

# American Dragon News

Volume 3

JANUARY 6, 1998

## 1999 Dragon World Championships in Martinique

The IDA has chosen Martinique as the site for the 1999 Dragon World Championships. Bids were received from the Chicago Yacht Club and the Royal Vancouver Yacht Club. The IDA expressed thanks for the bids. See page 8 of the IDA newsletter for details on the 1999 Dragon World Championships.

## 1998 Dragon Ski Weekend at Holiday Valley

The ski weekend is scheduled for February 6th, 7th and 8th. Make your own lodging arrangements and meet at Kirk Hinman's for cocktails after 7pm on Friday. Call Mr. Hinman @ 716-699-4304 when you arrive in Ellicottville, NY for directions to his place.

## Big Congrats to Mike Mahar

Mike Mahar (US290), finished construction, and passed muster with the FAA on his LancAir IV this past summer. This 4 seat aircraft is the fastest propeller driven airplane in production. He, and plenty of help have been at this monumental project for about 5 years. Kudos Mike!

## 43 Dragons registered in the US

See the AIDA roster for boats near you.

## Our National Champion...again

Paul Rieman, Mark DeYoung and Matt Adelman, aboard US261, Lola are the National Champions for the second straight year. Cleveland Race week, which serves as our National Championship was a closely contested battle between the top three finishers. Mr. Rieman won by tiebreaker. See the 1997 race results for details.

## Modern Day Miracles...

See Dr. Hunter Peckham's (US285) 15 minutes of fame and recognition in the October 13, 1997 issue of PEOPLE magazine, pages 123-124. "GETTING A GRIP". It is an article about his research on Functional Electrical Stimulation. Dr. Hunter Peckham is the director of a consortium of university

and hospital researchers that carries that name. Here is a guy who is making miracles through his Freehand. Freehand is a neural prosthetic that has just recently received FDA approval. Good Luck Hunter!

## 1998 European Fixtures

See page 10 in the December 1997 IDA newsletter for 1998 International Dragon Class Fixtures. A World Championship and The European Championship requires a letter from the national authority in order to compete. These regattas are generally well attended and have qualification criteria. The US is allowed 4 entries in a World Championship or a European Championship. If you wish to compete in these events, please inform Chris Brizes ASAP so that a letter can be prepared and the regatta hosts notified.

## Change in address...

Hoj Jensen Sails has moved, its new address and phone numbers are:

Hoj Jensen Sails  
Hoj Jensen & Co. ApS  
Havremarken 3  
DK - 3650 Olstykke

telephone: +45 70 20 14 29

fax: +45 47 17 78 88

## Results from 1997

This is an abbreviated description of the races because, well, generally I stunk it up this year and was rarely in a position to see the goings on up front. So here goes:

Cleveland Race Weekend. The third weekend this past June was a beautiful weekend on Lake Erie...for waterskiers. The wind was produced from a 12" oscillating fan on Edgewater Beach, no, the water intake, no, the Eastlake Power Plant. Well, you get the idea, by the time the wind got out to us, the Canadian soldiers (bugs) had already had their way with us. Well anyway, Paul Rieman in US261, Dick Hatheway in US256 and Ian Orr in KC139 drifted far faster than anyone else, with Mr. Rieman eventually

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winning the driftoff with a 1, 2, 4 finish. Mr. Hathaway was second with a 3, 3, 1 finish (I do not know the actual tie breaking rules). Mr. Orr was third with a 5, 1, 2 showing.

The light air continued into the first weekend in July for the Founder's Regatta at the Royal Canadian Yacht Club. I was not there but Dave Caesar, who crewed his own boat, Eclipse won with Tony Snell at the helm. Mr. Orr in KC139, Morven II was second and Dr. Tom Lajos, in US292, Undine was third overall.

The North American Championships were held at the RCYC the following weekend and again the air was light, but adequate (according to Simon Tindal). Tony Snell in Eclipse did it again, with Morven II placing and Undine showing. Dr. Lajos won the coveted McCloud Trophy for leading after the first day.

The Great Lakes Championship was held at the Toronto Sailing and Canoe Club in mid August, the weekend was sunny with light to medium breeze. Eclipse again won the regatta, Morven II was again the maid of honor, Viking, with Ed Kovachy at the helm was third, Lola sailed by Paul Rieman was fourth. Corte, Kent Aggus, fifth. Jezebel, Peter Jeffreys, sixth. Undine, Dr. Tom Lajos, seventh. Ludmilla, Greg Mezo. Scamp, Dick Hathaway. Intrigue, Jan Galoma. DD, Boris Kuzman. Saturday was mared by a near tragedy. Jan Galoma fell overboard and almost drowned. David Caesar and Ryan Beck jumped in to save him and were successful. Jan is very lucky, and we are very glad he is still with us.

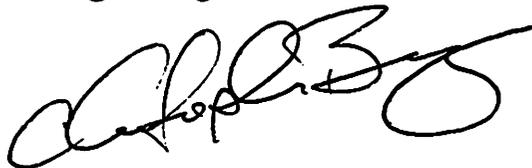
The OE Schupp regatta finishes were like this, in first place was AskClare, sailed superbly by Ted Sawyer. Almost as superb was the second place finish of Niagara sailed by Dr. Hunter Peckham, and fighting desperately for a third place finish was Scarlet sailed by yours truly, Christopher Brizes. Oh, just for this year, high score won this regatta, I know, I know, Morven II could be a little miffed because everyone thought they had to do well to win, and Morven II did the best, but if you would have read the written race instructions, you would have known. So there.

The Clambake regatta was once again the great success that it has been become known. The chowder was great! Mike Mahar back from playing all summer in his new toy, finished best with a 2, 3, 3, 6 finish. Morven finished second and strong with a 3, 5, 6, 1. Lola showed with a trademark 1, 1, 7, 11 finish. Mr. Rieman received the "Crap in your Hat" award, given to the guy who gets most screwed in a race (note the 11 finish in race #4, call him for details). Eclipse, who finished second for the CiyH award was fourth. In order, Jezebel, Corte, Orca, Undine, Scarlet, AskClare, Chauvinist, Grendel, and Senior.

This mini-newsletter was written and published by Christopher Brizes, you may send race results, articles, flowers, money, extra Harken gear, new sails only! to the address below:

Christopher Brizes  
3540 Dellbank Dr.  
Rocky River, OH 44116  
USA

440-331-9579, phone and fax  
E-mail @ US255@aol.com



# AIDA/CIDA Roster

	Last Name	First Name	Street Address	City	State	Country	Zip Code
11, US	Adkins	Douglas	The Highlands	Seattle	WA	USA	98177
60, KC	Aggus	Kent	721 Shaw St.	Toronto	Ontari	Canada	M6G 3L8
9, KJ	Aitken	Reg	4711 S. Himes Ave., #113	Tampa	FL	USA	33611
crew	Algrin	Susan	209 Overlook Rd.	Newton	NJ	USA	07860
crew	Alvey	Steve	8 Strathbury Circle SW	Calgary	Alberta	Canada	E3H 1P7
98, KC	Angus	Harry	1 Rainbow Creekway	Willowdale	Ontari	Canada	M2K 2T9
crew	Bauer	Tony	130 Carlton St., Suite 1104	Toronto	Ontari	Canada	M5A 2K1
crew	Bonnet	Jean	43 Boulevard LeClere	Arcachon		FRANC	33120
32, US	Boyer	Phil	2434 9th W.	Seattle	WA	USA	98119
98, KC	Brazier	Anthony	170 Elmhurst Ave.	Toronto	Ontari	Canada	M2N 1S1
255,US	Brizes	Christopher	3540 Dellbank Dr.	Rocky River	OH	USA	44116
	Bugler	Steve	915 Dupont St.	Toronto	Ontari	Canada	M6H 1Z1
	Butt	Robert	336 Webber Ave.	Vancouver	BC	Canada	V5V 2G5
301, US	Caesar	David	39 Hammersmith Ave.	Toronto	Ontari	Canada	M4E 2W3
208, K	Caron	David	Derby Rd., PO Box 137	Islesboro	ME	USA	04848
crew	Cervoni	Jackie	1 Homewood Ave., #213	Toronto	Ontari	Canada	M4Y 2J8
30, US	Chang	Phyllis	PO Box 11696	Winslow	WA	USA	98110
	Clark	Joe	225 St. Andrews Dr.	Hamilton	Ontari	Canada	L8K 5K2
crew	Clarkson	Dean	38 Prennan Ave.	Islington	Ontari	Canada	M9B 4C1
	Clasby	Ralph	3177 Point Grey Rd.	Vancouver	BC	Canada	V6K 1B3
	Coates	Reg	250 The Esplanade, Suite 20	Toronto	Ontari	Canada	M5A 1J2
	Code	Peter	5 George Henry Blvd.	Willowdale	Ontari	Canada	M2J 1E4
	Crawford	Alan	7 Ponderosa Dr.	Halfmoon	NY	USA	12065
34, KC	Daniel	David	5576 4th Line	Omaph	Ontari	Canada	L9T 2X8
273, US	Davies	Dave	31263 Lake Dr.	Bay Village	OH	USA	44140
	Delecat	Len	21 Doncliffe Dr.	Toronto	Ontari	Canada	M4N 2E1
crew	DeYoung	Mark	2874 Mayfield Rd., #15	Cleveland Hts.	OH	USA	44118
275, US	DeYoung	Arden	1670 Enterprise Pkwy	Twinsburg	OH	USA	44087
161, US	Dryburgh	Scott	17450 Azure Ln.	Brookfield	WI	USA	53045
168, US	Eib	Jason	122 Esplanade St.	San Clemente	CA	USA	92672
crew	Eichenberg	Loretta	301 Riverdale Dr., #6	Rocky River	OH	USA	44116
296, US	Feigan	Marc	30 E. 68th St.	New York	NY	USA	10021
302, US	Fiening	Jack	619 Dade Lane	Richmond	OH	USA	44143
304, US	Foster	Glen	1 Beekman Place, # 8B	New York	NY	USA	10022

