


# Adventure Tents

Design Features and Fabrics



# Design features

The table below defines the challenges concerning strain on the tents and compares the differences between Tentipi® Nordic tipis and ordinary dome and tunnel tents. Our solutions are presented in detail over the following two pages.

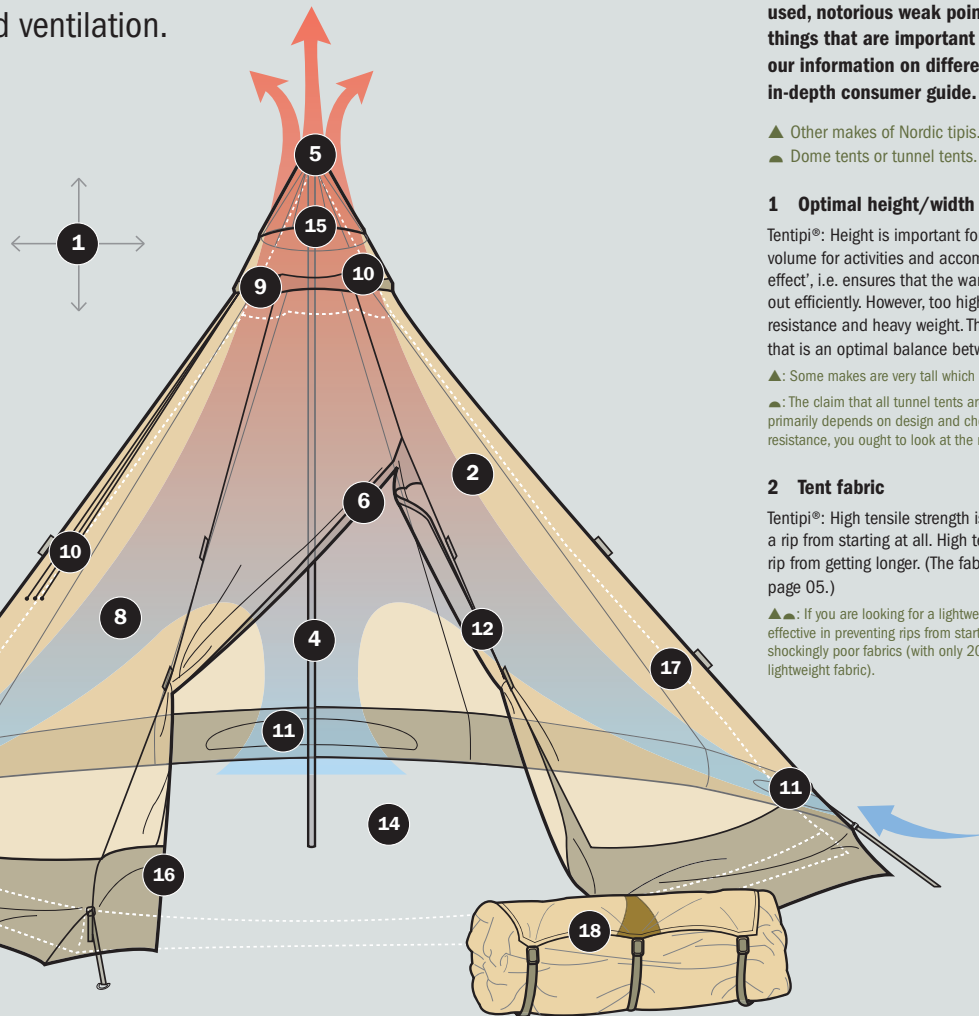
Storm	
Tentipi® tents	Dome and tunnel tents
The storm-durability of a Tentipi® tent is comparable to the durability of a dome or tunnel tent of the same size and price category. However, its behaviour and prerequisites are different, as described below.	
Shape	
Because it is symmetrical, the load on the tent does not change when the wind changes. Most of the tent area that's under wind pressure is near the ground, where the wind speed is lower. Only a small, slim area projects higher than other tents.	When the wind hits the short end, the area under pressure is very small. But, when the wind changes direction and hits the long side, the pressure on the tent increases considerably.
	
