

18

Users Manual 16.11.2011

81/J

# WARNINGS!

# Make sure your 1:2 main hallyard is not tangled before hoisting the mainsail.

In this case you may experience problems while taking the mainsail down. If the hallyard is wrapped several times you will not be able to release it and recover the mainsail.

# After use take your rudder blades out of the water and dry them.

Otherwise they may start to blister in the top paint layer.

# Use the neoprene cover to seal the boat while sailing.

Even though Seascape18 is insubmersible Neoprene seal is significantly helping the boat to recover from possible knoc-down.

# Be focused while using the keel winch.

Even though the force on the handle is reasonably small, hold it with force at all times. If it slips from your hand it will unwind rapidly while hurting your palm.

# 1. Introduction

Congratulations with your new Seascape 18. We hope you are going to enjoy sailing her as much as we enjoyed in her creation. Although she is very simple in concept, we believe that proces of discovering her potentials will give you plenty of satisfaction and fun for many years.

#### 1.1. About this owner's manual

This manual has been compiled to help you operate your Seascape 18 with safety and as little complications as possible. It contains details of the boat and equipment fitted. Please read it carefully and familiarize yourself with the boat before using it.

Please ensure that you are able to handle the boat in the anticipated wind and sea conditions before venturing out. This craft has been classified as a category C vessel, meaning a boat designed to operate in winds up to force 6 on the Beaufort scale and associated wave heights.

This owner's manual is not a course on boating safety or seamanship. If this is your first sport boat, or if you are unfamiliar with this concept of boats, please ensure you obtain handling experience before "assuming command" of the boat. Your dealer, National Sailing Federation or Yacht Club will be pleased to advice you of local sailing schools, or competent instructors.

This owner's manual is not a detailed maintenance or trouble shooting guide. In case of difficulties, always refer to Manufacturer or its proper representative.

Always use trained and competent people for maintenance, fixing and modifications of your Seascape 18. Manufacturer cannot be held responsible for modifications they have not approved. Note also that any change in the disposition of masses aboard may significantly affect the stability, trim and performance of your boat.

Users of the boat are advised that:

- All crew should receive suitable training.
- The boat should not carry more than the manufacturer's recommended load.
- Stability is reduced by any weight added high up.
- Hatches must be closed and sealed and neoprene seal shall be fitted over main companionway to assure wattertightness of the interior.
- Breaking wave are a serious stability hazard
- Buoyancy aids are recommended to wear at all times by all crew for their own safety.
- While sailing allways keep the keel in it's working (down most) position and use safety pin to prevent closing of the keel in the case of capsize.

In some countries, a driving licence or authorisation may be required, or specific regulations might apply. Please familiarize yourself with these.

Always maintain your boat properly and make allowance for the deterioration that will occur in time and as a result of heavy use or misuse of the boat.

Please keep this owner's manual in a safe place and hand it over to the new owner when you sell the boat.

## 1.2. General information

Manufacturer: ISSA d.o.o. Model: Seascape 18

Category C:

A boat designed to operate on winds up to force 6 on the Beaufort scale and associated wave heights (significant waves up to 2 metres) Such conditions may be encountered on exposed inland water, in estuaries and in coastal waters in moderate weather conditions.

A significant wave height is the mean height of the highest one third of the wave, which approximately corresponds to the wave height estimated by an experienced observer. Some waves will be double this height.

Maximum Recommended Load:  $i \times 4$  i + luggage = max 345 kg.Specifications: Length (L<sub>H1</sub>) = 5,55 m Width (B<sub>H1</sub>) = 2,37 m Mast height (above the deck) = 7,4 m Main sail area = 14.5 m<sup>2</sup> Jib area (optional) = 8,5 m<sup>2</sup> Spinnaker area = 32 m<sup>2</sup> Maximum draft (standard keel) = 1.500 mm with keel down Maximum draft (standard keel) = 160 mm with keel and rudders up Maximum draft (shallow draft keel) = 1.100 mm with keel down Maximum draft (shallow draft keel) = 250 mm with keel and rudders up Weight fully rigged = 470 kg Identification: Hull identification number on stern of each hull.

#### 1.3. Information connected with the risk of flooding and stability

#### 1.3.1. Loading advice

Keep the total weight of provisions, miscellaneous equipment not supplied by the manufacturer and persons aboard below the Maximum Recommended Load and suitably distributed.