# AIDA/CIDA Roster

	Last Name	First Name	Street Address	City	State	Country	Zip Code
114, US	Frost	Ken	5907 Sea Side Walk	Long Beach	CA	USA	90803
	Fuller	Simon	2780 Cassels St.	Ottawa	Ontari	Canada	K2B 6N8
98, US	Gagnier	Claude	92 E. Lynn St.	Seattle	WA	USA	98102
131, KC	Galama	Jon	965 Bay St., Suite 2508	Toronto	Ontari	Canada	M5S 2A6
crew	Garr	Erik	449 West Beldon, #3F	Chicago	IL	USA	60614
	Garrett	Anne	2 Ancaster Court, Queens	Richmond	Surry	UK	TW10 6JJ
	Gillmeister	Jeffrey	44 Lincoln Ave.	Toronto	Ontari	Canada	M6P 1M8
xxx, US	Gjaja	Niko	2611 Rosendale Rd.	Niskayuna	NY	USA	12309
	Godsil	Martin	PO Box 1131	Kingston	WA	USA	98346
crew	Green	Susan	2261 Lakeshore, W. SPH#5	Etobioke	Ontari	Canada	M8V 3X1
257, US	Guck/Crave	Cary/Phil	167 Mathewson Rd.	Barrington	RI	USA	02806
	Haig	Dave	141 Erskin Ave., #110	Toronto	Ontari	Canada	M4P 1Y9
	Haili	Keith	7 Fraser Ave., studio 2	Toronto	Ontari	Canada	M6K 3C1
	Hamm	Bill	1210 Buchanan St.	Rockford	IL	USA	61101-140
256, US	Hatheway	Richard	37223 Euclid Ave., Lot #74	Cleveland	OH	USA	44094
277, US	Hensel	Alvin	3226 Ormond Rd.	Cleveland	OH	USA	44118
crew	Hinman	Kirk	12700 Lake Ave., #1603	Lakewood	OH	USA	44107
	Hume	Steve	15 Norwich Way	Nepean	Ontari	Canada	K2G 5R3
crew	James	Thomas	1251 Churchill Rd.	Lyndhurst	OH	USA	44124
	Jeffrey	Peter	110 Erskine Ave, #1603	Toronto	Ontari	Canada	M4P1Y4
113, KC	Jenkins	John	14 Moorhill Dr.	Toronto	Ontari	Canada	M4G 1A1
	Kaiser	Richard	304 W. Evergreen	Chicago	IL	USA	60610
	Kliever	Terry	1813 Alliance Ct., NE	Keizer	OR	USA	97303
	Kneulman	Dirk	243 Speers Rd.	Oakville	Ontari	Canada	L6K 2E8
crew	Knott	Chris	30222 Ashton Lane	Bay Village	OH	USA	44140
218, US	Kottke	Ken	4364 S. Lennox	Milwaukee	WI	USA	53207
253, US	Kovachy	Ed	23691 Redfern Rd.	Columbia Stn.	OH	USA	44028
	Kubis	Kim	76 Main St., East	Kingsville	Ontari	Canada	N9Y 1A2
90, KC	Kuzmin	Boris	1309 Wilson Ave., Suite 305	Toronto	Ontari	Canada	M3M 1J4
crew	Lajos	Dr. Paul	6, Rue Felicieu David	Paris		FRANC	75016
292, US	Lajos	Tom	2454 W. Oakfield Dr.	Grand Island	NY	USA	14072
	Lake	Michael	125 Confederate Dr.	Spanish Fort	AL	USA	36527
299, US	Le Berre	Henri	Chemin Du Jardin Brule	Chambourcy		FRANC	78240
	Lorch	Anthony	366 Adelaide St., East	Toronto	Ontari	Canada	M5A 3X9

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	Last Name	First Name	Street Address	City	State	Country	Zip Code
208, US	Low	Howard	501 Seneca Park Ave.	Rochester	NY	USA	14617
	Luey	Walfun	2005 Yonge St.	Toronto	Ontari	Canada	M5A 2A6
115, US	Luskin	John	5252 Meadow Wood Blvd.	Lyndhurst	OH	USA	44126
	MacDonald	Keith	40 Delisle Ave., #611	Toronto	Ontari	Canada	M4V 1S6
	MacDonald	Nick	21 The Linx Rd. #311	Toronto	Ontari	Canada	M2P 1T6
	MacDonald	John	21 The Linx Rd. #311	Toronto	Ontari	Canada	M2P 1T6
	MacLennan	Nicola	4 The Charter Rd.	Woodford Green	ESSE	UK	IG8 9QL
	MacIntyre	Sandy	28 Dilworth Crescent	Toronto	Ontari	Canada	M4K 1Z6
290, US	Mahar	Michael	341 E. 131 St.	Cleveland	OH	USA	44108
	Manley	Mark	25 Bamboo Grove	Toronto	Ontari	Canada	M2B 2C6
	Manore	J.R.	Box 280	Grand Bend	Ontari	Canada	N0M 1T0
144, US	Mansour	Joe	3403 Euclid Heights Blvd.	Cleveland Hts.	OH	USA	44118
crew	Masse	Todd	2261 Lakeshore, W. SPH#5	Etobioke	Ontari	Canada	M8V 3X1
	Masterson	John	6 Parklea Dr.	Toronto	Ontari	Canada	M4G 2J4
	Masterson	Monty	6 Labatt Ave.	Toronto	Ontari	Canada	M4G 2J4
	McHaffie	Gordon	RR #1	Nottawa	Ontaro	Canada	L0M 1P0
	Mergenthale	Hank	35 Harbor Rd.	Westport	CT	USA	06880
113, KC	Mezo	Greg	362 Old Orchard Grove	North York	Ontari	Canada	M5M 2E9
	Mezo	George	40 Barrydale Crescent	Toronto	Ontari	Canada	M3B 3E2
crew	Mitchell	George	423 Roehampton Ave.	Toronto	Ontari	Canada	M4P 1S3
	Moddle	Scott	4295 Mayflower Dr.	Missisauga	Ontari	Canada	L5R 1E3
80, KC	Moyle	John & Eva	41 Kilbarry Rd.	Toronto	Ontari	Canada	M5P 1K4
crew	Mucklow	Michael	39 Salisbury Ave.	Toronto	Ontari	Canada	M4X 1C5
crew	Nedrow	Mike	1232 S. Belvoir Blvd.	Cleveland	OH	USA	44121
300, US	Neiser	Tom	4615 Wilburn Dr.	South Euclid	OH	USA	44121
crew	Neiser	Jack	664 Forsyth St.	Boca Raton	FL	USA	33487
	Newman	John	1366 Hillside Ave. #105	Victoria	BC	Canada	V8T 2B5
17, US	Noble	Mark	5514 Brenner Rd., NW	Olympia	WA	USA	98502
	Norton	Gordon	80 Foresthill Rd.	Toronto	Ontari	Canada	M4V 2L5
	O'Grady	James	79 Parkland Crescent	Nepean	Ontari	Canada	K2H 7V9
	O'Keefe	Harry	55 N. Cliff St.	Norwich	CT	USA	06360
	O'Neill	Mike	30165 Bulverde Hills Dr.	Bulverde	TX	USA	78163
139, KC	Orr	Muffy & Ian	39 Hammersmith Ave.	Toronto	Ontari	Canada	M4E 2W3
	Owen	Charles	22 Mary St.	Brampton	Ontari	Canada	L6W 2R1

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	Last Name	First Name	Street Address	City	State	Country	Zip Code
95, US	Owens	Tom	1566 Fillmore Ct.	Louisville	CO	USA	80027
	Parkins	David	135 Storm Rd.	Groton	NY	USA	13073
285, US	Peckham	Dr. Hunter	3361 E. Monmouth	Cleveland	OH	USA	44118
	Read	Ken	25345 Via Dona Christa	Valencia	CA	USA	91335
	Richardson	Paul	PO Box 724	Lake Fork	ID	USA	83635
261, US	Rieman	Paul	1588 Wooster Rd.	Rocky River	OH	USA	44116
297, US	Sawyer	Ted	361 Darby Run	Bay Village	OH	USA	44140
289, US	Schilling	Bob	25803 John Rd.	Olmsted Twp.	OH	USA	44138
262, US	Schilling	Bob, Sr.	4124 Charlton Rd.	South Euclid	OH	USA	44121
crew	Schroeder	Kathryn	288 Russell Hill Rd.	Toronto	Ontari	Canada	M4V 2T6
crew	Seebohm	L. & T.	3394 W. Streetsboro Rd.	Richfield	OH	USA	44286
	Shippee	Hamilton	126 Milwood Rd.	Toronto	Ontari	Canada	M4S 1J7
	Simon	Steve	55 Charles St. W, Suite 280	Toronto	Ontari	Canada	M5S 2A6
	Smith	Michael	131 Bloor St. West Suite 70	Toronto	Ontari	Canada	M5S 1R1
crew	Smith	Harry	33884 Canterbury Rd.	Solon	OH	USA	44139
crew	Snell	Tony	326 Mjr. Makenzie Dr., E. #	Richmond Hill	Ontari	Canada	L4C 8T4
305, US	Soderberg	Jan	PO Box 1062	Harbor Springs	MI	USA	49740
244, US	Steedman	John	4117 26th St. SW	Seattle	WA	USA	98106
	Stinson	Fred	372 Bay St., Suite 610	Toronto	Ontari	Canada	M5H 2W9
240, US	Sturgess	Alan	2806 W. 29th Ave.	Vancouver	BC	Canada	V6L 1Y1
	Sudbury	John	85 King St, Box 1106	Picton	Ontari	Canada	K0K 2T0
	Taylor	Paul	366 Webber Ave.	Vancouver	BC	Canada	V5V 2G5
	Tewksbury	Baird	Box 48776 Bentall Center	Vancouver	BC	Canada	V7X 1A6
crew	Thomas	Betty	30215 Ashton Ln.	Bay Village	OH	USA	44140
139 KC	Tindal	Simon	187 Marlborough Place	Toronto	Ontari	Canada	M5R 3H8
	Vigilante	Ted	530 S. 2nd St., Apt #742	Philidelphia	PA	USA	19147
134, KC	Wagner	David	15 Pintail Court	Guelph	Ontari	Canada	N1C 1A8
	Walsh	Reginald	319 Rosepark	Toronto	Ontari	Canada	M4T 1R8
	Walters	Guy	2786 Allamein Ave.	Vancouver	BC	Canada	V6L 1S2
264, US	Warren	Shaw	40 Royal Ave.	Cambridge	MA	USA	02138
1, US	Washatka	David	2244 Kilbirmie Dr.	Germantown	TN	USA	38139
	Wieg	Stanley	4925 Forrestal St.	Fair Oaks	CA	USA	95628-510
	Wishart	Chuck	4525 Dowling	Montague	MI	USA	49437
	Wodzynski	M.	610-230 Woodbridge	Nepean	Ontari	Canada	K2B 6A5

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# AIDA/CIDA Roster

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Last Name	First Name	Street Address	City	State	Country	Zip Code
Wujack	John	1815 NW 2nd. St.	Bend	OR	USA	97701
Wurtzebach	Paul	2404 Danbury Dr., #1B	Woodridge	IL	USA	60517

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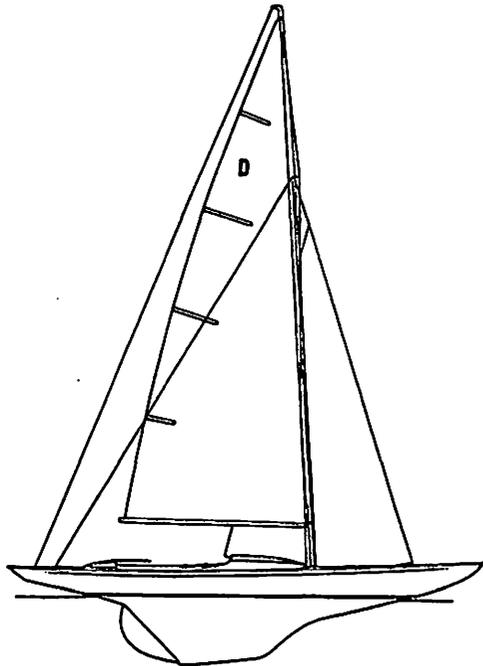
# 1998 Schedule of Events

