



One Design

For any question you may have on tuning your International 420 for speed, contact our 420 experts listed below:

ONE DESIGN WEST

Dave Hughes
619 226 1415 F 619 224 7018
dave@od.northsails.com

ONE DESIGN EAST

Brian Hayes
203 877 7627 F 203 877 6942
brian@od.northsails.com

ONE DESIGN RHODE ISLAND

Chuck Allen
401 683 7997 F 401 683 9121
chuck@od.northsails.com

ONE DESIGN CHESAPEAKE

Greg Fisher
410 212-4916 F 410 626-8445
greg@od.northsails.com

International 420 Tuning Guide

Congratulations on your purchase of North Sails! The following tuning guide for the International 420 is the result of many years of sail testing, rig tuning and racing in every conceivable condition. You can follow this guide with confidence.

MAST STEP

Measured from the inside of transom to the back of the mast 2830 mm.

SPREADERS

Length is measured from the sidewall of the mast to the shroud.

To measure spreader deflection we place the top batten (or any straight edge) across the tips of the spreaders, and then measure to the mast off straight edge.

MAST	LENGTH	DEFLECTION
Superspar M7	470 mm	162 mm
Proctor Kappa	480 mm	160 mm
Holt	470 mm	165 mm

MAST RAKE

Measured by attaching a long tape measure to the top of the main halyard, hoisting it to the top of the mast & then measuring to the back of the transom with the rig tension on & NO CHOCKS inserted.

WIND SPEED	MAST RAKE
2-6 Knots	19'9 3/4
7-11 Knots	19'9
12-16 knots	19'8 1/2
17-23 knots	19'8
24+ knots	19'7 1/2

NB - if caught out on the wrong mast rake you may want to either ease or add tension accordingly to achieve the best setup.

CHOCKS

Control the amount of pre-bend in the mast. This is crucial for controlling the amount of power in the rig.

You should have 3x 15 mm chocks, which are easily accessible, as chocking the mast is the only adjustment you can make to the mast whilst racing.

WIND SPEED	CHOCKS
0-6 Knots	0-1
6-11 Knots	1-2
12-16 Knots	3-2
20+ Knots	1

CENTERBOARD

This should be angled forwards in light air. When planing upwind the leading edge of centerboard should be vertical, as the wind increases the centerboard can be raked aft (no more than 6 inches of centerboard handle showing out of the case).

STROP LENGTH

It is very important to be able to get your boom as close to the center line as possible, so your mainsheet strop length must be altered depending upon the given conditions.

WIND SPEED	STROP LENGTH
2-6 Knots	560 mm
7-11 Knots	555 mm
12-16 Knots	530 mm
17-23 Knots	525 mm
24+ Knots	525 mm

Sail Settings and Adjustments

TOP BATTEN

In light airs the top batten should be pushed in lightly and the velcro fastened just to prevent batten from falling out. In medium/heavy airs, push the batten in quite hard and secure the Velcro.

CUNNINGHAM

Use only when overpowered to move draft of sail forward and open the upper leech. Never use in light air to remove the horizontal creases from the luff.

KICKING STRAP

No tension is needed until the mainsail has to be eased to prevent heeling. Use kicker to hold correct leech profile. When overpowered, pull on as hard as physically possible. NB - Ensure that you have the maximum purchase allowed by the class rules.

OUTHHAUL

Generally pull very tight in all conditions, except in a light air chop when the outhaul can be eased approximately 25 mm.

MAINSAIL LEECH TENSION

This is determined by leech tell tale behavior. Generally the top telltale should be flying 90% of the time.

JIB

Whilst on shore it is a good idea to mark both jib sheeting and barberhaulers. Tie the boat down to the trolley and place on a beat. Sheet in both mainsail and jib from behind and look at the slot (gap between mainsail and jib). Because of the 420s have fixed sheeting angles, the slot is not as efficient as it could be. You are looking to get the slot parallel all the way up between the mainsail luff & the jib leech.

Make sure the jib is in tight, then ease it one inch and pull the windward jib sheet (barberhauler) on quite hard and cleat it. Doing this pulls the clew inboard about 3-4 inches and creates a more efficient slot shape. Now with a waterproof pen, mark both jib sheets and barberhaulers so you can refer to these settings whilst afloat.

This method of barberhauling should be used in all conditions except:

VERY LIGHT AIRS

Very light pull on barberhaul

HEAVY AIRS

No barberhaul

JIB CUNNINGHAM

This should be tightened enough to remove creases from luff of the sail. It acts the same as the cunningham on the mainsail.

BASIC 420 RULES

1. Play the mainsheet at all times
2. Barberhaul in all conditions, except the extremes
3. Use as much kicker as possible in heavy airs
4. Never use cunningham until overpowered
5. Keep the boat flat at all times
6. ENJOY IT!

If you have any problem tuning your 420 or any other questions on 420 sailing, do not hesitate to contact North Sails.

Sail Care

Your North Sails are constructed out of the best materials on the market today. We make sure of this by testing every roll of cloth we use. Through proper care and maintenance your sails will give you the performance you have come to expect from a North sail.

The most important factor for a long life for your sails is to watch them for signs of wear and tear in high load and chafe areas. Be sure to wash the sails off with fresh water and dry the sails thoroughly before storing. A dry, mild climate is best. Excessive heat can cause problems with the sails due to the possibility of shrinkage. It is best to roll the mainsail and jib.

MAINSAIL

When hoisting and lowering the sail try to minimize the amount of creasing or

wrinkling of the sail. Every time the sail gains a crease the cloth breaks down that much faster. Always have someone contain the leech and luff during these procedures. The battens can be left in the sail without any problems. Be sure to roll the sail down the leech so that the battens will not twist. This could cause damage to the battens.

JIB

When rolling the jib keep the battens perpendicular to the leech. Pay special attention to the battens and batten pockets for wear and tear.

Racing Clinics

This tuning guide only begins to cover all there is to know about racing the boat. The 420 team at North One Design has prepared a professional, in depth 420 racing clinic that you and your fleet will be interested in learning more about. In the course of a weekend you will learn more about racing your 420 than you could possibly learn in a season of racing on your own.

Please call you nearest North Sails One Design loft for complete details!

Contact North Sails

At North Sails we are constantly striving to make our products better. If you have any comments on this tuning guide and how it could be improved for your purposes we'd love to hear from you. Please give us a call or drop us a line.