# News Magazine

A publication from Dockstavarvet • 2005

DOCKSTA VARVET

## Dockstavarvet 100 Years 1905–2005

## 100 Years of Dockstavarvet´s history

| | |
|---|---|
| **1905** | The family company started by Nils Sundin. A small workshop was established. |
| **1906** | First order, a fishing boat for a local fisherman. |
| **1916** | First wooden-hulled Pilot Cutter delivered. |
| **1920-1935** | Serial production of lifeboats for merchant marine. |
| **1926-1958** | 20 wooden-hulled Pilot Cutters delivered to local pilots in Gulf of Bothnia. |
| **1937-1938** | Prestige orders; a 12.8 m Petterson-design pleasure launch and an 11.2 m coastal cruiser. |
| **1940-1945** | Serial production of lifeboats and workboats for the Royal Swedish Navy. |
| **1945-1958** | Production of knock-down-kits for small road ferries and assembly on site. |
| **1950-1965** | Phasing out of wood and pleasure craft and transfer to steel, aluminium and workboats. |
| **1957** | First steel Pilot Cutter delivered. |
| **1960** | The second generation, Karl Sundin takes over. New slipway and workshop constructed. |
| **1967** | Solitude, the biggest yacht built in Sweden after WW II, a 22 meter steel-hulled motor-sailor. |
| **1969** | The first newbuild in aluminium, a fast launch for the Swedish Coast Guard. |
| **1975** | The third generation, Karl-Anders, Torsten and Per Sundin takes over. |
| **1975-1986** | Serial production of Pilot Boats for the Swedish Maritime Administration. |
| **1980** | First export order, a workboat for Tanesco, Tanzania. |
| **1989** | The first two prototypes of CB 90 H for the Royal Swedish Navy. |
| **1991-2003** | Delivery of 147 Combat Boats for the Royal Swedish Navy. |
| **1992-2004** | 20 Pilot Boats for Denmark. |
| **1996-1999** | 20 Combat Boats for the Royal Norwegian Navy. |
| **1999-2001** | 40 Combat Boats for the Mexican Navy. |
| **1999-2001** | 17 Combat Boats for Royal Malaysian Navy. |
| **2002** | Interceptor 15 M prototype ENFORCER II built for own account as demonstrator. |
| **2002-2004** | License Production in Mexico (8 x CB 90 H) and Malaysia (4 x IC 16 M). |
| **2004** | IC 16 M Security Interceptor delivered to Russia. |
| **2005** | IC 16 M in production for Mexico and 4 x ALUPILOT 14000 for Denmark. |

# The Future

"Our future lies in continued development of our existing range of Pilot, Police and Patrol craft," explains Mr K-A Sundin, the Managing Director of Dockstavarvet. "The concept is well proven and state-of-the-art boats from our yard are already in operation in 9 countries spread over three continents."

Concentration on a building programme based on a few basic platforms with proven performance and close attention to detail engineering is paying off, both for the customer and the builder.

"It started back in the late seventies", continues Mr Sundin. "We had already got into short-series production of Pilot Launches for the Swedish Maritime Administration and thought that we should try to build more of the same instead of just jumping on whatever came our way. We decided to continue on this track and I believe we have more than once shown that our concept-idea is a winner. In Sweden, for example, today there are just a couple of new-building yards still in operation. Our aim is to be an important niche-player on an international market and avoid trying to be a Jack of all trades."

### A big structural change

Looking back at 100 years of uninterrupted operation as a family owned business, the development from the


DOCKSTA VARVET

**Dockstavarvet AB,** SE-870 33 DOCKSTA, Sweden
**Phone** +46 613 711 600 • **Fax** +46 613 404 66

**Publisher** ..... K-A Sundin
**Project leader** ..... Pelle Strömsten
**Media sales** ..... Maud Svensson
**Editor** ..... Åke Nordlander
**Photo** ..... Åke Nordlander, Fredrik Forsman, Thomas Dahlqvist
**Grafic form** ..... Stegra reklam & prod.byrå
**Print** ..... Prinfo Bergs, Virserum

*Produced by:*
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MediaPartner, Box 86,
SE-598 22 VIMMERBY, Sweden
**Phone** +46 492 196 70
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# concept

modest start in 1905 is dramatic. The first 50 years saw some 300 wooden boats between 6 and 12 metres being built both for professional and private owners.

The following 20 years meant a switch to steel and, above all, aluminium construction and a concentration on the workboat sector. With the construction of a new slipway and workshop in 1960 the yard attracted an increasing number of repair customers, typically timber tugs, ferries, fishing vessels and authority craft. The first newbuilding in aluminium was delivered to the Swedish Coast Guard in 1969 and started a new era of specialisation.

### The boom in aluminium

From 1975 onwards the newbuilding section has expanded while the repair business has fallen back due to the sharp decline of the local commercial workboat fleet.

The real boom in aluminium construction started in 1989 with the delivery of the prototypes of the Combat Boat 90 H to the Swedish Defence Material Administration. Serial production started in 1990 and to date a total of over 230 units have been delivered worldwide plus some 10 customised variations on the same basic design. In the same period the yard has also built 20 aluminium Pilot Launches for Denmark.

To cope with this expansion the workshops have been extended and a whole network of specialised sub-suppliers and sub-contractors has been implemented in a tight logistics system. The export activities have also resulted in licence production in both Mexico and Malaysia and the creation of support systems for both new building and maintenance abroad.

