

# NORLYS Rule 2009

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## DEFINITIONS

Defined terms are in these rules written in *italics*.

<i>Asymmetric spinnaker</i>	Sail tacked in the centreline of the boat or at a spinnaker pole, not attached to a stay and normally defined by the measures ASLU, ASLE, ASHW og ASF. For an <i>asymmetric spinnaker</i> . <ol style="list-style-type: none"> <li>a. The luff (ASLU) shall be at least 5% longer than the leach (ASLE)</li> <li>b. The half with (ASHW) shall be at least 75% of the foot (ASF).</li> <li>c. The material shall be woven polyamide, i.e. nylon.</li> <li>d. If not specified by <i>Class Rules</i>, <i>LYS Table</i> or Norwegian LYS Standard the maximum size of an <i>asymmetric spinnaker</i> is: ASLU shall not be larger than <math>1.15 * \sqrt{(ISP^2 + TPS^2)}</math>. The ASF shall not be larger than <math>1.8 * TPS</math>. The ASMG shall not be larger than <math>1.8 * TPS</math>. The fraction of ASMG/ASF shall be bigger or equal than 0.75 if the sail shall be defined as an <i>asymmetric spinnaker</i>.</li> </ol>
<i>Authorized supplier</i>	Supplier authorized by Norwegian Sailing Federation for measurement of own supplied products, including hull rig and sails.
<i>Basic Standard</i>	Standard for boats in the <i>LYS Table</i> , in <i>Class Rules</i> or <i>boat data sheet</i> .
<i>Boat data sheet</i>	Specification established by the Swedish Sailing Federation lacking <i>Class Rules</i>
<i>Closely attached</i>	Attached to a stay, as when sailing to windward, or tightened close to a stay.
<i>Class association</i>	Association approved by ISAF or Norwegian Sailing Federation for administration of defined boat type.
<i>Class Rules</i>	Supplier authorized by Norwegian Sailing Federation for measurement of own supplied products, including hull rig and sails.
<i>Code Zero</i>	<i>Asymmetric spinnaker</i> designed for sailing to windward or at a course close to the wind, and which is not attached to a stay.

- a. The luff (ASLU) shall be at least 5% longer than the leach (ASLE)
- b. The half with (ASHW) shall be at least 55% and less than 75% of the foot (ASF).
- c. There is no limitation on the woven material.

