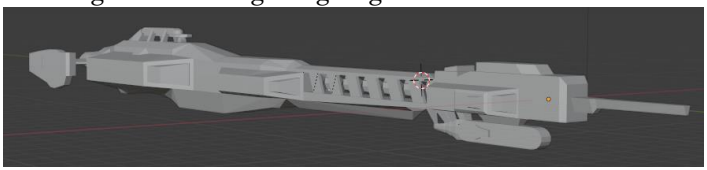
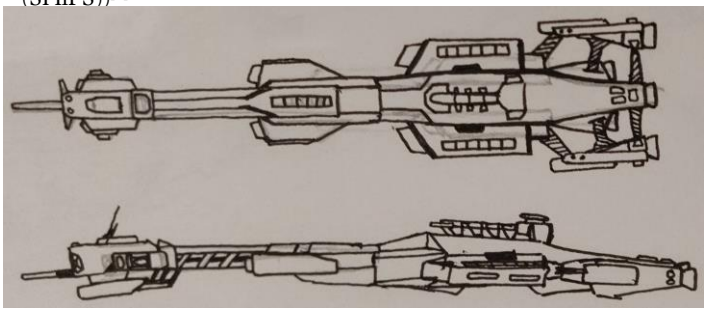
Vakan-class frigate

Maxwell Robertson

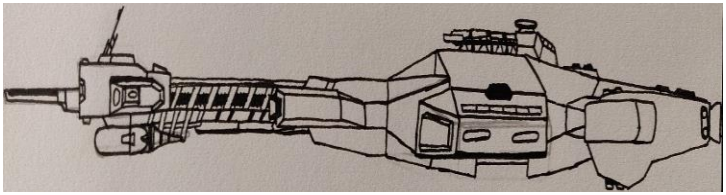
The *Vakan* class of frigates, officially the SOR FG-88 class[1][13], were built to serve as the primary power-projection for the Selenn Orbitary Republic. The ships of the *Vakan*-class were the 3rd largest vessels to enter service in the SOR navy prior to the Silent Escalation[2] in 2609, weighing in at 423,000 metric tons[1][13]. As next-generation High-Mobility Combat Vehicles, the *Vakan*-class integrated advanced protection and stealth mechanisms including Larnz-type 2-phase reactive plating[13] and a next-generation self-guiding Magnetic Accelerator Cannon



(Render courtesy of Ship Historical Preservation Society (SHiPS))[7]



(above and side view)[1]



(more detailed side view)[1]

General Information:

Name: *Vakan*-class frigate
Builders: Aphons Shipbuilding[1], Fazon Stellar-Yards[1], Brakom & Lann Stellar-Yards[10]
Operators: Selenn Orbitary Republic Navy
Preceded by: *Krast* class[1] and *Alesby* class[1]
Cost: Program cost: equivalent of 79 million ZDK (Zekk Denominational Kurrency (currency)) in materials and work time[8]
Unit cost: 4.8-6.1 million ZDK in materials and worktime[8]
In service: 2583-2672[10]
Planned: 18[1][3]
Completed: 14[1]
Cancelled: 4[1]
Lost: 1212
Retired: 2[7][13]
Preserved: SOR *Moltobar* (FG-94)[7]

Characteristics:

Type: Frigate (Force Amplification and Transmission Craft (FAMTRAC))[3][13]
Mass: Operating: 423,000 metric tons[13]
Space-Tunneling: 972,000 metric tons[13]
Operating (FAMTRAC-2 modification): 431,000 metric tons[13]
Space-Tunneling (FAMTRAC-2 modification): 1.03 million metric tons[13]
Length: 393 m[1][13]
Beam: 81 m[1][13]
Height: 39 m[1][13]
Installed: Up to 4.74 TW with FAMTRAC[13], up to 7.92 TW with FAMTRAC-2
power: modification[13]
Propulsion: 11 Praeton-cells containing a total of 48 Fasroa NM-160 Normal-Mover engines[13]
Additional propulsion: 34 Lakten NP-86 Normal-Pusher adjustment motors[13], 2 Praeton-cells containing a total of 16 Lakten NM-6 Normal-Mover engines[13]
Acceleration: Peak: 226 m/s2[13]
Restricted: 93 m/s2[13]
Minimum (main): 3 m/s2[13]
Range: effectively unlimited with drive maintenance required every 6 years[13]
Complement: 1,480 enlisted[1], 36 officers[1], 28 attendant staff[13]
Crew: 1,544[12][13]
Armament: 2 Spinal Magnetic Accelerator Cannons (SMACK) cannons (234 m)[13]
32 Laser Munition Defense Pods (LAMDEP) LD-3[13]
8 Medium-Range Engagement Railguns