### Craft are at the forefront on todays market

The range of standard designs goes from 10.5 to 20 metres with the new + 50 knots Interceptor 16 M as the flagship.

"Today", explains Mr Sundin "we have gained a know-how which is based on long term cooperation and feed-back from customers operating under the most demanding professional conditions world-wide. This knowledge goes straight back into all new projects and our Pilot Boats and Police/Patrol Craft are at the forefront of what you find on the market today."

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## SURVEILLANCE – PROTECT – ENGAGEMENT

# LEMUR™

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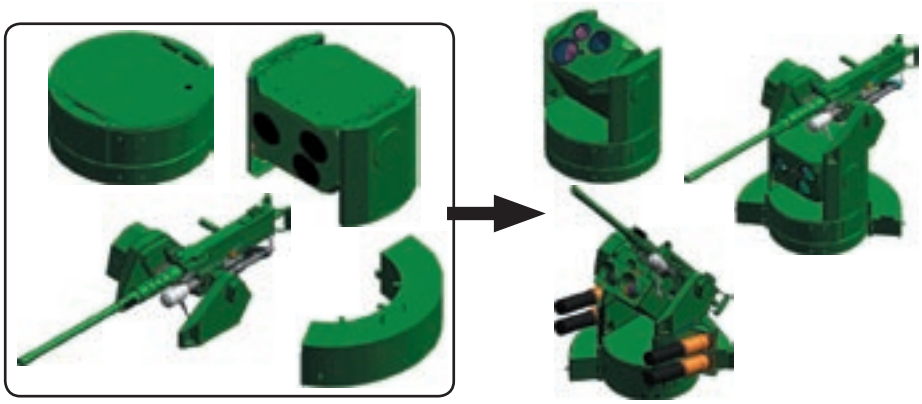

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# Demonstrating the CB

"We have stressed the CB 90 H as much as possible, navigating among tree tops and running over floating logs in 45 knots. We have been where there is almost no water at all", says Dockstavarvet's Project Manager Ulf Mansnérus after more than 200 running hours of the CB 90 H in the Amazon. The demonstrations were done together with Bofors Defence, Rolls-Royce, Scania and Transas.

1) The CB 90 H caught at a gasoline station on the Amazon River.

2) The CB 90 H made impression on the Brazilians with its speed resources and ease of operation while remaining very silent.

The rivers of the Amazon Basin are known for their natural obstacles to navigation. During the rainy season the water level in the Amazon rises about 10 meters, trees become submerged and the stream carries a lot of natural debris, such as logs and floating grass islands known as "canaranas". Hitting these obstacles and damaging the boat's underwater appendages are an imminent danger when operating at high speed in these waters.

By using waterjet propulsion and being heavily reinforced for beaching operations, the CB 90 H, is not as vulnerable to these obstacles.

However, waterjet propulsion is not commonly used in the Amazon, and the technique has earned a bad reputation due to unsuccessful tests in the past. In spite of this Dockstavarvet was convinced that water jets would perform well under these conditions.

## Reconnaissance and Assault exercises

Consequently, Dockstavarvet was invited by the Brazilian Army to conduct tests together with troops from the 1st Jungle Infantry Battalion (1°BIS) during the spring 2004. A Swedish team was formed comprising Dockstavarvet's Project Manager Ulf Mansnérus and Juan Veloci supported by three officers from the Swedish Amphibious Forces. Preparations started and vital spare parts together with personal gear were stowed onboard the assigned craft, CB 90 H No 917. The boat was then shipped from Sweden one month ahead of the demonstration and arrived in late March at Manaus, located some 1 500 km upstream in the Amazon where the two rivers Rio Solimoes and Rio Negro meet.

The demonstration began with training of Brazilian crews over three weeks at the Army base, learning how to utilize the full potential of the CB 90 H and how to operate the LEMUR system.

The training was then followed by one week of evaluation in the jungle. As a bonus, Dockstavarvet was invited to stay through July participating in Operation Timbo 2.

## Sophisticated and armour protected

The CB 90 H no 917 uses the latest standards including armour protection withstanding 7.62 Nato Ball and collective NBC-protection. The boat is normally used as a test platform by the Swedish Defence Material Administration and the Swedish Amphibious Forces.

Presently, the navy version of Bofors' LEMUR

# 90 H in the Amazonas

> "We have been where there is almost no water at all

system is installed, and the boat is powered by Scania's new DI 16 V8-diesel engines giving a sprint speed of 45 knots.

The onboard navigation system comprises Navi Sailor 3000 Electronic Chart System, compass, GPS, echo sounder and radar. Transas demonstrated the ability to tailor make products for a specific mission by producing digital navigational charts for the Amazon River purposely for this demonstration. Due to the continuous changes in water levels it is somewhat difficult to establish the actual shoreline and the chart information is limited close to shore, where the Brazilian Army often operates. Consequently, Transas added new information to the charts on site.

### Detects obstacles in the water

The Bofors' LEMUR system is a gyro stabilized weapon platform equipped with sensors comprising day-camera, IR-camera and Laser Range Finder. The system does not only provide good firing precision but a valuable reconnaissance aid. The IR-camera in particular proved very useful. Obstacles in the waters are detected by the navigation radar and then identified with the IR-camera.

Without the IR-camera it is almost impossible to detect targets hiding in the surrounding vegetation.

