

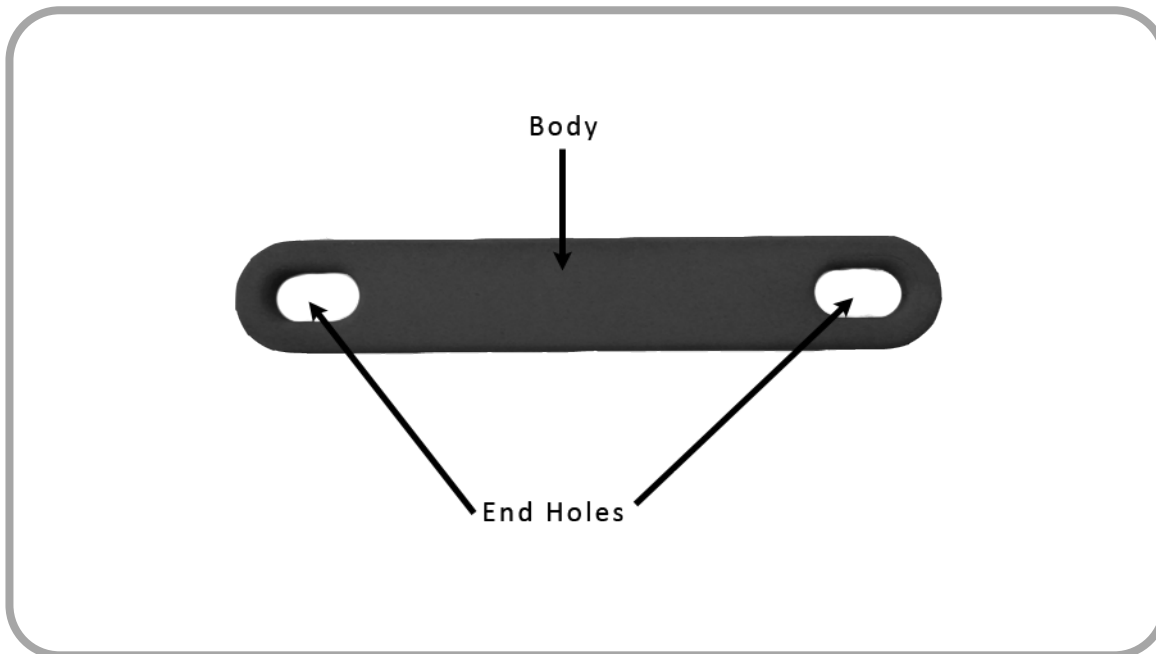


Smooth Operator



Retrievable Anchor System for Canyoneering

- Made in USA •Polycarbonate •DIM: 7.75 x 1.25 x 0.375 Inches •Weight: 1.9 Ounces / 56 grams
- Rope Diameter: 6mm - 11mm •Weight: 1.9 Ounces / 56 grams



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WARNING - FAILURE TO HEED ANY OF THESE WARNINGS MAY RESULT IN SEVERE INJURY OR DEATH.

This BG-Gear product is a canyoneering retrievable anchor system for canyoneering use only and must be used in accordance with the product's instructions. Activities involving the use of this product are inherently dangerous and present the risk of injury or death to you and/or others and cannot be made safe. It is the user's obligation to be aware of and use all relevant safety procedures. Before using this product, the user must read and understand all instructions and warnings accompanying this product and become familiar with the capabilities and limitations of this product and associated equipment. You must understand and accept the risks involved with the use of this product. If you are not sure how to use this product properly, seek professional guidance. You are responsible for your own actions and decisions.



BG-Gear products must be used in accordance with the product's instructions and only for the specified purpose it was designed for. Any person using BG-Gear products in any manner is responsible for learning proper techniques, assumes all risk, and accepts full and complete responsibility for any and all damages, loss or injury of any kind to you and/or others, including death, which may result from the use or misuse of any BG-Gear products.

