



Optimist Tuning guide



OPTIMIST SAIL TRIM

TRIM POSSIBILITIES

MAINSAIL

WIND STRENGTH
8-16 knots **16-24 knots**

Mast rake -determines the balance of the dinghy. If you rake your mast aft, you will achieve that your dinghy will have better pointing abilities. If you rake your mast forward you will ease the rubber pressure. The trim of the mast rake is very much individual.
 Meas.: 278-280 cm Meas.: 280-284 cm Meas.: 282-286 cm
 Your own meas.: Your own meas.: Your own meas.:

Mainsheet Using the mainsheet in an optimist is like changing gears in a race-car. The angle of attack between the sail and the wind is changed and you can control pointing ability and speed by easing and trimming the mainsheet. Remember always to adjust the tension on your sheet according to the conditions. It is a good idea to tack a little, white string into the mainsheet, just where the sheet exits the ratchet or at the block on the boom. This will make it easier to find the right trim fast. It will give you a reference point after bc tacking. It can be very difficult to see how the amount of sheet tension affects the draft of the sail and the leech, when you're in the dinghy.
1 **2-3** **3**

Sprit The sprit influences the leech tension. If you tighten your sprit, the sail will close and if the sprit is trimmed loosely the sail will open. It is important to avoid too much tension on the sprit. Remember to adjust your sprit when starting the downwind legs.
1 **2** **3**

Preventer The luff tension is adjusted with the preventer, which also regulates the angle of attack. A loose luff moves the depth of the sail aft and decreases the angle of attack while a tightened luff moves the depth forward.
1-3 **0-2** **0-1**

Kicking-strap The kicker is used together with the preventer to control the angle of attack. Furthermore the leech is affected by the kicker. A tight set downhaul will pull the draft forward and down in the sail, hence opening the leech.
0 **1-2** **3**

Outhaul controls the depth in the foot of the sail. You decide how much you want to use of the designed depth. It is important not to ease the outhaul too much, because the leech will close too much at the bottom batten.
2-6 cm **3-8 cm** **0-3 cm**
(.8" - 2.4") **(1.2" - 3.15")** **(0" - 1.2")**

Your position in the boat is an extremely important trim option. By moving the weight forward and aft in the boat you can achieve changes in the boat balance.
 position all the way in the boat, sitting on the coaming.
 Fixed in hiking straps, shoulders out, weight aft.
 All out hanging, further back in the boat, fixed in straps.

Notes: *Mast position:* Read at mast step and write into Tuning Guide. *Tension on measurements:* **0=no tension, 3=full** **REMEMBER TO SMILE!!**



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QUESTIONS & ANSWERS

Congratulations on your new North **nsX-4** optimist sail. We hope that this sail will fulfil your high expectations to a North sail.

Our tuning guide has been made through close co-operation between North Sails One Design and North Sails World-wide Optimist Team, and is based on all 3 **nsX-4** models.

Remember always to test new trim ideas yourself. One of the most important thing of the optimist is to find your own super trim.

Why North Sails? North Sails is the worlds largest sailmaker. With more than 80 sail- and service lofts all over the world, you can be sure of always being able to get tips and advice on your optimist sail.

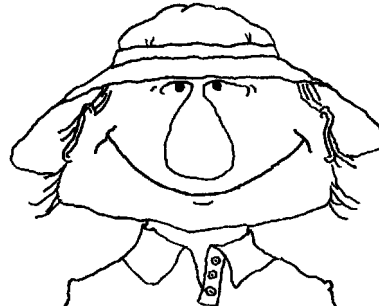
How do I trim? On the back of this leaflet you will find a chart showing the basic trim of a North **nsX-4** optimist sail, and below we have tried to answer the most commonly asked questions concerning trim.

What about mast rake?

Everybody talks about mast rake and in the chart you will find the most common rakes. As a matter of fact, the design of the rudder, the placement in the dinghy and how the centreboard is situated in the trunk together with the mast rake have much to say in the trimming of an optimist dinghy.

North Sails have tested all dinghies on the market, and the dinghies proved to be very different concerning trim of the mast rake. The masts on the Winner dinghies are not angled as much aft as the masts on the Björndahl dinghies, while the Kristiansen are just in between. You can add your own measurements to the chart on the back of this leaflet.

The mast rake is measured from the most upper-aft edge of the mast and then straight aft. Measure, where the measurement tape touches the coaming. It is a good idea to put



Be happy!!

the measurements from the chart on the millimetre ruler beside the mast track.

What about the "wrinkles"?

The majority of all wrinkles can be removed on an optimist sail by trimming it. But actually there are some wrinkles, which cannot be removed. Some of them can be called "Speed-wrinkles".

Up along the sprit (a - on the graphic) there will be a long wrinkle. The wrinkle is there because the sprit line is pre-stretched. This means that the sail is loose on the sprit line, which keeps it powered up in the upper third of the sail.

How do I tie the sail?

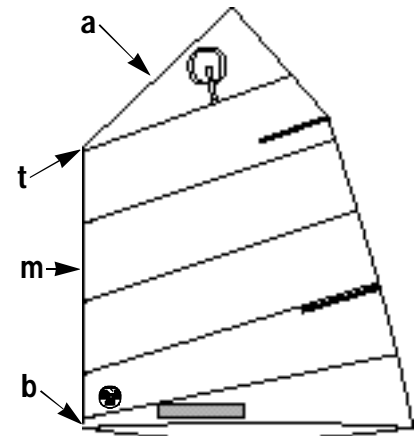
There are several ways to tie your sail-ties.

1. The sail can be tied in an even curve, which follows the luff's shape. The sail is tied with 8 mm distance to the mast at top and bottom and 1 mm at the middle. This method is popular in light air, because the leech is opened.
2. The sail can be tied with all eyelets 1-3 mm from the mast - all at the same distance. Hereby the luff-curve will be converted into power with a fuller sail and a more closed leech.

Are there any other methods?

Yes, for example in heavy air, the wrinkles that appear across the sail from approximately the middle of the mast, can be removed by loosening the middle sail ties.

The wrinkles or creases appear because of the mast bend.



Trim diary:

A good idea can be to record your trim from regattas and training in a trim diary. This can facilitate your trimming process, because when you leave the harbour, you know that you have a good setting. This diary does not necessarily give the correct answer every time. It just gives you a good basis setting, which can be tuned to the exact conditions of the race course. Having this basic setting will give you more time to check up on the course, wind and starting line.

Your diary should contain the following information: Mast rake - downhaul/kicking-strap tension - Sprit tension - outhaul - boom preventor setting - sheet tension and sail ties. Furthermore, you carefully have to write down the wind and wave pattern of that particular day.

Take this diary with you in your sailbag - always.

If you have any questions or if you are in doubt of anything, please call North Sails and have a chat with one of our Optimist experts.

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