<i>Dinghy</i>	Boat type in <i>LYS Table</i> for dingies, and boat types with similar characteristics
<i>Equipment code</i>	abc, for boat (i.e. SS,GA,FF):
	a SS Symmetric <i>spinnaker</i>
	a AC Asymmetric <i>spinnaker</i> tacked in the centerline
	a AP Asymmetric <i>spinnaker</i> tacked at <i>spinnaker pole</i>
	a C0 Code Zero
	a NS No <i>spinnaker/asymmetric spinnaker</i>
	b GE <i>Genua</i>
	b JI <i>Jib</i>
	b GA <i>Genua</i> with no correction for sailing with <i>Jib</i>
	b NH No <i>headseil</i>
	c SO Propeller with solid blades (Solid)
	c FF Propeller with folding or feathering blades (Folding/Feathering)
	c NP No engine or outboard (No Propeller)
<i>Genua</i>	<i>Headsail</i> with $JLP > 1.1 * J$ .
<i>Headsail</i>	Sail which is <i>closely attached</i> to a permanent stay in the centreline of the boat tacked at the stay's intersection with the deck and normally defined by the measures JLU og JLP.
<i>Jib</i>	<i>Headsail</i> with $JLP \leq 1.1 * J$ .
<i>Keelboat</i>	Boat type in the <i>LYS Table</i> for keelboats, and boat types with similar characteristics.
<i>Klass regler för LYS</i>	Swedish <i>LYS Rules</i> , issued by SweLYS.
<i>LYS Category</i>	Boats in the same <i>LYS Table</i> ( <i>Keelboats, Sport boats, Multi hulls</i> or <i>Dinghies</i> ).
<i>LYS Certificate</i>	Certificate for LYS, issued by NORLYS.
<i>LYS Class</i>	Range of boats grouped for joint scoring.
<i>LYS group A</i>	Boat listed in the <i>LYS Tables</i> <b>without deviation</b> from the <i>Basic Standard</i> .
<i>LYS group B</i>	Boat listed in the <i>LYS Tables</i> <b>with deviation</b> from the <i>Basic Standard</i> .
<i>LYS group C</i>	Boat not listed in any <i>LYS Table</i> .
<i>LYS measurement</i>	Measurement conducted by certified <i>measurer</i> . <i>LYS measurements</i> shall be done according to <i>NORLYS Måleveiledning</i> ( <i>LYS measurement guide</i> ) and <i>LYS Measurement form</i> .
<i>LYS measurement form</i>	<i>NORLYS form</i> for documentation of LYS measurements, written or electronic on <a href="http://www.seiling.org">www.seiling.org</a> .
<i>LYS Rating</i>	LYS TCF rating for calculation of corrected times.
<i>LYS Table</i>	Table for keel boats, sport boats, multi hulls or dinghies issued by NORLYS
<i>Measurement trim</i>	Trim at measurement of displacement and draught, defined in <i>NORLYS Rule 10</i> .
<i>Multi hull</i>	Boat type in the <i>LYS Table</i> for multi hulls, and boat types with similar characteristics.
<i>Nordic Working party</i>	Working party for co-ordination of LYS work among the Nordic countries (currently Sweden and Norway).
<i>NORLYS committee</i>	Committee in <i>NORLYS</i> maintaining the LYS system, including determination of any boats <i>LYS Rating</i> and issuing av <i>LYS Certificate</i> .
<i>NORLYS Måleveiledning</i>	<i>NORLYS measurement guide</i> , issued by <i>NORLYS</i>
<i>NORLYS Regel</i>	Norwegian rule text which takes precedence over <i>NORLYS Rule</i>
<i>NORLYS Rule</i>	These rules, issued by <i>NORLYS</i>
<i>NORLYS Veiledning</i>	Guide for practicing LYS in Norway, issued by <i>NORLYS</i> .
<i>Owner's declaration</i>	Declaration stating that owner knows the <i>NORLYS Rule</i> , and that he will comply with these rules in LYS regattas.
<i>Sheerline</i>	The line formed by the intersection of the deck and the hull shell. See <i>NORLYS Måleveiledning</i> .
<i>Shorthanded sailing</i>	Sailing with a maximum of one or two persons in the same boat.
<i>Spinnaker</i>	Symmetric <i>spinnaker</i> tacked at a <i>spinnaker pole</i> , normally defined by the measures SL and SHW or SMW. For a symmetric <i>spinnaker</i> : a) Both leaches shall have same lengt, with maximum difference of 2% of the leach length.

- b) The sail shall be symmetric with respect to shape, material and panel layout about a line from the top to the foot.
- c) The half width (SHW) shall be at least 75% of the foot (SF).
- d) If not specified by *Class Rules*, *LYS Table* or Norwegian LYS Standard the maximum size of a spinnaker is calculated by  $SL=0,95*\sqrt{ISP*ISP+J*J}$  og  $SHW=1,8*J$ .

<i>Spinnaker correction</i>	Correction of the <i>LYS Rating</i> , displayed on the <i>LYS Certificate</i> , for a boat with <i>spinnaker</i> or <i>asymmetric spinnaker</i> in the <i>LYS Certificate</i> , sailing without <i>spinnaker</i> or <i>asymmetric spinnaker</i> .
<i>Sport boat</i>	Boati <i>LYS Table</i> for sport boats, and boat types with similar characteristics.
<i>Spread</i>	Set a sails sheet windward using a pole.
<i>Stay sail</i>	Seil som måles som <i>forseil</i> , men som settes uten å være <i>tett lisset</i> til forstaget
<i>Technical Committee</i>	Committee within Norwegian Sailing Federation responsible for <i>Class Rules</i> , measurement and safety regulations.

## ABBREVIATIONS FOR ORGANISATIONS AND ISAF RULES

EHSC	ISAF Empirical Handicap Sub Committee
ERS	ISAF Equipment Rules of Sailing
ISAF	International Sailing Federation
NORLYS	NORLYS Norsk klasseklubb for LYS
NSF	Norwegian Sailing Federation
OSR	ISAF Offshore Special Regulations (with Norwegian interpretations published by NSF)
RRS	ISAF Racing Rules of Sailing
SSF	Swedish Sailing Federation
SkSF	Scandinavian Sailing Federation

