

International 2.4 metre Measurement Form

Sail Number **GBR 116**

ISAF Plaque Number **00798**

Owner **Mr. Ian Stowe**

Name of yacht

Overall length

4.182

Overhang Forward to L1

+ 0.431

Overhang Aft to L1

Total overhang

+ 0.660

→ -1.091

Measured length

3.091

Girth at Bow

0.313

Twice Vertical Height at Bow

O at Bow

- 0.240 →

0.073

1½ O at Bow

+ 0.109

Girth at Stern

0.896

Twice Vertical Height at Stern

O at Stern

- 0.524 →

0.372

Add 1/3 O at Stern

+ 0.124

Add any penalty at O2

Sum of Girth difference

+ 0.000 →

+ 0.233

Correct length, L

3.324

Skin girth d to d1 Port

0.730

Chain girth d to d1 Port

d Port

- 0.330 →

+ 0.000

Skin girth d to d1 Starboard

0.735

Chain girth d to d1 Starb,

d Starboard

- 0.735 →

+ 0.000

d = d Port + d Starboard

2 x d

0.000

+ 0.000

Add to find sum of L + 2d

3.324

Mean freeboard Bow O

+ 0.325

Mean freeboard Midships D

+ 0.297

Mean freeboard Stern

Sum of freeboards

+ 0.299 →

0.921

F = 1/3 sum of freeboards

F, max 0.292

0.307

- 0.292

= L + 2d - F

3.032

Penalty Displacement Rule D.7.2.

LWL

0.000

Corr LWL

Difference

2 x difference

- 0.000 →

0.000

+ 0.000

Penalty Beam Rule D.7.3

Beam

0.769

Min beam

Deficiency

4 x deficiency

- 0.720 →

0.000

+ 0.000

\sqrt{S}

+ 2.654

Total of Measurements L + 2d - F + \sqrt{S}

5.686

Divide by 2.37 = RATING =

2.399

Penalty Draft Rule D.7.1

Draft

0.985

Max draft

Excess

3 x excess

- 1.000 →

0.000

+ 0.000

Penalty Tumble home D.7.4

Tumble home

'

Max Tumble home

Excess

3 x excess

- 0.015 →

0.000

+ 0.000

FINAL RATING

2.399

Other Measurements recorded by measurer

Overall Length

Overhang Forward to L

Overhang Aft to L

Total Overhang (Sum overhang forward and aft)

Waterline Length (Overall Length - Total Overhang)

Minimum measured cockpit frame over water level when ballasted and swamped in accordance with rule C.5.2

Boat weight recorded by weighing according to rule C.5.1

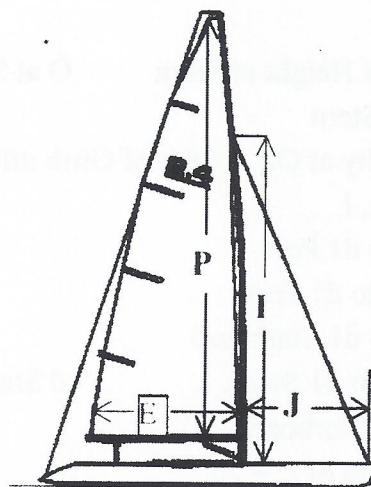
Boat weight including 35 kg ballast

Minimum weight by Rule D.7.2 $(0.2 \times L_{WL} + 0.06)^3 \times 1.025$

	4.182
+0.546	
+0.660	
1.206 →	-1.206
	2.976
	0.050
	254 Kg
	289 Kg
	288 Kg

Sail Dimensions

Outer point distance P = 4.650
Forestay height E = 1.960
Foretriangle base I = 3.750
Foretriangle base J = 1.560



Mast measurements checked	OK
Height of mast datum point Rule C.8.2 (b) (2)	OK
Boom measurements checked	OK
Rudder thickness, Rule E.4.3	OK

Areas of Sail

Mainsail $0.5 \times P \times E =$

Foretriangle Total $0.5 \times I \times J =$

Foretriangle Total $\times 0.85$

Sail Area For Rating = S =

\sqrt{S}

	4.557m ²
2.925m ²	
	2.486m ²
	7.043m ²
	2.654

K. D. Hull
RYA N.C.A.
29/1/13.

Builder Charger Comp. Designer Petar Nordin When Built 2012

Measured by Keith Gordon Date of Measurement 29 Jan 2013

Complementary measured by Date of compl measurement.....

Certificate issued by Date of issue.....

name

CA

authority

signature

GBR 116 ISAF 798

ORIGINAL PAPERWORK.



International 2.4 Metre Measurement Certificate

Owner: **Iain Stowe**
of: **7 The Lane**
West Deeping
Peterborough
PE6 9HS

Sail Number: **GBR 116**

Boat Name:

Co Owner(s):

Sailing Club:

Builder: **Charger Composites**

Designer: **NORLIN**

Date Built: **01/01/12**

Plaque No. **798**

Measurer(s): **K Gordon**

Measurement Completed: **29-Jan-2013**

First Certificate: **07-Feb-2013**

Date of this Certificate: **07-Feb-2013**

Notes:

Rating: 2.399

Certificate Authorised by: **Andrew Wibroe**



for the RYA

Sail Endorsements

All sails used when racing shall have been measured by an RYA Approved Metre Measurer who shall have signed and dated each sail at its tack. Sail endorsements are not required on this Certificate.