Instructions accompanying BG-Gear products are not a substitute for qualified personal instruction. Any person using BG-Gear products is responsible for obtaining qualified instruction on the proper use, techniques and limitations associated with the product. Before using this product you must be familiar with rescue techniques, so rescue may be immediately carried out in case of difficulties encountered while using this product; this implies adequate training in the necessary rescue techniques.

BG-Gear is not responsible for any direct, indirect or accidental consequences, damages, injury, or death resulting from use or misuse of this product. Any litigation involving this product will be in Nevada State pursuant to Nevada law. Inspect all equipment before each use and destroy any gear that is damaged, worn or unsafe for any reason.

The distributor-wholesaler-retailer-reseller is responsible for providing this warning information to the customer.

Smooth Operator - WARNINGS

The Smooth Operator requires advanced skills and judgment requiring constant attention to detail with every use. As with any anchoring system, there is always potential for failure and human error which can result in injury or death to you and or others. With proper use the last person will take the highest risk. Before using the device in the field or at height, test the device in a safe and controlled environment.

The Smooth Operator is not designed to withstand shock loads. Avoid situations where the Smooth Operator can experience a shock load resulting from a fall. Always rappel smoothly when using the Smooth Operator. Do not ascend on a rope anchored with a Smooth Operator. The Smooth Operator is not designed to withstand the forces generated by ascending.

The Smooth Operator can be a useful anchoring tool, but may not be the best choice for every situation. It is the user's responsibility to assess the situation and decide if the Smooth Operator is the best anchoring method. Do not use the Smooth Operator in flowing water or in high winds. Always use the Smooth Operator with two or more people. Never use the Smooth Operator with a pull line that weighs more than 8 pounds, including the weight of water absorption or anything attached to the pull line.

CARE - CLEANING - MAINTENANCE

Your Smooth Operator needs no regular cleaning or maintenance, but if you take pride in keeping your Smooth Operator clean, use only water to clean your Smooth Operator. Keep all chemicals away from your Smooth Operator (this includes sunscreens). Acetone (commonly used as nail polish remover) is one of the chemicals you definitely need to keep away from your Smooth Operator. Acetone can weaken polycarbonate (Lexan) on contact to the point it will snap easily by hand. Store the Smooth Operator in a cool place away from direct sunlight.

LIFE SPAN

Retire, destroy and replace your Smooth Operator every 3 years. The Smooth Operator is made from polycarbonate (Lexan) a very strong clear plastic. Acrylic (Plexiglas) is also a clear plastic but is an unsafe material for use as a Smooth Operator. When polycarbonate is used in the construction of outdoor signs, manufacturers suggest a life span of 5 to 10 years due to UV exposure. The Smooth Operator will see much less sunlight than an outdoor sign.

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INSPECTION / RETIREMENT

Each time you use the Smooth Operator, wipe clean and visually inspect it. Retire the Smooth Operator if there are signs of cracking or deformation. Scratches on the outer surface of the Smooth Operator are part of normal wear and tear and do not compromise the integrity of the device. While inspecting your Smooth Operator, look for signs of stress on the inside of the material. Internal signs of stress will show as white areas on the inside of the material (not the outer surface). Retire the Smooth Operator if there is severe chipping or deep gouges.

INSTRUCTIONS FOR USE

The Smooth Operator is an anchor system which can be retrieved after rappelling, leaving nothing behind. Trees, rocks, arches, existing anchors and other creative anchor options can be used. The Smooth Operator requires advanced skills and judgment requiring constant attention to detail. Some of the possible advantages of using the Smooth Operator are: Anchors can be set 20, 30 or more feet back from the edge of a rappel, Reduced consumption of webbing and rap rings, rope grooves can be minimized, can sometimes be set up faster than traditional anchors, adds options for ghosting a canyon (leaving no trace). Nomenclature (fig. 1a, fig. 1b and fig. 1c).

1 - SELECT AN ANCHOR

Select a secure anchor which will allow the rappel rope to be freely and easily pulled around it. Pass the rope around the chosen anchor and perform a test pull to confirm the rope can be easily pulled around the anchor (fig.2). Avoid placing the rope in a V shaped notch which is a common feature that can cause a rope to become stuck (fig. 3).

