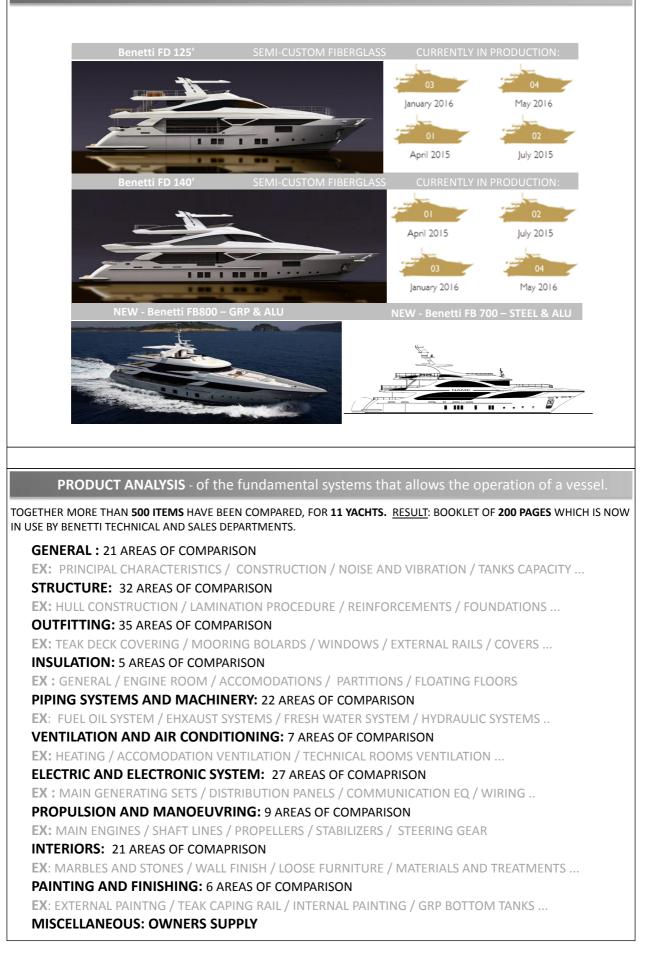
	UNIVERSITÀ DEGLI STUDI DI GENOVA						
	aster in Naval Architecture DESIGN OF A SUPERYACHT						
	ANGE OF BENETTI YACHTS, FROM 93' TO 140' ; CLASSIC"-121' YACHT						
	KOVIC M.Arch						
Prof. DARIO BOOTE – University	Pomeranian University of Technology, Szczecin						
STRUCTURE OF INTERNS	HIP AND MASTER THESIS						
	CATIONS COMPARISON						
10 TECHNICAL AREAS OF COMPARISON	IDENTIFYING THE STANDARDS						
THE SUPERYACHT	MARKET ANALYSIS						
MARKET CONSIDERATIONS	STRATEGIC COMPARISON OF "CLASSIC" 121'						
RE-DESIGN OF A M	Y "CLASSIC 121' YACHT						
DESIGN CONCEPT	TECHNICAL DRAWINGS AND SPECIFICATIONS						



THE LIST OF COMAPRED YACHTS – FAST DISPLACEMENT RANGE



GENERAL : 21 AREAS OF COMPARISON

EX: PRINCIPAL CHARACTERISTICS / CONSTRUCTION / NOISE AND VIBRATION / TANKS CAPACITY ...

BENETTI RANGE CLASS	- CUSTOM	BENETTI CLASS				
MODEL		BD 93'	BK 108'	BC 121'	BS 132'	BY 140'
NOISE AND VIBRATION						
Noise @ Aft Guests Cabins (ar	ch ; nav)	48 ; 65	50 ; 63	47 ; 62	47;72	45 ; 62
Noise @ Fwd guest Cabins (ar	ch ; nav)	45;57	45;58	46;57	46;57	45 ; 58
Noise @ Crew Mess (ar	ich ; nav)	45 ; 55	45;60	48;56	48;56	48;57
Noise @ Crew Cabins (a	nch ; nav)	45 ; 55	45 ; 60	48 ; 56	48;56	48 ; 56
Noise @ Main Saloon (a	nch ; nav)	50 ; 63	52 ; 62	45 ; 62	50 ; 62	48 ; 62
Noise @ Dining Area (ar	ich ; nav)	/	52 ; 62	45 ; 58	48;58	/
Noise @ Owner's Cabin (ar	nch ; nav)	45 ; 52	43 ; 50	44 ; 51	44;51	44;51
Noise @ Galley (a	nch ; nav)	45 ; 55	55 ; 65	52 ; 59	49 ; 59	48;60
Noise @ Sky Lounge (a	nch ; nav)	/	58 ; 65	46 ; 55	46 ; 55	pan.saloon 45 ; 56
Noise @ Captain cabin (a	nch ; nav)	/	/	48 ; 56	48;56	48 ; 55
Noise @ Wheelhouse (a	nch ; nav)	48 ; 57	50; 55	56 ; 56	56;56	55;55
Noise @ Aft Main Deck (ext. Area	(anch ; nav)	60 ; 78	63 ; 78	58 ; 80	58;80	58 : 79
Noise @ Aft Upper Deck (ext. Are	a) (anch ; nav)	/	58 ; 73	57 ; 73	57;73	56;74
Noise @ Middle Sun Deck (ext. Ar	ea) (anch ; nav)	58 ; 73	55 ; 70	56 ; 70	56 ; 70	55 ; 70
Vibration@ Owner and guests int (Nav)	erior lux areas	1RMS [mm/s]	1 RMS [mm/s]	2 RMS [mm/s]	1 RMS [mm/s]	2.5 RMS [mm/s]
Vibration @ Open Deck entertain	ment areas (Nav)	1.5 RMS [mm/s]	1.5 RMS [mm/s]	2.5 RMS [mm/s]	1.5 RMS [mm/s]	3 RMS [mm/s]
Vibration @ crew Quarters (Nav)		1.5 RMS [mm/s]	1.5 RMS [mm/s]	2.5 RMS [mm/s]	1.5 RMS [mm/s]	3 RMS [mm/s]

STRUCTURE: 32 AREAS OF COMPARISON

EX: HULL CONSTRUCTION / LAMINATION PROCEDURE / REINFORCEMENTS / FOUNDATIONS ...

BENETTI RANGE CLASS - CUSTOM			BENETTI CLASS		
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'
Hull Materials	GRP	GRP	GRP	GRP	FRP
Superstructure materials	GRP	GRP	Cored sandwich structure in the decks and on the sides utilising mat, unidirectional, biaxial and woven E-glass. When necessary single skin laminate will be provided.	Cored sandwich structure in the decks and on the sides utilising mat, unidirectional, biaxial and woven E-glass. When necessary single skin laminate will be provided.	Cored sandwich structure in the decks and on the sides utilising mat, unidirectional, biaxial and woven E-glass. When necessary single skin laminate will be provided.
Superstructure reinforcements	Local reinforcements when necessary	Local reinforcements when necessary	Local reinforcements when necessary, to support concentrated loads due to heavy parts and objects.	Local reinforcements when necessary, to support concentrated loads due to heavy parts and objects.	Local reinforcements when necessary, to support concentrated loads due to heavy parts and objects.

OUTFITTING: 35 AREAS OF COMPARISON

EX: TEAK DECK COVERING / MOORING BOLARDS / WINDOWS / EXTERNAL RAILS / COVERS ...

BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS					
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'	
EXTERNAL DECKS OUTFITTING						
Deck Lining	planked with teak 12mm	planked with teak 12mm	planked with teak 12mm	planked with teak 12mm	planked with teak 15mm	
Teak on hull doors and swimming platforms	/	/	planked with teak 10mm	planked with teak 10mm	/	
External stairs lining	planked with external stair covering 12mm. Benetti Standard 21107	planked with teak 12mm.	planked with teak 15mm	planked with teak 12mm	planked with teak 15mm	
Bulwark capping rails	12mm	12mm	15mm	12mm	15mm	
External ceilings	GRP panels	Plywood of adequate thickness, elasticly connected to the Yacht structure. Ceilings will be removable wherever necessary.	, marine plywood, satin finish	honeycomb sandwich panels, with satin finish.		