(MERA-ERA) RP-88G mod 6[13] 82 2-axis Sensor-Scattering and Optical Dispacement Chaff (SODIC) launchers[13]
2 Launch accelerators for 82 "Hedra" TPD-9 Thermo-Nuclear Stealth-Missiles [13]
18 vertical launch cells of 16 "Proso" MIS-11 Conventional and EMP missile launchers each [13]

Space- Tunneling Compression Generator: Falcsomin CG-18 mod 12[1] Rupture Generator: Falcsomin RG-18 mod 9 [1]

Systems: Path Predictor: Falcsomin PPST-909D mod 2 [1]

Armor: 3-16 cm reinforced Placum-Zerchod Polymer plate[12] , 12 cm Fazda polymer-fiber layer [12], 5 cm of Larnz-type 2-phase plate [13]

Craft carried: 28 "Pakra" DA-13 Strike-Drones[5][12][13] , 2 "Valtum" MT-7 Military Transports[12][13] ,90 "Prato" ES-9 Escape Craft [12] ,4 "Zeton" ES(D)-2 Escape Craft[4]

(Bridge, Reserve Bridge, diplomatic suites) [13]

Design Features

The side hangar facilities were expanded over previous frigates with 4 m wider doors to accommodate the DA-13 "Pakra" Strike-Drones expected to enter service in 2580[1][5]. The ventral hangar deck was additionally expanded in height by 16 m so that the CT(D)-4 "Prvada" Diplomatic Shuttles could be comfortably docked [1].

The *Vakan* class was the first ship type authorized to implement Larnz-type plating. The 2-phase reactive plating was composed of millions of hexagonal tiles and had two functional states that could be alternated by flipping the tile. In state 1, the tiles absorbed an average 97% of all detection frequencies in use, alongside high light-absorbance. State 2 implemented a new system of energy transfer and radiative cooling which spread energy attacks across larger hull surface areas to mitigate damage while dissipating accumulated heat [13].

The Spinal Magnetic Accelerator Cannons (SMACK) system increased power efficiency by 32% over the previous generation[13]. The increased size of the *Vakan* class over previous ships allowed for the barrel to be extended by 29 m [12], and the space for additional charge-accumulators to increase potential projectile velocity or allow for successive low-power shots [12]. The *Vakan* class mounted two accelerators in parallel that extended beyond the main hull through a pylon called the "spike" by crew [6]. The SMACK system was rated to fire the Self-Vectoring, Advanced Penetrator (SEVA-PEN) ammo-type being developed in parallel [13]. SEVA-PEN rounds had onboard computing capabilities, vectoring thrusters, and pusher engines to intelligently adjust course in response to changes in the Target's orientation, speed, and position, amongst others [13].

Similar to the *Alseby*-class frigates [1], the *Vakan* class carried a Multi-Output Capacitor Block (MOCAB) to store excess power during limited-activity periods for use in high-intensity maneuvers and Space-Tunneling[1][12][13]. The Mk-III aboard *Vakan*-class ships had two separately addressable and individually separable blocks so that the jettisoning of one block would not fully compromise the reserve energy capacity[9][10][12].

Like the four preceding frigate classes, *Vakan*-class ships mounted twin Rasama-Reactors for main power generation[1][12][13],backed up by 16 Lassero SS-8 Solar Generators enclosed in 12-cm reinforced Placum-Zerchod Polymer armor [12]. The *Vakan* class had the capability to carry 28 "Pakra" drones for long range engagement and deployment of Thermo-Nuclear arms without exposing the mother craft [5].

Detection equipment integrated the Jamuth Broad Spectrum Automated Identification and Reaction (JABS-AIR) system supplemented with the Computational Engagement Predictor and Target Based Resource Allocation (CEP-TAGRA) system for target assessment and prioritization [13].

Development:

In 2578, the Core Congress of the Selenn Orbitary Republic authorized the building of 12 "force amplification and transmission craft" to be completed by universal month Septum of 2581. As tensions with the Free State of Braktul escalated in 2579, the order was increased to 18 while in the design stages[3].

The frigates of the *Vakan* class were designed for the capital ship role, having extensive amenities in the bridge and Core-Compartment along with 2 diplomatic suites on opposite sides of the lower shuttle-bay[12]. The provisions for guests were described by foreign dignitaries as "luxurious" and "just like a hotel on Kpreika"[4].

Construction:

The first plate-piece was Laid on 3 Novross, 2579 for SOR *Vakan* FG-88 at Aphons Shipbuilding Site-3. The following two ships had plates Laid on 7 Novross, 2579 at Fazon Stellar-Yards. 5 more were laid down between 28 Novross, 2579 and 6 Trisop, 2581. The last 6 had plates Laid in 2583, and 4 more had plates Laid between 2584 and 2585, before being scrapped in-yard in 2587 after construction was put on hold indefinitely of the 30th of Quincina, 2585[1][14].

Refinements to the Larnz-type plating delayed commissioning of the first 3 ships to 2582 as the system was deemed critical to vessel effectiveness, the other 5 ships of the class that were under construction were delayed while the system was refined [13].

