

Columbia 451

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OCEAN CRUISER



We are proud to present to you our new evolution and would like to welcome you onboard the Columbie 451.

This ship is designed and built for the demanding sailor and explorer of the big oceans.

Columbie 451 is more than great craftsmanship – it is a lifestyle.

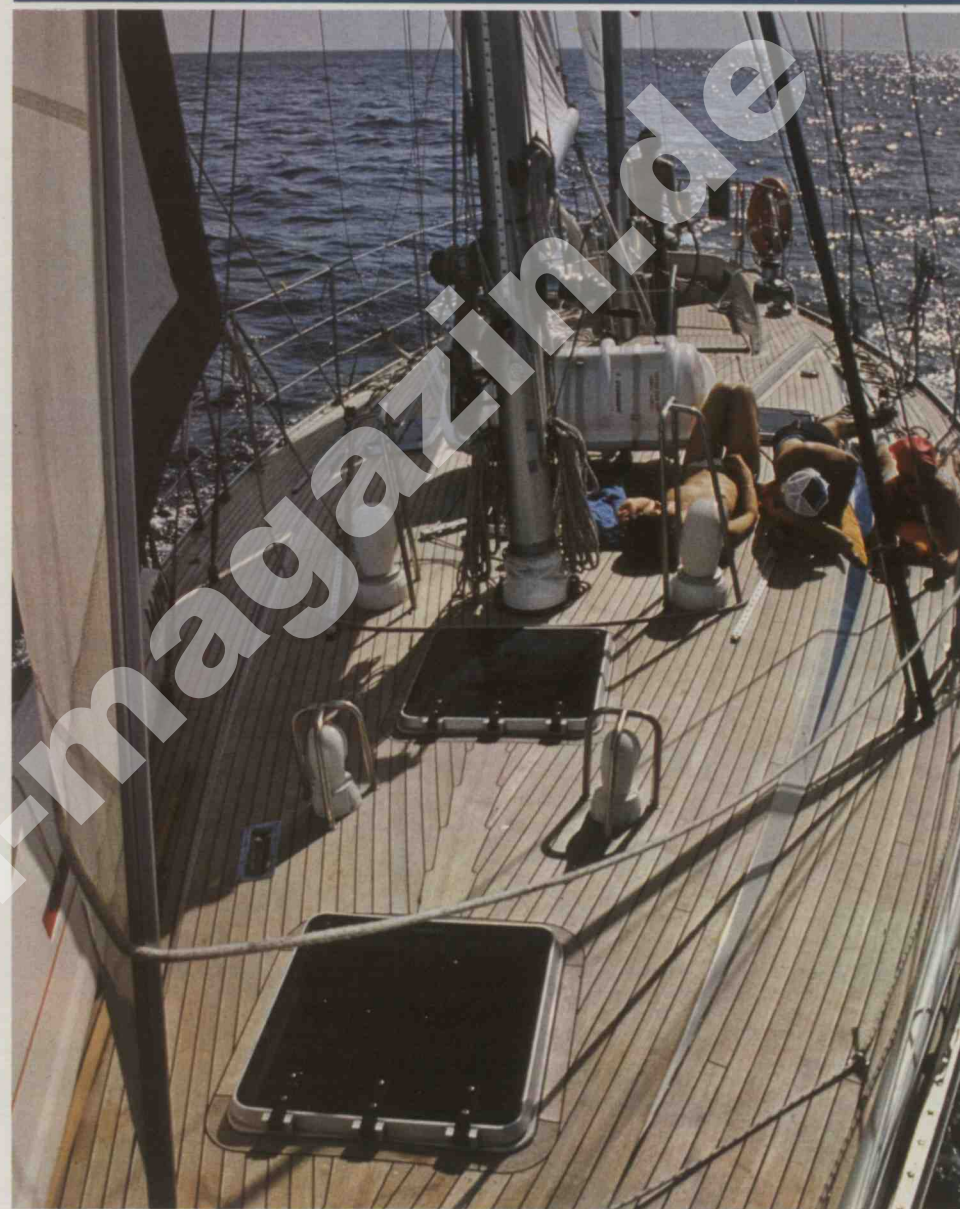
Columbie 451 is constructed and designed with very few compromises. You will realise that we solve challenges in a new way.