Putting up	
Small risk of anything breaking because all the pegs can be properly secured while the fabric is lying flat on the ground. It is not until the tent fabric is tightened that the strain on pegs and the central pole increases.	Dome tents are often difficult to put up in stormy weather and they are easily damaged before the storm cords are tightened. It is easier to secure tunnel tents and get them ready with pre-tightened storm cords before raising them.
Crucial features	
The central pole is crucial. However if it breaks, it is easy to replace or repair it using on-the-spot natural materials.	If the poles break, you must have spare poles with you or a repairs kit. There is a risk of damaging the tent fabric.

Poorly tightened storm cords	
The strain on the main pegs increases, resulting possibly in them being pulled up.	The storm cords must be tight in order to minimise the risk of the poles breaking. If that happens the tent will be unusable. Broken poles can damage the tent fabric.
Poorly secured tent pegs	
If the main pegs loosen, the tent will fold in with little risk of it being damaged.	The storm cords will loosen, see above.

Weight of snow	
Tentipi® tents	Dome and tunnel tents
No manufacturer guarantees that its tents can cope with the weight of snow. Snow that is not continually removed from the tent fabric will rapidly constitute a surprisingly heavy weight on any make of tent.	
Snow that slides down the tent wall and builds up around the bottom will soon become a heavy load on the tent. The storm cords provide considerable support for the tent fabric. However, if the load is heavy enough, something will break, unless the tent pegs loosen first.	Small amounts of sliding-off snow can collect without putting a strain on the fabric. When snow sticks to the fabric, the weight increases rapidly. Then the storm cords give no support because the load of the snow is coming directly from above.

# Design features

A chain is only as strong as its weakest link. The same thing applies to factors that affect safety, strength and ventilation.



## Compare for yourself

We believe that we win even the toughest comparisons and we welcome them with open arms. Knowing what to look for is not so easy however. Every time the symbols are used, notorious weak points are being indicated or other things that are important to consider. This, combined with our information on different features, can be used as an in-depth consumer guide.

- ▲ Other makes of Nordic tipis. Tips on what to look for.
- ▲ Dome tents or tunnel tents. Tips on what to look for.

### 1 Optimal height/width ratio

Tentipi®: Height is important for a number of aspects. Height gives volume for activities and accommodation but it also gives a 'chimney effect', i.e. ensures that the warm smoke fumes from a fire are sucked out efficiently. However, too high a construction means poor wind resistance and heavy weight. That is why Tentipi has chosen a height that is an optimal balance between these aspects.

- ▲: Some makes are very tall which makes them unsuitable for stormy places.
- ▲: The claim that all tunnel tents are storm-resistant is not correct, since that primarily depends on design and choice of material. If you need extreme storm-resistance, you ought to look at the market's most skilful makers of tunnel tents.

### 2 Tent fabric

Tentipi®: High tensile strength is of great importance in preventing a rip from starting at all. High tear strength is crucial in preventing a rip from getting longer. (The fabrics are described in more detail on page 05.)

- ▲▲: If you are looking for a lightweight tent, check whether the design in itself is effective in preventing rips from starting, because many tent manufacturers use shockingly poor fabrics (with only 20 percent of the tear strength of our weakest lightweight fabric).

### 3 Strain-relief for the tent fabric

Tentipi®: Exclusive reinforcement that distributes the strain on the fabric, a crucial factor for both safety and durability. This is especially important when used during snowfall.

- ▲: If there is no reinforcement, there is a great risk of ripping. One critical point is just below the main fastening point that tightens the seam. Just imagine what happens if the tent pegs are moved outwards, increasing the diameter of the tent, and the fabric is stretched hard horizontally between the fastening points.
- ▲: Check the factors that affect stability in a storm, e.g. the poles' material, thickness and construction, and check that the channels for these do not get worn after a while. Also check the storm cord fastenings and the pole sleeves.