INSULATION: 5 AREAS OF COMPARISON

EX : GENERAL / ENGINE ROOM / ACCOMODATIONS / PARTITIONS / FLOATING FLOORS

BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS				
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'
Exhaust gas pipes insulation	insulated to avoid thermal transmission	The stainless steel pipe is completely insulated by a rigid material which allows a maximum temperature of about 65 °C, without any further insulation and consequently avoiding the installation of the common soft insulation material.	Insulated with a rigid material. Max. Temperature of 65 °C will be reached in the	Insulated with a rigid material. Max. Temperature of 65 °C will be reached in the exposed surfaces. Connections will have textile insulation.	stainless steel polished covered
Pipes insulation					
Hot water pipes	insulated insulated inside and outside engine room, in	insulated	,	insulated insulated inside and outside engine room, in order to avoid any	
	order to avoid any condensation	,	condensation. Fresh water filling lines will be insulated too.	condensation. Fresh water filling lines will be insulated too.	condensation. Fresh water filling lines will be insulated too.

PIPING SYSTEMS AND MACHINERY: 22 AREAS OF COMPARISON

EX: FUEL OIL SYSTEM / EHXAUST SYSTEMS / FRESH WATER SYSTEM / HYDRAULIC SYSTEMS ...

BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS					
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'	
Bilge and fire system	connected to the	bilge manifold to the electric pump. Fire hydrant valves are fitted on open decks. 2 EL self priming pumps are provided for bilge and fire extinguishing system. Pipes made of cunipress. Fire hoses and nozzles are fitted as per rules. Fire hoses are stored on proper fittings.	bilge manifold to the electric pump. The forward storages will be served by automatic submergible pumps. For the garage bilge will be used a collecting tank located below the floor, the tank will be automatically emptied by a	served by automatic submergible pumps. For the garage bilge will be used a collecting tank	Each watertight compartment will have a separate bilge suction connected through a bilge manifold to the electric pumps. The bilge pump piping will be designed to normally discharge into the bilge tank and only be able to discharge directly overboard in emergency. Fire pump will be connected to the fire manifold and can supply sea water to the fire system.	
Water ballast system	/	electric valve, connected through a bilge manifold to the electric			A system to fill and empty the ballast tanks through manifold is provided. All sea water paping for ballast system is made in CuNi 90-10.	

VENTILATION AND AIR CONDITIONING: 7 AREAS OF COMPARISON

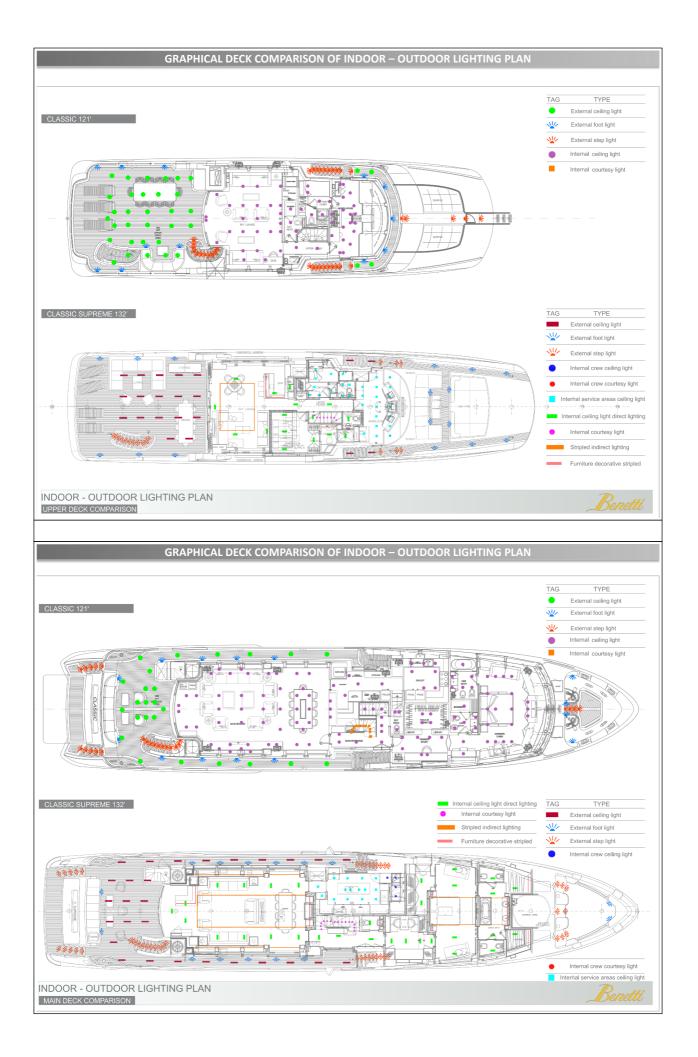
EX: HEATING / ACCOMODATION VENTILATION / TECHNICAL ROOMS VENTILATION ...

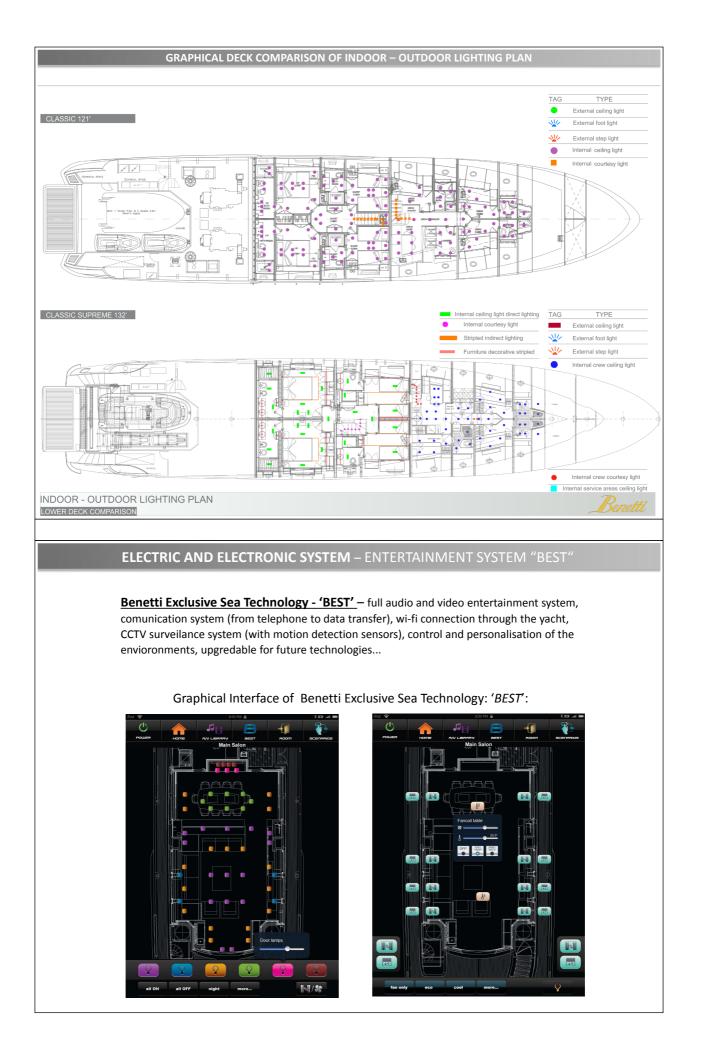
BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS						
MODEL	BD 93'	ВК 108'	BC 121'	BS 132'	BY 140'		
ACCOMMODATION AIR CONDITIONING AND VENTILATION SYSTEM							
Summer conditions:	35°C, 95 F, 90% / 22 °C, 72 F, 55 % / 32 °C, 90 F	35°C, 95 F, 80% / 22 °C, 72 F, 55 % / 32 °C, 90 F	35°C, 95 F, 90% / 22 °C, 72 F, 55 % / 32 °C, 90 F	35°C, 95 F, 90% / 22 °C, 72 F, 55 % / 32 °C, 90 F	35°C, 95 F, 90% / 22 °C, 72 F, 55 % / 32 °C, 90 F		
Winter conditions:	0°C, 32 F, 90% / 22 °C, 72 F, 50 % / 10 °C, 50 F	0°C, 32 F, 90% / 22 °C, 72 F, 50 % / 10 °C, 50 F	0°C, 32 F, 90% / 22 °C, 72 F, 50 % / 5 °C, 41 F	0°C, 32 F, 90% / 22 °C, 72 F, 50 % / 5 °C, 41 F	0°C, 32 F, 90% / 22 °C, 72 F, 50 % / 8 °C, 46 F		
Fan coils	drip-tray with double drain connected to separate drain tank,	order to ensure the proper water flow versus the various ambient condition and temperature requirement.	local fan coil units equiped with four way by-pass valve, thermostat, fan, heat exchanger,		Shall be fed by chilled/heated water. The units shall be complete with heat exchanger, fan, drip-tray with double drain connected to separate drain tank, electric actuated. Ech fan coil unit shall be provided with three speed controller for up and down room temperature and fan speed settings and a display panel.		