You may cruise, compete and enjoy living onboard, due to the well designed hull construction.

It is broad, deep and with a pronounced profile from the bulky bow to the long finkeel. The lines ensure you a tremendous stable and fast going ship even in very rough seas. To complete the total harmony we have designed the deck layout so spatial that sail handling is easy. The roomy cockpit and clean deck is very useful when enjoying life under the sun.

SCANDINAVIAN DESIGN



The lines and the layout may give a ship the superior outlook. Often neglected, but counting just as much, are the detail solutions and hardware used to ensure the everyday function of the ship, no matter what kind of stress situation she may be in.

We do use hardware of the best quality and combined with the newest experiences and untraditional thinking we have achieved some optimal results.

The Columbie 451 is approved by Det Norske Veritas and additionally by the Danish Shipsauthorities.

Columbie 451 is now used for many demanding tasks: charter sailing, competitions, circumnavigation of the globe, expeditions and of course for cruising.

It is chosen by those who have recognized our uncompromising way of working.

Columbie 451 is delivered in different versions in the exterior as well as in the interior, all dependent on your temper, sailing experiences and purpose of the purchase.

Sloop and ketch with or without cutter rig, deckhouse or flushdeck are all alternatives we can recommend.

It will not be the Columbie 451 that sets up the limits. It has already proved its eminent sailing and living conditions in several Atlantic and Mediterranean storms, as well as in the hot summers in the Adriatic and Greek waters.



CRUISING — A WAY OF LIFE



HIGH QUALITY



Combining modern design, function and beauty with superb traditional craftsmanship is how our shipyard sees its role in the building of a Columbie 451.

The high-class finish of the selected hand-rubbed wood gives a luxurious and elegant atmosphere.

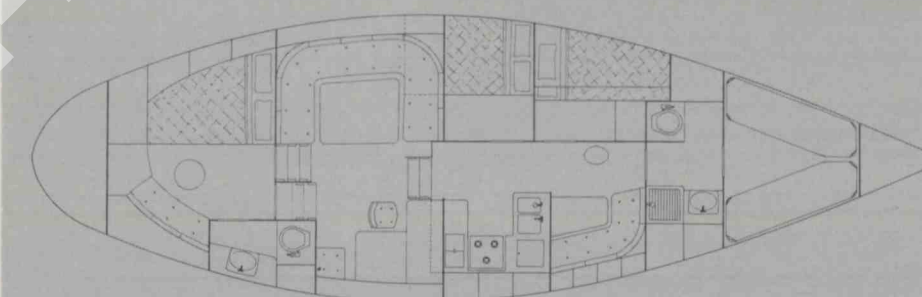
Solidity in all details make the Columbie 451 exceptionally functional at sea as well as in port.



CUSTOM DESIGN

COLUMBIE 451
DECKHOUSE

COLUMBIE 451
KETCH



Deckhouse



Flushdeck

SPECIFICATIONS:

			Sloop	Ketch
Length overall	13.80 m (45.2')	Mainsail	45.6 m ²	37.7 m ²
Length waterline	11.40 m (37.4')	Genoa	70.0 m ²	61.9 m ²
Beam	4.45 m (14.6')	Yankee	52.5 m ²	44.0 m ²
Draft	2.00 m (6.5')	Jib	22.8 m ²	17.9 m ²
Ballast	6t (13,100 lbs)	Mesana	—	17.3 m ²
Displacement	15t (33,000 lbs)			
Volume	19.4 Gross Tonnage	Water	550 l (144 US gall.)	
Engine	85 hp diesel	Fuel	400 l (104 US gall.)	

