Technical Packs
Fine Tune Your Fit

Measuring the torso

Why is torso length important?
The most important consideration when buying a backpack is your torso length – the measurement from the base of your neck to the top of your hip bone. If we’re getting technical, it’s the distance from the top of your iliac crest to your C7 vertebra. No matter what size of load you’re carrying, you want a backpack that comfortably fits your frame. And your torso length, not your height, determines which backpack suits you most.

How to measure torso length.
Lean your head forward and locate the most prominent bone at the base of your neck. This is your C7 vertebra and the top of your torso.

Put your hands on your hips so that your index fingers are in line with the top of the hip bone and pointing towards your belly button, and your thumbs are pointing towards your spine. Draw an imaginary line between your thumbs and follow the line to where it crosses your spine. This marks the bottom of your torso. The top of your hip bone is also called your iliac crest. It’s the bone that supports your backpack’s weight when the hipbelt wraps around your waist. Stand up straight and get a friend to measure the distance from your C7 to the imaginary line between your thumbs. This is your torso measurement.

Measuring the Hips

Why is hip size important?
When carrying large loads over long distances, it’s much less tiring to carry the weight on your hips than your shoulders. In fact, approximately 80% of a backpack’s load should be supported by your hips. So it’s really important to find a hipbelt that fits properly.

How to measure your hip size.
Grab your flexible measuring tape and wrap it around the top of your hips, not your waist. This is the same spot where your thumb and index fingers will rest when measuring your torso length.
Fine tuning your fit

Once you have determined your torso and hipbelt sizing and adjusted your pack, it’s important to fine tune your fit. To begin, loosen all the straps on the harness and hipbelt and load the pack with 5-10kg/15-20lbs of evenly distributed weight. Then follow the steps below to fully optimize your fit:

1. **Hipbelt** - Place the backpack on your back and position the top of the hip pad so that it’s about 3cm/1” above your iliac crest (top of your hipbone). Then connect your hipbelt buckle and tighten the webbing. The bulk of the pack weight should now be supported by the hipbelt.
   - **Fit tip** - The padded section should wrap around and cover the front of your hipbones but there should be at least 3cm/1” of clearance on either side of the central hipbelt buckle.

2. **Shoulder straps** - After the hipbelt has been adjusted, pull down and back on the straps at the bottom of the shoulder straps. This should pull the pack in towards your body. The place where the top of your shoulder straps anchor into the backpanel should be 3-5cms/1-2” below the top of your shoulders.

3. **Load lifters** - Your load lifter straps start at the top of your shoulder straps and connect with the pack body above your shoulders. Pull on the straps so that they are taut, but be careful not to over tighten as this will result in a gap forming between your shoulders and your shoulder straps.
   - **Fit tip** - For larger packs, your load lifter straps should ideally form a 45-60 degree angle between your shoulder straps and the body of the pack. For packs with a volume of less than 50L, because the torso height of the backpack is shorter, your load lifter straps may come straight off of your shoulders or at a negative angle and connect to your pack body. In this instance your load lifters act more like compression straps.

4. **Sternum strap** - Find your sternum strap between your shoulder straps and adjust it up or down to a comfortable spot on your chest, then connect the buckle and tighten so the sternum strap is snug.

5. **Load stabilizer straps** - Some of Thule’s larger technical backpacks are equipped with load stabilizer straps that connect the hipbelt to the pack body. To better stabilize the load, pull the load stabilizer straps forward towards the front of your body.

How to load your backpack

A well-packed backpack will feel more balanced, stable and comfortable – so you are free to enjoy your experience on the trail. Here are some tips on how to best pack your backpack.

1. Place your heaviest items, like your food, stove and water in the middle of the pack, close to your spine. This keeps most of the weight of the pack, its center of gravity, hugged close to the body. If heavy items are packed too high, the load may feel too unbalanced and tippy. If too low, the pack can feel saggy.

2. Lighter items such as your sleeping bag, rainfly and clothes should be packed above, below and behind the heavy items.

3. Rain jackets, headlamps, snacks and other “must have” items should be packed on the top or in the outer pockets of the pack.