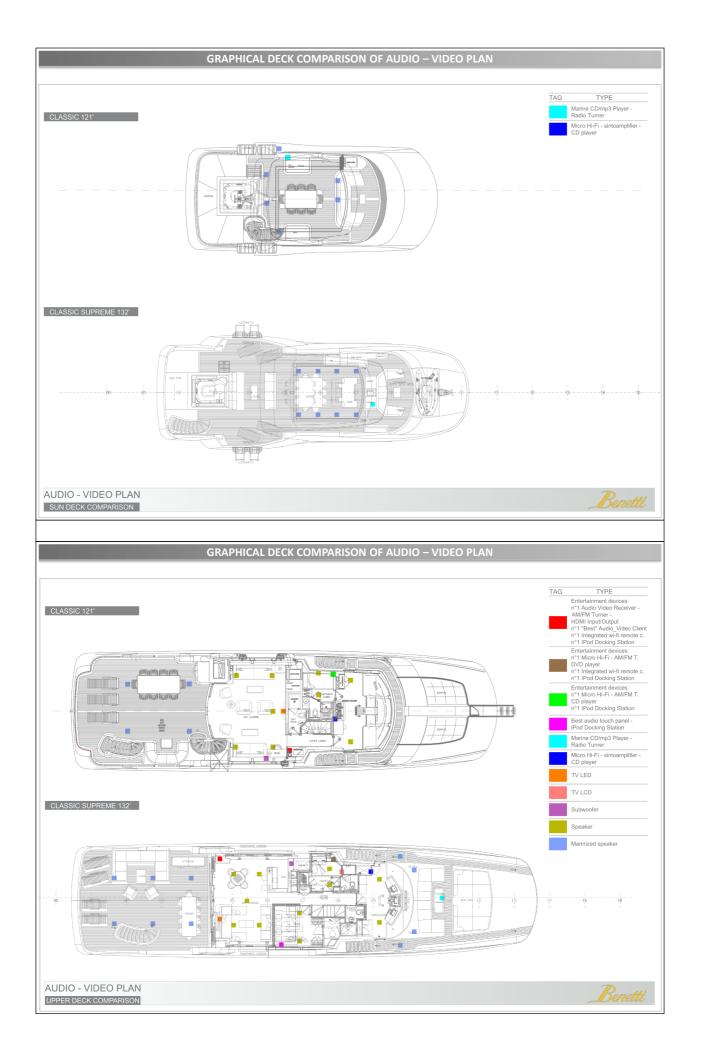
ELECTRIC AND ELECTRONIC SYSTEM: 27 AREAS OF COMAPRISON

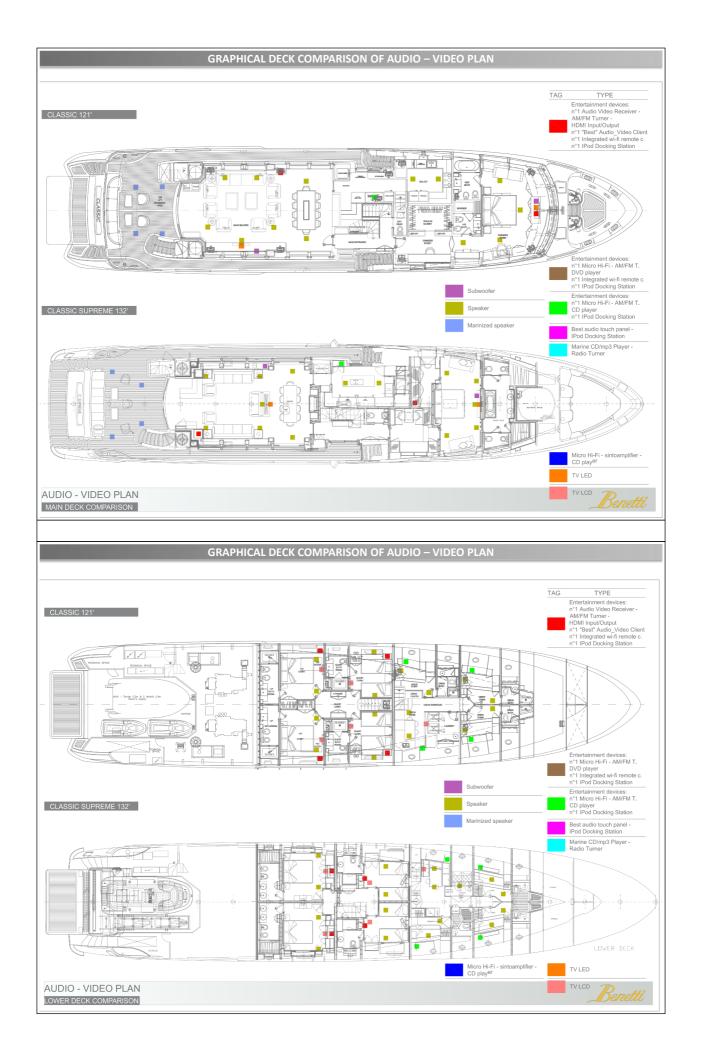
EX : MAIN GENERATING SETS / DISTRIBUTION PANELS / COMMUNICATION EQ / WIRING ...

BENETTI RANGE CLASS - CUSTOM		BENETTI CLASS					
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'		
Echo sounder	N° 1 BLACKBOX ECHOSOUNDER FURUNO DFF1 with dual frequency triducer (depth, log, water temp)	N° 1 BLACKBOX ECHOSOUNDER FURUNO DFF1 with dual frequency triducer (depth, log, water temp)	(depth, log, water temp) , <u>N 1 NMEA</u>	UFF 1 with dual frequency triducer (depth, log, water temp)	with dual frequency triducer (depth, log, water temp) ; <u>N 2 Log integrated in</u> <u>NAVNET</u> 3D		
Magnetic compass Navtex system	N°1 Magnetic compass Riviera White Star BW3 for Wheelhouse. N°1 Magnetic compass Riviera White Star BZ1 for Fly bridge	N°1 Magnetic compass C.Plath Jupiter over head mounting for Wheelhouse N°1 Magnetic compass Riviera for Fly bridge	N 1 Plath Jupiter m, 180 mm Over head installation	N 1 Plath Jupiter m, 180 mm to autosilo connection Over head installation	N 1 Plath Jupiter m, 180 mm to autosilo connection Over head installation		
Telephone units	10 VOIP telephones	13 VOIP telephones	14 VOIP telephones	15 VOIP telephones	17 VOIP telephones		
GRAPHICAL D	Connected to the B.E.S.T network.	B.E.S.T network.	B.E.S.T network.				
GRAPHICAL D	B.E.S.T network.	B.E.S.T network.	B.E.S.T network.		B.E.S.T. Network		
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	B.E.S.T network.	B.E.S.T network.	B.E.S.T network.		B.E.S.T. Network		









