

	MEKO A-200	Leander	Arrowhead-140
Industrial Consortium	Atlas Elektronik UK / TKMS	BAE Systems / Cammel Laird 'Team Leander'	Babcock / Thales 'Team 31'
Baseline platform	MEKO A-200 class frigate	Khareef class covette (enlarged by approx 38%)	Iver Huitfeldt class frigate
Displacement (tonnes)	3,700 (+200t future growth margin)	2,660 - 3,700 (+ some growth margin)	5,700 (large future growth margin)
Length OA (m)	121.0	Available in 4 sizes: 99m (Khareef), 102m, 117m & 120m	138.7
Beam (m)	16.34	14.6	19.8
Draft (m)	5.95	4.5	4.8
Speed (Kn)	27+	25	29+
Range (nm)	c 7,500 nm @ 16kn	c 8,100nm @12kn	c 9,300nm @18Kn
Propulsion	CODAG-WARP 2 x diesels - 11.8MW 1 x GT driven pumpjet - 20MW	CODELOD 2 x diesels - Total 9.1MW + 700Kw per shaft electric drive	CODAD 4 x diesels - Total 32.8MW + Bow thruster
Compliment	c150 (Accomodation for 200)	<120	117 (Accomodation for 165)
Construction Standards	Full warship design standards (+ Kevlar Low Weight Splinter Protection on inner shell plating)	ANEP 77 basic naval ship standard + enhanced in some areas	Full warship design standard endorsed by RN FOST organisation. Shock-tested
Hangar	2 x Wildcat or 1 x Merlin	1x Wildcat	2 x Wildcat or 1 x Merlin
Flight Deck	Up to Merlin size (27m x 16m)	Up to Merlin size	Up to Merlin size
Mission / Boat Bays	2 x ISO containers amidships 2 x Boat bays	Mix of up to 8 x ISO containers / 4 x 9.5m boats + direct access to hangar. 4t crane for self-loading.	4 x boat bays + Additional mission space below flight deck for 4 x ISO container.s
Main Radar	Can be specified by client	Artisan 3D or 4D AESA	Artisan 3D or Thales NS100 AESA
Hull mounted Sonar	Thales UMS4132 Kingklip HMS (or other)	Provision for HMS	Atlas AS90 medium range HMS (or other)
Towed Array Sonar	With modifications to the stern	Space allocated in stern	With modifications to the stern
Combat Mangmt System	To be specified by client?	BAES INTeACT with shared Infrastructure	Thales TACTICOS
VLS	16 or 32 cell VLS (modular)	12 x Sea Ceptor / 8 cell Mk 41	24 Sea Ceptor but has space for 32 cell strike-length Mk 41
Anti-Surface	Space for up to 16 x SSGWs	Space for 8 x SSGWs	Space for 8 x SSGWs
Anti-submarine	Space for 2 x TLS	None	Space for 2 x TLS
Main gun	Medium calibre gun - up to 127mm	Bofors 57 mm Mk3 but space for up to 127mm	Medium calibre gun - up to 127mm
CIWS	2 module spaces available	1 x Phalanx	2 module spaces available
Electronic Warfare	To be specified by client?	R-ESM – MEWSS Bllk1 or Vigile400/D	EW equipment from Thales UK, including Vigile400/D
Decoys	To be specified by client?	RF & IR seduction/distraction round launchers	8 x 6-barrelled Terma 137 Launchers /Seagnat Mk 36 SRBOC
Naval Architects	TKMS (Germany)	BAE Systems	OMT (Denmark) / BMT
Lead Shipyard	Harland & Wolff (with on-site TKMS technical support)	Cammel Laird, Birkenhead	Babcock, Rosyth
Other Shipyards	Ferguson Marine, Glasgow	A&P Tyne, Newcastle	Harland & Wolff, Belfast Ferguson Marine, Glasgow
Competitive Advantages	6 vessels already constucted + more on order. TKMS very experienced building with overseas partners. Unique pumpjet propulsion. No funnels gives more superstrucure space. Lowest signatures - notably the best acoustic signature of the 3.	BAE Systems experience in shipboard systems integration. Design utilises elements already in-service with RN, in particular the CMS. Single shipyard construction maybe cheaper more efficient than dispersed block-build. All-British design. Best mission bay space.	Proven baseline warship hull design already in service and only needs minor adaptations. Designed for verly low through life cost, modular construction and modularised weapons systems. Larger ship offers better performance and upgrade options.
Potential Weaknesses	Construction partners limited experience & capacity. Potential IP/ Licensing issues when exporting. More complex propulsion.	Type 31 partly an attempt to break BAES monopoly? Smallest future growth/upgrade margin. Not fully based on a proven warship design.	Tacticos CMS not in service with RN. Potential IP/ Licensing issues when exporting. Larger hull - too big for low end export market?
Political Advantages	Reduces BAES monopoly on RN warship construction. Good for economy of Northen Ireland and Scotland.	BAES largest global company with established export network and contacts. English shipyards adds insurance against Scottish Independence.	Reduces BAES monopoly on RN warship construction. Dispersed construction inline with NSBS aims. Maintains Rosyth facilites for future naval work.