## Great Lakes Dragon Fleets

<i><b>Event</b></i>	<i><b>Location</b></i>	<i><b>Dates</b></i>	<i><b>Contact</b></i>
<i><b>Cleveland Race Week (US Championships)</b></i>	<i><b>Edgewater Yacht Club Cleveland, Ohio</b></i>	<i><b>June 20, 21</b></i>	<i><b>Dr. Hunter Peckham 216-932-2779</b></i>
<i><b>Duke of Edinburgh Canadian Championships</b></i>	<i><b>Royal Canadian Yacht Club Toronto, Ontario</b></i>	<i><b>June 27/28</b></i>	<i><b>John Jenkins 416-421-9444</b></i>
<i><b>Founder's Regatta</b></i>	<i><b>Royal Canadian Yacht Club Toronto, Ontario</b></i>	<i><b>July 4/5</b></i>	<i><b>John Jenkins 416-421-9444</b></i>
<i><b>'Round Grand Island Race</b></i>	<i><b>Dr. Tom Lajos Residence Toronto, Ontario</b></i>	<i><b>July 11, 12</b></i>	<i><b>Dr. Tom Lajos 716-886-8148</b></i>
<i><b>Red Ringer Trophy</b></i>	<i><b>Toronto Sailing &amp; Canoe Club, Toronto, Ontario</b></i>	<i><b>August 8, 9</b></i>	<i><b>Peter Jeffreys 416-571-2408</b></i>
<i><b>O.E. Schupp Memorial</b></i>	<i><b>Edgewater Yacht Club Cleveland, Ohio</b></i>	<i><b>September 5/6/7</b></i>	<i><b>Dr. Hunter Peckham 216-932-2779</b></i>
<i><b>Great Lakes Championships</b></i>	<i><b>Edgewater Yacht Club Cleveland, Ohio</b></i>	<i><b>September 12/13</b></i>	<i><b>Dr. Hunter Peckham 216-932-2779</b></i>
<i><b>One Design Series</b></i>	<i><b>Toronto Sailing &amp; Canoe Club, Toronto, Ontario</b></i>	<i><b>September 20</b></i>	<i><b>Peter Jeffreys 416-571-2408</b></i>
<i><b>Clambake Regatta</b></i>	<i><b>Edgewater Yacht Club Cleveland, Ohio</b></i>	<i><b>October 10/11</b></i>	<i><b>Dr. Hunter Peckham 216-932-2779</b></i>

# INTERNATIONAL DRAGON CLASS RULES

Authority\*: International Sailing Federation



The International Sailing Federation (ISAF) is not a National Authority (NA).

- 1.42 Departure of any kind from the plans is prohibited, unless either a plan of the proposed departure has been approved by ISAF, or it is authorised by these rules.
- 1.43 In the event of a discrepancy between the rules, measurement form or plans the matter shall be referred to the ISAF.
- 1.44 Any interpretation of these rules shall be made by the ISAF which may consult the IDA.
- 1.50 Measurement and Measurers
- 1.51 Except where other methods of measurement are specifically indicated all measurement shall be carried out in accordance with the ISAF Measurement Instructions.
- 1.52 Only a measurer nominated by a national authority and approved by the IDA shall measure a yacht, its spars, sails and equipment, and sign the declaration on the measurement form. After consultation with the National Authority however, the IDA may approve one or more individuals within a sail loft to measure sails manufactured by that loft.
- 1.53 A measurer shall not measure a yacht, its spars, sails or equipment owned or built by himself, or in which he is an interested party, or has a vested interest, however measurers within a sail loft as stated in rule 1.52 are excluded from this rule for sail loft measurement only.
- 1.54 New or substantially altered sails shall be measured by a measurer who shall stamp, sign and date the sails.
- 1.55 Templates used for measurement shall be made accurately to designs supplied by ISAF, and registered with ISAF.
- 1.60 Application of Rules and Re-measurement
- 1.61 If a yacht is to be remeasured (see rule 1.64 below) this shall be carried out in accordance with the rules in force at the time the yacht's original measurement certificate was issued, except that rudder, keel, spars, rigging and sails shall be measured in accordance with the current class rules.
- 1.62 Re-measurement of the hull after a major repair or alteration shall be carried out in accordance with either the current class rules or those in force when the yacht's original measurement certificate was issued.
- 1.63 Replacement spars, rigging and sails shall be measured in accordance with the current class rules.
- 1.64 Re-measurement may be carried out on the instructions of ISAF, a national authority, IDA or the race committee except that re-measurement of the hull shall be permitted only if there is reason to think:
- .1 the hull shape has been altered, or
  - .2 the yacht had been incorrectly measured before the measurement certificate was issued.
- 1.65 Adjustment of any of the corrector weights shall be made only after:
- .1 the yacht has been officially reweighed by an official measurer with a scale that has been officially certified within the preceding twelve months, and

## 1. GENERAL

The Dragon was designed in 1929 by Johan Anker of Norway.

### 1.10 Purpose of the Class Rules

- 1.11 The intention of these rules is to ensure that the yachts are as identical as possible in hull shape, weight, weight distribution and sail plan. The construction of the hull, and the spars, sails and rigging are controlled by these rules. It is impossible to foresee every conceivable innovation which may be thought of in the future and to mention every suggestion that has been ruled illegal in the past. When considering anything in connection with the boat or its sails or equipment which is not within established practice in the Dragon Class or involves the use of a material not previously used or accepted by the Class or is not clearly covered by the plans or specification, you must assume that it is illegal, and must obtain a ruling from the Class Technical Committee before attempting it. The only exception to this rule are fittings which are governed by Class Rules 8 and 12.

### 1.20 Authority

- 1.21 The international authority for the class is the ISAF which will co-operate with the International Dragon Association (IDA) in all matters concerning these rules.
- 1.22 Neither the ISAF nor the International Dragon Association accept any legal responsibility in respect of these rules and plans or any claim arising therefrom.
- 1.23 In countries where there is no national yachting authority (NA), or the NA does not wish to administer the class, its functions as stated in these rules shall be carried out by the IDA or its delegated representatives, a national Dragon class association.

### 1.24 Advertising

All Dragon Class races under the authority of the International and National Dragon Associations shall be classified as category A (RRS Rule 79 and Appendix G) except that paragraph 3.1(f) of Appendix G shall be modified to read: -

The organizing authority of a sponsored event may permit or require the display of an advertisement of the sponsor in the form of a sticker not larger than 1500cm<sup>2</sup> on each side of the hull, the forward end of the sticker being level with the forestay fitting. No other form of advertising under paragraph 3.1(f) shall be permitted.

### 1.30 Language

- 1.31 The official language of the class is English and in the event of dispute over translation, the English text shall prevail.
- 1.32 The word "shall" is mandatory and the words "may" and "can" are permissive.
- 1.33 Wherever in these rules the words "class rules" are used they shall be taken as including the plans, diagrams and the measurement form.

### 1.40 Interpretation

- 1.41 These rules shall be read in conjunction with the official plans and measurement form. (Note: The official plans are listed at the end of these rules).

- .2 the hull has been swung or re-swung in accordance with rule 10.20.

Reweighting may take place under the requirements of rule 1.64 or on the owner's instructions. When a yacht is reweighed and reswung under rule 1.65 any or all of her corrector weights may be removed or amended. However the penalty weights (of 4 x 7.5kg) fitted to certain boats (as listed by the ISAF in December 1988) may not be removed at any time.

- 1.66 The revised details of the corrector weights shall be entered on the measurement certificate which shall be sent to the owner's national authority to be re-validated or re-issued.

### 1.70 International Class Fee

- 1.71 An International Class Fee (ICF) as prescribed by ISAF shall be paid on each yacht built. This amount shall be paid to the ISAF which shall issue an official International Class Fee Receipt and, for yachts first registered after 1st March 1986, an ISAF sticker. Yachts first registered after 1st March 1990 shall have the ISAF sticker permanently fixed on the inboard face of the starboard cabin side or for yachts with bulkheads the plaque may be fixed adjacent to the sail numbers (see rule 2.18).

- 1.72 The ISAF is responsible for the collection and distribution of the ICF.

- 1.73 The ICF is payable by the builder on each boat built, whether or not it is subsequently measured and registered. The ICF receipt shall be delivered by the builder to the owner on sale of the boat.

- 1.74 ICF receipts shall be valid only if made out on official receipts by the ISAF.

- 1.75 The ICF Receipt number or ISAF sticker number shall be entered on the yacht's measurement certificate.

### 1.80 Measurement Certificate

- 1.81 No yacht shall take part in class races unless it has a valid measurement certificate and its owner is a current member of a national Dragon association.

- 1.82 A valid measurement certificate is an original or copy of the measurement form which has been stamped by a NA or is a special measurement certificate issued by a NA.

- 1.83 To obtain a Measurement Certificate:

- .1 The builder pays the ICF to ISAF who will issue an official ICF receipt and sticker.
- .2 The owner shall apply to his NA for a sail number. (Each country shall issue said numbers which shall be consecutive beginning from one. The number shall be preceded by the national letter(s). Each number shall be used once only.)
- .3 An official measurer shall measure the yacht and complete a measurement form.
- .4 The owner sends the completed measurement form to his NA, together with any registration fee required.
- .5 On completion of the above the NA may issue a Measurement Certificate.

- 1.84 Change of ownership invalidates the certificate and the original certificate shall be returned to the National Authority together with a written application containing the name, address and club of the new owner and any re-registration fee that may be required by the National Authority. A certificate shall then be issued to the new owner. Re-measurement shall not be necessary to revalidate a certificate.
- 1.85 A copy of the completed and signed measurement form shall be supplied to the IDA Secretary by the builder or the owner. If the boat is not yard finished this copy shall be supplied by the owner before the yacht is raced. (New owners are requested to inform the IDA Secretary of their purchase to enable a record to be kept of the movement of boats).

## 1.80 Owner's Responsibility

- 1.91 It is the responsibility of the owner to see that his yacht, spars, sails and equipment comply with the class rules and relevant Racing Rules of Sailing at all times and that alterations, replacements or repairs to the yacht, spars, sails or equipment do not invalidate the measurement certificate.

Note: Alterations, repairs or replacements which are not re-measured may invalidate a yacht's certificate.

## 2. HULL AND DECK

### 2.10 General

#### 2.101 Builders:

Dragons shall only be constructed by builders licensed by ISAF. Sub-contracting by the licensed builder is permitted providing the ISAF has been informed in writing. The licensed builder is solely responsible for ensuring the class rules are complied with.

The builder shall permit the measurer to inspect the work at any time during its progress.

A one boat licence is available for those builders or sailors wishing to build one boat only or to complete the decking of any hull. Under this licence the building work must be inspected regularly by an approved measurer.

- 2.102 Three samples of any proposed construction (or change in construction) and its individual components shall be supplied to the IDA for checking that it complies with the Class Rules. One sample of the construction shall be returned, stamped as approved, and signed by the Technical Officer of the ISAF and one of the following:
- Chairman of the IDA Technical Committee,
  - IDA Chief Measurer,
- to the Builder and be available for measurement of hulls.

- 2.11 The yacht shall be constructed in one of the following ways:

carvel planked in accordance with class rule 2.20 (1989 edition) and subject to prior approval from the ISAF for each boat built or, cold moulded plywood (see rule 2.30), or strip plank (see rule 2.40), or glass reinforced plastic (see rule 2.50).

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### 2.20 Carvel Planked Construction

The requirements for a carvel planked yacht are available from the ISAF as a separate appendix.

- 2.21 Carvel planked yachts may be reinforced in the same manner as permitted for GRP yachts under rule 2.515.3(a).

