

12

INTERNATIONAL TWELVE METRE CLASS

Yacht's Name Columbia

National letters and Sail Number US16 Club New York Yacht Club

Designer Sparkman & Stephens

Builder Nevins Boat Yard Inc. Building Year 1958

Owner Kevin Hegarty

Owner's Address 421 Bellevue Ave, Newport RI 02840 USA

Lloyds R class certificate (Number or Date) _____

RATING CERTIFICATE

This yacht has been measured by measurer(s) appointed by the International Twelve Metre Association and has been found to rate not more than 12.000 metres.

This certificate is dated: 17-Jul-21

Measurer A Williams Signature Ander

Valid until 17-Jul-23

Supersedes 20-Jun-19

Is this an **Appendix E** Certificate? Y / N Yes

Was **Appendix F** used for Measurement? Y / N no

Signature 
ITMA Technical Director



Stamp of Authority of the
International Twelve Metre Association

RATING CALCULATION

OVERALL LENGTH			21.074
Overhang Forward to FGS	2.277		
Overhang Aft to AGS	2.568		
Total Overhang (Subtract)	4.845		
MEASURED LENGTH (L_{BG})			16.229
Girth at Bow	1.494		
Twice vertical Height at Bow (Subtract)	1.200		
Girth Difference at FGS	0.294		
Add 1.5 x Girth Difference at FGS (min 0.540 m)	0.540		
Girth at Stern	2.980		
Twice vertical Height at Stern (Subtract)	1.636		
Girth Difference at AGS	1.344		
Add 1/3 Girth Difference at AGS (min 0.400 m)	0.448		
Add any penalty (Beam or Displacement)			
Sum of Length and Girth Corrections			17.217
Age/Design Correction Factor (ADCF)(see page 3)	0.9700		
LENGTH (L)			16.700
Skin IM to d1 Port	2.225		
Chain IM to d1 Port	2.215		
d Port	0.010		
Skin IM to d1 Starboard	2.230		
Chain IM to d1 Starboard	2.216		
d Starboard	0.014		
Add d	0.024		
Add GIRTH 2 d			0.048
	Datum Sta.	Actual Sta.	Rating FB
Mean Freeboard Bow		1.307	1.307
Mean Freeboard Midship		1.044	1.044
Mean Freeboard Stern		0.998	0.998
Sum of Freeboards			3.349
Subtract FREEBOARD, F			1.116
Add SAIL AREAS (Square root)			12.806
TOTAL OF MEASUREMENTS			28.438
PENALTY (Draft or Tumblehome)		0.000	0
RATING			11.999

Date and Place of Measurement

17-Jul-21

Measurer's Name(s)

A Williams

Signature



Yacht's name : Columbia		Date	17-Jul-21
Range Measurement (Yes or No)	No	Date:	

PENALTIES

Overhang Forward to MWL	2.893	
Overhang Aft to MWL	3.374	
Subtract from overall length	6.267	
Difference of immersion from salt to fresh water	Meas. Density	0.000
WATERLINE LENGTH (LWL)		14.807
Minimum Displacement for Zero Penalty [m3]	30.121	
Minimum Weight for Zero Penalty [ton] (Water of sg 1.025)	30.874	
WEIGHT [tonne] Actual weight	Append E	30.900
Equivalent LWL (for Displ. < min.)	14.811	
Difference		
DISPLACEMENT PENALTY (add to L)		0.000
Displacement Determination Method	Append E	
DRAFT (actual)	2.890	
Max. Draft for Zero Penalty	2.869	
Difference (if positive)	0.021	
DRAFT PENALTY (add to Rating)	Appendix E	0.000
BEAM (Min)	3.600	
Max Beam at 1/3 of Midship Freeboard	3.602	
Difference (if positive)	0.000	
BEAM PENALTY (add to L)		0.000
Tumblehome Max. (2 x 2% of Extr. Beam)	0.146	
Extreme Beam	3.644	
Beam at deck	3.534	
Difference (if positive)	0.110	
TUMBLEHOME PENALTY (add to Rating)		0.000

Date and Place of Measurement	17-Jul-21	
Measurer's Name(s)	A Williams	Signature

Design/Age Correction Factor Calculation		
Age Date	1967	
ADCF (Table E-2)	0.9700	
Hull Alteration Scope and Date		
Appendage Change Scope and Date		
Change/Alteration Correction ADCF		
Accommodation Deficiency Ballast		

Yacht's name : Columbia

Date

17-Jul-21

SAIL PLAN

Max Height of Sail Plan =	<input type="text" value="25.000"/>	J=	<input type="text" value="7.468"/>	I =	<input type="text" value="18.750"/>
Boom above Mast Datum =	<input type="text" value="1.410"/>	P=	<input type="text" value="23.590"/>	E=	<input type="text" value="9.180"/>
Rated Mainsail Area	<input type="text" value="108.278"/>	Spi boom=	<input type="text" value="7.520"/>	√S=	<input type="text" value="12.806"/>
J used for Rating			<input type="text" value="7.520"/>		
Rated Foretriangle Area	<input type="text" value="59.925"/>	Propeller allowance		<input type="text" value="0.975"/>	
TOTAL RATED SAIL AREA (S)	<input type="text" value="168.203"/>	Corrected sail area		<input type="text" value="163.998"/>	

SAIL LIMITS

Mainsail max girth:	1/2 height (68% of E)	<input type="text" value="6.242"/>	3/4 height (41% of E)	<input type="text" value="3.764"/>
Genoa:	max. foot length (J + 4.8m)	<input type="text" value="12.268"/>		
Spinnaker:	1/2 foot max breadth (125% J)	<input type="text" value="9.400"/>	max. luff length=	<input type="text" value="18.661"/>

Spar Measurement

MAST (material)	<input type="text" value="Aluminium"/>	Mast Weight	<input type="text" value="505"/>	CG pos.	<input type="text" value="10.120"/>
	Deck	Half-Height	Jib-Halyard	Head	
Mast dimensions [mm]	<input type="text" value="340 x 248"/>	<input type="text" value="340 x 247"/>	<input type="text" value="270 x 205"/>	<input type="text" value="169 x 125"/>	
Sections area [cm ²]	<input type="text" value="662"/>	<input type="text" value="676"/>	<input type="text" value="434"/>	<input type="text" value="166"/>	
Mast CG Correction (if applicable) Wt & CG	<input type="text" value="@"/>		Mk ²	<input type="text" value=""/>	

Engine/Propeller Installation

Engine and propeller weight	<input type="text" value="yes"/>	Propeller diameter =	<input type="text" value="0.600"/>
Minimum boat speed with engine	<input type="text" value="yes"/>	Propeller position =	<input type="text" value="Skewed"/>
Propeller Type (folding feathering fixed pitch etc.), no of blades		<input type="text" value="3"/>	<input type="text" value="Feather"/>
Propeller Skew			<input type="text" value=""/>

Flotation

Internal Ballast	Amount	Location aft of bow

Measurer's Notes

- 1 Hull changed 1967
- 2 Keel replaced Pedrick 2001
- 3 Lighter floatation 2007
- 4 Rudder replaced 2019

Date and Place of Measurement

17-Jul-21

Measurer's Name(s)

A Williams

Signature