## EHSC ABBREVIATIONS FOR HULL, RIG AND SAIL MEASURES

ASF	<i>Asymmetric Spinnaker</i> Foot
ASHW	<i>Asymmetric Spinnaker</i> Half Width
ASLE	<i>Asymmetric Spinnaker</i> LEach
ASLU	<i>Asymmetric Spinnaker</i> LUff
BM	Beam, Maximum
DSPM	DiSPlacement <i>Measurement trim</i>
E	Distance from mast to outer limit mark for mainsail at boom
IG	Height of forestay intersection with mast above <i>sheer line</i>
ISP	Height of <i>spinnaker</i> halyard above <i>sheer line</i>
J	Horizontal distance from forward edge of mast at top of deck or superstructure, to center of forestay intersection with deck
JHW	<i>Jib</i> Half Width
JLP	<i>Jib</i> Largest Perpendicular
JLU	<i>Jib</i> LUff
JQW	<i>Jib</i> Quarter Width
JTQW	<i>Jib</i> Three Quarter Width
LOH	Length Of Hull
MHW	Main Half Width
MQW	Main Quarter Width
MTQW	Main Three Quarter Width
MTW	Main Top Width
P	Distance between limiting marks for mainsail at mast
SF	<i>Spinnaker</i> Foot
SHW	<i>Spinnaker</i> Half Width
SL	<i>Spinnaker</i> Leach
SMW	<i>Spinnaker</i> Max Width
SWPL	<i>Spinnaker/Whisker Pole</i> Length
SQW	<i>Spinnaker</i> Quarter Width
STQW	<i>Spinnaker</i> Tree Quarter Width
TPS	Horizontal distance in the center plane of the boat, from the forward edge of the mast to the tack point of the <i>asymmetric spinnaker</i> (Tack Point of Spinnaker)

## 0 OBJECTIVE AND CRITERIA

### 0.1 Objective for LYS

- a) The objective of the LYS system is to give boats of different types and sizes an opportunity to race.
- b) LYS is an empirical handicap system for issuing and use of *LYS Rating*.
- c) LYS shall be simple and inexpensive, suitable for a wide range of sailors.
- d) LYS shall be practiced in a way that doesn't invite to unwanted optimization and type forming.

### 0.2 Criteria for determination of LYS Rating

- a) The *LYS Rating* represents the speed potential of a boat as compared to other boats. On average LYS 1.00 approximately corresponds to an average wind speed (about 5 m/s) for sailing equal distances in all wind directions (circular course).
- b) Since LYS is an empirical system, the *LYS Rating* is primarily determined from boat results at the race course, based on statistics from races.
- c) For boats with incomplete statistics, a preliminary *LYS Rating* is based on measurement comparisons with known boats, experiences from other handicap systems or from formulas based on boat parameters and existing boats in the LYS fleet. Such *LYS Ratings* shall be estimated conservatively, and corrected when experience is gained.
- d) It is assumed that the boat is well maintained and well sailed. There is no bonus in the *LYS Rating* for lack of competence, inferior crew or equipment, or lack of maintenance.
- e) LYS numbers are determined from both open and secret rules, data, formulas and algorithms. The *NORLYS* administration and the *NORLYS Committee* have the full responsibility for the secret parts. In order to ensure the integrity of these secret elements, including statistical data, no one can demand insight into the secret elements.

## 1 JURISDICTION

### 1.1 LYS in Norway

Authority for LYS in Norway is *NORLYS*, who issues *NORLYS Rule*, *NORLYS Guide*, *NORLYS Measurement Guide* and *LYS Certificates*. *NORLYS* shall be a *class association* approved by NSF.

### 1.2 LYS in Sweden

Authority for LYS in Sweden is *SweLYS* who, after consultations in the *Nordic working party*, publishes *LYS Tables* and *Klassregler för LYS* within April 1st yearly.

### 1.3 LYS sailing in other countries

The national authority (*NORLYS*, *SweLYS* etc) demands that regattas within its jurisdiction, *LYS Certificates* are issued by their own administration. Norwegian boats racing in Sweden and vice versa, shall contact the LYS administration in the country the race is organized.

### 1.4 International representation

*NORLYS* is represented in the *Nordic working party*.

### 1.5 Legal responsibility

*NORLYS* refuse to accept any responsibility for any issues in application of the *NORLYS Rule*.