#### 1.3.2. Openings in the hull

Hatch on the foredeck deck, neoprene seal and inspection hatch on the stern must be sealed before leaving the shore. When storing the boat ashore, be sure to have the holes covered and it may be wise to leave the hatches open for ventilation purposes.

#### 1.3.3. Stability.

Stability of the boat is designed to compensate to all crew errors to including wind strenght of 4bf. In wind forces 4-6bf missuse of asymetric spinnaker can cause heel in ecces of 45 degrees and even knock down (90-100deg heel of the boat). Mast is watertight and in combination with weighted keel helps the boat to right herself when spinnaker hallyard is released. In case spinnaker hallyard is not released and/or crew holds itself for the windward side of the knocked down boat, boat will eventually capsize.

Insubmersibility volumes integrated in the boat provide sufficient bouyancy to prevent the boat from sinking but keeping the safety keel pin and neoprene seal over the door is essential to safe and quick righting of the boat.

#### **1.4.** Recommendations and information for proper operation

1.4.1. Danger from overhead power lines and other obstacles

When rigging and moving your boat, please look up and inspect the overhead area. Observe the location of overhead power lines and trees. These obstacles can damage your boat are potentially dangerous to yourselves. Remember that carbon fibre is electric conductor.

1.4.2. Towing on the water

When towing is required, make sure that:

- The tow rope is securely tied on the U bolt mounted on the vertical section of the bow.
- The boat is towed at a low speed.
- The tow line is fastened in such a way, that i t can be released when under load
- The tow line is of strechy material and sufficient length to manoeuvre safely.

1.4.2. Changing sail configurations according to the wind:

Following table represents safe sail configurations for cruising/daysailing crew. Remember that gusts can exceed average wind speed stated bellow for 20-30%.



# 2. Assembly

#### 2.1. Glossary

**Aft:** Back of the boat. **Gennaker**: Asymetric nylon sail hoisted when sailing downwind. **Bow**: Front of the boat. Bowsprit: the pole, which extends from the bow to fly the asymetric spinnaker. **Bobstay:** dyneema rope that prevents bowsprit to bend up when fully extended. **Batten**: Thin strip which fits into a long narrow pocket in the sail. It will give the sail its shape. **Boom**: Spar at the foot of the sail. **Cleat:** Fitting used for holding / securing ropes. Clew: Lower most after-most corner of a sail. **Downhaul**: Rope to stretch the luff of the sail. Also referred to as Cunningham. **Foot**: Bottom edge of the sail. **Forestay**: Wire supporting the mast in the fore and aft direction. Gunwale: Outermost edge of the hull. **Goose neck**: A hinge fitting connecting the boom to the mast. Halyard: Rope used to lower or hoist sails Head: The top corner of the sail. Hound: Point where the stays are connected to the mast Jib: Front sail. Jib Sheet: Control rope for the jib. Leeward: The side of the boat the sails are set to when sailing. **Leech**: Trailing edge of the sail. Luff: Front edge of the sail. Main sheet: Rope controlling the position of the main sail. Mast rake: Angle of the mast to the hull. **Mast step**; Fitting on the boat where the mast is connected to the front beam. **Pintel**: Fitting on the transom and rudder used to hang. **Rudder stock**: Carrier of a rudder blade and has an arm to steer. **Shackle:** U-shaped metal strip with a pin to secure halvards etc. **Shrouds**: Wire supporting the mast in the lateral direction. Turnbuckle: Adjustable stay connector to chain plate. Stern: Back of the boat. Tack: Forward lower corner of the sail. Tiller: (Telescopic) rod connected to the cross bar to steer the boat. **Transom**: Flat vertical plane of the end of the hull. **Windward**: The side of the boat opposite to where the sails are set to when sailing.

# 2.2. Tools needed

Your Seascape18 can be assembled without an expensive tool kit, but be advised to have ready with you the following tools:

- Electric tape,
- 6mm and 13mm open spanner,
- pliers,
- teflon dry lubricant,
- knife
- XXmm Allen key

#### 2.3. Supplied equipement



All equipement supplied with your Seascape is Racing grade. Please take time to carefully read this instructions and allow yourself 3-4 hours for first assembly of your boat. All consecutive assemblies are considerably quicker and should after some practice take you 30-60 minutes. Please note that rope colours and diameters and block types can change without notice. Trailer is not part of standard equipment.