PROPULSION AND MANOEUVRING: 9 AREAS OF COMPARISON

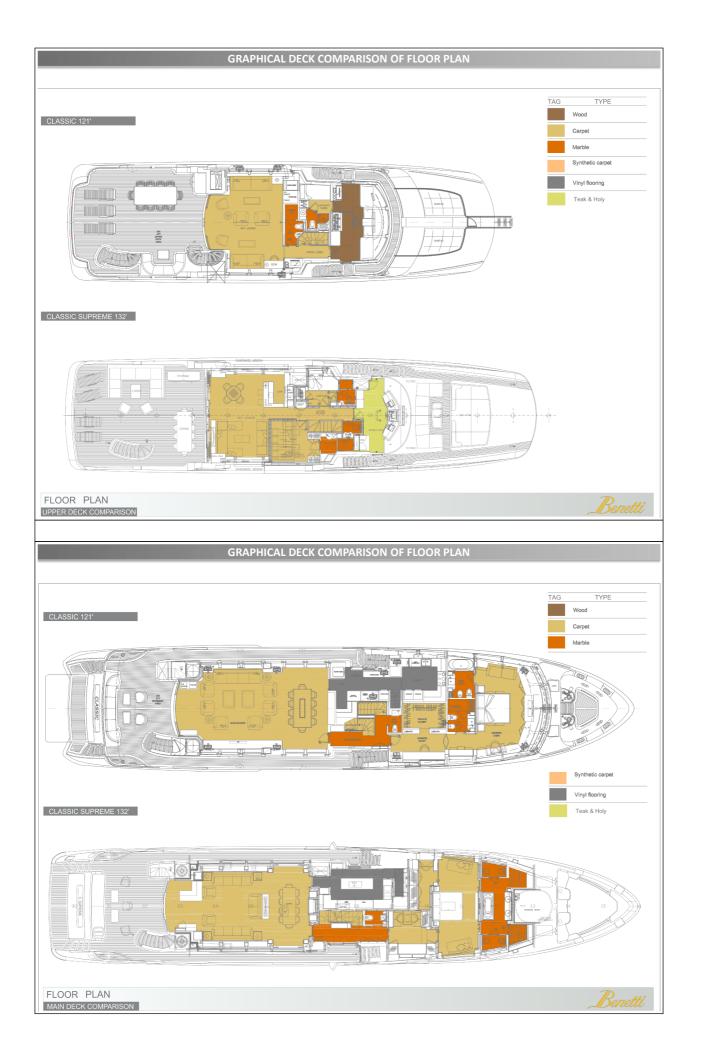
EX: MAIN ENGINES / SHAFT LINES / PROPELLERS / STABILIZERS / STEERING GEAR

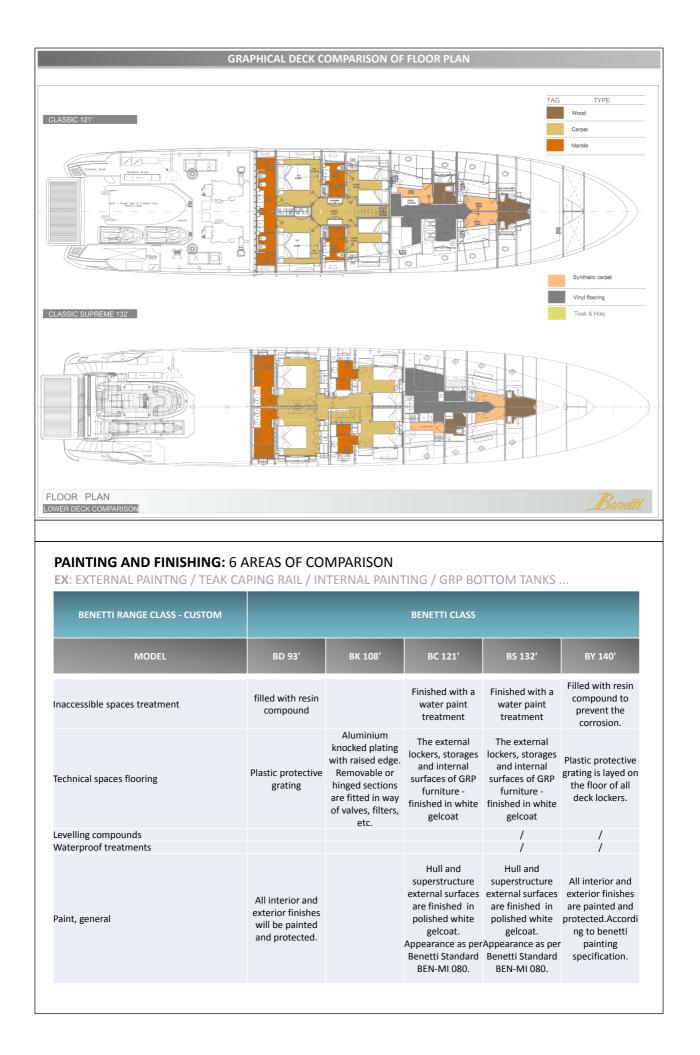
BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS				
MODEL	BD 93'	ВК 108'	BC 121'	BS 132'	BY 140'
Propulsion machinery					
Main engines	2 x MAN V8 1000, of 735 kW (1000HP) @ 2300 rpm each		2x MTU 12V 2000M72 1080 kW (1468 hp) @ 2250 rpm	2x MTU 12V 2000M72 1080 kW (1450 hp) @ 2250 rpm with BlueLine plant automotion	MTU12V2000M72, of 1080 kW (1450 HP) @ 2250 rpm each, with Blue vision NG basic
Shaft seals	Mechanical seals are provided inside hull.	Sealings are mechanical type.	Mechanical seals are provided inside hull.	Mechanical seals are provided inside hull.	
Propellers	2 highly skewed propellers. Made by five nickel- aluminium-bronze blades and hub. Blade surface finished according to ISO 484/2 S class.	blades and hub. Blade surface	five nickel- aluminium-bronze blades and hub. Each propeller is staticly balanced. Blade	2 highly skewed propellers. Made by five nickel- aluminium-bronze blades and hub. Each propeller is staticly balanced. Blade surface finished according to ISO S class.	2 propellers made by five nickel- aluminium-bronze blades. Each propeller is staticly balanced. Blade surface finished according to ISO S class.

INTERIORS: 21 AREAS OF COMAPRISON

EX: MARBLES AND STONES / WALL FINISH / LOOSE FURNITURE / MATERIALS AND TREATMENTS ...

BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS					
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'	
Loose furniture	Guest loose furniture (seats and tables) will be supplied and installed according to the Interior's Concept Design, the Functional Plan Book and the Excellence Range Book.	loose chairs, armchairs, tables, stools, sofas, etc. Will be instaled by Benetti in accordance to the GA and as per Interiors Book or per Furnitur plans.	loose chairs, armchairs, tables, stools, sofas, etc. Will be instaled by Benetti in accordance to the GA and as per Internal / External Loose Furniture plan.	loose chairs, armchairs, tables, stools, sofas, etc. Will be instaled by Benetti in accordance to the GA and as per Internal / External Loose Furniture plan.	loose chairs, armchairs, tables, stools, sofas, etc. Will be instaled by Benetti in accordance to the GA and as per Internal / External Loose Furniture plan.	
External Aft Area:	6 Dining Chairs, 1 Dining table	/	2 Coffe table, 2 armchairs	2 coffe table	1 coffe table	
Main Saloon:	2x Sofa 3 seats, 1x sofa 2 seats, 1 Coffe table, 10 dining chairs, 1 Dining table.	/	1x Sofa 4 seats, 6 Armchairs, 2 Coffe table, 10 dining chairs, 1 Dining table, 4 side table	2x Sofa 4 seats, 2 Coffe table, 10 dining chairs, 1 Dining table.	2 sofa 3 seat, 2 armchairs, 1 coffe table, 2 bar stool, 10 dining chairs, 1 dining table	
Owner's cabin:	1 Vanity Chair, 1x 2 seat Sofa.	/	1 Vanity chair, 1 desk chair (in Owner's Study)	1 Vanity chair, 2 Chaise lounge	1 Vanity chair, 1 Chaise lounge	
UPPER DECK:						
External Aft Area:	DINING TABLE 1, DINING CHAIR 6		1 Coffe table, 3 Sunbed, 1 Dining table, 10 Dining chairs.	2 Sofa 3 seats, 2 Armchairs, 1 Coffe table, 1 Dining table, 10 Dining chairs.	2 Sofa 2 seats, 1 Sofa 3 seats, 2 Armchairs, 1 Coffe table.	





