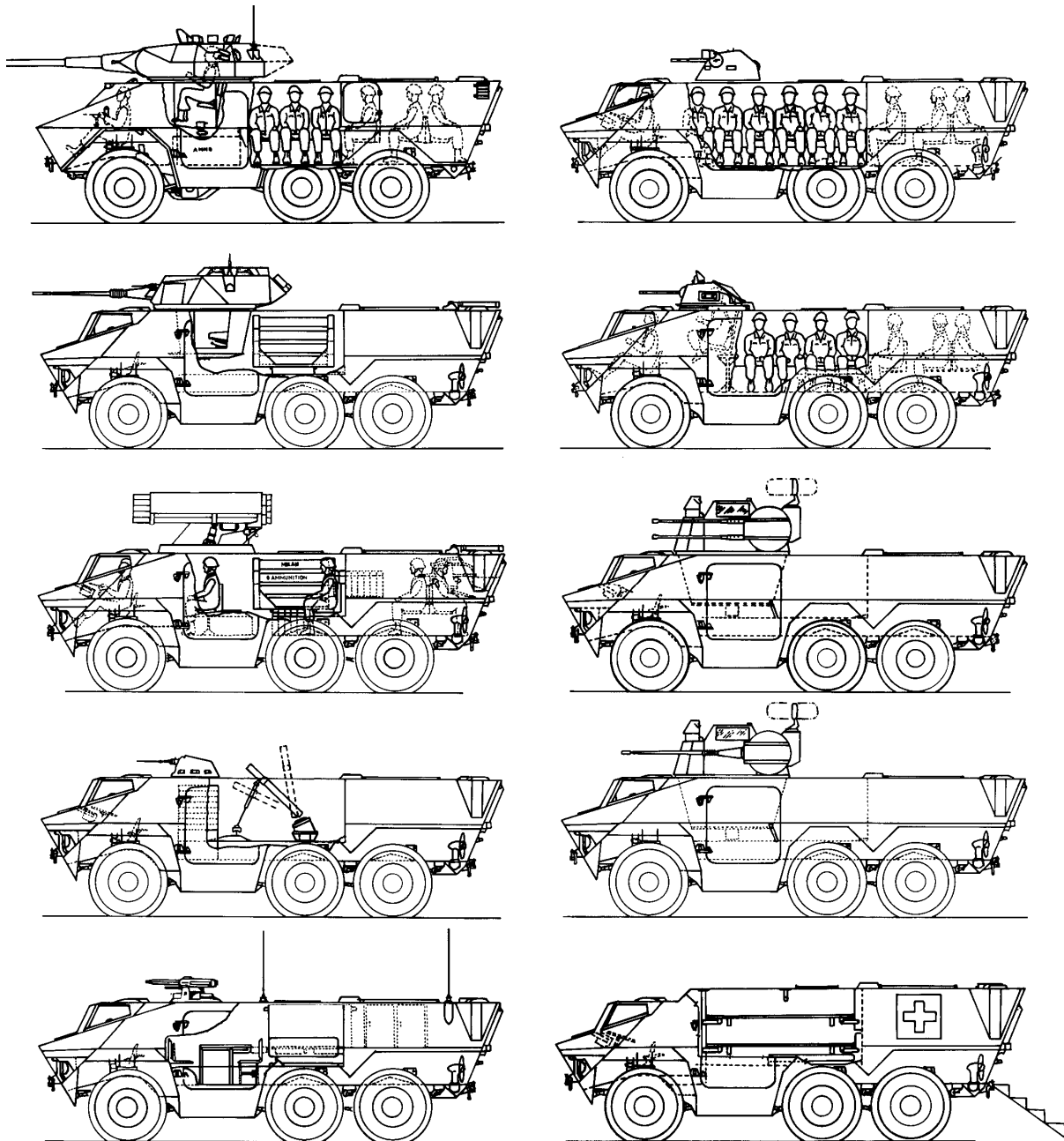
The Societe d'Applications des Machines Motrices TG.120 (now the TTB 120) turret with a 20 millimeter M693 cannon, and a 7.62 millimeter machine gun.

The Societe d'Applications des Machines Motrices S 365-1 (now the BTM 208) turret with a 12.7 millimeter machine gun as main armament and a 7.62 millimeter machine gun as secondary armament.

The Helio Mirror FVT 800 twin machine gun turret equipped with either two 7.62 millimeter machine guns or a single 7.62 millimeter machine gun and a 12.7 millimeter M2HB machine gun.

The FVT 900 turret, also from Helio Mirror mounting a single 20 millimeter cannon and a 7.62 millimeter machine gun.

Modernization and Retrofit Overview. As of mid-1997, no significant modernization or retrofit programs had been developed for the SIBMAS.



SIBMAS

Source: Belgian Mechanical Fabrication