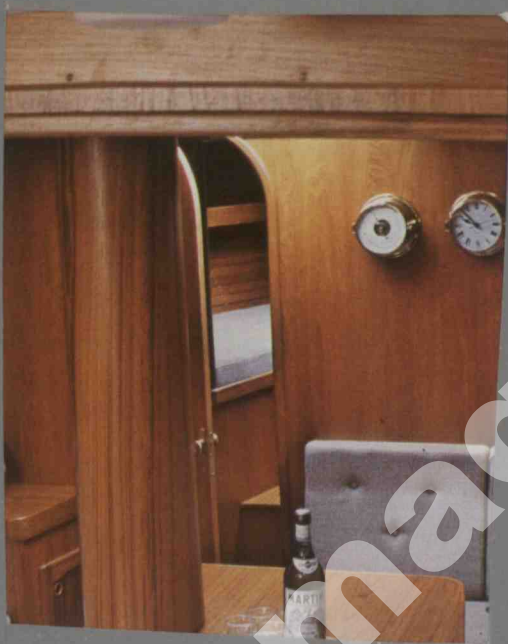
Your personal taste, experience and utilisation of the yacht are some of the factors our experienced shipyard is taking into consideration when designing your yacht.

The hull of Columbie 451 has proven its flexibility through different interior designs ranging from the five-cabin charter version to the luxury two-cabin deckhouse version.



We do our utmost to satisfy your needs and to create a yacht of the highest quality. This will give you a great personal comfort and the pride of individual ownership.





Combining modern design, function and beauty with superb traditional craftsmanship is how our shipyard sees its role in the building of a Columbie 451.

The high-class finish of the selected



Columbie Boats i/s Rysensteensgade 14 DK-1564 Copenhagen V ☎ 45-1 32 95 53



Preliminary SPECIFICATION for the COLUMBIE 451 cruising sloop version;

Designer: Petter G. Lie
Columbie Yacht DesignBuilder : COLUMBIE BOATS I/S Yard : BUCHWALD YACHTVÆRFT
Rysensteensgade 14 Ferup
DK-1564 Copenhagen V 6000 Kolding
Denmark Denmark

Telephone 045-1-32 95 53

Dimensions:	Length overall	13,80 m	(45'5)
	Length at waterline	11,40 m	(37'6)
	Beam	4,45 m	(14'7)
	Draft	2,00 m	(6'6)
	Ballast	6.000 kg	(13.200 lbs)
	Displacement	15.000 kg	(33.000 lbs)

Note: These specifications are believed to be correct at the time of printing. For the sake of continuous improvement, the builder reserves the right, without notice, to make any alterations considered desirable. No such alterations, however, will be considered retroactive for yachts already delivered or under construction. Draft and displacement specifications above vary with load condition.

July 1986

HULL

Construction;

The hull is a sandwich construction built of fibre glass reinforced polyester, laid up by hand, with a balsa core.

Structural bulkheads are of marine grade water-proof plywood laminated to hull and deck. Stiffeners are GRP lay-ups over foam cores. Engine beds are of GRP with steel inserts. Special care is taken to ensure a rigid foundation and proper adhesion to hull. Production and hull specification is approved by "Det norske Veritas".

Finish;

All gelcoat pigments used are approved types. Standard topside colour is white, cove stripe and coaming stripe, blue. Flotation reference marks at bow and stern.

Keel;

Ballast keel is a lead casting with antimony. Cast-in keel bolts are of stainless steel.

Rig anchorage;

The mast is stepped through the deck onto a steel mast step.

Rudder;

Steel-rudder with stainless steel tubular stock, supported by two bronze bearings on the inside of the hull bottom, a lower bronze bearing on the end of the fin and a top bearing in aft cockpit.

Steering gear;

Withlock Constellation 300 cable steering gear, sheaves provided with guards to prevent jamming. Aluminium quadrant bolted to rudder stock. 48/42" destroyer type wheel. Pedestal with bearings and friction brake. Emergency tiller stainless steel.

DECK

Construction;

Deck is made in GRP sandwich construction, laid up by hand. Balsa core is replaced by hard core under deck fittings. Deck surface has a painted non-slip finish, standard colour, light grey.

GRP moulding deck;

Anchor well hatch, stowage and lazarette hatches and emergency escape hatch.