MISCELLANEOUS: OWNERS SUPPLY

BENETTI RANGE CLASS - CUSTOM	BENETTI CLASS					
MODEL	BD 93'	BK 108'	BC 121'	BS 132'	BY 140'	
OWNER'S SUPPLY AND ALLOWANCES						
	tools, Crockery, Cutlery and serving pieces, Table accessories, Table linens, Bedlinens and blankets, Towels and	1 safe in the Owner's suite ; Built-in and separate GRP furniture and sofas for external decks ; Sun bathing mattress and external cushions that will be covered with proper upholstery for external	this specification : Tender, Jet-skis, Watersports equipment, Diving bottles with scuba accessories and swiming equipments, Gym and fitness equipment, Loose sun deck bathing chairs, Artworks and	considerd for weight calculation within	considerd for weigh calculation within this specification : Tender including the lifting points with engine included of 6.2x2.61x1.13 (LxWxH), Jet-skis including the lifting points with dimmensios of 3.07x1.22x1.16 (LxWxH), Watersports equipment, Diving bottles with scuba accessories and swiming	

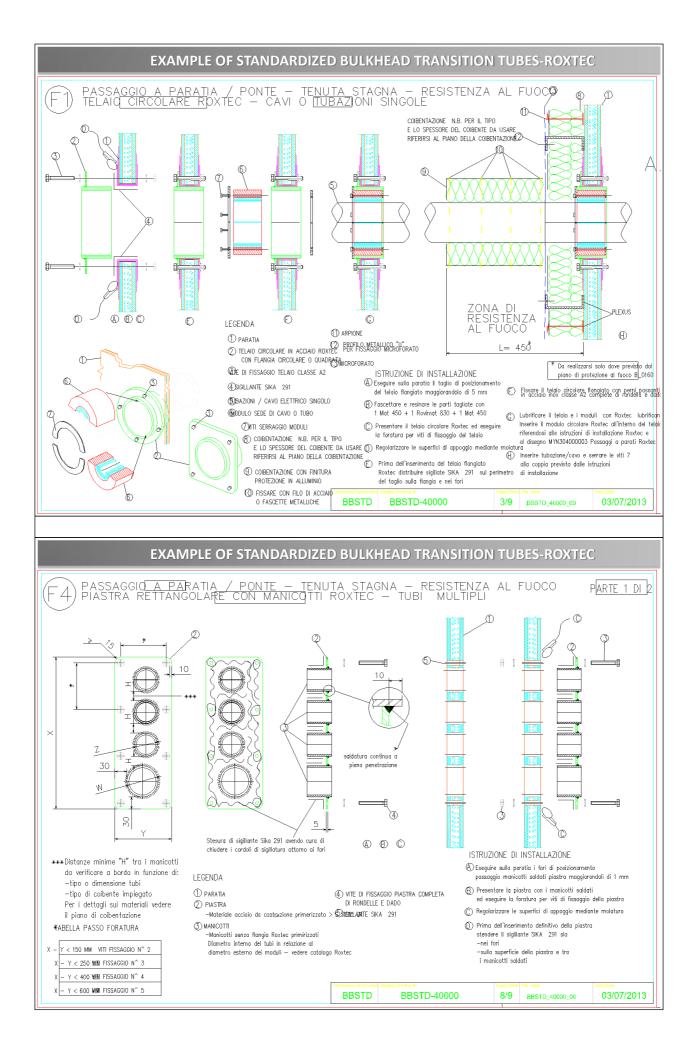
EXAMPLE OF STANDARDIZED BULKHEAD TRANSITION TUBES-ROXTEC

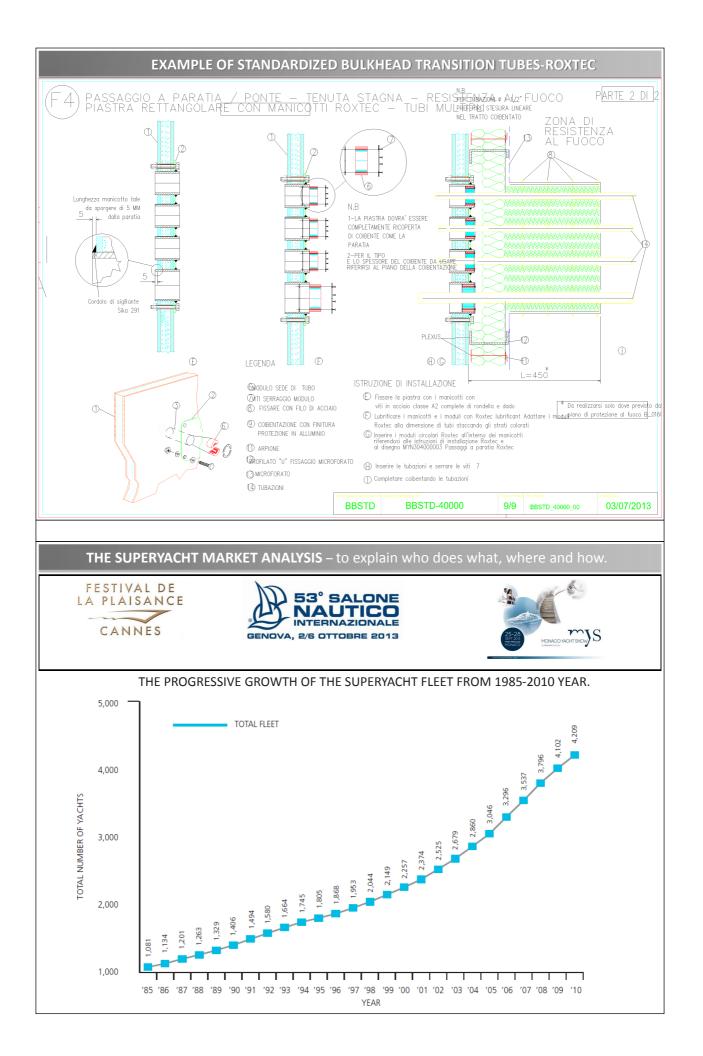


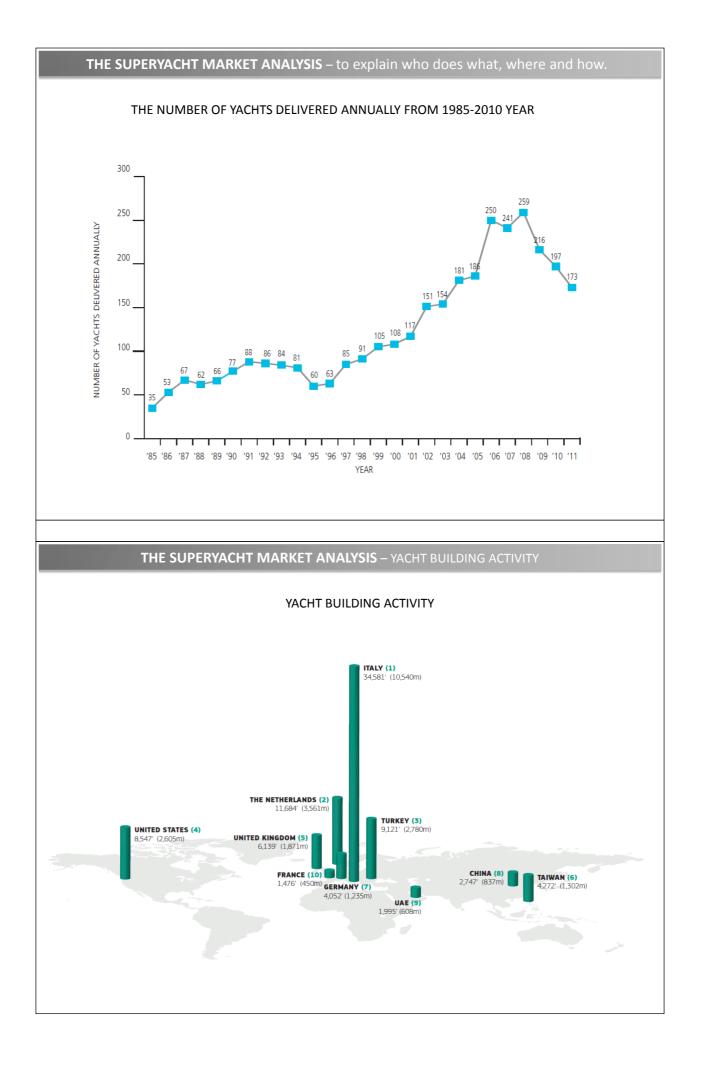










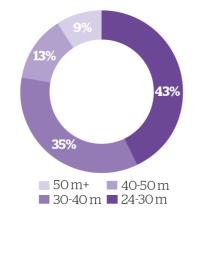


YACHT BUILDING ACTIVITY IN TERMS OF DISTRIBUTION BY COUNTRY

2013 GOB RANK	COUNTRY	TOTAL (M)	TOTAL (FT)	PROJECTS	2012 AVG. (FT)	2011 AVG. (FT)	2012 GOB RANK
1	Italy	10,540	34,581	272	127	120	1
2	The Netherlands	3,561	11,684	66	180	165	2
3	Turkey	2,780	9,121	63	143	141	3
4	USA	2,605	8,547	66	131	130	4
5	ИК	1,871	6,139	61	99	100	5
6	Taiwan	1,302	4,272	43	99	103	7
7	Germany	1,235	4,052	13	312	279	6
8	China	837	2,747	22	125	129	8
9	UAE	608	1,995	11	222	Not Ranked	Not Ranked
10	France	450	1,476	11	123	128	9