In cases where the rope cannot be freely pulled around the anchor or where there are concerns of rope pull damaging a tree or other object, webbing can be used and left on the anchor. To use webbing as part of the system, tie the webbing to the anchor then pass the rappel rope through the webbing instead of around the anchor (fig. 4).

To use the Smooth Operator with anchors that require webbing (deadman, cairn, or knot chock anchors) pass the rappel rope through the webbing on the anchor (fig. 4). When webbing is used on the anchor, no quick link is required since only a short section of rope will be pulled through the webbing during the pull.

2 - INSPECT THE PULL PATH

Inspect the area from the anchor all the way to the bottom of the rappel. Both the rappel rope and the pull line will need to pull cleanly to the bottom of the rappel. Vegetation, rocks, cracks, choke stones or other obstructions which may tangle or stick the rappel rope, pull line or Smooth Operator during pull should be avoided.

3 - CHOOSE GOOD LOCATION FOR STONE KNOT

The stone knot should be placed close to the anchor to reduce the amount of rope pulled around the anchor when the knot is released. The top exiting strands of the stone knot should maintain an angle of less than 90 degrees (fig. 5). If the anchor is of large diameter and creates an angle greater than 90 degrees in the top exiting strands (fig. 6), re-position the stone knot farther from the anchor to reduce the angle to less than 90 degrees.

Avoid rigging the Smooth Operator next to a wall or other solid feature (fig. 7). Rigging away from objects will reduce the risk of the Smooth Operator banging into things and being pushed into or out of the stone knot when the rope is moved during rappel. If possible rig the Smooth Operator and stone knot in free space or resting on the ground.

When possible position the stone knot where it can easily be seen from the top of the rappel to allow each person to view and evaluate the stone knot and Smooth Operator as they begin the rappel. This is especially important for the last person on rappel.

4 - TIE A STONE KNOT AND INSERT THE SMOOTH OPERATOR

There are many variations of the stone knot. The version used with the Smooth Operator is the Overhand Stone Knot tied in the UP position (fig. 1c). ALWAYS use the Overhand Stone Knot tied in the UP position with the Smooth Operator. The UP Position (or upward version) refers to which way the loop is folded (UP toward or DOWN away from the anchor) when tying the knot. When the stone knot is tied in the UP Position, the knot is easier to cinch into the proper configuration with the center strands straight / flat. With the center strands of the stone knot straight / flat, the stone knot releases reliably.

To tie the Overhand Stone Knot in the UP position, grab both ropes and make a loop (fig. 8). Fold the loop UP toward the anchor so the two strands above the knot can be pulled through the loop (fig. 09). Pull the upper strands through the loop then insert the Smooth Operator under the strands so the Smooth Operator is inside the stone knot (fig. 10). Cinch down the stone knot very tightly over the Smooth Operator. After the knot has been cinched, leave a tail of at least 18 inches (fig. 10).

Caution: When cinching the knot down it is **very important to keep the center strands of the stone knot as straight / flat as possible** while allowing the outer strands to wrap around the Smooth Operator (fig. 11). If the center strands of the stone knot are allowed to bend around the Smooth Operator (fig. 14), the center two strands may form a bight after the Smooth Operator is removed (fig. 15). As the rope is pulled the bight may get caught in the knot (fig. 16) making it difficult or impossible to retrieve the rope.

If the stone knot is tied properly (fig. 11) with the center strands kept straight / flat and the outer strands bending around the Smooth Operator, the stone knot releases and falls apart easily. After the Smooth Operator has been removed from a properly tied stone knot the rope will have only a couple of bends left in it (fig. 12). Very little force on the rope is required to straighten the loops and completely dismantle the stone knot (fig. 13).

If the stone knot looks twist free and tied clean then it has one twist in it. The supplemental information shows why the UP position is recommended and how to tie the stone knot free of twists. Take the time to learn the deceptively tricky art of tying the stone knot with no twists. This can be difficult and requires practice.