Scania's brand new DI 16 engine, rated 625 kW at 2 200 rpm, delivers more power and torque compared to its predecessor. There is an obvious improvement in both speed and acceleration, and the engines deliver full power at all times in the warm water. The additional torque becomes useful in close manoeuvres and the boat maintains its speed better throughout the turn. The new engine is a vital upgrade, especially for a boat with the increased displacement of this armoured protected version.

### New Understanding

Dockstavarvet gained a new understanding of what special demands this environment makes on the boat and its equipment during this demonstration. "We have stressed the CB 90 H as much as possible, navigating among tree tops and running over floating logs in 45 knots. We have been where there is literally no water at all. And despite the harsh treatment, we have not experienced any damage to the water jets after more than 200 running hours" says Dockstavarvet's Project Manager Ulf Mansnérus. "Of course the waterjets get clogged once in a while, but are easily cleaned by back-flushing the system".

In addition, the CB 90 H was also demonstrated for officials from other South-American countries, Civil Authorities and companies visiting Manaus.

As well as the CB 90 H, Dockstavarvet demonstrated an open group transport boat.

Manoeuvrability and being able to travel where there is almost no water is a great advantage when chasing and intercepting smugglers.

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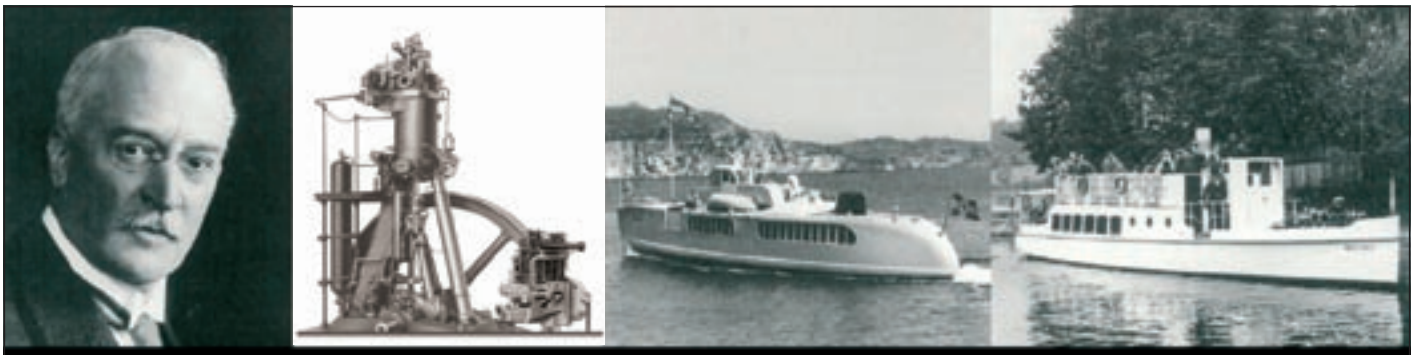

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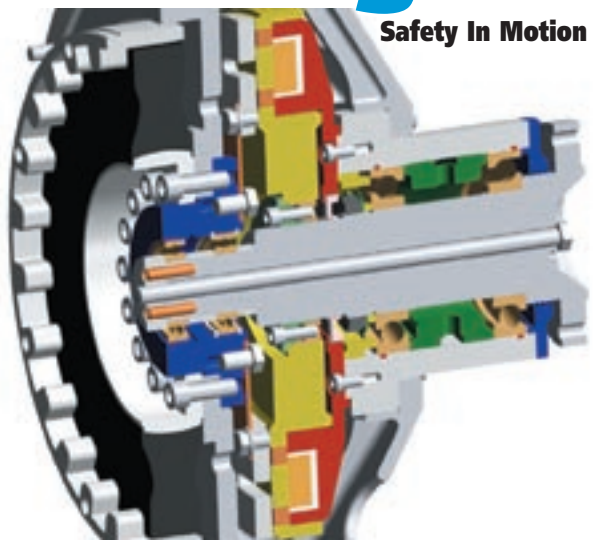

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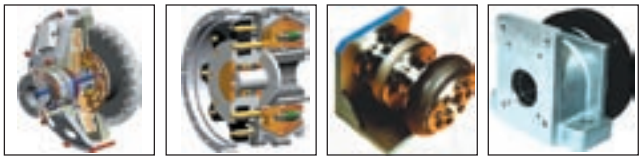

