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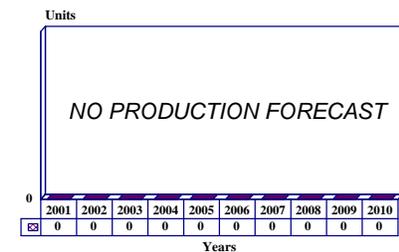
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Mk V - Archive 6/2002

Outlook

- Production ceased in 1999 with last deliveries to US Navy
- Exported to Mexico and Sri Lanka
- US attention switched to new catamaran interceptor
- Additional production unlikely

10 Year Unit Production Forecast
2001-2010



Orientation

Description. Special Operations Craft/Patrol Boat Fast (SOC/PBF).

Sponsor

US Special Operations Command (USSOCOM)
Directorate of Procurement
2418 Florida Keys Avenue
MacDill Air Force Base, Florida (FL) 33621-5323
USA

Contractors

Friede Goldman Halter Inc
13085 Industrial Seaway Road
Gulfport, Mississippi (MS) 39503
PO Box 3029
Gulfport, Mississippi (MS) 39505-3029
USA
Tel: +1 601 896 0029
Fax: +1 601 897 4848
(prime contractor)

Kamewa America Inc
St. Rose, Louisiana (LA)
USA
(waterjet units)

MTU Detroit Diesel
10450 Corporate Drive
Sugarland, Texas (TX) 77748
USA
(diesel engines)

Sensys Technologies Inc
Newington, Virginia (VA)
USA
(ESM system)

Stidd Systems Inc
PO Box 87
220 Carpenter Street
Greenport, New York (NY) 11944
USA
Tel: +1 631 477 2400 x120
Fax: +1 631 477 1095
E-mail: sales@stiddsystems.com
Web site: www.stiddsystems.com
(onboard occupant seating system)

Status. In production and service.

Total Produced. Twenty for the US Navy. Additionally, four of the XFPB predecessors have been built for Mexico and six for the Sri Lankan Navy.

Mission. The primary mission of the Mk V SOC is to provide medium range insertion (MRI) and extraction support for Special Operations Forces (SOF) personnel in a low- to medium-threat environment.

Their secondary mission is limited coastal patrol and interdiction (CP&I) in a low- to medium-threat environment.

Price Range. The information in open sources on the price of the boats is contradictory. Based on the amounts of funds allotted to the program in FY94-FY98, the unit price for the first 12 boats would have averaged \$11.1 million. A unit price of US\$4 million was quoted for the boats in 1997, but the

pending option for 12 more boats is being listed as worth a total of only US\$12 million.

On the other hand, the November 1997 follow-on contract for six more Mk Vs by the US Navy was reported to be worth US\$29.9 million, including the related transport trailers and maintenance cradles. Sri Lanka's XFPB versions were reported in 1997 to cost US\$3.8 million each. In support of this figure, status reports in early 2000 claimed that the Sri Lankan Navy has outstanding options for three more XFPB craft valued at US\$15 million total.

In consideration of the above, a rough average price of US\$4 million per unit is assumed throughout this report.

Technical Data

	<u>Metric</u>	<u>US</u>
Dimensions		
Length:	24.9 m	81.2 ft
Beam:	5.3 m	17.5 ft
Draft:	1.3 m	4.3 ft
Molded Depth:	2.4 m	7.8 ft
Displacement		
Full Load:	58 tonnes	57 tons
Airlift Weight (total, w/truck, trailer):	69 tonnes	68 tons
Fuel Capacity:	9,800 l	2,600 gal
Payload (variable materials):	2,900 kg	6,400 lb
Performance		
Cruising Speed:	45-85 km/h	25-45 kt
Max. Speed:	92+ km/h	50+ kt
Operating Range:	1,200 km at 83 km/h	600+ nm at 45 kt
Crew:	5 + 4 spare	
Military Lift Capability:	16 fully equipped troops	
Weaponry		
Guns:	Mk 19 Mod 3 40 mm	1
	M2-HB.50 caliber	4
	7.62 mm M60	2
Surface-to-Air Missiles:	Shoulder fired Stinger	
Combat Rubber Raiding Craft:	4-man RIB with outboard engine	1-4
Electronics		
Radar – Navigation:	Furuno; I-band	1
Global Positioning System:	Magnavox MX 200	1
Chart Plotter:	Transas Navisailor	1
Infrared Strobe:	Whelen	1
Compass:	KVH (oil-filled, fluxgate)	1
IFF Transponder (mast mounted):	APX-100(V)	1
Communications – HF Amplifier:	Harris RF-5022 RT/125W	1
UHF AM Amplifier:	Motorola LST-5C/200 W	1
UHF/VHF AM:	Magnavox URC-83(V)2	1

