

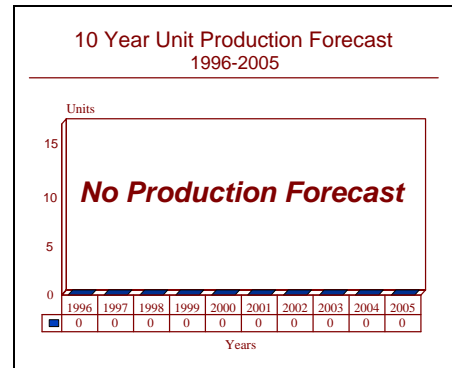
ARCHIVED REPORT

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Hot Dog/Silver Dog - Archived 11/97

Outlook

- Modification of AFV deployed system
- Simple, low-impact system
- Becoming outmoded by more sophisticated missiles
- Future production only feasible if new grenades
- Totally upgraded version of system likely to emerge



Orientation

Description. A naval infrared flare (Hot Dog) and chaff (Silver Dog) launching system aimed at decoying radar guided and infrared homing missiles and the deception of search radars.

Sponsor

Bundesamt für Wehrtechnik-Beschaffung (BWB)
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D-56068 Koblenz
Germany
Tel: +49 261 4001
Telex: 862261

Contractors

Wegmann & Co GmbH
August-Bode-Straße 1
D-34127 Kassel
Germany
Tel: +49 561 1050
Telex: 99859
(Launcher system)

Buck Chemisch-Technische Werke GmbH & Co.

Dr. Ing. Hans-Buck-Haus
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Postfach 2405
D-83435 Bad Reichenhall
Germany
Tel: +49 8651 7020
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(Grenades)

Licensee. No production licenses have been granted.

Status. In service. Production for naval applications is believed to have come to an end in 1996; production for land-based applications continues.

Total Produced. A total of 70 platforms have been equipped with, or are to receive, the Hot Dog and Silver Dog decoy launchers.

Application. In naval use, the following platforms have been used: fast attack craft, coastal minesweepers and minehunters, depot ships, patrol craft, corvettes.

Price Range. Analysis of the system indicates that the unit cost for a three-tube module does not exceed US\$20,000.

Technical Data

Specifications

Number of tubes: 12 or 24 per system
Cloud development time: 2 seconds

	Metric	US
Launcher		
<i>Bore:</i>	76 mm	3 in
<i>Dimensions (w x l x h)</i>	196 x 710 x 420 mm	7.7 x 28 x 16.5 in
<i>Weight (12 tube):</i>	115 kg	253 lb
<i>Weight (24 tube):</i>	220kg	485 lb
Hot Dog IR Decoy		
<i>Bore:</i>	76 mm	3 in
<i>Weight:</i>	0.74 kg	1.6 lb
<i>Payload weight:</i>	0.41 kg	0.9 lb
Silver Dog Chaff Decoy		
<i>Bore:</i>	76 mm	3 in
<i>Weight:</i>	0.95 kg	2.1 lb
<i>Payload weight:</i>	0.45 kg	1 lb

Design Features. The Hot Dog (IR flare) and Silver Dog (chaff) grenades are launched from 12- or 24-tube banks of single-launch units. These individual units are identical to those built by Wegmann for armored fighting vehicles. The tubes may be loaded with IR flare or chaff grenades, or a combination of both, depending on the threat situation.

The grenades can be fired in single shots or in a series of shots. In serial fire, continuous firing is carried on automatically and the decoy cloud becomes effective only after two seconds. The cloud remains effective over a considerable period of time, effectively causing the missile to lock on to this in lieu of the vessel itself. Each round contains seven submunitions which are

ejected in sequence, bursting at ranges of 40-160 meters. The system is controlled through a master or a manually operated auxiliary control box.

The system is especially appropriate to small craft, but can be mounted in any type of vessel where deck space or hard-points are at a premium.

Operational Characteristics. The Hot Dog/Silver Dog system is a navalized version of the Wegmann 76-millimeter multipurpose Grenade launcher system, widely used on German AFVs. The rocket was developed in conjunction with Plessey, the infrared material being adopted by the UK Royal Navy for its Shield P6 system.

Variants/Upgrades

It is possible that further developments to the individual rockets will take place in an attempt to increase range and improve the pattern formation. In addition, the range of grenades used in the land-based Wegmann multipurpose system remains compatible with the navalized versions, giving rise to the possibility of

firing smoke, thermal smoke and fragmentation grenades.

The smoke, anti-FLIR thermal smoke and anti-laser smoke grenades are likely to be of particular interest in view of the growing use of optically-guided anti-ship missiles.

Program Review

Background. The Hot Dog/Silver Dog system was in production at least up to the end of 1995 and has been procured by the German navy. It is claimed to be in service with export customers, including other NATO

navies, and has been offered for sale as part of the equipment fit of light vessels such as the Type 148, Type 143 and Lürssen class FAC.