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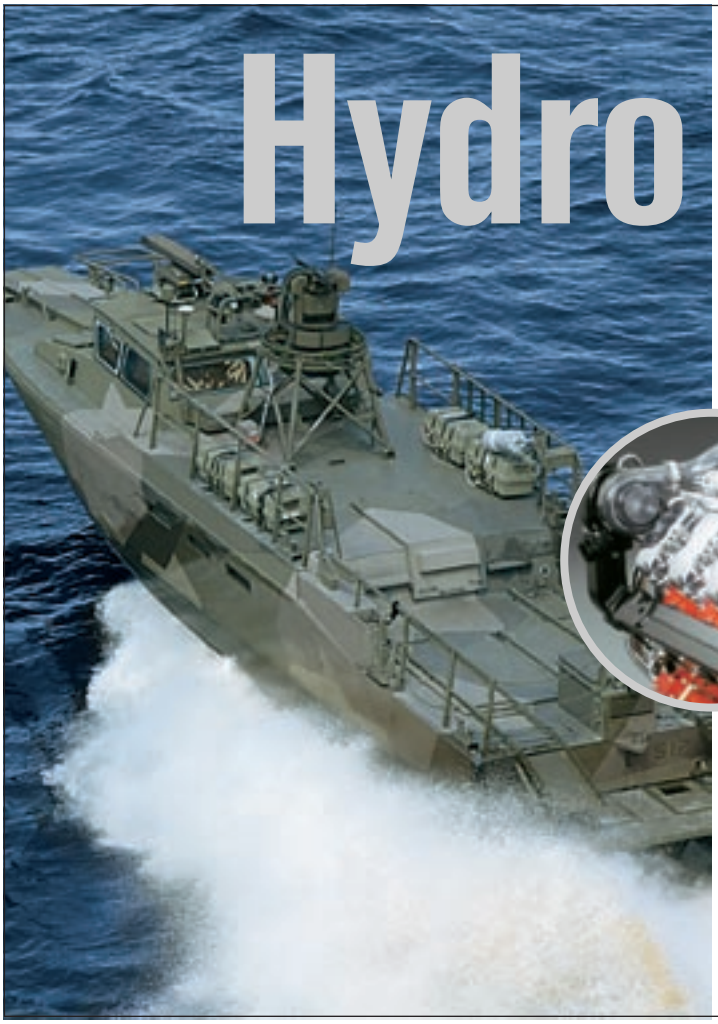

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In Sydney Harbour a police boat is slowly patrolling, while a high-speed ferry slices through the waves off Brisbane. Tourists admire the scenery along the Geiranger Fjord and outside Southampton a pilot is boarding a container ship. What they have in common are the Scania marine diesel engines – dependable, durable and reliable workhorses that require a minimum of service and maintenance.

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# IC 16 M

## – a real good tool for fulfilling the new working concept

The new high speed Interceptor, the IC 16 M from Swedish Dockstavarvet, has been a really good asset for the Royal Malaysian Customs. “The IC 16 M has helped us in a very positive manner” explains Mr Tuan Haji Hassan bin Arshad, head of the Royal Malaysian Customs in Sabah. “Thanks to its extreme speed capabilities, ease of manoeuvrability and accessibility, we have got a push forward in our new strategy where prevention has been a hallmark. We really like the new boat.”

Continues >>


The new IC 16 M from Dockstavarvet quickly gave rise to a new perception by the public, be careful, the Customs nowadays has a new strong boat.

> "The new Dockstavarvet vessel is our number one

From left Mr Kenny Wong, Royal Malaysian Customs, Boat Commander in Kota Kinabalu, Mr Hj Yusof, Deputy Director of Customs, Sabah, Mr Tuan Haji Hassan bin Arshad, head of Royal Malaysian Customs in Sabah and Mr Abd Gani bin Othman from Royal Malaysian Customs headquarters in Kuala Lumpur.

Dockstavarvet and its local partner in Kuala Lumpur received the order back in 2003. The Royal Malaysian Customs ordered four vessels in the new series from Dockstavarvet, launched 2002 in connection with the Seawork tradeshow in Southampton. The four vessels have been manufactured locally by DNSS Boat Builder Sdn Bhd, a joint venture company between Dockstavarvet, Dawn Enterpise Sdn Bhd and Sarawak Slipways Sdn Bhd in Miri, Sarawak, East Malaysia.

Dockstavarvet has supplied complete engineering and construction drawings as well as service, spare parts and support systems.

### Coastline of more than 3 000 km

Malaysia has an enormous coastline with over 3 000 km of seashore spilt between West and East Malaysia and an archipelago of more than 500 islands, reefs and islets from Langkawi in the west to the Spratley Islands and Borneo in the east. "Just here in Sabah the coastline is some 1 400 km and then we have land boarders with Indonesia, Brunei and our sister province Sarawak to the south", says Mr Abd Gani Othman, representative from the Royal Malaysian Customs headquarter in Kuala Lumpur.

"It means we have to have very good control at sea and on the rivers since there is a steady rise in traffic on all waterways. The short distances to neighbouring Philippines and Indonesia and the current situation there make the smuggling of goods,

drugs and people an attractive business to people without scruples. If we then add the increasing air-traffic just to Kota Kinabalu with about 50 new arrivals per week over the last half-year, then you can imagine that our job is increasing all the time. But we are also working together with the Marine Police and the Navy, who also have a number of Dockstavarvet patrol boats, including the Combat Boat 90 H with similar capabilities."

### The Firewall Strategy

One of the main missions of the Prevention Division of the Royal Malaysian Customs is to hinder the smuggling of goods, especially contraband cigarettes, liquor and drugs. Smuggling is so profitable that it has tempted the people to act for syndicates organizing smuggling into Malaysia where there is a demand for goods. "When it comes to drugs", continues Mr Abd Gani Othman, "the trend is to use Malaysia as a transit to either Europe or North America. And our forces are stronger than those of our neighbours, meaning we have to bear a big burden when it comes to patrolling at sea. But from time to time we do joint exercises and just last week we made one with our Philippine colleagues."

"Previously we tried to catch the smugglers, but with this new boat we have changed strategy and the concept now is to hinder them. We can establish a firewall thanks to the capabilities of the new vessel, we can cover longer distances at one go and with the joint communications centre just established we are looking forward with much more confidence. This way we save a lot of manpower, which can be used elsewhere, and in the end we also save a lot of money of course. By doing it this way we don't have to catch them, charge them, store good and destroy goods."