	<u>Type</u>	<u>Number</u>
VHF FM:	Harris VRC-94B(C)(V)3	1
VHF Highband:	Motorola Spectra	1
Bridge to Bridge:	(TBD)	1
Electronics (continued)		
Fathomete:	Raytheon	1
ES:	Bobcat (as part of PRIVATEER)	1
Machinery		
Diesels:	MTU 12V396 TE94	2x2,253 shp at 2,000 rpm
Propulsion:	KaMeWa K505 waterjets	2
Reduction Gearbox:	ZF 465	2
Auxiliary Power:	230 V AC/24 V DC diesel gensets	2x25 kW
Freshwater Generator:	220 gal/day capacity	1

Design Features. The Mk V Special Operations Craft (SOC) is a high-performance, low-profile combatant craft capable of maritime medium-range insertions and extractions of Special Operations Forces (SOF) teams. It is technically a variant of the XFPB design, four of which had been sold to Mexico and six to Sri Lanka.

The 25-meter-long monohull all-aluminum structure has very inwardly curved edges, a full deck, and a hardtop that covers the steering and navigation area. The boat's visible radar and infrared signatures are minimal. The hull form features a 24 degree deadrise for optimum crew comfort and seafaring capability in up to Sea State 4. Beam is 5.3 meters and the full-width stern includes a center ramp for rapid launch and recovery of the four-man Combat Rubber Raiding Craft (CRRC).

Seating is provided for the crew of five and the sealift capability is for a platoon of 16 fully armed and equipped SEAL troops, in the enclosed cockpit behind the five crew positions. The hard/soft top is removable, in order to provide full environmental enclosure for the crew and passengers. Other features designed for the comfort of the crew include the 3/4-inch padding on the cockpit deck, gear tie-down locations throughout the vessel, and a weapon bag at each seat location for rifles and other infantry weapons. The suspended (shock-mounted) seats for the troops are provided by Stidd Systems Inc. They are intended to allow the platoon to ride to and from combat operations in safety and relative comfort.

The cockpit configuration has been designed for multiple redundant operating systems. Overall, the craft was required to be built around non-developmental items (NDI) of proven design, conventional off-the-shelf (COTS) technology in order to ensure that the technology is not outdated prior to fielding, besides economizing the purchase price.

One key element of boat's design specifications was the capability of being easily airlifted on board a C-5 A/B

aircraft on an organic transporter along with system support equipment. The requirement to be air-transportable in a C-17 aircraft was dropped from the design requirement (and the Request for Proposals) in late 1992. The maximum weight of the package, including the craft and its associated transporter/trailer and prime mover, was specified as 68 tonnes.

All boats are assigned to detachments, each of which comprises two Mk V craft (each with a trailer and an M916A1E1 prime mover), six support vehicles, and a deployment and support package with 90 days of spare parts. The prime movers are a variant of the Freightliner line haul tractor with a six-man cab to accommodate both the truck driver and the Mk V crew. The support vehicles include two 5 ton trucks and four High Mobility Multipurpose Wheeled Vehicles ("Humvees"). The detachment personnel include nine craft crew members, a Surface Warfare qualified officer, an engineering warrant officer, and seven Maintenance Support Team (MST) members.

The modular design of the boat can be tailored to suit customer specifications. Variations on the power unit are possible as well, including diesel or gas turbine and propellers or waterjet propulsion systems. The machinery is installed in two watertight engine rooms and the craft is designed to maintain stability, even with one engine room flooded.