## 2 RULES AND INTERPRETATIONS

### 2.1 NORLYS Rule

- a) These *NORLYS Rule* apply to all LYS sailing in Norway and refer to
  - i) *Approved Class Rules*.
  - ii) *LYS Tables* and *boat data sheets* from SSF
  - iii) *LYS Certificates*, *NORLYS Måleveilledning* (measurement guide) and *NORLYS Veiledning* issued by *NORLYS*.
  - iv) *RRS*
  - v) *OSR*

### 2.2 Notice of Race/Sailing Instructions

- a) Notice of Race/Sailing instructions shall refer to *NORLYS Rule*, included references to
  - i. *NORLYS Rule*. Ref. Rule 1.1 og 2.1.
  - ii. Requirement for valid *LYS Certificate*. Ref. Rule 3 og 5.4.
  - iii. Inspection of boat at regatta. Ref Rule 5.6.
  - iv. Method for calculation of corrected times. Ref Rule 11.
  - v. *LYS Classes*. Ref Rule 12.
  - vi. *OSR* safety category. Minimum Category 6 of the Norwegian interpretations.
- b) A rule in the *NORLYS Rule* can not be changed by the Notice of Race/Sailing Instructions

c) The Notice of Race shall state a final deadline for registration. The *LYS Rating* in the *LYS Certificate* at the deadline is the valid rating for the regatta, unless the Notice of Race states an alternative time for control of *LYS Certificate*.

d) The Notice of Race shall refer to the 96 hour deadline in Rule 7 as a prerequisite for utilizing Rule 6.4.d.

### **2.3 Interpretations of NORLYS Rule**

Interpretations of *NORLYS Rule* are done by *NORLYS*.

### **2.4 Complaints regarding LYS Certificates**

Complaints regarding *LYS Certificates* are sent to *NORLYS* by the complaint form (ref. [www.NORLYS.org](http://www.NORLYS.org)). The complaints are handled by the *NORLYS Committee* and notify the parts about the outcome. The complaint shall be handled no later than by the end of the month following the date that the complaint was received by *NORLYS*.

### **2.5 Appeals regarding complains**

The outcome of a complaint, Ref Rule 2.4, may be appealed to the *NORLYS* board.

### **2.6 Class Rules i RRS**

This *NORLYS Rule* is defined as *Class Rules* according to RRS 78.

### **2.7 Responsibilities for compliance with Class Rules in RRS**

RRS 78 states that the boat owner **and** responsible person on board (RRS 46) are responsible for compliance with *Class Rules* and that certificates are valid. At *LYS* regattas the *NORLYS Rule* are "*Class Rules*" and *LYS Certificates* are "certificates".

### **2.8 Exceptions from RRS**

With reference to RRS 86.1 (c) *LYS Certificates* can be issued to boat with

- i) Trapeze
- ii) *Headsail* with roach
- iii) Movable ballast such as water ballast or canting keel

## **3 REQUIREMENTS FOR PARTICIPATION IN A LYS REGATTA**

### **3.1 Disqualification**

Boat starting without a valid *LYS Certificate* shall be scored DSQ without hearing. This changes RRS 63.1.

### **3.2 Valid certificate**

Valid *LYS Certificate* is required for participation in any *LYS* regatta in Norway.

### **3.3 Compliance**

The boat shall comply with the *NORLYS Rule*, *LYS Certificate* and *Basic Standard* (if so exists).

## **4 CLASS RULES AND BASIC STANDARD**

### **4.1 Class Rules**

For boat types with approved *Class Rules*:

- a) measures in the *LYS Tables* are for information only
- b) the *LYS Certificate* displays which *class rule* that applies to the boat
- c) valid class certificates and marks are accepted as basis for *LYS Certificates*
- d) the *NORLYS Måleveiledning* (Measurement Guide) defines which measurements that are required by *NORLYS* for a class boat without a class certificate. Compliance with these requirements does not necessarily mean that the boat complies with all its *Class Rules*
- e) if any difference between approved *Class Rules* and the *NORLYS Rule*, are the approved *Class Rules* the presence set of rules. Anyhow, electronic navigation and communication equipment are allowed, regardless any limitations in other *Class Rules*.

### **4.2 Basic Standard**

The *Basic Standard* is defined in the boats *Class Rules* or *boat data sheet*

## **5 LYS CERTIFICATE**

### **5.1 Endorsement of LYS Certificate**

- a) *LYS Certificate* are approved by *NORLYS*:
  - i) on request by the owner
  - ii) for a boat that *NORLYS* regards as suitable for *LYS Rating*.
  - iii) provided that *LYS measurements* or class certificates are endorsed by *NORLYS*
- b) A boat can have two valid *LYS Certificates*, where one is restricted to *shorthanded sailing*. *LYS Certificates* can not be modified between the registration deadline (or the alternative deadline – when published in the Notice of Race) and the race. A boat can free choose to use the *LYS Certificate* for *shorthanded sailing* if not written in the Sailing Instructions/Notice of Race that the regatta is for full crew only.

