



INTERNATIONAL FORMULA 18 CLASS
MEASUREMENT FORM
MEASUREMENT CERTIFICATE
I F18CA-2019 (version PCB2019/06)



IDENTIFICATION

Boat Certificate n°	FRA 2020-003	National letters & Sail N° :	FRA 83032	WS N° :	1 207
Hulls N° / N° coques :	PL EXP18018A020	Hulls N° / N° coques :	PL EXP18018A020		
Brand of boat :	EXPLODER SCORPION	Date manufactured :	2020		

OWNER

owner / propriétaire :	YACHT CLUB DE TOULON		
Address / adresse :			
Zip code / CP :	City / ville :		
Country / Pays	E-mail		

MEASURES & DESCRIPTION OF THE PLATFORM

C.6.1.(a) (1) Weight of the platform :	134,800 kg	130 kg maximum
C.6.1.(b) (1) Weight boat ready to sail :	178,200 kg	180 kg maximum
C.6.2.(a) Corrector weight		7 kg maximum
D.6.2.(a) Hull length / Longueur coque	5,52 m	5,52 m maximum
D.6.2.(b) Boat beam / Largeur plateforme	2,60 m	2,60 m maximum
C.7.1.(b) Inspection hatches / trappes	Minimum 1 per hull	2
D.3.1.(a) Material	Polyester	
D.5.1.(a) Trampoline material	Mesh	
B.1.1.(c) have valid certification mark is required :	Port side hull <input checked="" type="checkbox"/>	starboard side hull <input checked="" type="checkbox"/>

DAGGERBOARDS & RUDDERS

	Port side	starboard side	
C.8.2.(a)(1) Daggerboards serial n° :	Sans	Sans	
E.3.4.(a) Daggerboards weight	4,400 kg	4,300 kg	5,5 kg maximum
E.3.3.(c) Daggerboards extension below the hull	1,39	1,39	1,40m maximum
B1.1.(c) Daggerboard certification mark F18	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
C.8.2. Rudders serial n° :	Sans	Sans	
E.4.6.(a). Rudders weight	3,000 kg	3,000 kg	Minimum 3 kg
B1.1.(c) Rudder certification mark F18	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

RESERVED NATIONAL CLASS ASSOCIATION

Initial boat certification	<input checked="" type="checkbox"/>	Certification control carried by	Bernard Marcellin	Date	04/07/2020
Boat re-certification n°	0	For main sail :	<input type="checkbox"/> jib <input type="checkbox"/> Spinnaker <input type="checkbox"/> Platform <input type="checkbox"/> Other <input type="checkbox"/>		

Certification Authority

Complementary comments of the measurer

EQUIPEMENTS

Boat Certificate n°

FRA 2020-003

National letters & Sail N°:

FRA 83032

WS N°:

1 207

Owner :

YACHT CLUB DE TOULON

Brand of boat :

EXPLODER SCORPION

C.5 PORTABLE EQUIPMENT

C.5.1(a)1 One righting line

4,20

Minimum 4m. long

0,01

Minimum Ø 10mm

C.5.1(a)2 One magnetic steering compas

1

Minimum One

C.9 RIG

C.9.2(a) Mast datum point shall not be more than 120mm above the top of the front bear

100

C.9.7(a) Running rigging shall be led outside the mast spar

OK

D.4 BEAMS

D.4.2(a) The beams shall be extruded aluminium profiles of constant section

OK

D.4.2(b) The curvature of the beams shall be limited a maximum of 15mm

OK

F.3 MAST

F.3.2(a) The mast shall be extruded aluminium profiles of constant section

OK

F.3.3 Dimensions

Mast spar circumference

0,380 m

0,385 m Maximum

Distance between upper point and front beam

9,100 m

9,100 m Maximum

Shroud height

6,750 m

6,750 m Maximum

Spinnaker hoist height

8,145 m

8,150 m Maximum

Top of the front beam to mast datum point

100

Extrusion total length

9,100 m

B.1.1(c) Have valid certification marks as required

F.4 BOOM

F.4.1(a) The Boom, if fitted,

Yes or no

F.4.1(a) shall be made and extruded aluminium profiles of constant section

OK

F.5 BOWSPRIT

F.5.1(a) The bowsprit shall be on the longitudinal centreline of the boat

OK

F.5.1(b) The bowsprit shall be attached to the front beam

OK

F.5.2(a) The bowsprit shall be made of aluminium of constant section

OK

F.5.5(a) The length of the bowsprit shall not exceeded the distance from the centre of the front beam to a vertical line touching the most forward part of the hull plus 800 mm, with the bowsprit measured when vertical.