### 2.30 Cold Moulded Construction

- 2.31 The wood keel, stem and horn timber (centreline structure) and frames, shall be laminated from timber weighing between 530kg/m<sup>3</sup> and 575kg/m<sup>3</sup> (This weight bracket includes Khaya, Honduras and West African mahoganies). The thickness of the centreline structure shall not be less than 60mm or more than 85mm, but may be increased to 80mm from station 2 forward. The deadwood shall be in accordance with the plans. The deadwood shall be of oak or pine.

The width of stem and stern timbers shall be @ station 2: minimum 80mm, @ station 5 minimum 120mm, @ station 12 minimum 120mm, @ station 14 minimum 100mm.

- 2.32 The hull-skin shall not be less than 16mm thick and shall consist of not less than 3 veneers of wood of weight not less than 535kg/m<sup>3</sup>. The weight of the hull skin including glue shall not be less than 12kg/m<sup>2</sup>.
- 2.33 Two frames between stations 5 and 6 and one further frame between stations 11 and 12 are mandatory; their dimensions shall not be less than 50mm x 30mm. These frames shall be of wood and may be laminated.
- 2.341 The transom shall be of oak or mahogany not less than 20mm thick.
- 2.342 Floor timbers shall be oak, sided 70mm, for the length of the ballast keel and 50mm beyond the keel. For one half of their length the siding may be tapered down to 46mm.
- 2.343 The mast step shall be of oak 1350mm x 150mm x 60mm. The siding shall not be less than 150mm throughout although its moulding may be tapered as shown on the official plans.
- 2.344 The shelf shall be of Scandinavian pine or fir, larch or Oregon pine, 27mm x 100mm or 24mm x 115mm.
- 2.345 Beams and the carling shall be of larch, Scandinavian pine or fir, or Oregon pine of the following dimensions:

Spacing of beams shall not exceed 254mm centre to centre.

Mast beams and beams at the end of the cockpit and cabin top openings: 40mm x 60mm at the centreline reducing to 40mm x 40mm at the sides.

Complete beams between stations 3 and 13: 30mm x 45mm at the centreline reducing to 30mm x 30mm at the sides.  
Half beams at the sides of the cockpit, etc: 25mm x 38mm at the inboard ends reducing to 25mm x 25mm at the sides.  
Beams forward of station 3 and aft of station 13: 25mm x 38mm at centreline reducing to 25mm x 25mm at the sides.

The carlings shall be a minimum of 50mm x 40mm.

- 2.12 Except as specifically stated in these rules combinations of the different methods of construction are prohibited. (See rule 2.5.13) Where particular kinds of wood are mentioned, other kinds of wood may be used provided they have specific weights and durability not less than those specified.

- 2.13 The shape of the hull shall be in accordance with the lines plan and the table of offsets and be within the tolerances specified in the rules and the measurement form.

- 2.14 Stations are spaced at 600mm.

- 2.15 Stations 2, 4, 8, 12 and 14 shall be permanently marked (by screws in a wooden hull or countersinks in a GRP hull) on the covering board and in the hull just above the ballast keel at station 8 on both sides of the yacht, and on the centreline of the stem (at stations 2 and 4), and of the counter (at stations 12 and 14).

- 2.16 The transom shall be flat.

- 2.161 The round (camber) of the top of the deck shall not exceed 9.5mm per 305mm of the width of the boat at that location (eg at station 6 where the yacht's beam is 1834mm the round shall not exceed 58mm).

- 2.162 The rounding of the outside edge of the deck at sheerline and transom shall not exceed a radius of 9mm.

- 2.17 Two lifting eyes shall be attached to the keel, keel bolts or to the sides or undersides of the floor timbers. The weight of each lifting eye shall not exceed 3kg.

See Rule 10.21(e) and drawing.

- 2.18.1 The ISAF plaque number of the yacht shall be carved either on the rear bulkhead or in the starboard inner hull side forward of the aft bulkhead above the internal moulding. The numbers shall be clearly visible, not less than 50mm in height and carved to a depth of not less than 2mm.

- 2.18.2 For yachts first measured prior to 1 March 1995 either the plaque number or the national letter(s) and sail numbers shall be carved as specified in 2.18.1.

When a yacht is issued with a new sail number it shall be indelibly marked next to the original sail number (unless the ISAF plaque number is carved as above).

- 2.18.3 For yachts without bulkheads the ISAF plaque number (or National Letter(s) and sail number) shall be carved in the horn timber of a wooden hull or in the equivalent position in a GRP hull."

- 2.19 Buoyancy tanks, bags or compartments are permitted.

- 2.191 All yachts first built and measured after 1st March 1991 shall carry positive buoyancy of minimum 1,400 litres by means of buoyancy tanks.

- 2.192 Any bulkhead shall only be constructed at or within 300mm of stations 5 or 12 or at the forward and aft ends of any internal moulding. A means of pumping the tanks clear of water shall be fitted. Inspection hatches shall be fitted and they shall be closed whilst racing. The bulkheads may be of wood, plywood or any sandwich construction.

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- 2.346 The deck shall be of larch, Scandinavian pine or fir, Oregon pine, spruce, or plywood, not less than 14mm thick and weighing not less than 432kg/m<sup>3</sup> and covered with canvas of not less than 236g/m<sup>2</sup> and painted, or covered with any other material of equivalent weight.

- 2.347 The deck may be of plywood, or plywood overlaid with teak, of not less than 15mm total thickness and weighing not less than 7.6kg/m<sup>2</sup>.

- 2.348 A covering and/or margin board may be fitted in which case it shall be of mahogany not less than 14mm thick nor more than 95mm wide. (See 2.162)

- 2.350 The cabin sides shall be of mahogany not less than 16mm thickness, and the cabin top shall be of wood or plywood (type optional) not less than 10mm thick. The cabin top may be covered with canvas or other material.

A covering board of optional width is permitted round the cabin top.

### 2.40 Strip Plank Construction

Yachts first measured after 1st March 1992 may be constructed by the strip plank method of a single skin. Strip plank construction shall be the same as for cold moulded construction except for the following: The hull shall be a minimum 20mm thick and shall be of minimum 11.25kg/m<sup>3</sup> excluding frames. Minimum weight of planking timber 360kg/m<sup>3</sup> (will allow Western Red Cedar). Laminated frames of timber of minimum weight 530kg/m<sup>3</sup> shall be fixed at every station (ie 600mm) plus two additional frames between stations 5 and 6. The frames shall be of minimum sizes:

Station 1,2,3,13,14 = 22 x 25mm

Station 5,6,7,9,10,11 = 25 x 30mm

Station 4,8,12 and additional 2 frames between 5 and 6 = 30 x 34mm

The beam shelf may be attached to the hull side and the frames shall be notched into or over the beam shelf to maintain structural integrity. Where the beam shelf is placed inside the frames a filling piece, minimum 100mm in length shall be fixed between each frame.

### 2.50 Glass Reinforced Plastic Yacht

#### 2.501 General

These rules permit the construction in glass reinforced resin (GRP) and are supplementary to, and shall be read in conjunction with the official plans.

#### 2.502 Materials

- Long strand glassfibre material shall be used together with a rigid high strength, low-water-absorption-rate thermosetting resin (except epoxy). A specification of permitted and prohibited materials will be available on request from the IDA.
- The glass content of the combination shall be not less than 30% of the total weight.
- Unless otherwise specified the glass reinforcement shall be uniformly distributed over the whole of the moulding.
- The IDA/ISAF may take core samples in order to establish correlation between hull and deck construction and the samples submitted.

Note: A list of permitted materials is available from the Secretary of the IDA. No other materials may be used without the written consent of the IDA.

## 2.503 Hull Shell

The weight of the exterior hull moulding shall be not less than 12kg/m<sup>2</sup> and the total weight of the exterior hull moulding, measured to the sheerline only, shall not be less than 248kg. If a deck flange or covering board is attached to the exterior hull moulding the weight of this shall be deducted from the exterior hull moulding weight.

## 2.504 Keel Reinforcement

The centreline of the hull shell moulding shall be reinforced in way of the stem, keel and stern with additional glass and resin. The keel reinforcement shall extend from the centreline of the yacht, for a distance, g, around the girth, to a point, d, 250mm from the centreline (see diagram).

The laminate shall be of uniform thickness below a point 1/3 distance from the centreline. Above the 1/3 distance the laminate shall reduce uniformly to the upper limit of the reinforcement. The weight of glass and resin shall be evenly distributed along the centreline in accordance with the following table. The total weight of the keel reinforcement shall be 70kg ± 7kg.

Example of Construction

Stations	Total Weight of keel laminate kg/station (excludes weight of hull shell)	Area up to d One side m <sup>2</sup>	Total Area of 450g Glass use m <sup>2</sup>	Suggested number of layers 450g glass at maximum thickness
0-1	1.4	0.12	0.9	5
1-2	3.5	0.22	2.3	7
2-3	3.5	0.17	2.3	9
3-4	3.5	0.15	2.3	10
4-5	4.2	0.15	2.8	12
5-6	4.5	0.15	3.0	13
6-7	5.3	0.18	3.5	13
7-8	6.8	0.23	4.5	13
8-9	8.9	0.30	5.9	13
9-10	11.0	0.37	7.3	13
10-11	7.2	0.29	4.8	11
11-12	3.6	0.18	2.4	9
12-13	2.4	0.15	1.6	7
13-14	2.1	0.15	1.4	6
14-15	1.8	0.15	1.2	5

## 2.505 Internal Moulding

A separate internal moulding shall be bonded to the exterior hull moulding and it shall extend at least from station 5 to station 11.

The minimum horizontal width of the moulding shall be:

at station 8 1700mm  
at each end 1300mm

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### Station 4

Between Station 5 and the mast  
One immediately aft of the mast  
One between the aft end of the cockpit and Station 12

The weight of the beam laminate shall not be less than 4kg/m<sup>2</sup>.

The beams shall have a balsa or foam core of density not less than 80kg/m<sup>3</sup>.

The beams shall be of constant depth over 70% of their length. Outside that limit beams may be uniformly tapered.

Minimum dimensions of the beams shall be:

	Centre 70%	Ends	
width at underside of deck	70mm	50mm	
width of top	50mm	40mm	
depth	50mm	20mm	(see diagram at end of rule)

The deckbeams shall be laminated to the underside of the completed deck moulding by a laminate of not less than 3kg/m<sup>2</sup> giving a minimum weight on the face of the beams of 7kgm<sup>2</sup>. This laminate shall extend not less than 30mm from each side of the deck beam nor more than 50mm.

Additional laminates, minimum 3kg/m<sup>2</sup>, shall be used in way of mast, rigging and other high stress areas to strengthen the moulding.

Plywood crush pads shall be fitted in way of winches, forestay, mast, shrouds, rudder, cleats and sheaves.

## 2.510 The total weight of the complete deck, coamings and cabin top shall not be less than 116kg.

Any covering board laminated to the exterior hull shell which forms an integral part of the deck shall be included in the 116kg.

The specification for the cabin top and sides and coaming shall be the same as for the deck or may be of solid glass with a minimum weight of 9kg/m<sup>2</sup>.

## 2.511 Running rigging passing through watertight spaces (eg bulkheads) may be lead through ducting or tubing no lower than 300mm under the deck. The opening for the spinnaker tube, if used, shall be not more than 520mm below the deck.