- c) NORLYS can deny issuing *LYS Certificates*, and modify or withdraw *LYS Certificates* at any time.
- d) NORLYS shall be notified when hull, keel, ballast, rudder, rig, sails or equipment are modified.
- e) Modifications shall be documented by a *measurer*, who sends *LYS measurement forms* to NORLYS.
- f) For modifications that NORLYS evaluate as considerable, the *LYS Certificate* will be modified.
- g) When NORLYS becomes aware of boat modifications, which are not reported to NORLYS, or finds that earlier data are not correct, the *LYS Certificate* may be withdrawn until satisfactory documentation is received by NORLYS.
- h) Repeated or grave violations of the *LYS Rule* may result in withdrawal of the *LYS Certificate*, and NORLYS may deny issuing of a new certificate.
- i) NORLYS will seek to issue *LYS Certificates* as swift as possible, but cannot guarantee that certificates are issued sooner than one month after the complete application has been received.

### 5.2 Validity of *LYS Certificates*

- a) Endorsed certificates become valid when the fee has been received by NORLYS.
- b) *LYS Certificates* are valid until December 31st the year it paid for when
  - i) the requirements listed in rule 5.1 are fulfilled
  - ii) the *owners declaration* has been received by NORLYS (change of ownership makes requires a new *owners declaration*)
  - iii) the annual fee has been received by NORLYS.
- c) *LYS Ratings* and major parameters for valid *LYS Certificates* are listed at [www.seiling.org](http://www.seiling.org), continually updated. Information given on this website takes precedence over any printed copy of the *LYS Certificate*.

### 5.3 Limitations given in the *LYS Certificate*

- a) The *LYS Certificate* states the *LYS Rating* corresponding to the equipment codes in the certificate, and the boat data which shall be complied with at *LYS regattas*.
- b) Limitations in approved *Class Rules* shall be complied with rule 4.1 e at *LYS regattas*.

### 5.4 Display of *LYS Certificate*

- a) The organizing authority shall control that there is a endorsed *LYS Certificate* for each entry prior to a *LYS regatta*. Endorsed *LYS Certificates* are listed at [www.seiling.org](http://www.seiling.org).
- b) Time for control of the *LYS Certificate* are regulated by rule 2.2.c og 2.2.d.
- c) A printed copy of the endorsed *LYS Certificate* shall be kept onboard during the race,
- d) Boats which do not show a valid *LYS Certificate* shall be denied by the organizing authority to start in a *LYS regatta*. Only exception to this rule is RRS 78.2, which is valid only if a valid certificate exists before the start.

### 5.5 Groups of *LYS Certificates*

NORLYS issues *LYS Certificates* for boats in *LYS Group A, B and C*.

### 5.6 Inspection of boats in connection with regattas

- a) The organizing authority is responsible for checking that participating boats and crews comply with the *NORLYS Rule*, the *LYS Certificate*, any approved *Class Rules* and with any departures from these, the divergence shall be reported to the race organizers, whom shall protest against the boat. Ref RRS 78.3.
- b) The organizer should ake a random check of a minimum of 10% of participating boats per year.
- c) The organizing authority shall state in the sailing instructions that inspections may be done. Ref RRS J2.2(10)
- d) A competitor may protest the boat if he suspects that it does not comply with the *LYS Rule*.
- e) The protest committee may refer a question regarding *LYS Rule* to NORLYS. Ref RRS 64.3.b.
- f) If the race organizers prior to start have knowledge of any entry without valid *LYS Certificate*, the boat shall be denied to start in a *LYS Class*.

## 6 LIMITATIONS

### 6.1 Boat with *Class Rules*

A boat with approved *Class Rules* can only use rules 6.4.c, 6.4.d og 6.5 with sails which are permitted in the *Class Rules*.

### 6.2 *Storseil*

- a) Full battens are allowed, unless the *Basic Standard* prohibits them.
- b) Provided that the *Basic Standard* does not have other requirements, the maximum widths of mainsails

are:

MTW	top width	maximum of	0.04 * E and 0.15 meter
MTQW	3/4 width	maximum	0.40 * E

MHW	1/2 width	maximum	0.67 * E
MQW	1/4 width	maximum	0.90 * E.

c) Mainsails within the following limits are entitled to a deduction of 0.01 *LYS Rating* in the *LYS Certificate*:

MTW	top width	maximum	0.05 m
MTQW	3/4 width	maximum	0.25 * E
MHW	1/2 width	maximum	0.50 * E
MQW	1/4 width	maximum	0.75 * E.