OK

F.6.2(b) (2) The bowsprit bridles may be of rope of minimum diameter 2,5mm

3

Dimensions :

Diameter Ø

0,040 m/m

Length

3,720 m

C.9.5(c) The bowsprit shall have an end cap that is smooth, rounded

OK

F.6 STANDING RIGGING

F.6.1(a) The standing rigging of the stainless steel

F.6.2(a)(1) A forestay and bridles mini 4mm

F.6.2(a)(1) Shrouds mini 4mm

F.6.2(a)(3) Trapeze wires mini 2,5mm

F.7 RUNNING RIGGING

F.7.2(a)(1)(2) Mainsail halyard & sheet

F.7.2(a)(3)(4) Jib halyard & sheet

F.7.2(a)(5)(6) Spi. halyard & sheets

F.7.2(a)(7) Spi. Retraction lines

Complementary comments of the measurer

MEASURES AND CALCULATIONS AREA OF JIB & SPINNAKER

Boat Certificate n°

FRA 2020-003

National letters & Sail N° :

FRA 83032

WS N° :

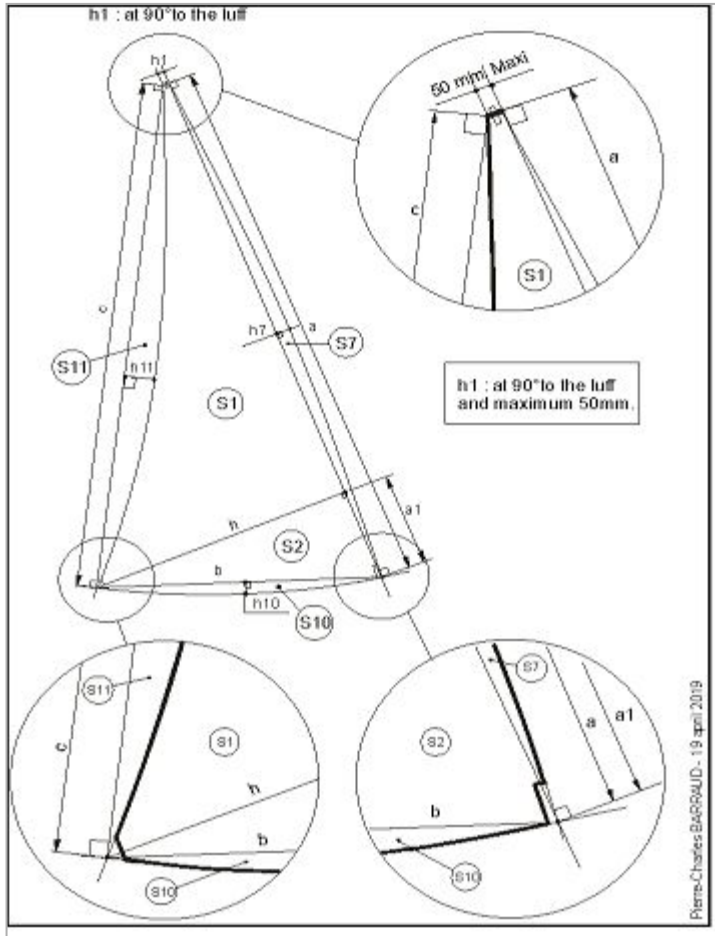
1 207

Owner :