### 4 Central pole

Tentipi® (Safir & Zirkon): Advanced construction with optimal design for high strength combined with low weight. The high strength is achieved through hardening the alloy (3 times stronger than ordinary aluminium). Joints use an inserted pipe which is stronger than contraction joints.

Tentipi® (Onyx): Simpler but still hardened design; simpler alloy and contraction joints.

- ▲: The central pole is often unnecessarily heavy. Check that it is hardened and that a simple wooden pole can replace the central pole.
- ▲: The poles are the equivalent function in dome and tunnel tents. They should be of the very best quality; otherwise they will break when you need them the most. Also check that the sleeves which the ends of the poles are put into are sufficiently strong so that holes are not worn in them.

### 5 Cap for central pole

Tentipi®: Braided of strong band. Made to last.

- ▲: Several makes only have a cloth cap which simply does not last in the long run!

### 6 Diagonal zip with cover

Tentipi®: Two important features to minimise leakage:

- Diagonal zip. If the zip is positioned vertically on the fabric, rainwater will gather and go through.
- Cover. Thanks to the diagonal positioning, the zip cover makes the rainwater pass over the zip without penetrating.
- ▲: Check whether YKK zips are used. The most common solution is a vertical zip which often has no cover either!

## 7 Storm cord holders

Tentipi® (Safir & Zirkon): Allow cords to be in place, ready for use, without tangling. In normal weather, there is no need to use the storm cords. In bad weather, they can be easily pulled out from the holders. The cords can also be fastened quickly without any tying.

Tentipi® (Onyx): Does not have this function.

▲: Tentipi® design. This feature seems to be unique for us.

## 8 Tent fabric – ventilation

Tentipi® (coated fabrics): These fabrics do not let out any condensation at all, which makes our specially designed solutions for good ventilation all the more important.

Tentipi® (cotton polyester): The fabric is highly water-repellant and this in combination with good ventilation right through the fabric ensures a pleasant internal climate with minimum condensation. This is especially important in winter.

(Read more about the fabrics on page 05.)

▲▲: For cotton or cotton/polyester tent fabrics, check to see if you can force exhaled air through the fabric. If you cannot do so, the fabric is completely airtight and it will not let out condensation. There is also a big risk that the fabric will start to leak after a while.

## 9 Smoke opening

Tentipi® (Safir & Zirkon): A large smoke opening guarantees that smoke from a fire really is expelled and that there is efficient ventilation on warm days. Jointed, super-strong fibreglass rods are positioned around the smoke opening. They stretch the fabric and hold it tight against the ventilator cap.

Tentipi® (Onyx): The smoke opening is the same size but there are no fibreglass rods.

▲: A common problem is that the smoke opening is too small which results in the smoke lying at a low level.

## 10 Ventilator cap and In-Tent Vent™ system

Tentipi® (Safir & Zirkon): The ventilator cap is permanently attached to the Nordic tipi and closes tight against the fabric. This keeps the tent free from mosquitoes and water even without an inner-tent.

The patented In-Tent Vent™ system allows for maximum control of the tent's internal climate and provides the tent user with a number of advantages. This ventilation management system is one of the design features that make the Tentipi® Adventure Nordic tipi the world's best Nordic tipi and when used together with an inner-tent, it is a tent of world-class supremacy. The advantages include:

- Ventilation on boiling hot summer mornings. You don't even have to get out of your sleeping bag in order to adjust the cap.
- Mosquito-free ventilation on warm summer days and nights, even when not using an inner-tent. Then you just open the small top ventilator cap.
- Stops mosquitoes from coming in as the fire goes out. You close the large cap but continue to let smoke out through the open top ventilator cap.
- Dry and pleasant internal climate thanks to the airing of damp and condensation (caused by, for instance, steam from cooking or from damp clothes).
- Easy fire making. You don't have to go out in the wind or bad weather in order to adjust the cap every time the wind changes direction.
- Maximum heat without troublesome smoke when making a fire in severe cold, thanks to the possibility of making fine adjustments to the smoke opening.