### IC 16 M fast, reliable with a good staying power

"The new Dockstavarvet vessel is our number one today. It can be deployed at very short notice, once we know something is on, we just call the crew, push the button and off we go. We can be off in less than two minutes! Sea conditions are good, it is stable with an excellent sprint speed and it is easy and reliable in manoeuvring. It is a very good boat compared to what we had earlier and it is the best out of the three new types we bought at the same time."

"With a crew of up to eight people we can also go on longer missions. That is very suitable i.e. when we are patrolling in the Tawau area on the east coast of Sabah. Here we often work together with more units as well as with the Navy or Marine police. The accommodation onboard is also thought out.

"There is no doubt", concludes Mr Kenny Wong, Boat Commander at the Royal Malaysian Customs in Kota Kinabalu, "we need more boats and this boat really helps us fulfil our mission, and the public perception nowadays is that the Customs has a very strong boat – so be careful."

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# Security Craft

Dockstavarvet has delivered a customized version of the 16 meter Interceptor Craft "IC 16 M" to Autogrand Marine Ltd of St Petersburg. The new vessel was handed over at Dockstavarvet in May 2004, and will be operated on the inland waterways of Russia.

The IC 16 M design is based on the well-known CB 90 H concept adapted for patrol operations. The wheelhouse, now being sound-insulated, has been moved aft increasing the crew comfort and providing excellent visibility around the horizon despite the low profile.

The accommodation is arranged for a crew of four with two single cabins, one two-man cabin, galley, mess-room and head.

The craft is an all aluminium construction and is powered by two MAN 2842 LE 410 diesel engines, giving a total output of 1 600 kW (2 200 hp) and a sprint speed of more than 50 knots. The engines drive two Rolls-Royce FF410 water jet units through hydraulic clutches and flexible shaft couplings.

This version is fitted with a bow ramp taken directly from the CB 90 H design. A remotely operated foldable mast provides a maximum air draft of 3.50 meters when the mast is lowered, thus enabling the craft to pass under bridges even at high water. The boat is also fitted with a 3.4 meter RIB tender stowed in a ramp on the aft deck.

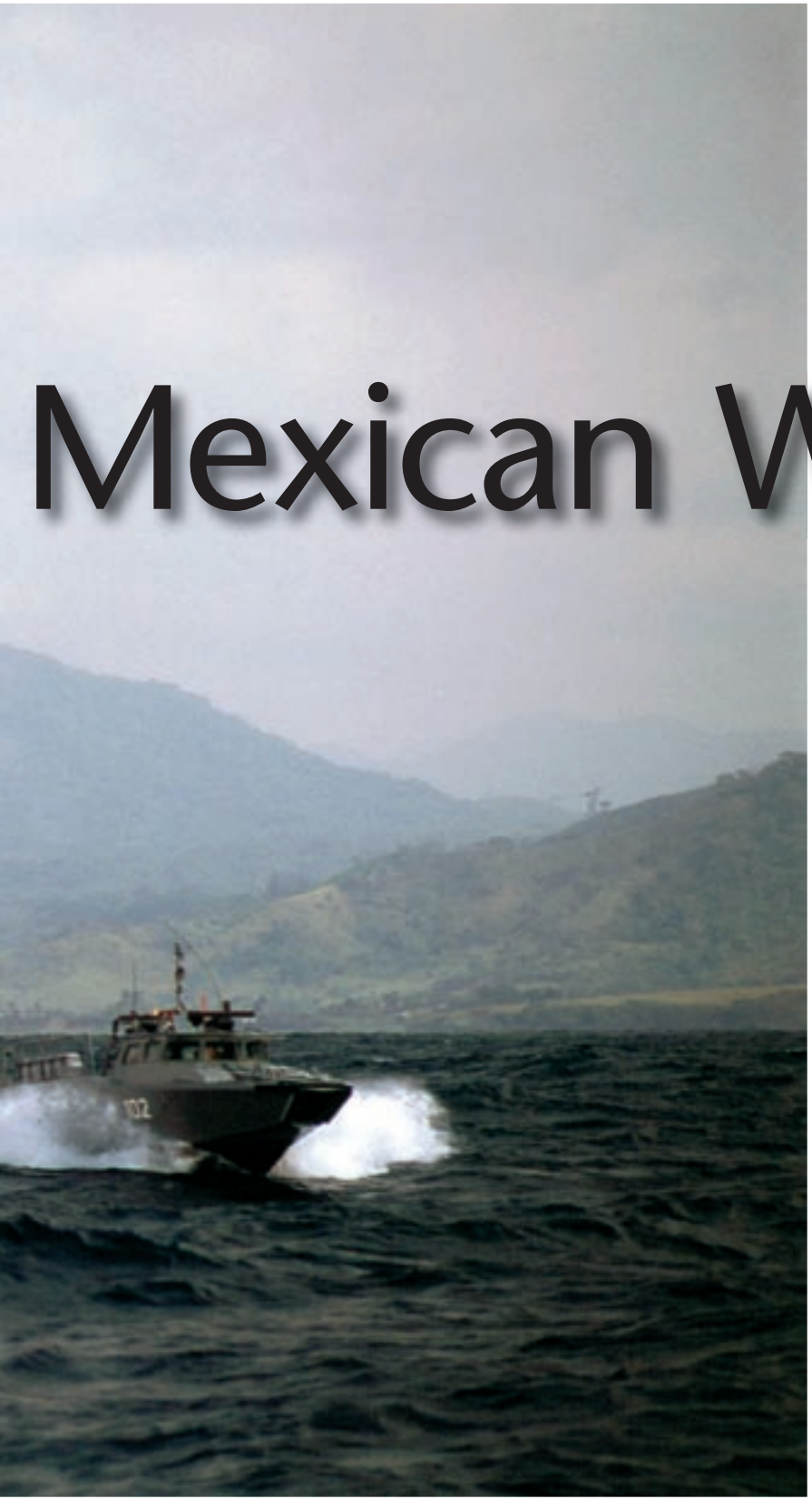
With a speed capability of more than 50 knots it's a true High Speed Craft, but it is not a racing machine. It retains the ruggedness and reliability which is the trade mark of all Docksta designs.