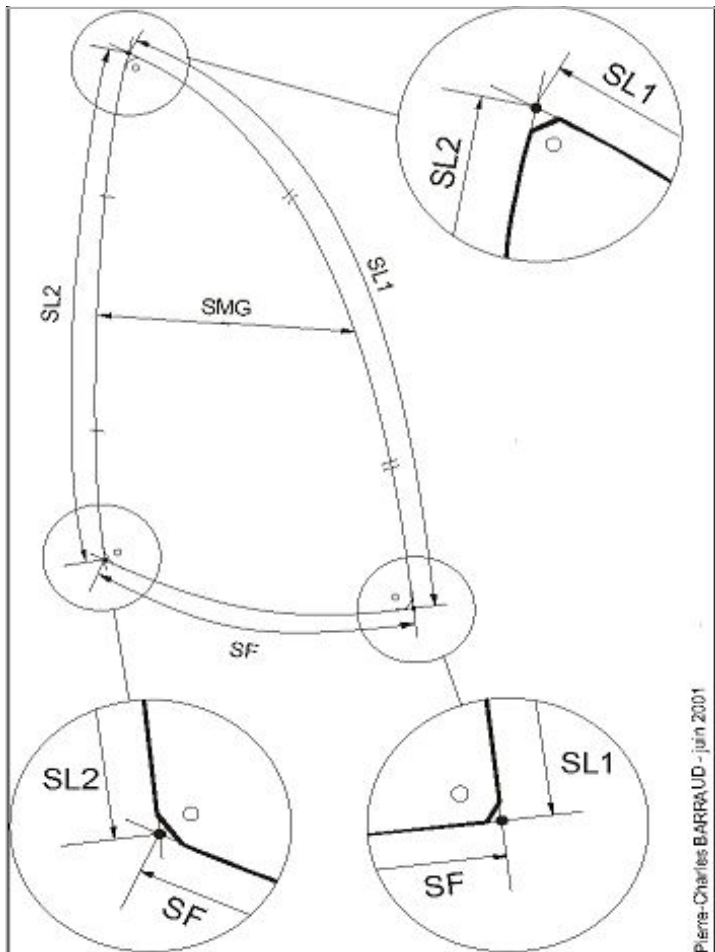
YACHT CLUB DE TOULON

Brand of boat :

EXPLODER SCORPION



Pierre-Charles BARRAUD - 19 avril 2019



Pierre-Charles BARRAUD - juin 2001

G.4 JIB

Small Jib 3,60 m2

Large Jib 4,30 m2

Sailmaker / Voilier :

ONE DESIGN

Serial n° / N° série :

141220

Colour / Couleur :

BLANC

Batten number :

3 1.2(d)/2 maximum 3

Material / Matériau :

APEN 6 3 mil

h1	0,045	$S1 = ((h+h1) \times (a-a1)) / 2$	4,2980
a	5,900	$S2 = (h \times a) / 2$	0,2235
h7	0,000	$S7 = ((a \times h7) / 3) \times 2$	0,0000
c	5,725	$S10 = 2 / 3 \times b \times h10$	0,0184
h11	-0,070	$S11 = 2 / 3 \times c \times h11$	-0,2672
h	1,490	JIB AREA Small Jib 3,60m2 Large Jib 4,30m2	4,273
a1	0,300		
b	1,535		
h10	0,018		

G.4.2 Construction & G.4.3 Dimensions

The Leech shall not be convex	OK	Max
Top width	45mm	50mm
Batten width	30mm	40mm
Batten pocket outside width	50mm	80mm
Window area : minimum : 0,30 m2	0.31	
Dacron sticker F18 Small Jib 3,60m2	<input checked="" type="checkbox"/>	
Dacron sticker F18 Large Jib 4,30 m2	<input type="checkbox"/>	

G.5 SPINNAKER

Small Spinnaker 19,00m2 maximum

Large Spinnaker 21,00m2 maximum

Sailmaker / Voilier :

ONE DESIGN

Serial n° / N° série :

170420

Colour / Couleur :

Rouge

G.5.1 Material / Matériau :

Maxikote 100

SL1	8,887	% SMG / SF	75,47
SL2	7,777	Spinnaker AREA	20,594
SMG	2,785		
SF	3,690		
Dacron sticker F18 spinnaker 19,00 m2	<input type="checkbox"/>		
Dacron sticker F18 spinnaker 21,00 m2	<input checked="" type="checkbox"/>		

RESERVED NATIONAL CLASS ASSOCIATION

Certification control carried by

Date

Bernard Marcellin

04/07/2020

Certification Authority

Blank box for Certification Authority signature.

Boat Certificate n°

FRA 2020-003

National letters & Sail N° :

FRA 83032

WS N° :

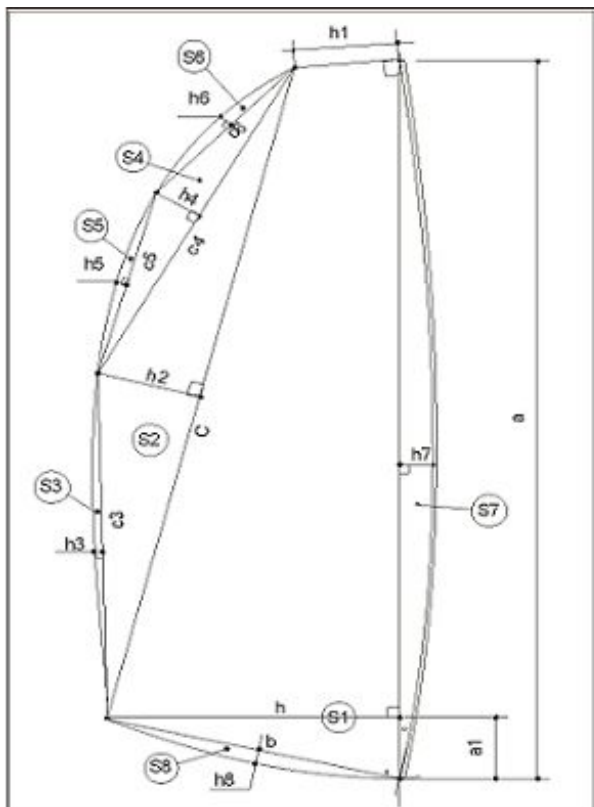
1 207

Owner :