Ventilator cap tighteners allow you to regulate how hard the cap is to be pulled down, before a storm, for instance.

▲▲: Not available, Tentipi holds the patent!

Tentipi® (Onyx): The ventilator cap is permanently attached to the Nordic tipi. Two adjustment points are controlled from inside the tent allowing effective ventilation. This is our simple solution which still benefits from not having to leave the tent to adjust the cap.

▲: Check whether the ventilator cap is included in the price. It is difficult to get rid of smoke efficiently in a Nordic tipi without a cap. Moreover the rain comes in! Check that you don't have to peg down the cords in the ground and that the cap is permanently attached.

▲: Check that there are really large ventilation openings and that they are positioned both top and bottom.

## 11 Large air intakes

Tentipi®: Ventilation is extremely good on warm days thanks to the big smoke opening, the large air intakes fitted with mosquito nets, and the net-fitted door. Every air intake is easily adjustable from inside. The air intake roof can be closed to make sure that no rain gets in and to protect the net when using the Nordic tipi during winter, for example. These are important solutions which make the Tentipi® Adventure Nordic tipi a well-functioning alternative even without an inner-tent.

Tentipi® (Safir): Three air intakes. It is easy to supply a fire with oxygen because the air intakes and the door allow you to let in air from any desired direction, which is practical if the wind turns.

Tentipi® (Zirkon): One air intake opposite the door.

Tentipi® (Onyx): Have no special air intakes. Air comes in through the net in the door or under the fabric. An inner-tent is needed to make the Nordic tipi insect-proof.

▲: Are there air intakes? How many and are they positioned in different directions? Are they protected in winter? Are they big enough to let in enough air for a fire or for cooling the tent?

▲▲: Too dense a net is no good on hot, still days because the natural ventilation will not be strong enough to get through the net. If a high ventilation opening is too small, the airflow will be poor; if there is no high opening, there will be no natural ventilation at all.

## 12 Door fitted with mosquito net

Tentipi®: Improves ventilation. Allows you to have a view even if there are mosquitos. To protect the net, it is tied away when not in use.

▲▲: Check that the protection chain is unbroken. Just because some openings have nets, it is not guaranteed that others have them. Check the strength of all net openings; most mosquito nets are very frail. Can you protect the net when it's not in use? If not, there's a risk it will be broken when you need it.

## 13 Inner-tent

Tentipi®: Tentipi® Adventure Nordic tipis have been designed to function well even without an inner-tent. Nevertheless, an inner-tent does provide a number of advantages.

▲: Check whether the floor and inner-tent are sewn together and whether the floor is completely closeable; otherwise ants will get in. Check that there is sufficient ventilation and that it is mosquito-proof, and that you can make a fire with the inner-tent assembled.

▲: For tents of cotton or cotton/polyester, is there an inner-tent as an optional extra?

## 14 Fire-making facility

Tentipi®: Unique design feature for the Nordic tipi. A fire provides atmosphere, increases safety, dries out damp, gives heat and light, and creates the cosiness that only a Nordic tipi can have.

## 15 Stove and chimney opening

Tentipi® (Safir & Zirkon): One of the main principles behind the Tentipi® Adventure Nordic tipis is versatility – that you should be able to manage with just one tent. That is why it has not been designed using the stove as a starting point, but there is an opening which allows a stove to be easily fitted.

Tentipi® (Onyx): Simpler and less tight solution where the chimney sticks out through the cap.

▲: Check the versatility of the Nordic tipi. Can a stove be fitted? Is there enough insulation between the chimney and the fabric? Is there enough rain protection around the chimney? Can you make an open fire?

## 16 Reinforced edging

Tentipi® (Safir & Zirkon): Reinforcement, 50 cm high. If turned inwards, the Nordic tipi can easily be sealed from draught using ones own packs. If turned outwards, it can be sealed using stones, earth or snow. (Air is let in through the desired air intake or through the door.) This material is even stronger than the main fabric, which further increases the total length of life and affects the total level of safety.