A wide variety of onboard system options are also available, according to mission requirements. The craft is designed with four Mk 64 Mod 4 SOF weapon stations (mounts) around the rear deck. Depending on the mission posture, these stations can be equipped with 7.62 millimeter machine guns, .50 caliber machine guns (twin cannons), or 40 millimeter grenade launchers. Other armament options include a 23, 25 or 30-millimeter rapid cannon; HELLFIRE, Mistral or RBS70 missiles; and rockets. For instance, the last unit of the Mexican set of four craft has been a testbed for the French Aerospatiale MM15 surface-to-surface missiles.

Depending on the weather conditions and the mission, the open cockpit can be covered by removable hard canopies. Some of the craft in use in the USN have solid gray-blue exterior coloring while others have been painted in camouflage patterns. Also, railings are used on some units while most appear to be without any, probably due to concerns about radar cross section.

Operational Characteristics. The Mk Vs of the US Navy are operated by the Naval Special Warfare Command (NAVSPECWARCOM). The crew members are drawn from the Fleet and must complete the Navy's "9533" Combatant Crewman course prior to serving on the Mk V detachments.

The Mk V is used to carry Special Operations Forces, primarily Navy SEAL troops, into and out of operations where the threat to these forces is considered low to medium. It also supports limited coastal patrol and the interruption of enemy activities.

The craft is believed to have a top speed of about 50 knots (not officially disclosed), and crews report it is "easily capable" of towing two 30-foot rigid inflatable boats (RIBs) at that speed. The craft's handling qualities include the ability to carry out 180° turns at full speed in less than 150 feet, with no lateral skid and minimum deceleration. The craft can reach planing speed from the loiter condition in less than eight seconds. The deep-vee hull is said to offer excellent handling, seakeeping and stability, with minimum slamming. The boat remains stable in harsh seas where conventional hulls would be forced to reduce speed. Speed and quality of ride are maintained reportedly well beyond those of similar, more conventional craft, a fact that considerably reduces crew fatigue. The Mk V craft will survive in Sea State 5 and are able to operate in Sea State 3 at sustained cruising speeds of up to 35 knots.

In Sea State 2, speeds of more than 40 knots can be sustained.

The Kamewa waterjets discharge 660 gallons of water per second at full speed, leaving no roostertail that would be typical for propeller-driven high-speed vessels. Consequently, the vessel's visual signature is substantially reduced compared to that of the more conventional craft.

Thanks to its low draft (5 feet except at the step, where it is only 4 feet), the fully loaded vessel can operate in extremely shallow water and can even beach the bow. The Mk Vs are considered virtually self-sufficient in their capability in beaching and recovering themselves during emergency extraction situations. The onboard weaponry can be used to provide direct gunfire support for SEAL team members ashore. The small-caliber weapons provide 360° firing coverage. If necessary, an auxiliary 7.62 millimeter M60 machine gun position can be established in the bow for additional fire support.

The rear deck accommodates up to four CRRCs and air hose attachments on each side of the stern, allowing CRRC inflation (or deflation) in a matter of minutes. An entire 16-man SEAL platoon can be inserted from a Mk V in a four-CRRC configuration in less than five minutes, using the rear launch ramp at speed. A 500-gallon fuel bladder can also be carried on the deck.

The US Navy's Coastal Systems Station is the operating systems Life Cycle Sustainment Manager (LCSM) on the Mk V program. As the LCSM, CSS has the responsibility of providing: Inventory Management, Maintenance, Configuration Management, Supply Support, Technical Publication Management, Safety, Product Improvement, Reliability and Maintainability Analysis, and Disposal.

Variants/Upgrades

Isla Coronado Class. The Mexican Navy operates four 82-foot fast attack craft that are apparently based on the same design as the US Mk V but with a different superstructure. Whereas the primary design objective of the US Mk V has been providing a platform for the insertion and extraction of troops to enemy territories, the Mexican types are more geared for patrol missions, lacking the rear area for the landing craft and carrying more weaponry on the foredeck. Furthermore, their antenna structure and the railings on the deck have been built with less emphasis on minimizing the radar cross section.