Deck fittings for running rigging;

Winch notation: All winches are of topgrade stainless steel
st = self-tailing

On coaming : Two genoa sheet winches Andersen 56 or equal
On bridgedeck : One main sheet winch Andersen 46 or equal
One main sheet track with slider
On cabin trunk : One Andersen 28 for cunningham and kickingstrap
On mast : One main halyard winch Andersen 46st or equal
One yankee halyard winch Andersen 46 or equal
One reefing winch andersen 28st or equal
Two clamcleats for pool up/down on mast
On deck : One pair of Lewmar 9427-4 blocks fastened in stainless steel bases. Aluminium genoa sheet tracks.

Other deck fittings;

Anodized aluminium toe rail with one pair of hawse holes amidships and drain holes where necessary.

12" aluminium mooring cleats, two on fore deck two amidships and two aft.

Pulpit, pushpit and life line stanchions of stainless steel, with bases bolted through deck.

Plastic covered lifelines.

Socket for flag pole on pushpit.

Aluminium mast collar.

Stemhead fitting of stainless steel with headsail tack attachment and another tipper sternhead fitting with two chain rollers.

Stowage for gas bottle in drained lazarett locker.

Drained anchor well forward.

Cockpit stowage locker (not with alternative two aft cabins).

Stainless steel guards over Dorade ventilators.

Hatches and windows;

Two fore deck hinged stowage locker hatches.

One hinged hatch Lewmar 62 x 62 or equal in forward cabin.

One hinged hatch Lewmar 62 x 62 or equal in main cabin.

Two hinged hatches Lewmar 32 x 45 or equal, one in galley and one in port cabin.

Six fixed windows in trunk sides.

Main companionway sliding hatches of tinted acrylic, lockable from the outside.

INTERIOR

General;

All joiner work is done in accordance with the best yacht practice, using first-grade materials. Teak with hand rubbed satin finish is used for all visible woodwork.
Floorboards with laid teak veneer and providing access to the bilge.
Topsides where visible lined with teak battens, excl. forecastle.
Overhead lined with removable panelling.
Tables, bureaus, seats, etc. have rounded corners.
Doors, partitions and panelling throughout are teak-plywood.
Hanging lockers are equipped with rods and hooks.
Drawers have to be lifted to open.
Wooden companionway ladder with non-slip steps.
Bulkheads in toilet and shower in white plastic laminate.

Forecastle;

Sail bins under berths.
Hanging locker opposite head forward.

Main cabin;

Drop leaf table with removable rack.
Lockers behind settee backrests each side.
Space for bottles and glasses in table and lockers starboard and port forward end.

Galley;

Insulated and sheathed space for stove, protected by stainless steel guard.
Stainless steel sinks with mixing faucet and waste container below.
Chest drawer for utensils. Teak bread board.

Toploaded 220 litre refrigerator insulated with 100 mm thick foam.
Countertops of Formica or equivalent. Racks for plates of 17, 20 and 24 cm diameter in cupboard against hull.

Navigation area;

Chart stowage under table top. Book shelf alongside.

Heads;

Wash basin module with shower pan, covering bulkheads up to wash basin height. One hand mixing faucet.
Telephone type shower-, towel-, soap-and- paper-holder and waste container.
Large mirror on bulkhead.
Lockers with shelves alongside.

Aft cabin;

Double bed on Port-side with stowage under.
Hanging locker, book shelves and drawers.

PROPULSION MACHINERY

Engine;

Ford C-Power four-cylinder 4-stroke marine diesel, type 4/254 rated 85 BHP at 2600 rpm on flexible mountings with Hurth mechanical reverse gear, reduction 3:1.
Removable engine box internally sound insulated.

Starting system;

The engine has its own starting battery, 145 Ah, 12 V, located portside of engine.

Engine controls;

In cockpit:
Engine controls ON/OFF.
Start and stop buttons.
Automatic thermostatic coldstart equipment.
Recessed single level control of throttle and gear shift.
Tachometer.
Coolant temperature gauge.
Oil pressure gauge.
Control light for starting and service battery charging.
Warning light and audible alarm for low oil pressure/high engine temperature.

Propeller shaft;

Made of corrosion resistant stainless steel with flexible shaft coupling, outboard end supported by strut. Rubber bearings in strut and stern tube. Flexible stuffing box, flexible supported by hose connection to stern tube. Zinc anode on shaft handed.
Two blade propeller 24".