#### 2.3.1. Main sail and boom parts:



From left to right and top to bottom: Hallyard shackle, main hallyard, 2 block loops, four 55 mm main sheet blocks, main sheet, A frame, cunningham blocks (20mm), cuninngham control line, Vang strap, vang blocks (30mm, 2x20mm, 40mm), outhaul block (20mm), vang controll line, vang cascade line, 2 composite shackles, outhaul line.

#### 2.3.2. Jib parts:



From left to right and top to bottom: Jib furler with 2 shackles, adjustement ladder and spring pin, top jib furler, trapeze block for jib cunningham with 2mm dyneema, jib cunningham line, jib hallyard, jib furling line, two 30mm blocks for jib sheet, composite shackle, jib sheet.



2.3.3. Spinnaker parts:

From left to right and top to bottom: Composite shackle, 4x 40 mm sheet blocks (2 ratchet, 2 normal), sheet, retriver line block (20mm), gennaker hallyard/retriever, gennaker bag aft attachment line, gennaker bag forward attachment line, gennaker bag.

#### 2.3.4. Sails:



From left to right: jib (pentex), Gennaker (nylon), main+ battens (pentex).

2.3.5. Standing rigging:



Forestay and shrouds with 2 trunbuckles and 4 smart pins.



2.3.6. Footstraps:

From left to right: elastic rope, 2 carbon support tubes, 6 dyneema ropes, 2 footstraps.

#### 2.4. Stepping the mast

Attach furler to the bow chainplate and prepare the furling line:



Attach trapeze cleat to the furler with dyneema line. Second photo is showing finished assembly. Use electric tape on all sharp points (shackle, spring-pin...) to prevent tear of gennaker while retrieving.



Take off the ropes/straps that were used to fix the mast during transport and position the mast to the center of the boat. Use pice of cloth or foam on the point where it touches the deck.



Start by assembling the shrouds. Insert the pin and secure it with the safety splice. When you finish protect it with the electric tape.



On the bottom part of the shrouds attach turnbuckles to the chainplates as shown on the next photos. After you insert the safety pin aplly generous ammount of electric tape to prevent the spinnaker sheets catching in the pin. Make shure that the turnbuckles are maximaly unwinded before raising of the mast:



When assembling forestay make sure that strap is not wraped and that furler is oriented with the part that has two rings away from the mast. Also make shure that pin of the furler is pointing away from the mast tube otherwise it will damage it. You tighten the pin with the pliers.



Lead hallyards trough top fittings only. You'll organize them when the mast is raised. Tie a knot on the bottom to prevent them from falling trough top blocks. You begin with jib halyard:



Mainsail hallyard is next. It has 2:1 purchase so later you will need a shackle to attach it to the head of the mainsail:



Lead spinnaker hallyard trough the top block end secure the loose ends with a knot.



Before raising make shure all the hallyards and shrouds are set correctly and that they are not tangled or caught under the trailer. Operation can be done by single person if you use support instead of the person standing in the back of the boat. It is much easier to do it by two people.

Remove the pin from the mast step and tape the swiveling cleats for hallyards to prevent them catching between the mast and the coachroof when raising the mast:



Then you remove the mast from its support and move it towards the back of the boat:



The person at the back uses his shoulder or hands to support the weight of the mast and the person at the mast step alignes the mast with the mast foot. In order to help aligning the holes the person supporting the mast gently moves the mast few centimeters left and right. Then you insert the bolt into the mast step and secure it with the safety pin:



You raise the mast to its final position. Make sure that the shrouds and hallyards are not caught on the trailer or other gear.







Attach the forestay to the ladder to achieve the desired rake of the mast while one person is supporting the mast. Then tension the shrouds using 6 and 13mm keys and insert smartpins.



## 2.4. Boom

You start with outhaul which you guide trough the boom tube as shown:





Attach boom to the goosneck



Vang (kicker):

Attach the double block on the mast foot and lead the composite shackle trough the holes.



The system suplied is 1:6 purchase. In stronger wind (20-25+ knots) this system allowes significant force to be put to the boom so be advised that you can damage the boom if you overtension the vang in this conditions.



Don't cut the cascade lines before the system streches. When you are satisfied with the mobility of the boom (it has to move at least 10deg up and down from horizontal position) you can cut the lines to right length.

Attach aft main sheet blocks like shown on the photo:



Assemble A-frame for the Main sheet as expalained on photo:



Run mainsheet trough the blocks (make shure the ratched in the middle of the cockpit is turned corectly).