THE SUPERYACHT MARKET ANALYSIS – DISTRIBUTION BY TYPE, SIZE AND AGE

YACHT BUILDING ACTIVITY IN TERMS OF DISTRIBUTION BY SIZE

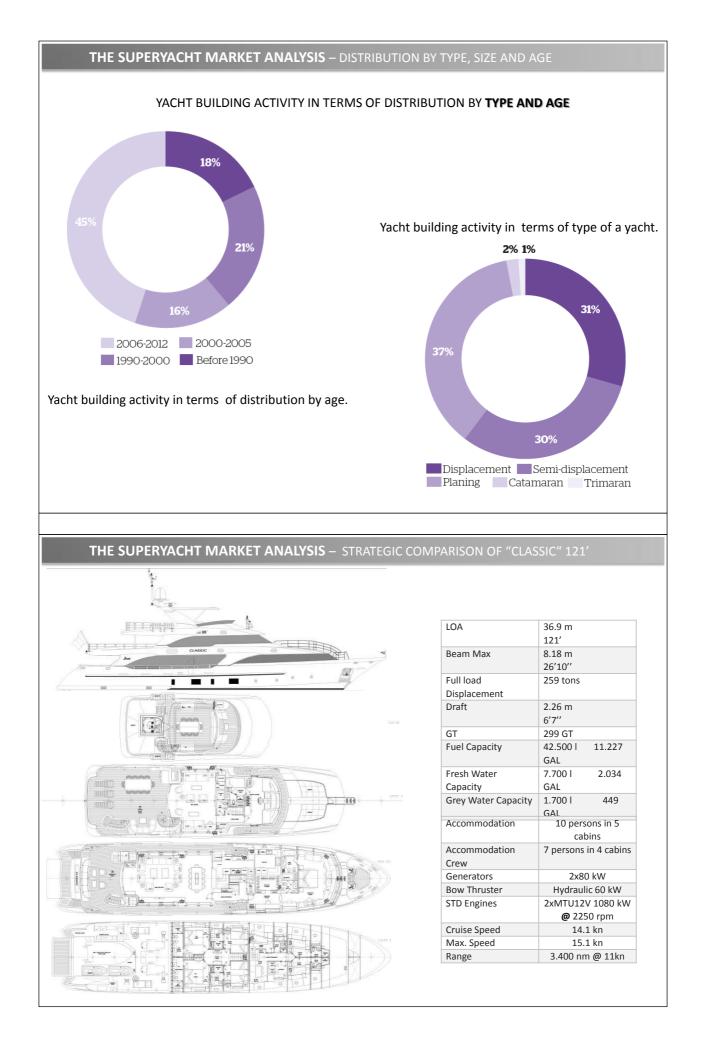


Yacht building activity in terms of distribution by size:

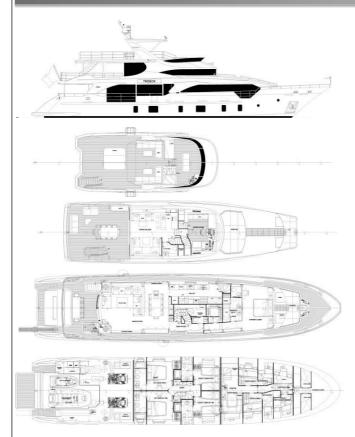
	24-30m	30-40m	40-50m	50m+	All
Motor yachts	2,127	1,867	654	490	5,138
Sailing yachts	590	362	129	71	1,152
Total	2,717	2,229	783	561	6,290

The table of the **Trend of orders** from 2006-2013 year. **In red**: the most active area of the yacht orders.

LENGTH (IN FEET)	2013	2012	2011	2010	2009	2008	2007	2006
80-89	119	178	158	187	286	253	207	216
90-99	94	70	78	89	117	114	109	86
100-119	142	151	151	144	190	179	155	146
120-149	151	150	155	150	193	175	152	110
150-199	100	109	132	112	145	125	108	90
200-249	47	43	45	41	40	47	28	28
250+	39	27	30	30	21	23	18	12
Total	692	728	749	753**	992*	916	777	688

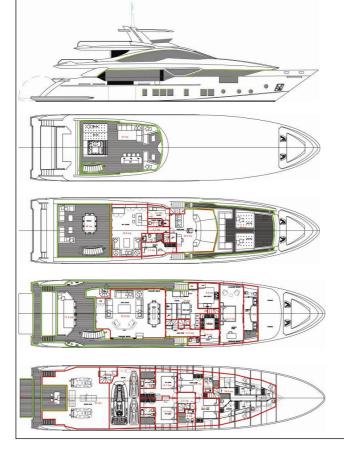


THE SUPERYACHT MARKET ANALYSIS - "IN-HOUSE" COMPETITOR BENETTI TRADITION 108'



LOA	32.98 m		
	108'2''		
Beam Max	7.41 m		
	24'4''		
Full load	170 tons		
Displacement			
Draft	2 m		
	6'7''		
GT	217 GT		
Fuel Capacity	21.500 5.680		
	GAL		
Fresh Water	3.500 925		
Capacity	GAL		
Grey Water Capacity	1.500 396		
	GAL		
Accommodation	10 persons in 5		
	cabins		
Accommodation	6 persons in 3 cabins		
Crew			
Generators	2x50 kW		
Bow Thruster	Electric 37 kW		
STD Engines	2xMAN V8 735 kW		
	@ 2300 rpm		
Cruise Speed	12.5 kn		
Max. Speed	13.5 kn		
Range	800.@10kn		

THE SUPERYACHT MARKET ANALYSIS – "IN-HOUSE" COMPETITOR BENETTI GRANDE 125'



IOA	38.1 m	
20/1	125'	
Beam Max	8.45 m 27'9''	
Full load	200 tons	
Displacement		
Draft	2.06 m 6'9''	
GT	320 GT	
Fuel Capacity	25.000 l 6.600 GAL	
Fresh Water	4.000 l 1.055	
Capacity	GAL	
Grey Water Capacity	2.000 l 528 GAL	
Accommodation	10 persons in 5 cabins	
Accommodation Crew	8 persons in 5 cabins	
Generators	2x70 kW	
Bow Thruster	Hydraulic	
STD Engines	2xMTU 12V 1939	
-	kW @ 2450 rpm	
Cruise Speed	17.5 kn	
Max. Speed	22 kn	
Range	1.250 nm @ 12kn	

STANDARD SURFACES COMPARISON:

WORSE than		TRADITION SUPREME 108'	CLASSIC 121'	GRANDE 125'
"Classic"	LOA	32.98 m	36.9 m	38.1 m
	Beam Max	7.25 m	8.18 m	8.45 m
	Sun Deck	65 m ²	68 m²	63 m ²
	AFT Upper Deck	39 m ²	55 m²	48 m ²
	FWD Upper Deck	<mark>11 m</mark> ²	29 m ²	49 m ²
	Sky Lounge	26 m ²	35 m²	30 m ²
BETTER than "Classic"	Captain's Cabin + head	/	7 m ²	10 m ²
	Wheelhouse	21 m ²	18 m²	31 m ²
	Main Deck Ext. Area	70 m ²	62 m ²	72 m ²
	Main saloon	41 m ²	58 m²	53 m ²
	Main foyer	6 m ²	8 m ²	7 m ²
	Galley / Pantry	14 m ²	23 m ²	28 m ²
	Owners area	32 m ²	57 m ²	46 m ²
	VIP Cabin Port side	16 m ²	16 m ²	19 m ²
	VIP Cabin Stbd side	16 m ²	16 m ²	19 m ²
	Twin Cabin Port side	14 m ²	14 m ²	16 m ²
	Twin Cabin Stbd side	14 m ²	14 m ²	16 m ²
	Crew quarter	37 m ²	45 m ²	39 m ²
	Engine room + Technical area	39 m²	54 m²	54 m ²
	Garage	19 m ²	27 m ²	30 m ²
	Swim platform	10 m ²	10 m ²	9 m ²
	Beach Area	N/A	N/A	10 m ²
	Crew number	6	7	8
	Crew Cabins	3	4	8 5