Engine cooling system;

Thermostat-controlled fresh water cooling with heat exchanger.
Strainer on seawater intake, discharge through exhaust system.

Fuel system;

Fuel capacity 400 litres in two tanks with shut-off cocks. Water separator on fuel feed line, return line provided. Tanks vented to coachroof.
Tanklevel gauge for each tank placed at navigation station.

Exhaust system;

Wet system exhaust with incorporating stainless steel waterlock discharging at transom.
Raw water loop provided with antisiphon line, discharging through transom.

PLUMBING AND VENTILATION

General;

Sea cocks for all through-hull fittings below water line, located in accessible positions. Inboard side of sea cocks fitted with nipples long enough to take two hose clamps. Sea water piping of steel reinforced rubber tubing, fresh water piping of nylon. All fuel and water tanks of welded stainless steel, and provided with stringers, inspection covers, and vent pipes.

Fresh water system;

Pressure water system.

55 litres waterheater connected to engine.

Water capacity 500 litres in three tanks.

Two filler lines from deck, termination at valve chest. Tank vent pipes drain outside through the hull.

Foot pumps for galley sinks and wash basin.

Sea water system;

Foot pump for galley sink spout.

Inlet sea cocks for galley, engine cooling and toilet flushing.

Drainage system;

Galley sinks drained to a GRP wastewatertank. Shower trays and wash basins drain to wastewatertank, which is emptied by electrical pump through outlet below waterline.

Two manuel bilge pumps, one below, one in cockpit, discharging through outlets above waterline.

Two 1 1/2" drains in each cockpit discharging through hull.

Toilets;

One Lavac Zenith discharging by an electric pump to a septictank, and one Lavac Zenith with manual pump discharging through sea cock.

Stove;

Three-burner ENO gas stove with oven, gimballled and provided with fiddles. Flame failure device on burners. Gas shut-off cock adjacent to stove. Remote controlled shut-off near gas bottle.

Refrigeration;

Iceberg hold-over system with compressor belted from main engine.

Ventilation;

Dorade ventilators at transom, forward toilet and beside mast.

Electrical ventilators in heads and galley.

Engine space air in and outlet in lazarette.

Battery boxes ventilated to outside.

ELECTRICAL

General;

12 V DC insulated return system for general service and battery charging.

Care is taken that cables are heavy enough to prevent excessive voltage loss.

Service power;

One battery set 420 Ah, 12 V in a ventilated fibre glass box under port-cabin-closet.

Outlets;

12 V outlet at main switchboard and one watertight in cockpit.

Lighting arrangements;

Interior:

One berth light over each berth, necessary dome lights overhead, fluorescent lights over galley counter and mirrors. Two reading lights in main cabin.

Flexible chart light at navigation station.

Outside:

Downward flood light on forward side of mast.

Masthead light.

Compass light with rheostat.

Navigation lights:

One red and one green side light on pulpit.

White stern light on pushpit.

White bow light on forward side of mast.

Main switchboard 12 V DC;

Located at chart table and protected by an acrylic door.

Switches of trip-free circuit type, four spares included.

One V-meter with two-way switch for checking service and starting battery voltage.

One ammeter for service - and starting battery charging control.

Switches for cutting alternator field current to non-charging level.

Main switch and fuses located near switchboard.

Navigation switchboard 12 V DC.

Switches for navigation and outside lights.

Charging system;

On the engine there is a 65 Amp 12 V alternator for charging the engine starting battery and the service batteries.

Cockpit controls;

Push button for mast flood light.

INSTRUMENTS

Compass;

One 7" Whitlock steering compass or equivalent, mounted in binnacle on steering pedestal. No magnetic materials within a three feet radius.

RIG

Scantlings to Columbie Yachts standards.
Spares of extruded aluminium alloy-anodized.
Two-spreader mastheadrig

	Sloop	Ketch	Mizzen
I	17,40m	17,00m/10,00m	
J	6,00m	5,10m	
P	15,85m	15,40m/ 3,00m	
E	5,00m	4,10m	

Mast;

Of oval section, with joint in approximately half length, and stainless steel tangs. Masthead with one spinnaker crane and four halyard sheaves. Fitting for inner and - halyard. Upper - and lower spreader.
Gracket sheave box for spinnaker boom topping lift. Spinnaker gooseneck track with stainless steel slide with ring.
Sail track gate. Complete gooseneck fittings 6 pcs. halyard cleats.
Fitting for boom vang.
Two base plates for halyard winches, one for reefing winch.
Internal wiring, shielded in a PVC tube secured to mast.