Tentipi® (Onyx): Does not have extra-reinforced fabric. However the length of the fabric is the same.

▲: Check the strength. Some makes use fabric of the same colour as ours but that does not mean the fabric is the same. Most do not have any reinforcements.

## 17 Fastenings for accessories

Fully equipped with fastenings for accessories such as inner pockets and drying rail, for stretching the floor, for the reliable and simple joining-up of floor and inner-tent at the bottom.

▲: Check what accessories are available and how they work. Check that the accessories fit both old and new models

## 18 Compression bag

Tentipi® (Safir & Zirkon): Unique Tentipi® design. Facilitates packing because you can pack in a big bag which is then compressed using straps. The folds are hidden under the cover. This is especially useful in winter when icy fabrics tend to take up more space.

Tentipi® (Zirkon 15cp): Combined compression bag (see above) and rucksack.

Tentipi® (Onyx): Has an ordinary packing bag.

## 19 Total weight

Tentipi®: It is not difficult to make ultra-light tents. The hard thing is to make them both light and strong and to know when you should choose a stronger, heavier material/design in order to get a product that really lives up to demands. At the same time, we believe that a manufacturer must state how much weight will actually have to be carried.

▲: Does the weight include fabric, ventilator cap, packing bag, central pole and pegs? Analyse the fabrics and other components and decide if they will live up to the stresses and strains caused by challenging weather conditions etc. Many manufacturers do not succeed with the tough challenge of finding a good balance between weight and strength.

# Fabrics

**The perfect tent fabric would be weightless, let all condensation pass through, be completely waterproof and super-strong.**

Of course, such a fabric will never be made.

Different tent manufacturers use many different tent fabrics. Often the fabrics look alike when they are new, but the differences are quite substantial. A poor quality tent will let you down just when you need it the most.

Tent fabrics intended for all-year-round usage must meet up to rigorous demands.

## The sun's UV-rays

Our coated fabrics are UV-stabilised. Our cp fabric is a 50/50 cotton-polyester blend which is considerably more resistant to sunlight compared with a similar type of cotton fabric. Even so, do not expose the fabric to sunlight unnecessarily since cotton and most types of nylon (even if UV-stabilised) are weakened by the sun's ultraviolet light.

## Tearing

Everyone knows how difficult it is to punch a hole in a crisp bag, and how easily the hole extends once it's made. The same thing happens with low quality tent fabrics. Quality fabrics however, must not tear further even in the event of a rip. We have four different ways of solving this problem.

1. The impregnated cp fabrics have a 50 percent polyester mix which substantially strengthens the fabric.
2. A silicone coating increases the strength of the fabric 2-3 times compared with other coated fabrics.
3. Our very lightest fabrics are constructed using a ripstop technique. This means that thicker threads are woven into the fabric in a chequered pattern. Any tears or holes are stopped by these reinforcement threads but without making the fabric too heavy.
4. The fibre's material and quality play an important role. Less expensive cotton fabrics use short fibres which give poor strength. We use fabrics with longer cotton fibres. For the coated fabric used for the Safir light, we have chosen high-tenacity polyamide. This type of nylon has a different

molecule structure, which makes the fibre more than twice as strong as ordinary nylon.

Tear strength varies greatly between the tents available on the market. In fact, it is quite common for some manufacturers to use fabrics that have only one sixth of the tear strength of our simplest fabrics.

## Rain

There are two ways of making a fabric waterproof.

1. The fabric is impregnated with an agent that increases surface tension which in turn prevents water droplets from penetrating the fabric.
2. The fabric is given a coating which is completely waterproof. The quality of this treatment is measured in how well the coating binds with the fabric's fibres. Even really cheap fabrics can be relatively waterproof when new but after being used for a time, the difference becomes apparent.

## Condensation

Impregnated fabrics breathe and let out condensation straight through the fabric. Coated fabrics do not.