YACHT CLUB DE TOULON

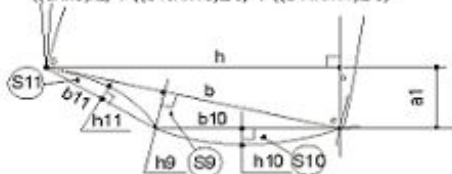
Brand of boat :

EXPLODER SCORPION



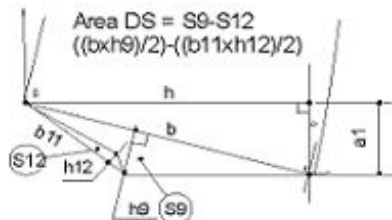
$$\text{Area DS} = S9 + S10 + S11$$

$$\left(\frac{b \times h9}{2} + \frac{1}{2} \left(\frac{b10 \times h10}{3} \right) + \frac{1}{2} \left(\frac{b11 \times h11}{3} \right) \right)$$



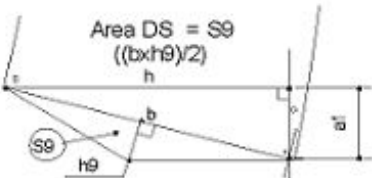
$$\text{Area DS} = S9 - S12$$

$$\left(\frac{b \times h9}{2} \right) - \left(\frac{b11 \times h12}{2} \right)$$



$$\text{Area DS} = S9$$

$$\left(\frac{b \times h9}{2} \right)$$



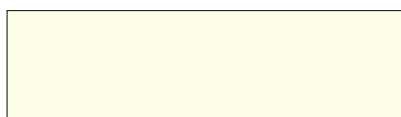
Certification control carried by

Bernard Marcellin

Date

04/07/2020

Certification Authority



MAST AREA

Length extrusion 9,100 Perimeter 0,380

G.3 MAIN SAIL : 17 m maximum

Sailmaker / Voilier :	ONE DESIGN
Serial n° / N° série :	150320
Colour / Couleur :	BLANC
Batten number :	3
G.3.2 Material / Matériau :	APEN 6 3 mil

a	9,050	S1 : $\frac{((h+h1)(a-a1)+(a1xh))}{2}$	12,8321
h7	0,120	S2 : $\frac{(cxh2)}{2}$	0,7605
c	8,005	S3 : $\frac{2}{3} c3xh3$	0,1120
h2	0,190	S4 : $\frac{(c4xh4)}{2}$	0,0802
c4	4,012	S5 : $\frac{2}{3} c5xh5$	0,0201
h4	0,040	S6 : $\frac{2}{3} c6xh6$	0,0268
c6	2,010	S7 : $\frac{2}{3} axh7$	0,7240
h6	0,020	S8 : $\frac{2}{3} bxh8$	
c5	2,010	S9 : $\frac{(b \times h9)}{2}$	0,6000
h5	0,015	S10 : $\frac{((b10 \times h10)/3)^2}{2}$	
c3	4,000	S11 : $\frac{((b11 \times h11)/3)^2}{2}$	
h3	0,042	S12 : $-\frac{(b11 \times h12)}{2}$	
h	2,110	Main Sail AREA	15,156
b	2,400		
h8	0,000	Mast area / Surf. Du mât :	1,729
a1	1,088	Total AREA	16,885
h1	0,825		

h9	0,500	<p>h1 and h being parallel and perpendicular to the main luff, the main area is a trapezium and a right-angled triangle. h2 and h4 are perpendicular to the middle point between c and c4. H3, h5, h6, h7 and h8 are respectively the cambers of the cords c3, c5, c6, a and b. h10, h11 can be positive, negative or equal to zero.</p>
b10	0,000	
h10	0,000	
b11	0,000	
h11	0,000	
b12	0,000	
h12	0,000	

G.3.5 DIMENSIONS

Top width excluding boltrope	0.825	Max 1,00 m
Upper wight at upper leech point 1500mm from the head point	1.125	1,29 m
The angle between the luff ans the head	>90°	90°
Tabling width	0.055	115mm
Window area : minimum : 0,30 m2	0.82	

B.2 CERTIFICATION MARKS F18

Dacron sticker F18 main sail 17,00 m2	<input checked="" type="checkbox"/>
Class emblem F18	<input checked="" type="checkbox"/>