### 6.3 Head sail

a) Except for 6.4.c)ii not more than **one** *Headsail* may be carried simultaneously. For boats with more than one permanent forestay as standard this rule may be waived, and this should be stated in the *LYS certificate*.

b) This rule is deleted.

c) Provided that the *Basic Standard* does not have other requirements, the maximum widths of

*Headsails*

are:

	For JLP ≤ 1.1 * J	For JLP > 1.1 * J
JTQW 3/4 width	maximum 0.28 * JLP	maximum 0.25 * JLP
JHW 1/2 width	maximum 0.55 * JLP	maximum 0.50 * JLP
JQW 1/4 width	maximum 0.77 * JLP	maximum 0.75 * JLP

d) When a *Jib* is specified in the *LYS Certificate*, no larger *Headsail* may be carried onboard.

e) If not specified different in approved *class rule*, *LYS Table* or Norwegian standard, the maximum area of standard head sail are calculated by the formula:  $JLU = 0,98 * \sqrt{IG * IG + J * J}$  og  $JLP = 1,5 * J$ .

f) *Staysails* shall be fastened in the deck in the centreline astern of the forestay, and the size is limited by the size of head sail with  $JLP \leq 1.1 * J$  i regel 6.3.c. JLU shall not be larger than standard JLU for the boat type.

### 6.4 Spinnaker and asymmetric spinnaker in the LYS Certificate

a) Only **one** *spinnaker* or *asymmetric spinnaker* may be carried set simultaneously.

b) A boat which is registered **without** *spinnaker* or *asymmetric spinnaker* may use a whisker pole for the *Headsail*. The length of the whisker pole is limited to SWPL in the *LYS Certificate*, and it shall be attached to the foremost mast. If not specified different in approved *class rule*, *LYS Table* the length SWPL is limited to J.

c) A boat which is registered **with** *spinnaker* or *asymmetric spinnaker* may, if no *spinnaker* or *asymmetric spinnaker* is carried set:

i) use whisker/spinnaker pole for the *Headsail*

ii) carry two *Headsails* simultaneously, provided that one of them is carried set to windward and the other is carried set to leeward.

d) A boat with *spinnaker* or *asymmetric spinnaker* in the *LYS Certificate* may register at a regatta without any of these. The *spinnaker correction* may then be deducted from the *LYS number*, provided that rule

7 is complied with.

e) *Asymmetric spinnaker* shall not be *spread* by a pole touching she sheet fastened in the clew.

f) Unless the *Class Rules* have different requirements, an asymmetric spinnaker shall

1) be tacked in the centre plane of the boat at deck height. TPS shall not be larger than the maximum of  $1,20 * J$  and  $J + 0,8$ . If the *asymmetric spinnaker* fulfil the criteria's in rule 6.5.b-6.5.c . a reduction in the *LYS Rating* of 0.01 is admitted from the *LYS Rating* with standard *spinnaker*. Boats with bowsprit as standard from the builder may deviate from this limitation. The maximum bowsprit length is limited to TPS in the *LYS Certificate*

or

2) be tacked on a spinnaker/whisker pole braced from the boat centre line. The spinnaker/whisker pole length is limited to SWPL in the *LYS Certificate* If the *asymmetric spinnaker* fulfil the criteria's in rule 6.5.b-6.5.c the *LYS Rating* will be the same from the *LYS Rating* with standard *spinnaker*.

g) For an *asymmetric spinnaker* tacked in the boats centre plane, the tack line may be eased maximum 60 cm from the tack point at deck height, but the tack line or the tack corner of the sail may not be affected in any other way.

h) When an *asymmetric spinnaker* is carried set, a *Headsail* shall not be set with any spinnaker pole or outrigger.

### 6.5 Asymmetric spinnaker for boats with spinnaker in the LYS Certificate

- a) Boat with *spinnaker* in its *LYS Certificate*, may register and sail with an *asymmetric spinnaker* within the limitations in the *definitions*.
- b) The sum of the lengths of the luff (ASLU) and leach (ASLE) of the *asymmetric spinnaker* shall not exceed twice the allowed length of the leach (SL) of the *spinnaker*. ( $ASLU + ASLE \leq 2 * SL$ )
- c) The half width ASHW of the *asymmetric spinnaker* shall not exceed the half width SHW of the *spinnaker* in the *LYS Certificate*. For boats with maximum *spinnaker* width SMW in the *LYS Certificate*, ASHW shall not exceed SMW.
- d) Boat configured with a *asymmetric spinnaker* in stead of *spinnaker* i ref Rule 6.5.a-6.5.c is not given reduction in the *LYS Rating*.
- e) Boat configured with a *asymmetric spinnaker* ref the *definition* tacked on a spinnaker/whisker pole is given a plus of 0.01 in the *LYS Rating*.
- f) Boat configured with *Code Zero* together with a *Jib* gets a plus of 0.02 in the *LYS Rating*.
- g) Boat configured with *Code Zero* together with a *Genoa* gets a plus of 0.01 in the *LYS Rating*.