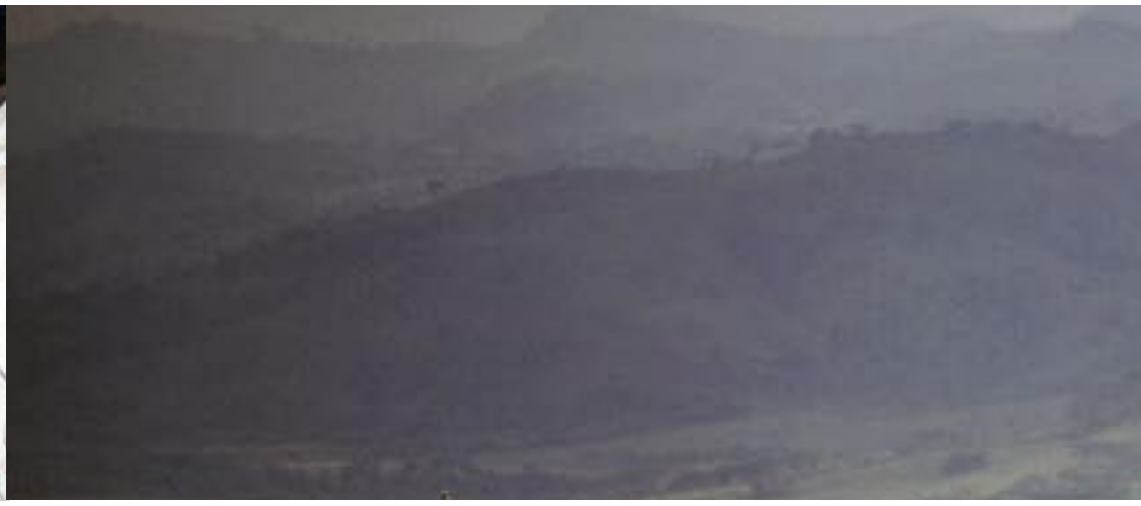
The new IC 16 M Interceptor Craft has a low radar profile and can perform stealthy as well as very speedy.

# Nordic Stars on

The new IC 16 M will soon operate on Mexican water. After the success of the Combat Boat CB 90 HMN within the Mexican Navy over the last couple of years it is now time for a new vessel to join the Navy and their efforts to combat drugs smuggling. The Polaris II project was launched in December last year and will result in a prototype built in Docksta. The construction will be closely followed by two engineers from Astilliero No 3 (Shipyard 3) in Coatzacoalcos. The Mexican Navy intends to expand their fleet of fast interceptors with the new IC 16 M, locally built at this yard and probably two more.

# Mexican Waters





A team from the Mexican Navy yard is on site at the Dockstavarvet yard to learn about manufacturing in aluminium for a series of craft to be manufactured in Mexico. From left Mr Gustavo Barreto, welding specialist, Lieutenant Jesús M Méndez, the Polaris II Project Manager, both from the Navy yard in Mexico together with the Dockstavarvet Project Leader Per Öberg.

The intention is for Dockstavarvet to deliver all parts as complete knock-down-kits for construction locally. The Polaris II was initiated after the introduction of the new Dockstavarvet concept for the Mexican Navy. The new Police/Patrol Craft with the combined characteristics of the CB 90 H and the new vessel IC 16 M was well received by the Mexican Navy.

Its increased speed with a sprint speed over 50 knots, the aft mounted wheelhouse for improved crew comfort, especially on open-sea operations, and the bow ramp for rapid deployment of a task force were some of the most vital criteria in the selection phase.

## Stars on water

The Polaris name was selected by the Mexican Navy to reflect where the boats were manufactured, quite far away from Mexico, in Docksta Sweden. All the Navy's boats have names of stars or other celestial bodies. The first boat in the Polaris I project was named simply Interceptora Polaris followed by names like Interceptora Sirius, Capella, Canopus, Vega etc.

A total of 44 CB 90 HMN are now operating in the Gulf and on the Mexican Pacific coast and four more are under construction.

The CB 90 H is already in operation in Mexico, here on a joint mission with other units from the Navy.

"The coastlines of the Gulf and the Pacific ocean have some similarities, but also a lot of differences", explains the Polaris II Mexican Project Manager, Lieutenant Jesús M Méndez. "The sea is different, the shore-lines are different and we also have the smuggling activities. They are using different techniques, sometimes a normal fisherman with a bad season behind to transfer the goods, unaware of the consequences but seeing an easy way of making money. Another alternative is a fishing boat with small speedy craft onboard or ashore to transfer the goods. All the time the schedule is changing."