The Isla Coronado class, as they are known within the Mexican Navy, feature three Detroit Diesel engines, producing a total of 16,200 horsepower (12,900

kilowatts) through three Arneson surface drive units. The displacement of these boats is said to be 52 tons, which is considerably less than the 68 tons of the Sri Lankan versions, even though the latter have only two engines, as opposed to Mexico's three.

The Isla Coronados are reported to feature only one 12.7 millimeter and two 7.62 millimeter machine guns. Retrofits were planned to equip the ships with MM 15 surface-to-surface missiles and with either 40 millimeter or 20 millimeter guns as well.

The operating range of these craft is quoted as 1,200 nautical miles at a speed of 30 knots. Top speed is officially stated to be 50 knots.

The first two of the boats were taken into service in 1993 and the other two in 1994. They are based at Islas Mujeres in the XI naval zone. It is not known whether the Mexican Navy plans to expand this fleet in the future.

Pegasus Class. Alternative name used to refer to the US Navy version.

Pre-Planned Product Improvements (P³I). Studies are under way to implement a number of pre-planned product improvements (P³I) on the Mk V class in the near future. Reportedly being considered are the addition of electronic support measures (ESM) and a forward-looking infrared (FLIR) system, and the integration of the Special Operations Command Research, Analysis and Threat Evaluation System (“SOCRATES”). In addition, the weaponry is to be upgraded.

Trinity Marine Class. The Sri Lankan Navy also operates PCFs that are quite similar to the Mexican Isla Coronado class. The hull and even the superstructure of the versions of those two countries are virtually the same. However, in contrast to the Mexican boats, these craft only have two engines (MTUs) and use waterjet drives for propulsion, and not the surface piercing drives of the Arneson type on the Mexican version. Top speed is quoted as 47 knots, and the operating range is 600 nautical miles at a speed of 17 knots.

The Sri Lankan boats also require slightly more manpower – 12 crew members. The US Mk Vs have a crew of five and the Mexican version carries a crew of nine, three of whom are officers.

The weaponry on the Sri Lankan Trinity Marine class boats, as they are known, consists of two Oerlikon 20-millimeter and two 12.7-millimeter machine guns. An automatic grenade launcher is also included. Whether any of the Trinity Marine class boats have been lost is not known; it is known, however, that at least two of the Israeli-design Super Dvora fast attack craft were lost in fights against the Tamils. It remains to be seen whether these will be replaced by the US or Israeli craft, if any – funding is a major issue and the war is significantly depleting the government’s funds.

XFPB. The Extra Fast Patrol Boat (XFPB or XF-PB, depending on the source) was the predecessor to the Mk V class, using the same hull but a different superstructure. Both the Mexican Isla Coronado and Sri Lankan Trinity Marine class boats are representatives of this design in slightly differing interpretations (see above descriptions of each program). The Mk V was derived from this same family, with a few modifications resulting from a different mission profile.

In terms of the exterior design, the XFPB’s cockpit is located further to the center or aft of the boat, while that on the Mk V is more in the fore section. As a result, the XFPB has more room on the foredeck for installation of different weaponry, while the Mk V requires a larger seating area for the platoon, and the inflatable craft are carried on the rear deck. Also, the XFPBs of both countries feature full railings around their deck and larger masts with antennas and electronic gear.

Program Review

Background. An initial Request for Proposals (RFP) was issued as early as 1982 for a “Patrol Boat, Multi Mission” (PBM), or alternatively, “Transportable Fast Attack Craft” (TFAC) or “Special Warfare Combatant Craft” (SWCC). The aim was to develop a replacement for the aging fleet of small patrol craft that the US Navy Special Operations Forces (SOF) – specifically the relatively new Sea Air Land (SEAL) teams – had been using since the Vietnam war.