### 6.6 Runners and fuirling sails

- a) Runners give no correction of the *LYS Rating*.
- b) Furling sails give no correction of the *LYS Rating*, but the size of the sail may affect the *LYS Rating*.

### 6.7 Propeller

- a) The propeller shall comply with the *LYS Certificate*.
- b) No deduction for propeller is given in the *LYS Certificate*, unless the motor is capable of giving the boat a speed in light winds of at least  $V_{MIN} = 1.80 * LWL^{0.5}$  knots. This speed shall be obtained with a propeller of normal size, which is not geared to a high number of revolutions to decrease the size of the propeller.

### 6.8 Keel

No part of the keel may change character during a race, unless it is specified in the *Basic Standard* or in the *LYS Certificate*. "Wings" or similar arrangements shall be an integral part of the keel, and may not be articulated during a race. For *keelboats* and *sport boats* a centreboard shall be locked in its lowest position, equal to the position at measurement.

### 6.9 Crew limits

Unless the *Class Rules* specify different limits:

- a) LYS crew limits have effect only if this is specified in the sailing instructions.
- b) then the maximum number of crew on board shall not exceed the number specified in *the LYS Certificate*.
- c) in addition to the number in *the LYS Certificate*, it is allowed to have children onboard, no more than 10 years of age. They shall carry safety vest.
- d) crew limits are calculated from sail area, displacement and hull length.

## 7 NOTIFICATION OF SAILING WITHOUT SPINNAKER OR ASYMMETRIC SPINNAKER

7.1 Boat which wishes to use rules 6.4.d shall notify this change with the race committee not less than 96 hours before start of the first race of a regatta, and not later than the deadline for entry or specified deadline published in the Notice of Race if earlier than the 96 hour rule.

7.2 If the entry deadline is less than 96 hours ahead of the start, will the 96 hour rule will not be changed and notification shall be done 96 hours ahead according to rule 6.4.d.

7.3 With notification less than 96 hours prior to start, is the valid *LYS Rating* the one listed 96 hours prior to start.

## 8 SAILS AND EQUIPMENT ON BOARD

### 8.1 Allowed sails

- a) Sail cloth material is free, unless the *Basic Standard* specifies limitations. Excepted from this rule is an *asymmetric spinnaker*, where the material is specified in the definition of *asymmetric spinnaker*.
- b) Only sails allowed in the *LYS Rule*, measured by a *measurer* and registered and activated at [www.seiling.org](http://www.seiling.org), is allowed on board racing.
- c) No other sails than mainsail (including stormsail/trysail), *Headsail* (including storm*Jib*/heavy weather *Jib*), *spinnaker*, *asymmetric spinnaker* and *staysail* is allowed.
- d) Double wing profile sails are not allowed.
- e) *Code Zero* and similar sails are allowed.
- f) The number of sails onboard during a regatta is limited to:
  - 1 (one) mainsail
  - 5 (five) *Headsails* (included *staysails*), *spinnakers* or *asymmetric spinnakers*.
- g) In addition its allowed to carry onboard:
  - 1 (one) trysail according to *OSR*

- 1 (one) storm *Jib* according to *OSR*,
  - 1 (one) heavy weather *Jib* according to *OSR*, and
  - 1 (one) transportation mainsail not used in the regatta.
- h) The *LYS Certificate* may state a number of spinnakers exceeding the number stated in rule 8.1.f. This gives an addition to the *LYS Rating*.

### **8.2 Equipment which shall be on board when racing**

- a) All equipment included in the *Basic Standard* (including *Class Rules*), or specified in the *LYS Certificate*, shall be on board when racing. Such equipment can be:
1. Cushions
  2. Pulpits, stanchions, lifelines
  3. Stove
  4. Head
  5. Bunks in the fore peak
  6. Batteries
  7. Anchors and mooring equipment
  8. Table
  9. Companionway hatches
- b) Internal ballast specified in the *LYS Certificate*, kg and position, shall be carried on board at its specified position.
- c) During the period November the 30th to March the 31th, its elective to have cushions on board rule 8.2.a.