THE SUPERYACHT MARKET ANALYSIS – EXTERNAL COMPETITOR SAN LORENZO SD110





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LOA	33.65 m			
	110'5''			
Beam Max	7.66 m			
	25'2''			
Full load	170 tons			
Displacement				
Draft	2 m	6'7''		
GT	/			
Fuel Capacity	23.700 l	6.261		
	GAL			
Fresh Water	4.000 l	1.055		
Capacity	GAL			
Grey Water Capacity	2.000 l	528		
	GAL			
Accommodation	10 perso	ons in 5		
	cabins			
Accommodation	5 persons i	n 3 cabins		
Crew				
Generators	2x50 kW			
Bow Thruster	TBD			
STD Engines	2xMTU 12V 1080			
	kW @ 22	250 rpm		
Cruise Speed	11	kn		
Max. Speed	17	kn		
Range	3.260 nm	3.260 nm @ 10kn		

THE SUPERYACHT MARKET ANALYSIS - EXTERNA	L COMPETITOR <u>NAVET</u>	TA 33 CRESCENDO
, it	(Fe	erretti Custom Line)
	LOA	32.62 m 117'
	Beam Max	7 m 22'12''
	Full load Displacement	147 tons
	Draft	2.37 m 7'9''
	GT	/
	Fuel Capacity	17.000 l 4.491 GAL
	Fresh Water	3.100 819
Hard Street Stre	Capacity	GAL
	Grey Water Capacity	800 I 211 GAL
	Accommodation	10 persons in 5 cabins
	Accommodation	5 persons in 3 cabins
	Crew	
	Generators	2x33 kW
	Bow Thruster	Hydraulic 37 kW
	STD Engines	2xMAN 12V 1029 kW @ 2100 rpm
	Cruise Speed	15 kn
	Max. Speed	17 kn
	Range	300.nm @ 10kn

LOA	32.62 m
	117′
Beam Max	7 m
	22'12''
Full load	147 tons
Displacement	
Draft	2.37 m
	7'9''
GT	/
Fuel Capacity	17.000 l 4.491
	GAL
Fresh Water	3.100 819
Capacity	GAL
Grey Water Capacity	800 l 211
	GAL
Accommodation	10 persons in 5
	cabins
Accommodation	5 persons in 3 cabins
Crew	
Generators	2x33 kW
Bow Thruster	Hydraulic 37 kW
STD Engines	2xMAN 12V 1029
	kW @ 2100 rpm
Cruise Speed	15 kn
Max. Speed	17 kn
Range	300.nm @
	10kn

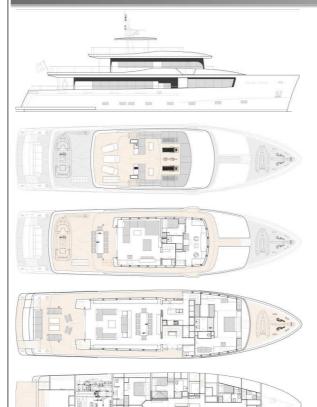
THE SUPERYACHT MARKET ANALYSIS – EXTERNAL COMPETITOR VULCAN 35M-TRI DECK



(Vicem Yachts)

101	26.2	
LOA	36.2 m	
	118'9"	
Beam Max	8.06 m	
	26'5"	
Full load	135 tons	
Displacement		
Draft	2.3 m	
	7'8''	
GT	/	
Fuel Capacity	28.000 l 7.565	
	GAL	
Fresh Water	5.400 l 1.460	
Capacity	GAL	
Grey Water Capacity	No available data	
Accommodation	10 persons in 5	
	cabins	
Accommodation	5 persons in 3 cabins	
Crew		
Generators	2x33 kW	
Bow Thruster	Hydraulic 37 kW	
STD Engines	2xMTU 16V 1790	
5	kW @ 2450 rpm	
Cruise Speed	21 kn	
Max. Speed	23 kn	
Range	965. nm @ 10kn	

THE SUPERYACHT MARKET ANALYSIS – EXTERNAL COMPETITOR NAUTA AIR 115



LOA	35.4 m	
	116'2''	
Beam Max	8.4 m	
	27'7''	
Full load	350 tons	
Displacement		
Draft	2.6 m	
	8'6''	
GT	1	
Fuel Capacity	70.000 l 18.492	
	GAL	
Fresh Water	11.000 l 2.905	
Capacity	GAL	
Grey Water Capacity	3.700 l 977	
	GAL	
Accommodation	10 persons in 5	
	cabins	
Accommodation	7 persons in 4	
Crew	cabins	
Generators	2x33 kW	
Bow Thruster	/	
STD Engines	2xCAT 16V 448 kW	
	@ 1800 rpm	
Cruise Speed	11 kn	
Max. Speed	13 kn	
Range	4900 nm @ 10kn	

(Cantiere delle Marche)