The boats used at that time consisted of PBLs (Patrol Boats Light), PBR (Patrol Boats River) Mk IIs, and assorted units of Mk III and Mk IV attack craft. A new class was being sought, with improved tactical mobility, heavier firepower, greater endurance, and improved seakeeping qualities compared. The plan was to procure one vessel at first, in FY85, followed by four each in FY86 and FY87, going up to five in FY88, and

concluding (presumably) with four in FY89 for a total of 19-20 units.

Initial Operational Capability (IOC) of the class was expected to be achieved in FY90. At the time it was also considered possible that the new class of fast insertion vessels would be alternatively be based on hydrofoil or hovercraft technology. Four firms (Boeing, Swiftship, Uniflite and Rohr Marine) were initially selected, in FY84, to carry out further development work before a prime contractor was selected.

However, the 1980s represented a “transitional phase” in the US Navy Special Boat Unit operations, testing the capabilities of the troops and expanding their operational horizons. While the above-mentioned program plans for the replacement of aging riverine and patrol craft were being laid out, the role of the Special Operations Forces was evolving and a decision to go ahead with the procurement of one type of vessel over

another was put off. By the end of the decade, the deliveries of the Mk IV Spectre class patrol boat had been completed. This class basically represented only a lengthened version of the preceding Mk III, with minor changes in the weaponry (25 millimeter Bushmaster replacing one 20 millimeter gun, for example).

By 1991, the US Special Operations Command (USSOCOM) Commander-in-Chief, Carl Stiner, told the House Armed Services Committee that his command would rather limit the procurement of the then-current coastal craft to eight instead of completing their initially planned production series of up to 13 units. USSOCOM was suggesting instead to allocate the remaining funds for the development of a faster and more appropriate vessel for their needs.

In April 1992, the Navy issued a classified RFP for the initial design of an advanced SEAL delivery system. At this point, it was projected that three contractors would be downselected for the preliminary design phase, after which those three would receive a second solicitation for the detail design/manufacturing development phase. The first ship would be built in the second phase of the program, with a follow-on production option for an additional ship. The request specified that the hull must be built in the US, even though the competition was open to foreign competitors as well.

Israel Aircraft Industries (IAI) teamed up with Textron Marine Systems of New Orleans to bid a concept based on the Israeli Super Dvora Mk II design. This had an 82-foot-long deep-vee hull with two diesel engines using either a traditional V-drive or a surface-piercing propeller drive for propulsion.

Cougar Marine Ltd of the UK, of offshore racing boat fame, teamed up with Petersen Builders Inc (PBI) of Sturgeon Bay, Wisconsin. Their proposal was based on a modified version of the 70-foot Cougar Cat 2100 patrol craft, which has a top speed of more than 50 knots, using two MTU diesel engines and a surface propeller drive. For loiter speeds, the craft was fitted with a Sabre 350-horsepower diesel driving a waterjet.

During the bidding process, Bollinger Machine Shop and Shipyard Inc, along with PBI and Swiftships, filed protests against SOCOM claiming that special dispensation should have been allocated to small businesses only.

Among the bidders was also Infinity Yachts Inc, which was proposing a 57 foot craft with a "Duo-Delta Conic" (D-DC) high-speed planing hull. Halter Marine was expected to bid its then-new XFPB design which, in prototype form, had achieved speeds of more than 55 knots in high seas using three diesel engines.

In August 1993, SOCOM chose Halter Marine and PBI for the construction of prototypes for testing and evaluation in Fiscal Year 1994. Halter was given two contracts, each worth US\$4.7 million, for two very different designs both based on the XFPB. One ("Mk V A") would have a hull made from Kevlar composite, with power from three Detroit Diesel engines driving surface-piercing propellers. The other hull ("Mk V B") was made of aluminum, using two MTU diesel engines on waterjets. By this time, the XFPB had already been procured by the Mexican Navy. That version greatly resembled Halter's "Mk V A" proposal. PBI was awarded a US\$4.5 million contract to build a prototype of its proposed asymmetrical "Sea Stalker" catamaran design. The packages requested from both bidders were inclusive of the transport skids for the airlifting and land transportation of the craft. (PBI's transport element was prepared by Talbert Manufacturing Inc, of Rensselaer, Indiana. It is not known whether the same subcontractor was retained by the winning team for its design.)