## **9 MEASUREMENT**

### **9.1 Requirement for measurement**

*LYS measurement* shall be carried out by a *measurer*, and in compliance with the *NORLYS måleveiledning*.

### **9.2 Competence of the measurer**

- a) ERS H.1.1 states that a measurer is not allowed to measure a boat or its equipment if the boat is owned, designed or built by himself, or in which he is an interested party - i.e. a crew member on a regular basis.
- b) Excepted from 9.2.a are a number of *authorized suppliers* who have been given authorization by NSF to carry out measurements on supplied products. This system is monitored by Norwegian Sailing Federation.

### **9.3 Limit marks on mast and boom**

- a) The mainsail boom shall have an outer limit mark for the setting of the mainsail.
- b) The mast shall have upper and lower limit marks for the setting of the mainsail.
- c) The limit marks shall have a width of minimum 20 mm, and have a colour which is contrasting to the colour of the mast and the boom.

### **9.4 Not measured boat**

A temporary *LYS Certificate* can be issued to a boat not measured and given a *LYS Rating* plus 0.01.A temporary certificate can only be issued once per boat and is only valid in two months from the date issued. If boat after this date doesn't satisfy rule 9.1 regulations on measurements, its *LYS Rating* will be raised by 3%.

## **10 CONTROL OF DISPLACEMENT**

If measurement is required by *NORLYS*, the following rules shall be complied with:

### **10.1 Weighing**

- a) Weighing shall be done with a calibrated weight, and witnessed by a *measurer*.
- b) The *measurer* checks that the weight is calibrated, and sends the *LYS measurement* form to *NORLYS*.

### **10.2 Liquid on board at measurement**

- a) Water tanks, including septic and water ballast tanks shall be empty.
- b) Maximum 10 litres of fuel may be on board.
- c) All spaces in the boat shall be dry.

### **10.3 Equipment accepted on board at measurement**

Only the following equipment in its normal racing position is allowed at weighing:

- a) Standing and running rigging.
- b) One spinnaker/whisker pole.
- c) One set of rope and equipment for sheeting of the mainsail.
- d) One set of rope and equipment for sheeting of the *Headsail*.

- e) One set of rope and equipment for sheeting of the spinnaker or the asymmetric spinnaker.
- f) Permanently installed standard equipment.
- g) Permanently installed navigation equipment.
- h) Equipment defined in rule 8.2.

#### **10.4 Equipment which is not allowed on board at measurement**

- a) Sails
- b) Life raft or other safety equipment
- c) Personal gear like clothing etc.
- d) Food and other supplies
- e) Kitchen equipment
- f) Tools and spare parts

#### **10.5 Freeboard measurement for checking of displacement**

As an alternative to weighing, the displacement may be checked by freeboard measurement. The *NORLYS Måleveiledning* (*NORLYS Measurement Guide*) gives details for such measurements.

### **11 SCORING**

#### **11.1 Calculation of corrected time**

Corrected time may be a result of either

- a) Time-on-time
- b) Time-on-distance
- c) Pursuit (Gunder) start
- d) Ideal time

Time-on-time is the standard method. *NORLYS Veiledning* (The LYS guide) gives advice for calculation of corrected times.

#### **11.2 Rounding of times**

Both elapsed and corrected times shall be rounded to whole seconds with no decimal places. Equal corrected times for several boats gives equal scores.

### **12 LYS CATEGORIES AND LYS CLASSES**

#### **12.1 LYS Tables**

SSF publishes *LYS Tables* for the following *LYS categories*:

- a) *Keelboats* (the most common cruisers and keelboats)
- b) *Sport boats* (keelboats with especially large speed potential - ref *LYS veiledningen*)
- c) *Multi hulls*
- d) *Dinghies*

#### **12.2 Boat not listed in any LYS Table (Group C boat)**

Group C boats are placed in the 12.1 categories.

#### **12.3 Mixing of LYS categories for scoring**

- a) Boats in different *LYS categories* are scored separately.
- b) *Keelboats* and *sport boats* may be scored in a joint scoring, given there no large span in the *LYS Rating* between the highest and lowest rating, ref the *NORLYS Veiledning* (the LYS guide).

#### **12.4 LYS Classes**

- a) Except for rule 12.3, division into *LYS Classes* is free.
- b) The *NORLYS Veiledning* (the LYS guide) gives recommendations for division into *LYS Classes*.

### **13 STATISTICS**

For correct assessment of *LYS Rating*, *NORLYS* is dependent on race data from race management at specified format. Advice may be found in the *NORLYS Veiledning* (the LYS guide).