The first of the Type 343 minesweepers entered service in late 1988. These ships are thought to mount the Hot Dog/Silver Dog decoy launcher. Although the Hot Dog/Silver Dog system is available for export, there is no evidence of any purchases other than the German navy. Photographs of Type 148, Type 143 and Lürssen class FAC exported to other navies show no sign of Hot Dog/Silver Dog installations. This does not mean they are not fitted to receive such systems, since the design of Hot Dog and Silver Dog allows for their installation at a very short notice.

The last two Type 343 minesweepers were delivered in 1991. Future mine warfare construction will be concentrated on the Type 332 coastal minehunters. These will also mount Hot Dog/Silver Dog.

In 1992 virtually the entire East German navy was sold to Indonesia. This sale included 16 Parchim-I class

corvettes, 9 Kondor-II class minehunters, 12 Frosch-I class LSTs and 2 Frosch-II depot ships. Of these, only the Parchim class ships were delivered in armed condition, but it is possible that some or all of these have been equipped with Hot Dog and Silver Dog decoy launchers. The Kondor-II ships are believed to be intended for offshore patrol and maritime policing rather than mine warfare; thus they may also carry the Hot Dog/Silver Dog system, possibly using illumination rather than decoy rounds.

The Buck Chemisch-Technische Werke has introduced a number of new grenades for its land-based systems, mainly intended for defeating laser-guided munitions and thermal imaging equipment. Presumably naval equivalents of these munitions can be made available. Apart from this, no activity in this program has been reported for some years now.

Funding

The original multipurpose grenade system was developed for armored fighting vehicle use under contract from the then-West German army. Navalization of the system was undertaken by a West German navy contract. Any future production of the system will be funded by German navy contract.

Recent Contracts

No contractual information has been made publicly available.

Timetable

1983	Entered service on German Type 143A FAC
1984	Installed on German Type 143 FAC on refit
1988	Entered service on German Type 343 minesweepers
1996	Expected completion of deliveries for Type 332 minehunters, winding down the production for naval applications.

Worldwide Distribution

Germany is the only confirmed user of the system (7 on Lüneburg AD, 3 on Oste AGI, 9 on Type 143 FAC-M, 10 on Type 143A FAC-M, 1 on Type 143B FAC-M, 20 on Type 148 FAC-M, 10 on Type 332 MCMV, 10 on Type 343 MCMV, 2 on Type 762 MMC).

Forecast Rationale

Hot Dog/Silver Dog is a quick, simple adaptation of a well-established land system to the naval environment. The Wegmann-Buck system is hardly suitable for larger ships due to its lack of integral ESM and RWR facilities. The system has a very short range and is thus only usable for last-ditch defense.

Within these fundamental limitations, however, it is effective and competitively priced. Still, its market acceptability is likely to be limited and sales to armed forces other than the German navy are improbable. Even within the German navy, the existence of FAC-compatible chaff/flare launchers with integrated radar

warning equipment will hasten the demise of Hot Dog/Silver Dog.

If upgrading efforts are undertaken, they will center on the integration of a radar warning device into the existing system. The Matilda RWR is probably best-suited to this requirement. The scale of production will ensure that the system developed remains competitively priced. It will, however, constitute a radically different equipment from the simple, low-impact Hot Dog/Silver Dog and will be treated accordingly.

Another possibility lies in the adaptation of more recent grenades that have been developed for the land-based versions of this system. These include thermal smoke, anti-laser designation smoke, illumination and fragmentation charges.

Hot Dog/Silver Dog has proved particularly suitable for mine warfare vessels. Deploying mine warfare ships to the Persian Gulf as part of Desert Shield/Desert Storm caused serious concern about their increased vulnerability, resulting from apparently trivial

modifications. Those included replacement of 40 mm guns by 30 mm, as well as the addition of 20 mm cannon and a pair of lightweight chaff launchers, all of which was considered enough to move their acoustic and magnetic signatures into the danger zone. The very light, low-impact Hot Dog/Silver Dog system provides a measure of decoy capability for such vessels, without substantially changing the ship's signature in these vital areas.

The installation on the ten planned Type 332 minehunters will mark the end of launcher production for naval requirements, although production as smoke launchers for armored vehicles will continue at a relatively high rate. Once the Type 332 installations are completed, the Hot Dog/Silver Dog is likely to be replaced by a new, highly developed version that has integral radar warning and ESM facilities. Production of munitions for the system will, however, continue beyond the production cessation for launch units.

Unless there is an unexpected change in this situation, this report will be discontinued in a future supplement.

Ten-Year Outlook

The forecast chart has been omitted, since no production is forecast.

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