## 2.512 Bonding Hull to Deck

The deck and hull shall be bonded together and reinforced with a laminate which is uniformly distributed longitudinally. The total weight of this bonding laminate shall be not less than 21kg.

The width of each successive layer of glass in the bonding laminate shall be less than the previously applied one in order to reduce local high stress points.

The weight of any flange from the hull moulding (on top of which the deck will be laid) shall be included in the 21kg.

The top edge of the moulding shall not be below a continuous fair curve on each side of the yacht between the minimum points. No part of the moulding shall extend below 1000mm from a line joining the two sheerlines nor shall it, at any point, extend higher than 200mm below the deck.

The internal moulding may incorporate a web or frames, at its forward and aft ends.

The weight of the laminate in the internal moulding shall be not less than 3.5kg/m<sup>2</sup>.

Where the internal moulding does not touch the hull moulding (for instance, in way of seat mouldings, floor boards etc.) the weight of the laminate shall be increased by not less than 3kg/m<sup>2</sup>. The internal moulding shall be bedded on a uniform wet laminate of not less than 3kg/m<sup>2</sup>, or may be bonded within the weight requirements of rule 2.508.

## 2.506 Mast Step

The mast step shall be incorporated in the interior hull moulding and shall not be less than 500mm long and connected to not less than 3 floors. The other dimensions of the mast step are optional. The mast step shall incorporate an additional weight of laminate of not less than 3kg/m<sup>2</sup>, over and above the specified amounts for the internal hull moulding.

## 2.507 Floors

A minimum of 8 floors shall be fitted. The maximum spacing between adjacent floors shall be 700mm. The floors may be formed as part of the internal hull moulding. No part of a floor shall extend below 1000mm from a line joining the sheerlines. The floors shall extend up to the underside of the cabin sole.

The floors shall be of a uniform laminate of 7.5kg/m<sup>2</sup>. The floors shall be bonded to the hull with a laminate of not less than 6kg/m<sup>2</sup>.

## 2.508 Weight of Internal Hull Mouldings

The total weight of the internal moulding, mast step, floors, bonding and/or bedding laminates shall be not less than 58kg nor more than 72kg (80kg if bulkheads are included in the internal moulding).

## 2.509 Deck, Coamings and Cabin

The deck shall be of balsa or foam sandwich construction of minimum weight 9kg/m<sup>2</sup>.

If the core is of balsa its thickness shall not be less than 12mm and its density shall not be less than 130kg/m<sup>3</sup>.

If the core is of foam its thickness shall not be less than 15mm and its density shall not be less than 80kg/m<sup>3</sup>.

The internal and external laminates shall each comprise a minimum of 3 layers of glass. The total weight of glass and resin on each side of the core shall be not less than 3kg/m<sup>2</sup>.

Four deck beams shall be fitted the full width of the deck moulding less 60mm in each end, one in each of the following positions:

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Additional support for the deck moulding shall be provided at the aft end of the cabin by including either plywood knees or partial bulkheads.

## 2.513 Weight of Assembled Hull and Deck Mouldings.

The weight of the completed hull and deck mouldings shall not be less than 520kg or 528kg if bulkheads are included as an integral part of the internal moulding.

## 2.514 A wooden cabin top and sides may be permitted subject to prior approval being obtained from the ISAF of details of its connection to the GRP cabin sides.

Wooden coamings in accordance with the rules for the cold moulded yachts may be permitted subject to prior approval being obtained from the ISAF of the details of their connection to the GRP deck.

A wooden deck, in accordance with the rules for the cold moulded yacht may be permitted subject to prior approval being obtained from the ISAF of the details of its connections to the GRP hull. (Note: For the purpose of this rule the covering board can be considered to be part of the deck).

A GRP cabin and coaming may be added to a wooden deck on a GRP hull subject to prior approval from the ISAF.

## 2.515 Additional reinforcement of a yacht with a GRP hull shall be of wood, plywood, foam and/or GRP in accordance with the following may be fitted:

- 1 Between stations 5 and 6:
  - (a) Two internal frames each not exceeding 60mm thick x 150mm deep except within 510mm of the sheerline.
  - (b) Two additional deck beams each not exceeding 60mm thick x 75mm deep measured from the underside of the deck. (Note: These beams are in addition to those specified in rule 2.509). Alternatively, the existing deckbeams may be enlarged to 60mm x 75mm.
- 2 Between stations 11 and 12 not more than one deck beam and/or internal frame with associated knee not exceeding the equivalent measurements as stated above. Alternatively, the existing deck beam may be enlarged to the equivalent dimensions.
- 3 For yachts constructed prior to 1st January 1988 further extra stiffening is permitted as follows forward of the cabin and aft of the cockpit:
  - (a) Two aluminium tubes maximum diameter 50mm from the underside of the deck to forestay and backstay positions (two tubes forward and two tubes aft are permitted), and/or,
  - (b) Two foam stringers maximum section 50mm x 50mm may be bonded to the hull. Position optional. Two forward and two aft. Maximum width of bonding shall be 100mm either side of the stringer.

## 2.516 Measurement

- 1 The builder shall weigh each moulding in order to satisfy himself that the weights specified in this rule have been attained.

.2 The measurer shall satisfy himself, as far as he is able, that the yacht complies with the requirements of these rules.

### 3. CABIN COCKPIT AND HATCHES

#### 3.10 Cabin

- 3.11 The length of the top of the cabin top shall not be less than 1000mm.
- 3.12 The aft end of the cabin top and the forward end of any cabin hatch shall not be forward of Station 8. The cabin top and cleat beam shall not extend more than 150mm aft of Station 8.
- 3.13 The height of the sides of the cabin above the top of the deck, shall not be less than 180mm at station 8. The arch of the cabin top measured at the same station shall not be less than 100mm.
- 3.14 The shape of the cabin is optional. Its breadth 1000mm from station 8 shall not be less than 500mm. At points 250mm either side of the centreline, at the section 1000mm forward of station 8, the height of the cabin shall be not less than 80mm measured vertically above the deck.
- 3.15 The cabin may be totally enclosed. The internal arrangements of the cabin and cabin fittings are optional.

#### 3.20 Cockpit

- 3.21 The arrangement and layout of the cockpit are optional, except that:
- 3.22 The cockpit shall not extend forward of station 8 nor further aft than 200mm forward of station 12.
- 3.23 The width of the side deck outside the cockpit shall not be less than 300mm.
- 3.24 The height of the cockpit coaming aft of the cabin shall not be less than 100mm.
- 3.25 The cockpit coaming shall fair into the cabin sides.

#### 3.30 Hatches

- 3.31 One hatch forward of the mast is permitted. If fitted it shall not exceed 508mm x 508mm and it shall be properly framed, and have a hinged or sliding cover so constructed that it is retained permanently between the slides. It shall be capable of being secured in the closed position. The hatch cover shall not be less in weight than that of the deck it replaces.

#### 3.40 Floorboards

- 3.41 Floorboards shall not exceed 18mm in thickness and shall be of wood or GRP. Floorboards shall not create or form part of any water tight compartment. [Note: The original floorboards in boats laid down before 15th November 1988 may be retained.]
- 3.42 The area of floorboards shall not be less than 1.2m<sup>2</sup>.
- 3.43 The weight of the floorboards and stiffeners shall not exceed 40kg in a wooden hull and 15kg in a GRP hull.

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- 5.50 The tiller shall be above the deck and shall not be of divided or hooped design.
- 5.60 The weight of the rudder, including its stock and fittings, shall be not less than 11kg and not more than 17kg.

### 6. SPARS

#### 6.10 Mast - General

- 6.101 The mast shall be made of either one kind of wood or of aluminium alloy (minimum 90% aluminium). Wooden spars shall be constructed only after prior approval from ISAF in accordance with Class Rules 6.30 (1989 edition) (available as a separate appendix from the ISAF).
- 6.102 The fore and aft position of the mast is optional, except that it is prohibited to make changes while racing. The heel of the mast shall be fixed and not be capable of being moved while racing. However free movement of not more than 10mm shall not be considered as infringing this rule.
- 6.103 A mark 50mm measured fore and aft and 20mm athwartships shall be fixed on the deck on each side of the mast opening, in such a position that the fore side of the mast shall not be outside nor be capable of being moved outside the limits of these marks.

Movement of the mast within these limits shall be restricted by either:

- (a) A mast ram (or controller) permanently fixed in such a way that total fore and aft movement of the ram (other than by adjustment of bottle screws) restricts the mast to within these limits. Any adjustment of mast ram bottle screws or other devices which results in the mast being capable of movement outside these limits is prohibited.

or

- (b) Chocks (or other filling pieces) fixed in such a way that they cannot be removed with the mast in place or otherwise fixed by means of screws (which shall not be removed during racing).

Athwartship clearance of more than 10mm each side is prohibited. Any filling pieces limiting athwartship movement to 10mm shall be fixed such that they cannot be removed with the mast in place. (Note: Any other filling pieces or chocks do not have to be fixed).

- 6.104 Another mark 76mm measured fore and aft shall be placed as close as possible to the yacht's centreline, with its forward edge 1860mm forward of the after end of the mast marks. See diagram on page 23.

The forward edge of the forestay or its extension, shall lie within the limits of this forward mark when racing.

See also rule 6.113.

- 6.105 A permanently bent or rotating mast is prohibited. However a permanent set in the aft side of the mast not exceeding 100mm between upper and lower measurement bands is not considered to contravene this rule.

### 4. BALLAST KEEL

- 4.10 The ballast keel shall be cast iron, except that a separate bronze casting is permitted for locating the rudder stock in the keel. Uneven surfaces or blow holes shall not be filled with lead. Fairing shall not alter the general shape, curvature or rounding of the keel.
- 4.20 The weight of the iron keel shall be minimum 1000kg, maximum 1020kg including keel bolts or studs.
- 4.30 The iron keel shall be weighed and a certificate of its weight issued. This weight shall be recorded on the measurement form.
- 4.40 The iron keel shall be measured and templates (Drg. No.3) applied at stations 5(a), 6, 6(a), 7 and 8.
- 4.50 The template stations 7, 6(a), 6 and 5(a) are to be positioned by reference to the aft end of the iron keel, where it joins the hull. The distance of station 7 from that point shall be 1925mm, measured along the top surface of the iron keel. The other template stations (6(a), 6 and 5(a)) are to be found by measuring along the top of the iron keel 304mm for each station as indicated on the diagram.
- 4.60 Station 8 on the iron keel (1317mm from its aft end measured along the top surface) shall be within 5mm of the station 8 mark on the hull on all boats built and measured after 1st March 1988.

In the case of yachts built and measured before 1st March 1988 station 8 on the keel shall be within 10mm of the station 8 mark on the hull.

- 4.70 The templates (Drg. No.3) shall be applied with the top of the templates level with the top of the iron keel. The clearance between the templates and the iron keel shall not exceed 8mm.
- 4.80 The aft end of the iron keel shall have a hollow locating round the rudder. This hollow may be constructed by metal non-flexible flaps not less than 3mm thick but shall produce a hollow of equal depth to that shown on the plans.
- 4.90 Finished keel templates (Plan 7, issued March 1997) shall be applied to the keel after it is fitted to the hull and any coatings have been added. The templates shall be applied with the top of the templates level with the top of the iron keel. The clearance between the surface and the templates shall not be more than 10mm. At section 9a the keel shall comply with the radius templates (Plan 7, issued March 1997).