## Learning for local manufacturing

"We will spend some months here in Docksta to learn about the design and construction in detail", continues Lieutenant Méndez.

"The idea is to really learn about the secrets of welding aluminium and do it in a serial production way. We still have to learn quite a lot, even if we have built some smaller vessels in aluminium."

"It is easy to read a book telling you what to do, but learning from Dockstavarvet, experienced in welding, in reality is something different and I have encountered a procedure we can transfer to Mexico. Altogether we are some 500 people at the yard in Coatzacoalcos, about 54 are in the welding department. In total we have five yards for manufacturing/repair and another five just for repairs. We will gain from learning about what Dockstavarvet are doing and even if we are not familiar with the order placement, we expect the project to continue smoothly."

## Closing the loop

"It's interesting to see that we seem to be closing the loop", explains Dockstavarvet Managing Director K-A Sundin. "When we developed the Enforcer II, the prototype for the IC 16 M class, we configured a boat with a normal bow, the wheelhouse set aft and an accommodation for a crew of 4 – 6 persons to live onboard."

"In the Mexican Navy version of the IC 16 M we have mixed the characteristics of both the CB 90 and the new vessel. We have reintroduced the bowramp and a troop carrying capacity of up to 18 men. We have created a new combat boat, laid out as a patrol boat with even better speed capabilities and adopted for open sea conditions."

This new vessel will be fitted with two MAN V12 engines of 1 100hp with direct coupling to the Rolls Royce FF410 water jets.

Most of the components and technical systems are similar to those on the CB 90 HMN, making the service support easier and more customer oriented. "The IC 16 M type should be an interesting alternative for any marine security organisation looking for a high speed craft with a proven track record", concludes Mr K-A Sundin Managing Director of Dockstavarvet.

# Pilot Boats – a long story


"We have been building Pilot Boats almost since the company was founded in 1905", says K-A, Torsten and Per Sundin, grandsons of the founder Nils Sundin. "Especially during the significant and concentrated renewal periods of the late 30s and 50s when our grandfather and father built a number of wooden motor cutters for the local Pilot Stations in the Bay of Bothnia (as well as one in steel), and from 1974 when we started building aluminum launches for the national Swedish Maritime Administration.

When that program ended in 1982 (only three more boats were built for SMA between 1982 and 1994) we had already started to look at exports and found markets in Turkey, the U.K. and eventually Denmark."

With the delivery of the first of four new boats ordered in 2004, there are now twenty Dockstavarvet all-aluminum Fast Launches in service in Denmark and another three under construction for delivery in until May 2006. The co-operation between the Royal Danish Pilot Service and Docksta started in 1980 but it was not until 1992 that the first two 15 meter boats were delivered, closely followed by two 13 meter boats. In 1994 the two types were amalgamated into a standard 14 meter design; the ALUPILOT 14000 of which a total of 14 units have been built to date, including one for the independent Pilot Service of Port of Aarhus. In between, Dockstavarvet has also built two 30 knot boats with waterjet propulsion. These two High Speed Launches are stationed at Gedser and Fredericia, both stations with intense traffic and quite long runs out to the deep draft boarding areas.

## Comes in two versions

The ALUPILOT 14000 is a 13.9 x 4.6 meter semi-displacement all-aluminium craft with a resiliently mounted deckhouse. The hull design is based on the well-known MURRAY CORMACK lines modified for higher speeds. The boats are built according to the classifications of the Special Service Craft Rules of Lloyd's Register. The standard propulsion package is two Scania DSI 14 diesels rated 374 kW at 1800 rpm, each connected to a fixed pitch propeller through a ZF 550 A gearbox and with Kobelt mechanical controls. (Two customised boats were fitted with Controllable Pitch Propellers at considerable extra cost.) The arrangement comes in two versions; one with the "British style", one-tier, wheelhouse/saloon and the other with the "Scandinavian style" raised wheelhouse and semi-sunk saloon seating up to 8 pilots.

The latest order comprised two craft of each type, all fitted with the new SCANIA DI 16 engines and TWIN DISC "Quick-Shift" technology gearboxes as well as electronic control systems. Navigation systems are based on FURUNO hardware including FAR-2117 Black Box radar, SC-50 GPS compass, FCV-611 echosounder and FAP-550 autopilot with MaxSea software for charts and plotting.

In addition to the normal security equipment, including heated decks and railings, the AP14000 is fitted with a man overboard direction finder, a rescue crane and a separate manoeuvring station on the aft deck, to facilitate fast and safe salvage of a person from the water even under severe conditions.

The most recent delivery to Denmark, the Pilot Boat LUNA on its first mission.

## The best you can buy

"By spring 2006 our boats will comprise over 70 % of the fleet of Pilot Boats in service in Denmark. We are very proud of our track record and convinced that these boats are the best you can buy in their class in terms of both design and detailed engineering," explains Mr. K-A Sundin, Managing Director of Dockstavarvet.

"One area where we are definitely on top of what's achievable is in noise reduction. When the resiliently mounted deck-house was introduced in 1977 and we could bring db(A) readings down to 73 we thought that 70 was the absolute limit in craft of this size. In the last few boats we are well under 65, which is really very comfortable for the crew and actually the limit which should be adhered to, both according to Danish and Swedish legislation. The Pilot Boat market used to be a very local one but we are convinced that the trend towards specialisation will go on - and we are one of the best specialists."

