

MISPERCEPTIONS ABOUT THE NANO 23

Climbers at every level have latched on to the advantages of climbing with a lighter rack. For carabiners, the Nano 23 has set the industry standard. Misunderstandings about factors like size, clipability and strength are inevitable when a product establishes a new paradigm like the Nano has done for carabiners. Here, we address these misperceptions.

IS IT REALLY THE LIGHTEST? Yes – It weighs 23 grams, 0.81 ounces. The Nano 23 is the lightest carabiner in the world that is certified for climbing (the Nano 23 meets both CE0123 and UIAA standards).

IS IT TOO SMALL? No – The Nano 23 excels at the functions it was designed for. These bad boys rack individual cams with minimal weight and the low profile of the carabiner reduces the space allotment for each piece on gear loops so you can carry more gear ... woohoo! The Nano 23 also excels on the bolt/gear end of sling draws where they wiggle into tight spots to snag webbing and best of all they glide in and out of chain links like butter making them perfect for a cleaning rig. Finally, the Nano 23 is great for carrying accessories like tag lines, shells or cameras because unlike accessory carabiners, the Nano 23 is rated for climbing and will function perfectly as a back up/emergency/bail biner. One concern we hear a lot (especially from climbers who have not tried the Nano 23) is that the Nano 23 might be too small for big hands. Hans Florine is 6'4" and raved about the Nano 23's he racked with for his new speed record on The Nose. Matt Samet from Climbing Magazine praises the clipping action for big and small hands alike in his review in issue #261. CAMP Rocklete Rob Pizem (also over 6 foot) clips Nano 23's on lead in Rifle, a notoriously overhanging climbing area known for desperate clips. While larger, even slightly heavier carabiners with looser gate action will still be most climbers' choice for overhanging routes, we have found that clipping the Nano 23 on the vertical and less-than-vertical climbs is as easy as clipping any other carabiner and far easier than many. The main difference is that before you placed the gear, you were carrying up to half the weight of a standard carabiner.



IS IT STRONG ENOUGH? Yes – Note: because we are discussing a practical safety concern, we will take the time to answer this question in full detail. With the dynamic properties of climbing equipment, particularly when used in systems that cumulatively absorb energy (i.e. multiple pieces of gear, dynamic ropes and webbing, etc), generating 20kN of force on a carabiner is next to impossible. To do so would require a long Factor 2 fall by a 200 pound person on a static rope. Even in this situation, the carabiner would likely remain intact, but the climber would almost surely be seriously injured. For the most part, climbing equipment is overbuilt and the Nano 23 is no exception. Another point to consider when talking about carabiner strength ratings is gate flutter. To understand gate flutter, take a standard gate carabiner and whack the spine (opposite the gate) against the palm of your hand. You probably heard a small metallic snap in addition to the sound of the carabiner hitting your hand. This is gate flutter. The gate actually opened marginally and then snapped shut. Gate flutter results from looser gate tension. Generally speaking wire gates are less prone to gate flutter than carabiners with standard gates. By combining a shorter gate length with higher gate tension, the Nano 23 essentially eliminates gate flutter.

Why is gate flutter important? Every carabiner has two major axis ratings: closed gate (usually 20+ kN) and open gate (usually 7+ kN). When a gate flutters, the carabiner is momentarily caught in its open position. Gate flutter usually occurs when the rope engages a carabiner (specifically the rope end carabiner on the last piece of pro in the system) and snaps the carabiner into the wall as a result of the swing generated by the falling body. If the rope engages the carabiner at the moment gate flutter occurs, the carabiner is really only as strong as the open gate rating.

Now back to question at hand ... is the Nano 23 strong enough? To generate 20kN of force on a carabiner would require a long Factor 2 fall by a 200 pound person on a static rope. Long falls often involve dramatic swings which are more likely to produce a situation where gate flutter can become an issue. We recommend against Factor 2 falls, especially long Factor 2 falls. We also recommend strongly against climbing on a static rope when a fall is a possibility. With this in mind, we can safely assert that the Nano 23 rated at 20kN is certainly strong enough.

CONCLUSION. The Nano 23 is one of the best-selling carabiners in the world for a reason. It simply accomplishes what other biners have not been able to achieve. It shaves a ton of weight from the rack while maintaining dimensions and specifications that make it remarkably versatile. At a minimum, every climber should have two Nanos on their rack for clipping chains on sport routes. Trad climbers should have a lot more. If you are like us, you have every cam racked on Nanos (finger sizes on gray, hand sizes on bronze, OW sizes on orange) and every one of your

alpine draws is fixed with a Nano on the bolt/gear end. Since we climb in the desert and prefer long routes, this means our racks hold up to 60 Nanos for any given trip. That's a weight savings of at least 2 pounds compared with other popular racking biners!