



# 12

## INTERNATIONAL TWELVE METRE CLASS

Yacht's Name Freedom

National letters and Sail Number US 30 Club New York Yacht Club

Designer Sparkman & Stephens

Builder Minnefords Building Year 1979

Owner Charles A Robertson

Owner's Address Freedom 12=30 LLC  
741 Boston Post Road Suite 200 Guilford CT 06437

Lloyds R class certificate (Number or Date) \_\_\_\_\_

### APPENDIX " E " 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 June 6, 2018

Measurer A Williams

Valid until June 5, 2020

Supersedes June 19, 2017

Signature *Ander*

Signature *K. Allipio*  
ITMA Technical Director



Stamp of Authority of the International Twelve Metre Association

Yacht's name : Freedom

US 30

June 6, 2018

**RATING CALCULATION**

<b>OVERALL LENGTH</b>									<b>19.332</b>
Overhang Forward to L1								1.851	
Overhang Aft to L1								2.128	
Total Overhang (Subtract)								<b>3.979</b>	
<b>MEASURED LENGTH (L1 L1)</b>									<b>15.353</b>
Girth at Bow								1.563	
Twice vertical Height at Bow (Subtract)								1.200	
O at Bow								0.363	
Add 1 1/2 O at Bow (min 0.540 m)								<b>0.545</b>	
Girth at Stern								3.350	
Twice vertical Height at Stern (Subtract)								1.652	
O at Stern								1.698	
Add 1/3 O at Stern (min 0.400 m)								<b>0.566</b>	
Add any penalty (Beam)								<b>0.000</b>	
Sum of Length and Girth Corrections									<b>16.464</b>
Age Date and Allowance	1982	Allowance	0.9890						<b>16.282</b>
<b>CORRECT LENGTH L</b>									<b>16.282</b>
Skin d to d1 Port								2.169	
Chain d to d1 Port								2.158	
d Port								0.011	
Skin d to d1 Starboard								2.167	
Chain d to d1 Starboard								2.155	
d Starboard								0.012	
Add d								0.023	
<b>Add GIRTH 2 d</b>									<b>0.046</b>
Mean Freeboard Bow O	Actual	1.169						1.169	
Mean Freeboard Midship d	Actual	0.990						0.974	
Mean Freeboard Stern O	Actual	1.006						0.964	
Sum of Freeboards								<b>3.107</b>	
<b>Subtract FREEBOARD, F</b>									<b>1.036</b>
<b>Add SAIL AREAS (Square root)</b>									<b>13.136</b>
<b>TOTAL OF MEASUREMENTS</b>									<b>28.429</b>
PENALTY (Draught)								0.000	
<b>RATING</b>									<b>11.995</b>

Date and place of Measurement

June 6, 2018

Measurer's Name(s)

A Williams

Signature



Yacht's name : **Freedom**

**US 30**

**June 6, 2018**

## PENALTIES

Overhang Forward to L	2.458	
Overhang Aft to L	3.007	
Subtract from overall length	5.465	
Difference of imersion from salt to fresh water	0.000	
<b>WATERLINE LENGTH</b>		<b>13.867</b>
Minimum Displacement for Zero Penalty [m3]	24.984	
Minimum Weight for Zero Penalty [tonnes] (Water of sg 1.025)	<b>25.609</b>	
<b>ACTUAL WEIGHT [tonnes]</b>		<b>Appendix E</b>
Equivalent LWL (for Displ. < min.)		
Difference		
DISPLACEMENT PENALTY (add to L)		<b>Appendix E</b>
<b>DRAUGHT (actual)</b>	2.705	
Max. Draught for Zero Penalty	<b>2.719</b>	
Difference (if positive)		
DRAUGHT PENALTY (add to Rating)		<b>0.000</b>
<b>BEAM (Min)</b>	3.645	
Max Beam at 1/3 of Midship Freeboard	0.000	
	0.000	
BEAM PENALTY (add to L)		<b>0.000</b>
Tumblehome Max. (2 x 2% of Extr. Beam)	0.000	
Extreme Beam	3.720	
Beam at deck	3.720	
Difference (if positive)	<b>0.000</b>	
TUMBLEHOME PENALTY (add to Rating)		<b>0.000</b>

Date and place of Measurement

June 6, 2018

Measurer's Name(s)

**A Williams**

Signature

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**SAIL PLAN**

Max Height of Sail Plan =	25.000	J=	7.345	I=	18.750
Boom Height =	1.550	A=	23.450	B=	9.725
Rated Mainsail Area	114.026	Spi boom=	7.345	√S=	13.136
Rated Foretriangle Area	58.530	Propeller allowance			1.000
TOTAL RATED SAIL AREA	172.556	Corrected sail area			172.556

**SAIL LIMITS**

Mainsail max girth:	1/2 height (68%)	6.613	3/4 height (41%)	3.987
Genoa:	max. foot length (J + 4.8m)	12.145		
Spinnaker:	1/2 foot max breadth (125% J)	9.181	max. luff length=	18.610

**Spar Measurement**

MAST (material)	Aluminium	Mast Weight	546	CG pos.	9.503
Mast dimensions [mm]	Deck 352 x 246	Half-Height 350 x 246	Jib-Halyard 282 x 204	Head 168 x 126	
Sections area [cm <sup>2</sup> ]	680	676	452	166	

**Engine/Propeller Installation**

Engine and propeller weight	Nil	Propeller diameter	none
Minimum boat speed with engine	none	Propeller position	none
Engine model and power			

**Flotation**

Internal Ballast	Amount	Location aft of bow
Lead	82 kgs	6

**Measurer's Notes**

- 1 2009 mast with 54 kg of corrector weight at gooseneck
- 2 Boat not weighed
- 3 2009 Lighter Trim Tab fitted
- 4 2018 Mast and J Moved aft

Date and place of Measurement	June 6, 2018	Portsmouth RI USA
Measurer's Name(s)	A Williams	Signature 