After a nine-month-long evaluation period, in September 1994 SOCOM moved to award an US\$11 million build contract to Halter, to supply "an initial two examples" of its proposed design no later than September 1995. The design, now known as the Pegasus class, is based on an aluminum hull and two engines. This contract included options for up to 38 additional vessels, bringing the total potential value of the deal to about US\$190 million. Construction was assigned to Equitable Shipyards Inc in New Orleans, a sister company of Halter Marine, also under Trinity Marine Group.

By February 1995, MTU's US arm in Texas was assigned with the delivery of 20 propulsion systems, and the first two units were received by USSOCOM on September 4, 1995. Milestone III of the project was approved on October 27, 1995, following completion of the Operational Test and Evaluation (OPEVAL) earlier the same month. The issuance of Milestone III indicated release of a full-rate production contract to Halter, with Full Operational Capability scheduled for the first quarter of FY99.

Meanwhile, PBI's rival design, which lost out to the Pegasus, was discarded after the competitive trials. The hull, without engines, was offered for sale in 1995.

In November 1997 the Navy (USSOCOM) ordered another six boats from what was now Halter Marine, operating independently of Trinity Marine.

In 1997, Sri Lanka also became a customer for the original XFPB, buying six boats, with the first three delivered in January and another three in September of that year. That deal was financed by the US-based

Exim Bank, which subsequently stipulated that the boats could not be deployed in operational areas until the purchase price had been paid in full, which was expected to take up to four years. The status of that account is not verified, but it is believed that Sri Lanka is planning to expand its fleet of these boats, dealing at the same time with Israel on secondhand Super Dvoras.

The Mk V program is the product of a streamlined acquisition effort managed by the USSOCOM Special Operations Acquisition Executive (SOAE). It went from concept to operation in only three years, and the program took only 18 months from the awarding of the contract to actual possession of the first boat. This efficiency has been attributed to the use of both non-traditional processes and COTS products.

SEAL troops were able to carry out initial testing of prototype vessels in Tampa Bay, off the Florida coast, before full production was initiated. This sped up the procurement process by reducing the development time while ensuring that NAVSPECWARCOM received an optimum craft design for its purposes.

The last of the 20 boats in the US program were delivered by the end of 1999. This appears to represent the last planned activity in this program, with funding activity switching to support of the active fleet. Eight of the Mk V craft are assigned to Special Boat Unit Two based at Little Creek, Virginia, and the other 12 to Special Boat Unit One at Coronado, California.

Funding

In deliberations over the FY83 budget, the US Congress had added US\$2.25 million in funding for the development of something identified at that time as the "Transportable Fast Attack Craft" (TFAC). An initial Request for Proposals (RFP) had been issued as early as 1982 for TFAC, a.k.a. "Patrol Boat, Multi Mission" (PBM) or "Special Warfare Combatant Craft" (SWCC). Initial funding for those studies was granted in FY84, with lead ship funding pegged at US\$15 million.

The Sri Lankan purchase of six vessels in 1997 was financed by the US-based Exim Bank. The bank stated at the time of delivery that, due to heavy criticism by the local media, the craft could not be deployed in operational areas by their owners until the loan was fully repaid. At the time, that was expected to take up to four years. The US defense budget for the next few years includes proposed funding for exercising the outstanding option of 12 further vessels for the US Navy. Being only requests, however, those figures may change before they are actually procured.

Recent Contracts

<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
Halter Marine	N/A	1992 – Mexico orders four XFPBs (predecessor variant to Mk V).
Halter Marine	4.7	August 1993 – Prototype alternative for Mk V program based on XFPB with Kevlar hull and two engines.
Halter Marine	4.7	August 1993 – Prototype alternative for Mk V program based on XFPB with aluminum hull and three engines.
Peterson Builders	4.5	August 1993 – Prototype for Mk V program based on Cougar Cat 2100.
Halter Marine	11	September 1994 – Initial two examples of their revised design, with options for up to 38 more units. The first to be delivered by September 1995.
Halter Marine	N/A	October 27, 1995 – Full-rate production contract, with FOC for Q1/FY99.
MTU Detroit Diesel	N/A	February 8, 1995 – Up to 20 propulsion systems (including waterjets).
Halter Marine	N/A	Early 1997 – Six XFPBs to Sri Lanka.
Halter Marine	29.9	November 1997 – Six more boats, transporters, maintenance cradles for USN.