The remaining 4 ships were cancelled in 2586 after the Elodd Economic Crisis of 2583 and the Signing of the Arms Reduction Treaty of 2585 on Novross 18th, 2585[12][14]. jobs that would have been allotted for the construction of the vessels were re-assigned to Civil Reconstruction and infrastructure maintenance [14].

Ships in class:

Ship	Hull Number	Plate Laid	Launched	Commissioned	Retrofit	Fate
Vakan	FG-88	3, Novross, 2579	14 Septum, 2582	30 Octoss, 2582		Split in half, Depressurized at Battle of Mas. 498 casualties of 1561 crew
Dephato	FG-89	7 Novross, 2579	14 Septum, 2582	31 Octoss, 2582		Compression Generator perforated by railgun fire while executing Space-Tunneling Maneuver, lost with all hands in ensuing Spatial-Anomaly
Lekhia	FG-90	7 Novross, 2579	14 Septum, 2582	31 Octoss, 2582		Significant structural damage and power-loss during engagement in Battle in Yetsop Orbital, Evacuated and Scuttled, crew taken as prisoners
Sasta	FG-91	28 Novross, 2579	8 Novross, 2582	30 Trisop, 2583		Critically damaged during Battle of Mas. Evacuated and scuttled
Meita	FG-92	29 Novross, 2579	19 Monolo, 2583	4 Trisop, 2583		Lost with all hands during battle of Mas after unintentional activation of the Compression Generator caused by EMP shell, flaw rectified in remaining ships
Saschweet	FG-93	3 Monolo, 2580	21 Monolo, 2583	19 Trisop, 2583		Destruction of limiter modules and damage to primary Reaction Control Motors, along with a subsequent EMP warhead detonation in proximity and severe negligence by the Captain and Deck Officers lead to an uncontrolled dive into Seasis II. The Black Box was successfully evacuated along with most personnel. Captain Dephtheil, along with 19 other crew of the total 1450, failed to escape before complete structural failure around 291 m above surface according to the tertiary Black Box that remained aboard and was retrieved on Duom 2nd, 2591. Surviving ships received
Moltobar	FG-94	18 Quincina, 2580	14 Quincina, 2583	6 Septum, 2583	29 Trisop, 2610-8 Septum, 2612	Decommissioned 3 Novross, 2672[10]. Transferred to the Ship Historical Preservation Society on 9 Duom, 2674. Preserved as museum in orbit of Ulasus adjacent to the Moltobar Orbital[7][10]
Baroko	FG-95	6 Trisop, 2581	19 Sexota, 2583	12 Novross, 2583		Accidental power loss due to reactor overload in maximum output test. Contaminated due to failure of Environmental Shielding in low-power state. Evacuated, Black-Box retrieved. Directed into nearby star by recovery Tugs when scrapping deemed impossible in 2601 survey
Tapum	FG-96	12 Monolo, 2583	13 Sexota, 2584	Destroyed Septum 1st, 2584		Destroyed in Thermonuclear chain-reaction event during Massacre at Lemete, lost with all hands
Yetsop	FG-97	13 Monolo, 2583	19 Sexota, 2584	Destroyed Septum 1st, 2584		Destroyed in Thermonuclear chain-reaction event during Massacre at Lemete, lost with all hands
Nellos	FG-98	13 Monolo, 2583	29 Sexota, 2584	Destroyed Septum 1st, 2584		Destroyed in Thermonuclear chain-reaction event during Massacre at Lemete, lost with all hands
Mieka	FG-99	15 Monolo, 2583	3 Sexota, 2584	Destroyed Septum 1st, 2584		Destroyed in Thermonuclear chain-reaction event during Massacre at Lemete, lost with all hands
Urono	FG-100	17 Monolo, 2583	5 Sexota, 2584	Destroyed Septum 1st, 2584		Destroyed in Thermonuclear chain-reaction event during Massacre at Lemete, lost with all hands[1][11]
Bakelle	FG-101	21 Monolo, 2583	13 Septum, 2584	9 Novross, 2584	31 Trisop, 2610-9 Septum, 2612	Decommissioned on Septum 8th, 2638, scrapped between 2641 and 2643[10]
(Romos)	(FG-102)	1 Novross, 2584	Cancelled	Cancelled		Cancelled Monolo 2nd, 2586, scrapped in-yard[1]
(Tiekan)	(FG-103)	1 Novross, 2584	Cancelled	Cancelled		Cancelled Monolo 2nd, 2586, scrapped in-yard[1]
(Gheust)	(FG-104)	1 Novross, 2584	Cancelled	Cancelled		Cancelled Monolo 2nd, 2586, scrapped in-yard[1]
(Niende)	(FG-105)	1 Novross, 2584	Cancelled	Cancelled		Cancelled Monolo 2nd, 2586, scrapped in-yard[1]

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