Owner's Declaration

I undertake to race this 2.4 Metre only so long as I maintain it to conform with the International 2.4 Metre Class Rules. I also undertake that corrector weights (if any) will not be altered or removed except when carried out in conjunction with an official re-weighing undertaken by an RYA Approved Metre Class Measurer. At such times or upon a change to any of the details shown on this certificate I will return it to the RYA.

Owner's Signature: *Iain Stowe*

Date: 11/2/2013

This Certificate is as required by the RYA in accordance with RRS 78

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Royal Yachting Association

RYA House, Ensign Way,
Hamble, Hampshire, SO31 4YA
United Kingdom
Tel: 02380 604100
Fax: 02380 60 4299
<http://www.rya.org.uk>

INTERNATIONAL 2.4 METRE CLASS CERTIFICATE OF RATING

SAIL NUMBER	GBR 116
ISAF PLAQUE NUMBER	798
DESIGNER	Norlin
DESIGN	Mk III
BUILDER	Charger Composites
WHEN BUILT	2012
MEASURED BY	K Gordon
DATE MEASUREMENT COMPLETED	29 January 2013
DATE OF THIS CERTIFICATE	07 February 2013
ISSUED BY	THE ROYAL YACHTING ASSOCIATION
RATING	2.399



MEASUREMENTS

Overall length

Add Overhang Forward to L1
Overhang Aft to L1

Total Overhang

Measured Length (Overall length - Total Overhang)

Girth at Bow

Twice Vertical Height at Bow

O at Bow

Add 1½ O to Bow

Subtract Girth at Stern
Twice vertical Height at Stern

O at stern

Add 1/3 O at Stern

Add any penalty at O2

Correct length, L

Skin girth d to d1 Port
- Chain girth d to d1 Port
= Girth difference Port

Skin girth d to d1 Starboard
- Chain girth d to d1 Starboard
= Girth difference Starboard

Add Girth difference Port and Starboard

2 x sum of Girth difference

Add to find sum of L + 2d

Add Mean freeboard Bow O
Mean freeboard Midships D
Mean freeboard Stern O & O2

Sum of freeboards

Subtract 1/3 sum Freeboard, F (max 0.292)

= L+2d-F

√ S

Total of Measurements L+2d-F+ S

Divide by 2.37 = RATING =

	4.182	
0.431		
0.660		
.	+1.091	
	3.091	
0.313		
0.240		
0.073		
	0.109	
0.896		
0.524		
0.379		
	0.124	
	0.000	
	0.233	3.324
0.730		
0.730		
0	.	
0.735		
0.735		
.	0	
	0	
		0
		3.324
0.325		
0.297		
0.299		
.		
0.921		
0.292		-0.292
		3.032
		2.654
		5.686
		2.399

OTHER MEASUREMENTS RECORDED BY MEASURER

Overall Length

Overhang Forward to L

Overhang Aft to L

Total Overhang (Sum overhang forward & aft)

Waterline Length (Overall length - Total Overhang)

Beam at 1/3 Height of Midship Freeboard

Tumblehome

Minimum measured freeboard when ballasted and swamped in accordance with Rule 8.2

Weight recorded by weighing in measurer's presence (including 35kg ballast)

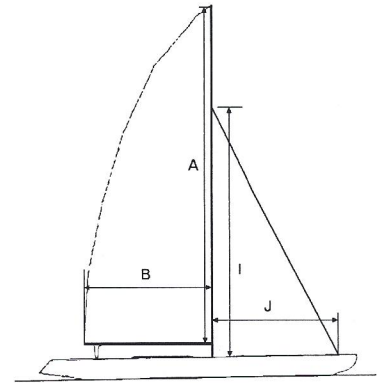
Minimum weight required by Rule $(0.2 \times \text{LWL} + 0.06)^3$

	4.182
0.546	
0.660	
1.206	-1.206
	2.976
	.
	.
	0.050
	289 kg
	288 kg

Sail Dimensions

A = 4.650 I = 3.750

B = 1.960 J = 1.560



Areas of Sails

Mainsail

Foretriangle Total =

Foretriangle Total x 0.85 =

Sail Area for Rating = S =

\sqrt{S}

	4.557 m ²
2.925 m ²	
	2.486 m ²
	7.043 m ²
	2.654

[2.4 GBR 116] NOTE: This Certificate is issued by the RYA. No details shall be altered without the prior permission of the RYA.

INTERNATIONAL 2.4mR YACHT, WATERLINE DECLARATION
IN ACCORDANCE WITH, CLASS RULES 2010, D6.1(c)

Sail Number: GBR 116

ISAF Plaque Number: 00798

Owner: Mr. Ian Stowe

Design: Norlin Mk III

Boat Weight as tested 254 kg

Boat weight after testing* 254 kg

Fresh/ salt water Fresh

Date of Waterline check: 29th Jan 2013

The yacht has been checked under the following conditions:

- The boat was in racing condition according to Rule C.5.1 and loaded with extra weight in accordance with H2. Extra **28** kg lead ballast placed within **125mm** from 0.55 x LWL from the bow station.
- The boat was placed in a tank, in still water and the LWL was checked against LWL measurement marks

Signed 

Declaration by: Keith Gordon Official Measurer NCA, RYA