### 5. RUDDER AND TILLER

- 5.10 The rudder shall comply with the measurement diagram. Plans 4 and 5.
- 5.20 The rudder shall be of wood or GRP. The maximum thickness of the rudder blade shall not exceed 45mm. The position of maximum thickness shall be forward of the mid-point of the chord length. There shall be no concavity in the surface of the rudder.
- 5.30 The rudder stock shall not be less than 25mm diameter of solid steel or bronze.
- 5.40 The rudder pipe shall be of the same material as the rudder stock or GRP except that a short length of plastic or rubber tube may be used to connect the upper and lower sections of the rudder pipe in a GRP yacht.

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- 6.106 A bracket or chock may be fitted at the mast head to keep the backstay (preventer) clear of the sail. This bracket shall not extend more than 102mm from the aft edge of the mast.
- 6.107 Measurement bands each not less than 15mm wide and clearly discernible while racing shall be marked on the mast as follows:

- (a) with its upper edge 800mm  $\pm$  10mm above the deck. This measurement shall be taken along the aft side of the mast in its most upright position.
- (b) and with its lower edge 9200mm maximum above the upper edge of the lower band.

A stop shall be fitted to prevent the top of the boom being below the top of the lower measurement band.

- 6.108 Jumper struts of any material shall be fitted with their upper edges 6300mm  $\pm$  15mm above the lower measurement band and shall not be less than 300mm long measured in a straight line from the side of the mast to the bearing point. They shall be connected at points within 30mm of their bearing points by a cross member of diameter not less than 4mm. A straight line between the bearing points of the jumper struts shall not be less than 30mm from the fore side of the mast.
- 6.109 Spreaders of any material shall be fitted with their upper edges not less than 3200mm and not more than 3615mm above the lower measurement band in a straight line from the side of the mast. They shall not be less than 450mm long measured from the side of the mast to the bearing point. The method of securing spreaders is optional but the fore and aft movement shall not exceed 10 degrees in either direction.
- 6.110 The spinnaker halyard shall be attached not more than 6300mm above the lower measurement band and not more than 30mm from the face of the mast. For the purpose of this rule, if the halyard is led through a fairlead, or bull's eye, its bearing surfaces shall be taken as the points of attachment.
- 6.111 The gonoa/head sail halyard shall not be attached higher than the forestay
- 6.112 The weight of the mast including all fixed fittings, jumper struts and diamond shrouds, but excluding all other standing rigging, running rigging, slides on any track fixed to the mast, and lower spreaders shall not be less than 30kg. The centre of gravity of the mast stripped for weighing shall be not less than 3400mm above the lower measurement band. Any corrector weights shall be permanently fixed (Note: This rule shall apply to all masts regardless of the date of construction).

The mast complete with all fixed fittings, jumper struts, diamond shrouds, spreaders, standing and running rigging, shall weigh not less than 13kg when it is supported at the lower measurement band and weighed at the upper band. For the purpose of the measurement the halyards shall be in the sailing position and the standing rigging secured along the mast. The ends of the rigging below the lower coloured band may rest on the ground or be removed so as not to affect the tip weight. In case of doubt the first paragraph of this rule shall prevail.

- 6.113 The foot of the mast shall not be above a point 1450mm below the upper edge of the lower measurement band. The slot in the heel of the mast shall not be more than 25mm deep.

[Note: All yachts built and measured prior to 1st March 1991 with a mast step at time of first measurement giving a mast foot higher than 1450mm may retain that mast step but in that instance the fore and aft movement of the mast at deck under rule 6.103 shall be limited to

40mm and the measurement marks shall measure 40mm x 20mm and not 50mm x 20mm accordingly).

## 6.20 Aluminium Mast

6.21 The mast shall be constructed out of one continuous drawn extrusion with a section weight of not less than 2.2kg/m.

6.22 The mast shall be constructed with a continuous fixed groove for the mainsail luff rope.

6.23 The untapered section of the mast shall comply with the following minimum dimensions:

(a) If the luff groove is extruded with the section:  
 athwartships 70mm  
 fore and aft 110mm overall, or

(b) If the mast is constructed from a circular tube its diameter shall not be less than 75mm. The depth of the luff groove is optional.

6.24 The fore and aft dimension of the mast may be reduced by the depth of the luff groove, or the luff groove opened, below a point 400mm above the lower measurement band.

6.25 The mast may be tapered above a point 6700mm above the lower measurement band. The taper shall be convex or straight. However, local hollows not exceeding 3mm in depth will not be considered as contravening this rule.

6.26 The dimension of the mast at the upper measurement band shall not be less than 45mm athwartships, and not less than 50mm fore and aft including the luff groove for extruded sections and 45mm for masts constructed from circular tubes excluding the luff groove (as in 6.22).

6.27 The mast may be squared at the deck by the addition of any material.

6.28 The method of attachment of standing rigging is optional.

6.29 Running rigging may be led internally along the length of the mast. The exit points for the lower ends of adjustable jumper stays, if fitted shall be maximum 3715mm above upper edge of lower black band.

6.30 Spare No. (Rules for wooden masts are available as an appendix from the ISAF.)

## 6.40 Boom - General

6.41 The boom shall be of either one kind of wood or of aluminium alloy (minimum 90% aluminium). For wooden boom see rule 6.60.

6.42 The boom may incorporate a groove for the mainsail foot rope. The boom may be cut away to a maximum depth of 50mm or the groove opened out for not more than 250mm forward of the boom measurement band for the insertion of a track, or other device, to control the clew of the mainsail; and for not more than 250mm measured from the aft side of the mast, to permit the insertion of the mainsail foot rope. The ISAF approved a dispensation for booms manufactured by Holt Allen prior to 1995 which have a cut-away track which exceeds 250mm from the aft side of the mast.

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7.60 The standing rigging shall intersect with the wall of the mast (port side rigging to port side mast, starboard to starboard) between the following dimensions measured above the upper edge of the lower measurement band.

	Maximum	Minimum
Upper jumper wire	9000mm	8950mm
Lower end jumper wire	3715mm	optional
Forestay	6200mm	6000mm
Main shrouds	6200mm	6000mm
Running backstays	6200mm	6000mm
Lower shrouds	3500mm	3150mm

Lower shrouds shall always intersect the mast below the spreaders (see rule 6.109). Lower ends of jumper wires shall always intersect the mast above the spreaders.

For the shrouds, jumpers and backstays the point of intersection is where the inner side of the wire intersects the mast. For the forestay the point of intersection is where the forward or upper side of the wire intersects the mast.

## 8. FITTINGS

8.10 Fittings are optional except where specifically restricted or prohibited by these rules.

8.20 A furling device for headsails is permitted but it shall not be in a recess in the deck.

8.30 Winches, tackles, levers and other devices not specifically prohibited are permitted for any purpose on board, except for the adjustment of shrouds and forestay.

8.40 The method of sheeting the mainsail and headsails is optional except that fittings for sheets shall be placed so that they do not protrude outboard of the sheerline.

8.50 Hydraulic equipment is prohibited.

## 9. SAILS

### 9.10 General

9.11 Sails shall be made and measured in accordance with the ISAF Equipment Rules of Sailing 1997-2000, except where varied herein.

9.12 Sails shall be made of woven cloth and shall be of single ply construction. Sails shall be of the following weights:

Mainsail, Headsail (formerly headsail number 1):	270g/m <sup>2</sup> minimum 304g/m <sup>2</sup> maximum
Genoa:	150g/m <sup>2</sup> minimum 304g/m <sup>2</sup> maximum
Spinnaker:	38g/m <sup>2</sup> minimum

Note: A sail may be made of different cloth weights within the above limits.

6.43 A measurement band not less than 15mm wide and clearly discernible while racing shall be marked on the boom with its forward edge not more than 3450mm from the line of the aft edge of the mast, projected if necessary and disregarding any local projections or cut outs.

6.44 A permanently bent boom is prohibited. However, a permanent set not exceeding 50mm between the forward end and the measurement band is not considered to contravene this rule.

### 6.50 Aluminium Boom

6.51 The sectional weight of an aluminium boom shall not be less than 1.5kg/m.

6.52 The boom section shall be not less than 80mm nor more than 100mm deep including the groove for the mainsail foot rope (which shall be continuous). Its width shall not be less than 64mm.

6.53 The boom shall not be tapered or cut away except as permitted in rule 6.42.

6.60 Spare number. (Rule for wooden booms are available as a separate appendix from the ISAF).

### 6.70 Spinnaker Boom

6.71 The spinnaker boom shall be of wood or of aluminium alloy.

6.72 No part of the spinnaker boom, including fittings, shall be capable of extending more than 2250mm from the surface of the mast.

## 7. RIGGING

7.10 Standing rigging shall be of wire rope of not less than the following diameters:

main shrouds	5mm
lower shrouds	5mm
forestay	one of 5mm or two of 4mm
jumper stays	4mm
permanent backstay (preventer)	3mm (minimum length 9500mm)
running backstays	3mm (minimum length 6500mm)

The dimensions of other rigging are optional.

7.20 Shrouds or their extensions shall intersect or pass through the deck with their inner side not less than 700mm from the yacht's centreline and shall be attached to steel chain plates inside the hull. The fore and aft position of the shrouds at the deck and their position relative to each other is optional.

7.30 Shrouds shall be adjusted only with turnbuckles or other means of thread.

7.40 Adjustment of the forestays and shrouds is prohibited while racing.

7.50 Wire or rod ties are permitted between chainplates, or the deck where the shrouds pass through the deck, and/or the heel of the mast or the mast step.

Such wires or rod ties shall not be adjusted while racing.

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9.13 Two non-woven transparent panels, the total area of each of which shall not exceed 0.4m<sup>2</sup> are permitted in each sail excluding spinnakers. No part of such a window shall be closer to the luff, leech or foot than 150mm.

9.14 The class insignia (letter D), national letters and sail numbers shall be placed as laid down in RRS Rule 77.

Letters and numbers shall not be less than the following dimensions:

Height	375mm
Width	250mm (excluding number 1 and letter I)
Thickness	50mm
Space between adjoining letters and numbers	75mm

9.15 Double-luffed sails (except as permitted in rules 9.34 and 9.43) and loose-footed mainsails are prohibited.

9.16 Each sail shall be measured and approved by an official measurer who shall stamp or sign and date a mainsail or headsail near the tack, and a spinnaker near the head.

9.17 Each sail measured after 1st January 1991 shall have permanently fixed, near to its tack, an official IDA label. No sail shall be accepted for its first measurement without a sail label. The measurer shall sign across the label and sail to ensure that it cannot be transferred to another sail. Labels shall only be available from the IDA secretary (or treasurer) and the cost shall be fixed by the IDA in general meeting.

### 9.20 Mainsail

9.21 The mainsail shall comply with the measurements on the measurement diagram and rule 9.12.

9.22 Cross widths shall be measured between a point on the leech and to the nearest point on the luff (including the bolt rope), found as follows:-

The mid-point of the leech shall be found by folding the sail so that the head (see diagram) is over the clew (see diagram).

The three-quarter height point shall be found by folding the sail in a similar way to the mid-point of the leech.  
 Hollows in the leech in the way of measured points shall be bridged.