Boom;

Of flat section with internal outhaul tackle and arrangements for two slab reefing with lock-off cams for three lines.

Standard rigging;

Of stainless steel wire - 1 x 19 with eye terminals in both ends.
Forestay and backstays have toggles at upper end.
Running backstays have T-terminals at upper end.
Rigging screws of stainless steel with jaws in both ends.

Running rigging;

Wires are of 7 x 19 stainless steel construction, ropes polyester.
Main halyard with screw scackle. All other halyards with snap shackles. Internal halyards and topping lifts.

Description;	Quantity	Material	Diameter
Main halyard	1	wire/rope	6/12 mm
Genoa	1	- -	6/12 mm
Jib Halyard	1	- -	6/12 mm
Spinnaker halyard (prepared for)	1	rope	12 mm
Spinnaker polelift(prepared for)	1	-	12 mm
Main boom topping lift	1	-	8 mm
Boom vang tackle with blocks	1	-	12 mm
Outhaul	1	-	5/10 mm
Reefing lines	2	wire/rope	12 mm
Main sheet with blocks	1	rope	14 mm
Haul with blocks for running backstay	1	-	14 mm

Sailing gear;

Two genoa fairlead cars with stops Lewmar or equal.
Four winch handles 10" and two 8" lock-in.

Miscellaneous;

1/2 litre gelcoat, hull colour.
1/4 litre gelcoat, coaming stripe colour.
Catalyst for above
Alle berths are equipped with canvas leeboards and 12 cm (4") thick mattresses of flexible foam.
Textile covers with zippers, colour to owner's choice.



Columbie 451, den danske jordomsejler.

Columbie 451, den danske havkrydser, kendt i Norden som "jordomsejleren Columbie 451.

Med mere end 30 skibe leveret indenfor de sidste 3 år er Columbie 451 den største serieproducerede sejlbåd i Danmark.

Columbie 451 er fra starten udviklet som jordomsejler med godkendelser fra Det norske Veritas på alle skibe.

En enkeltordre på 8 specialindrettede og -udrustede charterbåde krævede yderligere godkendelser. Derfor er Columbie 451, -som den første serieproducerede sejlbåd, -blevet godkendt af Det Danske Skibstilsyn for sejlads med besætning og ikke sejlkyndige gæster.

Tilliden til kvalitet og konstruktion er medvirkende til at bådens anvendelsesområder strækker sig fra sejlads ved Grønland, over chartersejlads i Middelhavet og Caribien til jordomsejling.

De høje individuelle krav jordomsejlere og charterselskaber stiller har betydet at Columbie 451 findes i optimerede varianter fra den specialiserede charterbåd i ketchversion med 5 separate dobbelthytter, til jordomsejlerversion med sloop-cutter rig.

Sidste nye skud på stammen er den luksuriøse deckshouse-version der siden lanceringen har udgjort halvdelen af salget. Den først leverede deckshouseversion sejler nu i Caribien. På sejladsen dertil løb skibet i december 1985 ind i en orkan i Biscayen og fik riggen under vand to gange. Tre større skibe sank i denne storm. Columbie 451 kunne uden skader fortsætte sin rejse efter stormen.

Columbie Boats leverer idag den højeste kvalitet indenfor Skandinavisk bådebyggerhåndværk, men det høje renome stammer også fra den enestående service der ydes før og efter levering;

- under byggeriet efterkommes personlige ønsker i meget vid udstrækning
- før levering af skibet inviteres den kommende ejer på en uges krydstogt med et af vore chartersejlskibe i Adriaterhavet
- ved leveringen følger automatisk en grundig gennemgang af skibets tekniske installationer samt en sejlads med værftets sejlektspert.
- gratis serviceeftersyn et år efter levering.

Columbie Boats er nu ved at etablere sig på eksportmarkederne.