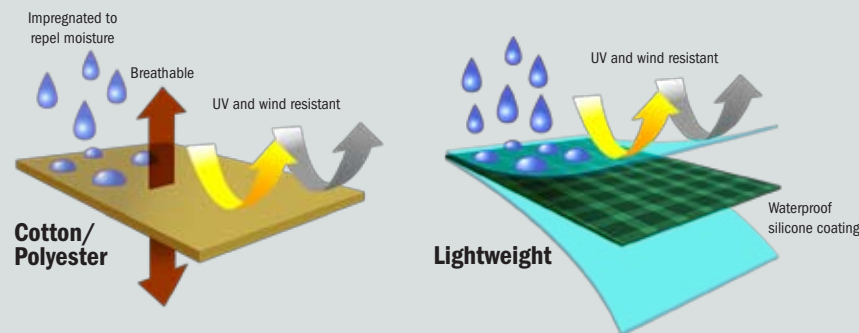
If you want to buy a Nordic tipi of lightweight material and without an inner-tent, you will manage quite well in some circumstances. For instance, in the forest where the wind won't shake the fabric, condensation will run easily down the fabric to the ground due to the slanted construction. Condensation is not normally a problem in dry weather either. However, we always recommend using the inner-tent.

## Summary

Considering the complex nature of the practical and weather requirements placed on a tent, we have chosen fabrics that best meet these various requirements and needs.

## Fabric guarantee

12-month guarantee for defects in materials. Guaranteed water-resistant for 12 months. Guarantee does not apply for damage arising through accidents, incorrect care or careless handling. Normal wear and tear or damage caused by the sun's ultraviolet radiation is not covered by the guarantee.



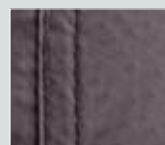
### Cotpolmex C

Highly breathable and really strong cotton/polyester fly fabric. The breathing feature gives a much better internal atmosphere than most tents. The tightly woven fabric and high class impregnation gives high water repellency. 275 g/m<sup>2</sup>.



### Cotpolmex P

Highly breathable and really strong cotton/polyester fly fabric - as Cotpolmex C, but with better shape stability and improved aesthetic appeal. To our knowledge, the finest cotton/polyester fabric available globally. 275 g/m<sup>2</sup>.



### Traillix B

One side PU coated lightweight fly fabric carefully selected to be waterproof after prolonged use. 95 g/m<sup>2</sup>.



### Traillix C

Ripstop polyamide, UV-protected, double-sided silicone-coated fly fabric. A carefully chosen, light and very fine standard fabric. 60 g/m<sup>2</sup>.



### Traillix P

One of the absolute strongest and finest lightweight fly fabrics available on the tent market. Very light, waterproof super fabric for light hiking tents. Ripstop reinforced, silicone-coated on both sides and UV-protected. Manufactured in high tenacity Nylon 66. 62 g/m<sup>2</sup>.



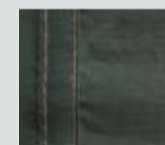
### Innerlix C

Ultra-light, teflon impregnated, and ripstop reinforced inner-tent fabric. Breathes out condensation but also prevents condensation from the tent from coming in. Made of Nylon 6. 42 g/m<sup>2</sup>.



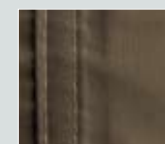
### Innerlix P

Highest class of inner-tent fabric. As Innerlix C, but lighter and made of high tenacity Nylon 66. 35 g/m<sup>2</sup>.



### Flookix C

Lightweight floor fabric made specifically to resist wear and penetration. For this purpose, the fabric has a relatively thick polyurethane coating. 100 g/m<sup>2</sup>.



### Flookix P

Lightweight tent floor. As Flookix C, but with higher strength and a special kind of PU coating that prevents water vapour from coming through the floor. Made of high tenacity Nylon 66. 115 g/m<sup>2</sup>.



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