#### 2.5. Jib

You attach two 30mm block to the clew using a composite schakle. On the photo you see one of the possible ways to do so. Then you attach the tack on the forestay ladder using a small shackle.



Tie both ends of the hallyard on the head of the jib. Make sure the hallyard is not tangled and that it runs straight from the top furler.



Zip first 15cm of the luff and run the remaining halyard trough the pocket.



Pull on the part of the hallyard that hoists the sail and zip the luff as the sail is being hoisted.



Make a half knot on the halyard and use jib cunningham to tension the luff. Put the remaining halyard and the cunningham line in the zip pocket and zip the luff all the way.



You run the sheet as it is shown on the photo. the end is tied on the attachment point for 40mm blocks.



# 2.4. Main

Unroll the main on a flat surface you first swept and make sure it doesn't have sharp objets that could damage the sail. Unpack the battens and place them on the main in the right order.



Slide the battens all the way into the pockets and put them under tension. Note that different sails use different systems to tension the battens. You'll know you put to much tension if you have problems to flip the sail's camber over while sailing. If you tensioned them to lightly you'll see wrinkles forming around them.



Use the big shackle to attach 1:2 halyard on the head. Make sure that halyard is not wraped or tangled before hoisting.



Clew is fixed on the boom with the velcro strap and outhaul is fixed in the way shown on the photo giving 1:2 transmision.



Tack is also fixed to the mast using the velcro strap. 1:6 Cuningham control is used to control the mast bend and main camber.



After all 3 points of the main are fixed you can hoist the sail.



# 2.6. Gennaker

Start by running a tail of the Gennaker hallyard trough a 20mm block you fixed on the attachment point aft of the chanplate.



Then you run it trough the snuffer bag. It is easier to do so while the bag is not attached.



Attach snuffer bag to the snuffer ring using a 2-3mm dyneema line.



Aft part of the snuffer is attached to the same attachemnt point as 20mm block. Put it under medium tension.



Use attachment points on the bag to secure it from sagging if the gennaker gets wet due to the waves or rain. Note that bags have different number of attachment points. Always use all of them.



Continue by attaching gennaker blocks and running the sheets trough them. Not that silver ones have ratchet action and have to be turned the right way - so that they hold the sheet in direction towards the gennaker and release it towards the trimmer. They have automatic action and engage under load.



Use composite shackle to secure the tack. Make sure gennaker is oreinted correctly. Salimakers logo and color of the luff (green) helps you identifying that.



Attach hallyard to the head using bowline knot. You can find it since luff (green) and leech (red) join in this point. Make sure you follow the luff edge from tack to the head so you are sure there is no wrap.



Run the retriver line (end of the gennaker halyard) from the snuffer trough the bottom patch on the gennaker and fix it to the top one with a knot. Note that patches can be on one or the other side of the gennaker depending on the model.



Attach sheets to the clew. Make sure that starboard sheet is attached exactly as on the photo.



After that slowly snuff the gennaker. Make sure you don't catch it on the trailer or other sharp edges when you do it on the land. Also note that with a new boat things will go a little bit harder. Applying dry lubricant on the bag and the snuffer ring helps a bit.



After snuffing the mouth of the bag should look like that.



#### 2.7 Footstraps

Fix the central part of the footstrap with the dyneema line. Note that footstrap is not symetrical - measuring from the middle to the end one part is longer than the other so make sure footstrap is oriented corectly before you fix the center. Use carbon tube to raise the point to allow easier hooking with your feet.



Fix end parts withth dyneema as well. Be particulary carefull with this knots since you can loose someone overboard if the knot gets loose while hiking. You can use bungee rope wherever you think will help you.



This is one of the options how the footstraps can look like when finished.



# 3. Using the Seascape 18

#### 3.1. Protecting the sails

On the bow there are several pointy things that can tear gennaker if not properly protected. Use the electrical or self vulcanizing tape to protect all the sharp objects in the way of the gennaker.



#### 3.2. Using the keel

Make sure you are in comfortable and stable position before you operate the keel winch. Force on the winch handle is not big but you have to make sure you don't let it go while unwinding/droping the keel. Use the clutch (left photo) to select the ratchet position. Aplly small force on the handle when changing direction of the ratchet.



Working position of the keel is 17 turns from the upmost position. It shall remain droped with about 10 degrees aft angle to keep stable position.



After you lowered the keel to working (down) position, apply the safety pin which prevents the keel from folding in case of a capsize. Pin is designed to break in case of grounding but holds the keel in place if the worst happen.