<u>Contractor</u>	<u>Award (\$ millions)</u>	<u>Date/Description</u>
MTU Detroit Diesel	N/A	June 1998 – More than 60 engines ostensibly for 30 future boats.
Harper/Nielsen Dillingham Builders	7.9	October 15, 1998 – Waterfront operations support facility construction for Mk V operations in San Diego, California.
Sensys Technologies	6.3	November 4, 1998 – PRIVATEER ESM systems for both Mk V and PC-1s.
Kamewa America	9.5	February 11, 2000 – Repair parts and support for waterjet systems.
Detroit Diesel Corp	9.5	February 11, 2000 – Repair parts for engines and waterjet systems.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	1992	Israel Aircraft Industries offers the Super Dvora design for basis of USN fast SOC
	1992	Mexico buys four XFPBs
Early	1993	RFP for Mk V released
Mar	1993	Deadline for proposals from shipbuilders
Aug	1993	Halter Marine, Petersen Builders downselected as finalists for Mk V contract
Sep	1994	Halter wins design contest for Mk V with twin-engine waterjet version
Aug	1995	First two craft from Halter's initial batch received by USSOCOM
Oct	1995	Operational Test & Evaluation completed
Jan	1996	Second pair received by US Navy
	1996	Sri Lanka buys six XFPBs
Apr	1996	First four Mk Vs in full service
Aug	1996	Six delivered to USN thus far
Jan	1997	Fourth detachment (units no. 7, 8) delivered
Mar	1997	Nine craft delivered thus far
Oct	1997	Milestone III approved
Nov	1997	Full-rate production contract award to Halter for six more units
Mid	1998	14 boats delivered to USSOCOM thus far
Q1	1999	Full Operational Capability of first 20 units assumed

Worldwide Distribution

Mexico. Four Isla Coronado class XFPBs

Sri Lanka. Six Trinity Marine XFPBs

United States. 20 Mk Vs

Forecast Rationale

Deliveries of the Mk V have now concluded with the entry to service of the last of the 20 craft planned for the USA. This probably marks the end of construction, since the outstanding option for 12 more such craft is unlikely to be fulfilled. The US Navy has turned its attention to a new catamaran design of fast patrol craft that will be optimized for boarding missions by US forces. In an environment where funding is extremely

tight and higher priority candidates for any additional resources already lined up, it is hard to see any extra procurement funding being made available.

Sri Lanka has six XFPBs in its fleet but appears unlikely to expand this number. Current Sri Lankan procurement is directed toward the Israeli Shaldag class, which represents a continuing program now being built locally. The Sri Lankan Navy is deeply embroiled in

the battle against the Tamil Tigers, and, provided that funding remains available, it is likely that the fleet will continue to require a high rate of construction in order to replace its heavy losses. However, this construction rate – and the basic simplicity of the craft needed – all point to local construction rather than additional imports.

There is virtually no chance that Mexico will procure additional patrol craft of this type. In recent years, Mexico has shifted emphasis away from small patrol craft toward the larger and more capable offshore patrol vessel concept, and is in the final stages of building a

series of Holzinger class patrol boats. While some additional patrol craft are being built, they are significantly smaller than the Islas Coronado class.

Overall, the Mk V represents a successful product in its niche but the operative word is niche. The total market for craft of this type is not great and the unit cost of the design is so small that even the significant number built do not result in an appreciable market presence. The fact is that however useful and glamorous high-speed patrol craft may be, their utility is so limited that they can never be anything more than a minor contributor to the naval market.

Ten-Year Outlook

No additional production is projected.

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