# The new 10 meter Interceptor Craft

"From a number of our foreign customers, especially within the defence sector, there is a demand for a smaller rugged craft similar to the CB 90 H", explains Dockstavarvet Technical Director Torbjörn Larsson.

"The demand is focused on a small transport boat, a boat that could follow the Combat Boat in the same sea conditions. We started the design work during 2004 and at the same time found an increasing interest from civil authorities like harbour police, security vessels for trafficking control and threats against cruise ships."

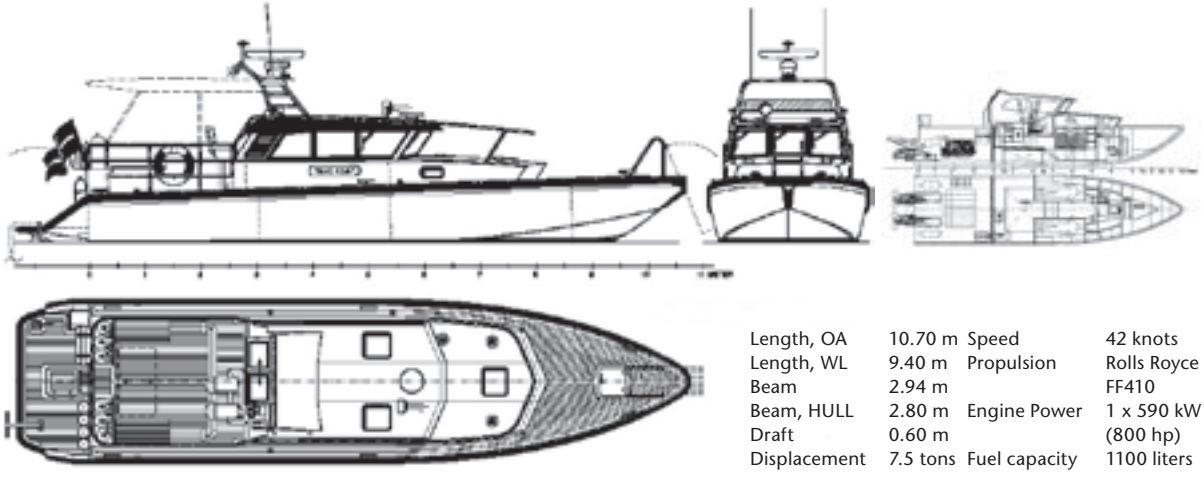
Dockstavarvet's new 10 meter Interceptor Craft the "IC 10 M" is a smaller version of the successful and thoroughly tested CB 90 H.

The IC 10 M can be built as a patrol boat or a combat boat, and there is also an open version available which can carry 12 troops. With a beam of less than 3 meters and 24 degrees dead rise the boat provides not only high speed but good sea-keeping capabilities for a boat of this size.

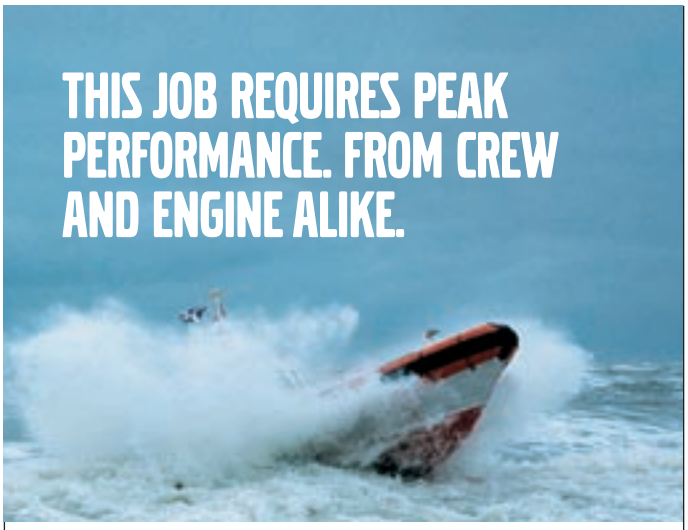
A prototype was launched in June 2004 and since then has been undergoing extensive tests and demonstrations. The prototype is designed as an Interceptor with accommodations for the crew, including berths, a galley and head. The wheelhouse layout comprises seating for helmsman, navigator and passengers. The boat is powered by one Scania DSI 14 diesel engine, rated 588 kW at 2 200 rpm, driving a Rolls-Royce FF410 waterjet. The sprint speed is more than 43 knots.

The IC 10 M is built using an all-welded aluminium construction according to Lloyd's Register's Special Service Craft Rules. Like the CB 90 H the boat can be fitted with armour protection and air conditioning. A computerized navigational system is fitted as standard.

## Interceptor Craft 10.7 M



| | | | |
|---|---|---|---|
| Length, OA | 10.70 m | Speed | 42 knots |
| Length, WL | 9.40 m | Propulsion | Rolls Royce |
| Beam | 2.94 m | | FF410 |
| Beam, HULL | 2.80 m | Engine Power | 1 x 590 kW |
| Draft | 0.60 m | | (800 hp) |
| Displacement | 7.5 tons | Fuel capacity | 1100 liters |

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Sweden
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