9.23 There shall be four batten pockets on the leech of the sail, each within 127mm of the respective point which divides the leech into five equal parts. Strengthening patches (maximum 300mm x 300mm) are permitted on one or both sides of the inner end of each batten pocket. The patches, which may be self-adhesive, shall be no thicker than the main body of the sail.

9.24 The lengths of the batten pockets shall not exceed:

Top	650mm
Middle two	950mm
Bottom	650mm

9.25 No part of the sail shall extend beyond the inner edge of the boom measurement band or the lower edge of the upper mast measurement band. The line of the top of the boom shall not be below the upper edge of the lower mast measurement band.

9.30 Genoa

- 9.31 The genoa shall comply with the measurements on the measurement diagram and rule 9.12.
- 9.32 The distance from the head to the mid-point of the foot shall not exceed the average of the length of the luff and leech by more than 30mm. The mid-point of the foot shall be found by placing the centre of the clew cringle over the tack.
- 9.33 The foot of the genoa shall be nowhere concave.
- 9.34 The genoa may enclose the forestay but not more than one zip shall be used and provided the sail can be attached and removed without disconnecting the forestay. A sail enclosing the forestay shall be measured with the zip closed and the width of the luff pocket so formed shall not exceed 60mm.

9.40 Headsail

- 9.41 The headsail shall comply with the measurements on the measurement diagram 9.12.
- 9.42 Two batten pockets are permitted on the leech of the headsail, each not exceeding 350mm in length, dividing the leech into equal parts with a tolerance of 100mm.
- 9.43 The headsail may enclose the forestay provided the sail can be attached and removed without disconnecting the forestay. A sail enclosing the forestay shall be measured with the zip closed and the width of the luff pocket so formed shall not exceed 60mm.

9.50 Sennaker

- 9.51 The spinnaker shall be a three cornered sail symmetrical about its centreline and shall comply with the measurements on the measurement diagram and rule 9.12.
- 9.52 The luffs and the foot shall be taped with stretch resistant tape.
- 9.53 The dimension of the attachment of the swivel or, the cringle at the head of the spinnaker and which is within the sail, shall not exceed 38mm. The horizontal dimensions of any device or fitting at the head of the spinnaker shall not exceed 38mm.
- 9.54 Measurements on the centrefold shall be taken with tensions applied at the head and centre of the foot sufficient just to remove the wrinkles across the line of measurement.
- 9.55 Not more than two spinnakers shall be on board while racing.

10. WEIGHT OF YACHT

- 10.10 The weight of the hull, shall not be less than 1650kg weighed complete with floor boards, seats, pumps and all fittings normally used on board whilst racing but excluding the following: Mast and boom with their fittings, spinnaker boom, standing rigging, halyards and sheets, and loose equipment. The equipment included in the weight of not less than 1650kg shall not thereafter be removed whilst racing.
- 10.11 The weight of the yacht that is the hull complete as stated in Rule 10.10 (including bilge pumps) but excluding other equipment listed in rule 11) and together with the mast, boom,

11.10 The following equipment shall be on board while racing:

- .1 An anchor of not less than 10kg, or an anchor of not less than 5kg with chain so that the combined weight at anchor and chain is not less than 10kg. The anchor shall be of a recognised pattern.
- .2 One length of anchor rope of not less than 30m, weighing not less than 3kg in dry condition.
- .3 One bilge pump.
- .4 Three life jackets or buoyancy vests with a positive buoyancy of minimum 5kg each.
- .5 Two oars or paddles (or one of each). The paddles shall be a minimum of 1.2m long and suitable for the intended use of propelling a Dragon.
- .6 One bucket or bailer of not less than 9 litres.

12. PROHIBITIONS

- 12.10 Altering the effective length of the shrouds or forestay while racing is prohibited.
- 12.20 Digital compasses and devices transmitting or correlating data relative to wind direction or speed or boat speed and location, by means such as, but not limited to, electronic, mechanical, hydraulic or pneumatic are prohibited. Depth sounders may be permitted by the National Authority in races confined to yachts of its nationality.
- 12.30 Except for corrector weights in accordance with rule 10 inside ballast is prohibited.
- 12.40 Self-bailers or means other than pumps for draining the cockpit while racing.

13. CREW

- 13.10 There shall not be more than three persons on board while racing.
- 13.20 The use of any apparatus or contrivance (other than fixed hand holds on the inside face of the cockpit coaming) the purpose of which is to support or assist in supporting a member of the crew outboard or partially outboard is prohibited. When hiking no part of the crew's body between the middle of the thigh and feet shall be outboard of the sheerline.

LIST OF OFFICIAL PLANS

A separate Appendix containing rules concerning carvel construction and wooden spars is available from the ISAF.

Plan	Description	Date of Plan	Date of Amendment
1	Hull and Keel Offsets	March 1990	November 1994, April 1997
2	Keel Sections and Detail of keel	March 1990	November 1994
3	Template Plan	December 1989	June/November 1991, Feb/Mar 1992
4	Construction plan - Wood	March 1990	June 1991, Feb/Mar 1992, July/Nov 1994
5	Construction plan - GRP	March 1990	July/November 1994
6	Sail and Rigging Plan	March 1990	June 1991, Feb/Mar 1992, Nov 1994
7	Finished Keel Templates - (Full Size)	March 1997	
8	Hull Offsets and Templates - (Full Size)	April 1997	

spinnaker boom and their fittings, standing and running rigging and one set of sheets for each of the headsail, mainsail and spinnaker shall be not less than 1700kg.

- 10.12 The weight of the yacht as shown on the measurement form shall clearly show whether the helmsman's and/or crew seats have been included (for boats measured after 1st March 1996).

Swing Test

- 10.20 Yachts first measured after 1st March 1989 or after a major repair or alteration shall be subject to the swing test in accordance with rule 10.21.
- 10.21 When the hull as defined in rule 10.10 is swung from the class approved swing test gear then:

- (a) the centre of the bearing point of the swing test gear ("the swing centre") shall not be less than 40mm nor more than 90mm forward of station 8 of the hull.
- (b) when 10kg are placed 4700mm forward of the swing centre the distance by which a point on or level with the deck 4800mm forward of the swing centre shall drop below its original position shall be measured ("D1").
- (c) the depth of the swing centre below the sheerline ("D2") shall not be more than 550mm for a "D1" measurement of 350mm or where D1 is greater or less than 350mm D2 shall be such a distance as is proportionate thereto calculated by the following formula:

$$D2 < 938.29 - \frac{135899}{D1}$$

Provided that if the weight of hull specified in rule 10.10 is more than 1650kg D2 may be increased by 1mm for every 4kg that the weight of the hull exceeds 1650kg.

- (d) when the 10kg weight in sub-paragraph (b) is removed the hull shall be allowed to oscillate for 10 cycles and then time taken shall be not less than 46 secs for a "D1" measurement of 350mm plus or minus 1 second for every 20mm by which the "D1" is either greater or less than 350mm.
- (e) the arrangement of lifting eyes, frames, internal moulding and/or fittings shall be such that they shall not obstruct the use of the class approved Swing Test gear. (See drawing page 30). Any fittings or equipment in this area, eg pump, shall be easily removable.

- 10.30 If the hull is found to be underweight and/or the depth of swing centre ("D2") is lower than permitted and/or the oscillation time is less than the minimum, lead corrector weights shall be fixed to the hull so as to bring the weight of the hull and/or D2 and/or the oscillation time up to the relevant permitted minimum. In accordance with ISAF Measurement Instructions, "fixed" means that a tool is required to remove this item from its position.

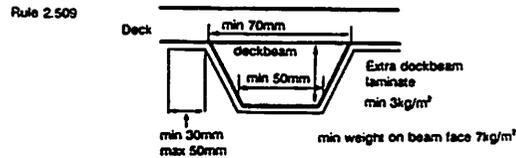
- 10.31 The positioning of corrector weights is optional provided 10.30 is complied with and that no more than 20kg can be positioned in the hull between stations 4 and 12.

- 10.32 The correctors shall be adjusted in accordance with rule 1.65 and 1.66.

- 10.40 The weight and position of all corrector weights shall be entered on the yacht's measurement certificate. Corrector weights shall be clearly visible and the weight of each shall be permanently marked thereon (for boats measured after 1st March 1996).