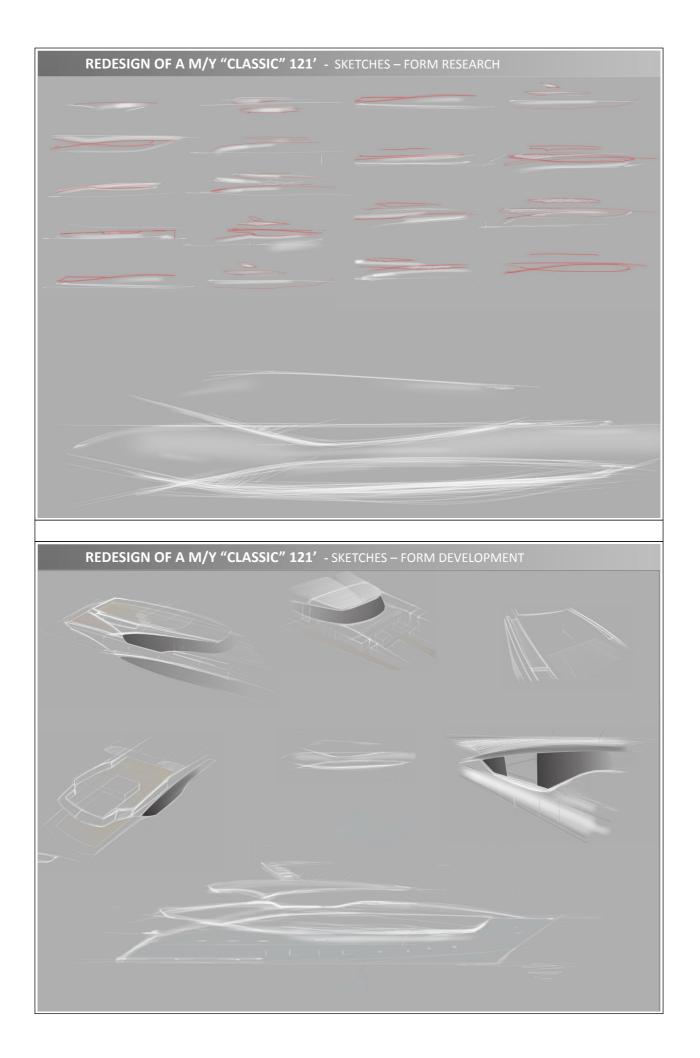
THE SUPERYACHT MARKET ANALYSIS – "CLASSIC" 121' vs "EXTERNAL" COMPETITORS

				IZI VS LA	
		SAN LORENZO	NAVETTA 33	VULCAN 35M	NAUTA AIR
		SD110	CRESCENDO	3 DECK	115
	LOA	33.65 m	32.62 m	36.2 m	35.40 m
	Beam Max	7.66 m	7 m	8.06 m	8.40 m
WORSE than	Sun Deck	42 m ²	36 m ²	63 m ²	77
"Classic"	AFT Upper	/	/	1	/
	Deck				
	FWD Upper	/	/	1	/
	Deck				
	Sky Lounge	/	/	/	/
	Captain's Cabin	/	/	1	/
BETTER than	+ head				
"Classic"	Wheelhouse	15 m²	18 m²	18 m ²	17 m ²
Classic	Main Deck Ext.	1	/	/	/
	Area				
	Main saloon	50 m ²	40 m ²	51 m ²	54 m ²
	Main foyer	/	/	/	/
	Galley / Pantry	/	/	/	/
	Owners area	31 m ²	32 m ²	34 m ²	35 m ²
	VIP Cabin Port	/	/	/	/
	VIP Cabin Stbd	/	/	/	/
	Twin Cabin	/	/	/	/
	Port side				
	Twin Cabin	/	/	/	/
	Stbd side				
	Crew quarter	46 m²	27 m ²	22 m ²	53 m ²
	Engine room +	39 m²	47 m ²	45 m ²	50 m ²
	Technical area				
	Garage	22 m ²	14 m ²	13 m ²	18 m ²
	Swim platform	1	/	1	/
	Beach Area	N/A	N/A	<u> </u>	/
	Crew number	5	5	5	7
	Crew Cabins	3	3	3	4

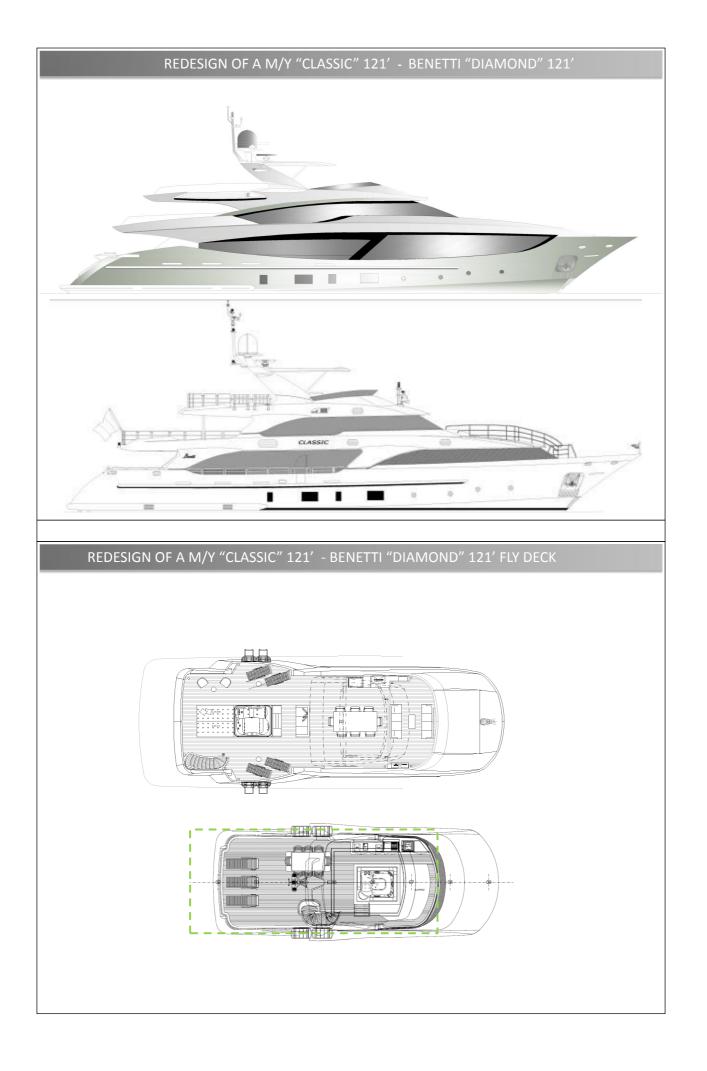
MAIN DATA COMPARISON	between all o	f the competitors:
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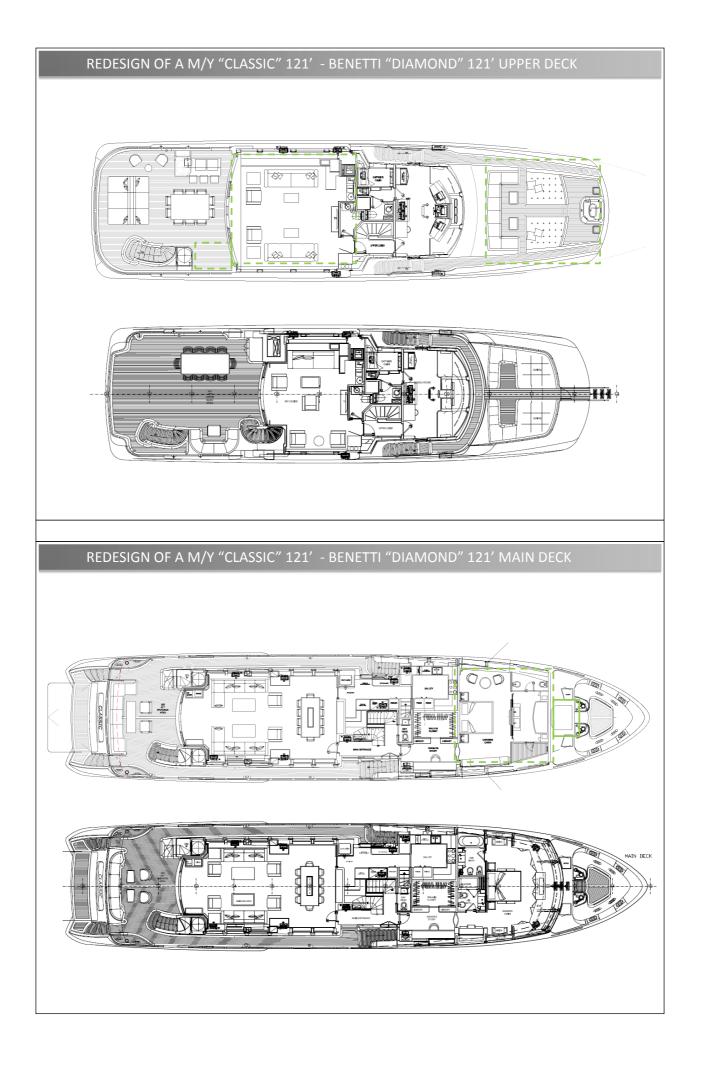
	TRADITIO	CLASSIC	GRAND	SAN	NAVETTA	VULCAN	NAUTA
	N	121'	E 125'	LORENZO	33	35m 3	AIR 115
	SUPREME			SD110	CRESCEND	DECK	
	108′				0		
LOA	32.98	36.9	38.10	33.65	32.62	36.2	35.4
Beam	7.25	8.18	8.45	7.66	7	8.06	8.40
Max							
Full load	170 t	259 t	200 t	170 t	147 t	135 t	350 t
Displ.							
Draft	2.00 m	2.25	2.06	2.00	2.37	2.33	2.60
STD	2xMAN 8V	2xMTU	2xMTU	2xMTU	2xMTU 12V	2xMTU	2xCAT
Engines	1000 hp	12V	12V	12V 1468	1400 hp @	16V	C18
U	@2300	1468 hp	2636 hp	hp @	2.1000 rpm	2434 hp	609 hp
	rpm	@ 2.250	@ 2.450	2.250		@ 2.450	@
		rpm	rpm	rpm		rpm	1800
							rpm
Cruise	12.5 kn	14.1	17.5	11	15	21	11
Speed							
Max.	13.5 kn	15.1	22	17	17	23	13
Speed		-			_		
Range	1800 nm	3400	1250	3260 nm	2300 nm @	965 nm	4900
Be	@ 10 kn	nm @	nm @	@ 10 kn	10 kn	@ 10 kn	nm @
	e	11 kn	12 kn	e		C	10 kn
Constructi	GRP	GRP	GRP	GRP	GRP	GRP	Steel/A
on	Chi	GAU	GAU	GIN	Gitt	Gra	lu
material							iu
material							

REDESIGN OF A M/Y "CLASSIC" 121' - the most successful model from Benetti range









REDESIGN OF A M/Y "CLASSIC" 121' - BENETTI "DIAMOND" 121' LOWER DECK