11. EQUIPMENT

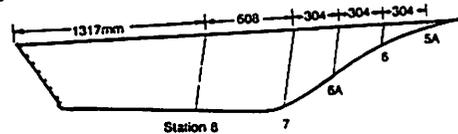
SECTION THROUGH CENTRE 70% OF DECK BEAM



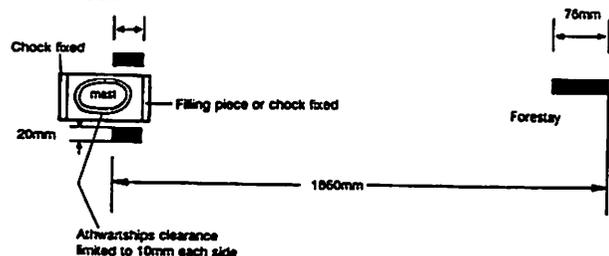
Rule 3.13



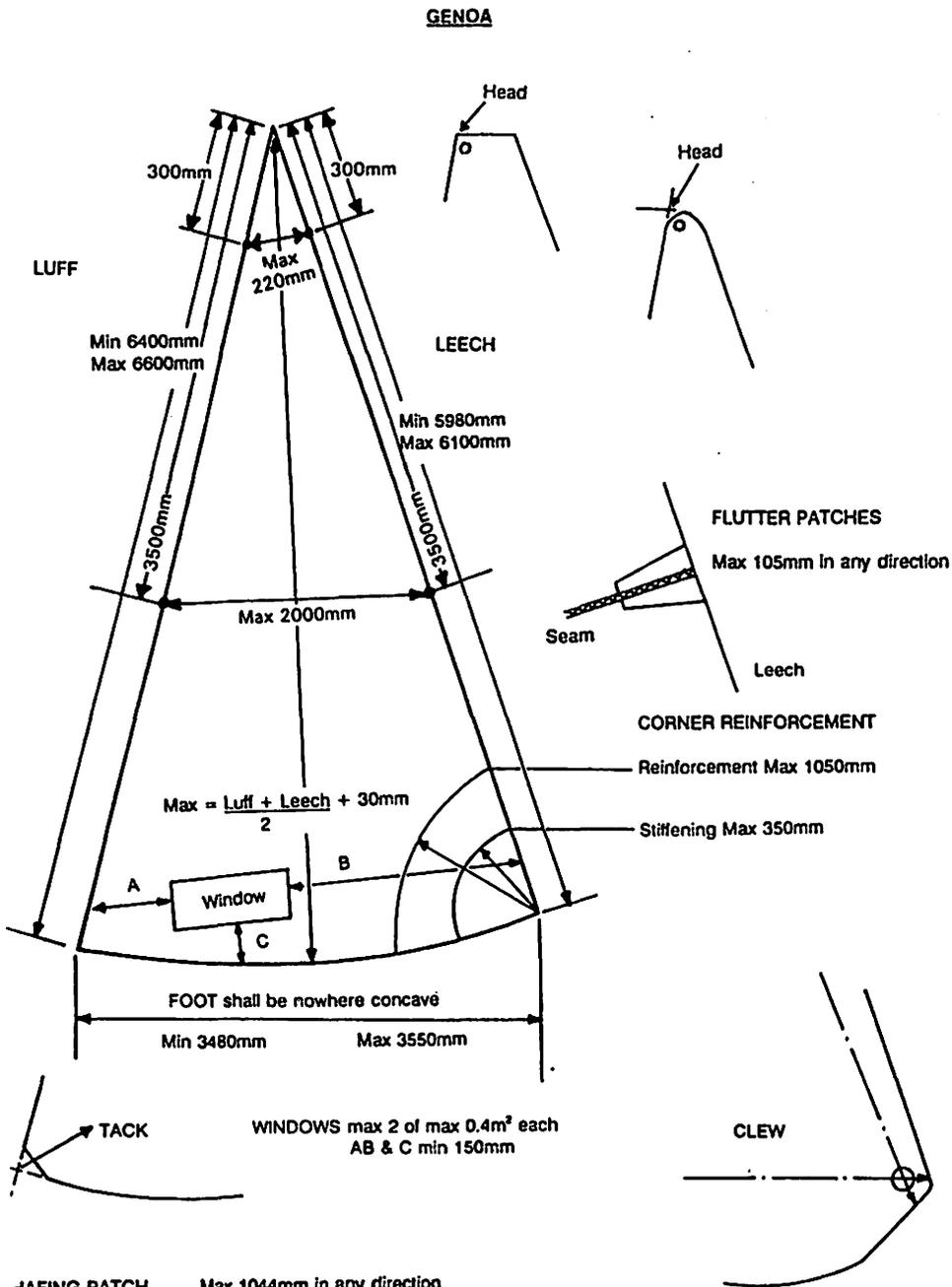
Rule 4.60



Rule 6.103 and 6.104

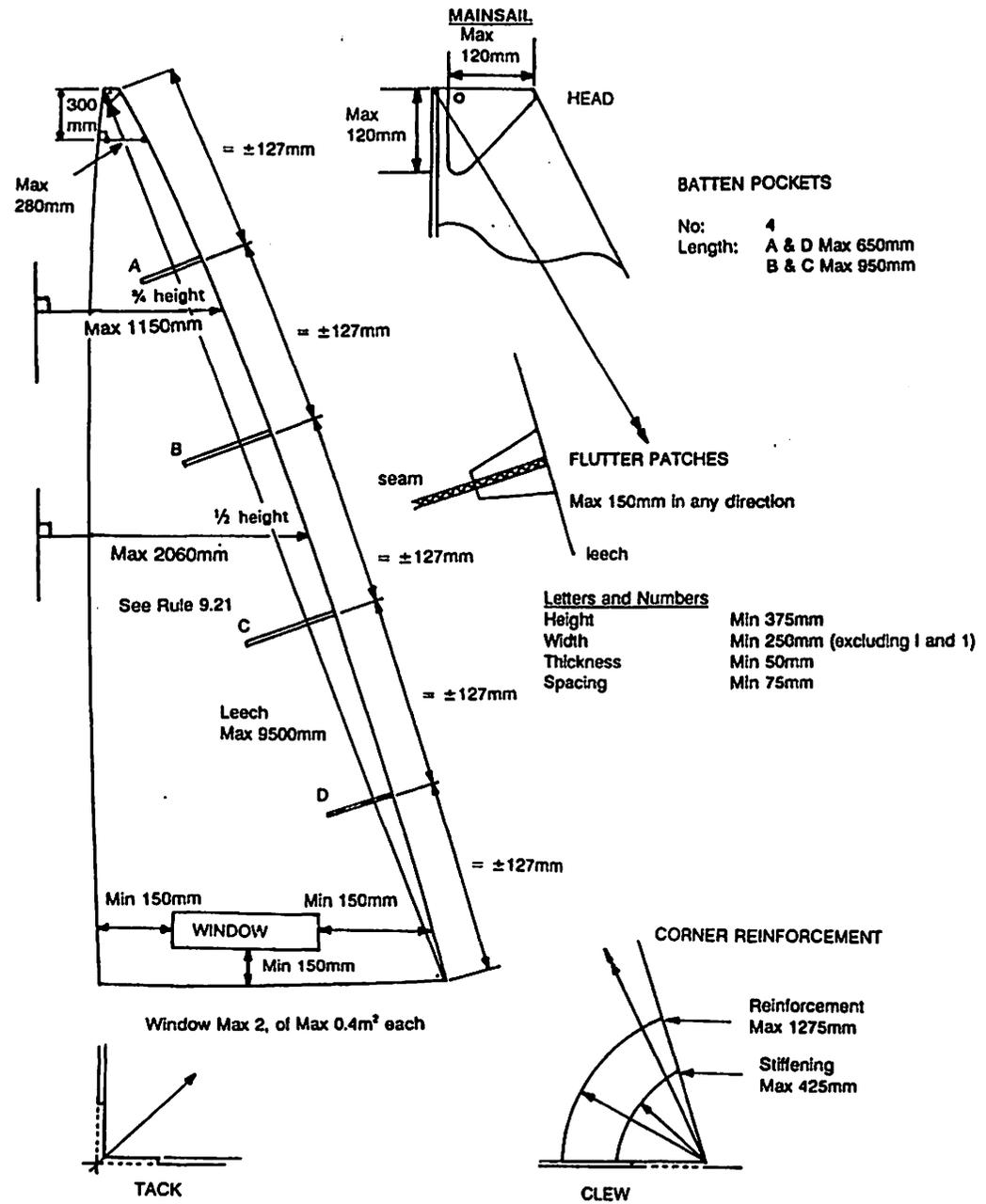






**BAFFING PATCH** Max 1044mm in any direction

**SAILMAKER'S MARK** Max 150 x 150mm & within 530mm of the TACK

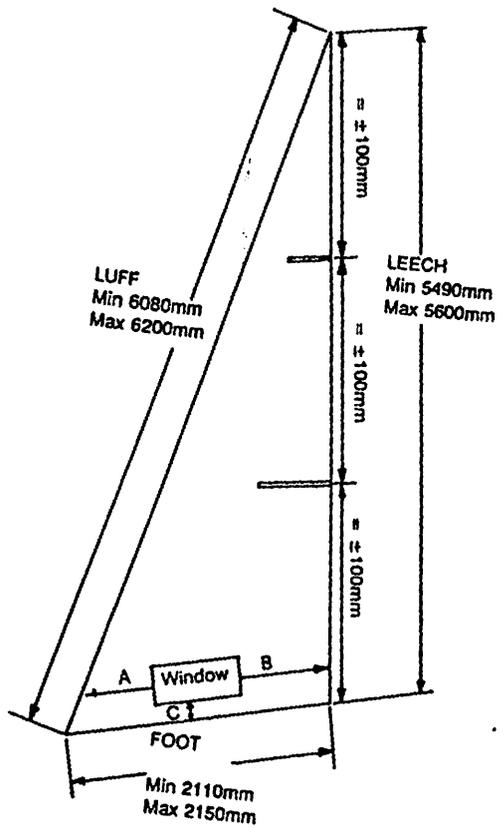


**CHAFFING PATCH** If fitted, max 300mm x 300mm

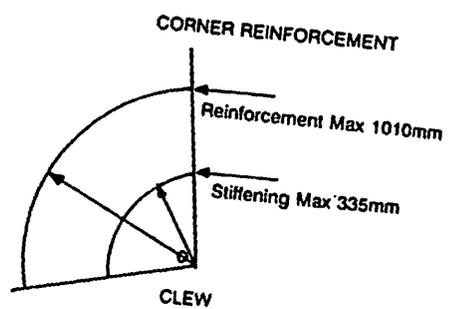
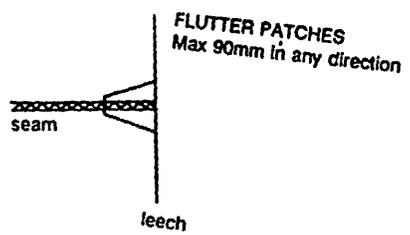
**SAILMAKER'S MARK** Max 150 x 150mm and within 520mm of the TACK



**HEADSAIL**

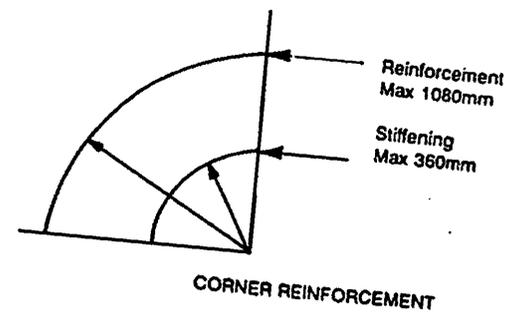


**BATTEN POCKETS**  
 No: Max 2  
 Length: Max 350mm

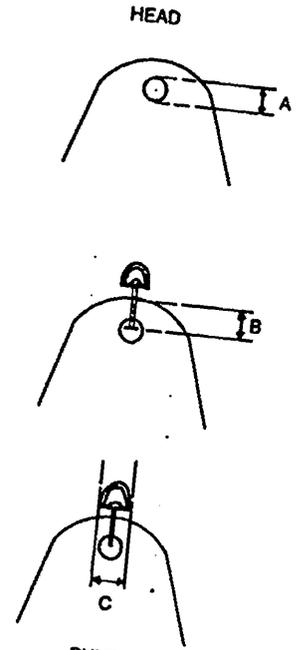
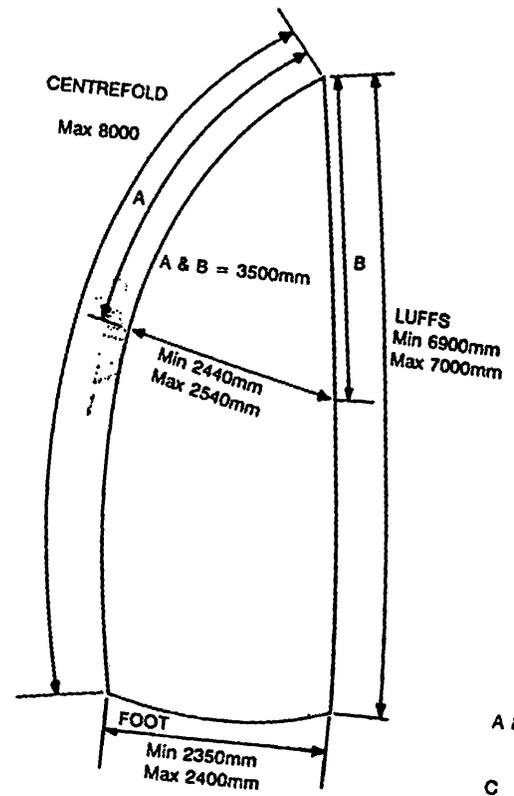


**WINDOWS** Max 2, of Max 0.2m<sup>2</sup> each. A, B & C min 150mm.  
**FLUFFING PATCH** If fitted Max 1008mm in any direction  
**SAILMAKER'S MARK** Max 150 x 150mm & within 320mm of the TACK

**LETTERS AND NUMBERS**  
 Height Min 375mm  
 Width Min 250mm (excluding l and 1)  
 Thickness Min 50mm  
 Spacing Min 75mm



**SPINNAKER**



**RULE 9.53**  
 A & B Max 38mm. Cringle or swivel attachment within the sail.  
 C Max 38mm. Horizontal dimension of any fitting or device.

**SAILMAKER'S MARK** Max 150 x 150mm

**CORNER REINFORCEMENT**