5 - CONNECT THE SAFETY CARABINERS

Clip a carabiner into each end hole of the Smooth Operator, then clip each carabiner to one of the top exiting strands of the stone knot and lock both carabiners (fig. 17). With both safety carabiners in place, the Smooth Operator cannot be pulled out of the stone knot.

6 - ATTACH PULL LINE TO SMOOTH OPERATOR

Tie a pull line to one of the end holes using a bowline knot. The elongated end holes allow a pull line to be attached with the safety carabiners installed (fig. 18).

Warning: Do not use a pull line weighing more than 8 pounds, the lighter the pull line the better. Rappel ropes can be used as pull lines for short drops, smaller diameter pull lines like 1/8 inch Dyneema line can be used on long drops. When using the light weight 1/8 inch Dyneema as a pull line **the bowline knot is required along with the addition of two half hitches to back up the bowline knot.** Other knots have been known to slip out of Dyneema since it is ultra slick. Always cinch the bowline knot tightly and leave at least 4 inches of tail after the knot has been tied. **Caution:** Wet and sandy conditions add to the weight of the rope. Heavy winds can pull on ropes and pull lines.

7 - DEPLOY THE RAPPEL ROPE DOWN

Throw the rappel rope over the drop after installing both safety carabiners and the pull line has been attached. The rappel rope must reach the bottom of the rappel.

8 - ADD A BACKUP IF DESIRED

If the strength of the chosen anchor is in question, a backup anchor should be set up to test the main anchor. To add a backup to the Smooth Operator system, tie an alpine butterfly knot in the rappel rope just below the stone knot. Clip a separate rope to the alpine butterfly loop and tie the separate rope to different secure anchor (fig. 19). The last person to rappel will need to dismantle the backup system and untie the alpine butterfly knot before rappelling down.

Set the length of the backup rope with as little slack as possible while still not bearing any of the load of the rappel line. If the backup rope is too tight, it will share the load with the rappel rope and will not truly test the main anchor. If the backup rope has too much slack, the backup anchor will be severely shock loaded if the main anchor fails.

9 - RAPPEL DOWN – (except the last two people)

As the first person starts the rappel, those at the top can watch the stone knot and Smooth Operator. Watch to see if the Smooth Operator bangs into things or if it twists. Banging into things could force the Smooth Operator into an unsafe configuration. If the System twists a lot the rappel rope or pull line may tangle during the pull down. If you do not feel comfortable with the way the system behaves, rearrange the system to resolve the problem.

10 - PULL LINE DEPLOYMENT

The pull line must be neatly deployed **before** the last person rappels and while the safety carabiners are installed. The pull line should be thrown or carried down the rappel by the next to last person. If the rappel is convoluted with stages, vegetation, choke stones or other obstructions - consider carrying the pull line down the rappel. The next-to-last person should deploy the pull line (fig. 20). Deploying the pull line must be done before the last person rappels.

11 - LAST PERSON DOWN AND PULL LINE MANAGEMENT

Before rappelling the last person must remove both safety carabiners, ensure the Smooth Operator is centered in the stone knot and ensure the tail of the stone knot and the pull line are unobstructed and tangle free (fig. 21). **Caution:** If the safety carabiners are not removed, the system will not release.

While the last person is rappelling the pull line should not be moved or pulled on. Someone at the bottom of the rappel should tend the pull line and carefully hold it out of the way of the rappeller (fig. 22).

Warning: The risk of system failure is greatest while the last person is on rappel. After the safety carabiners are removed, there is potential for the Smooth Operator to be accidentally pulled out of the stone knot. The moment of greatest risk is while the last person is on rappel and the rope becomes un-weighted during the rappel. While rappelling last, pay close attention to situations where the rope will become un-weighted. Standing on ledges, crossing potholes, crossing horizontal sections during rappel will cause the rope to become un-weighted. While the rope is not weighted, use smooth movements and avoid pulling on the pull line or create significant movement in the rappel rope at the top up by the Smooth Operator. **DO NOT** move the pull line while the last person is on rappel (fig. 22).

12 - PULL DOWN THE SYSTEM

Be sure everyone is down and the rappel rope is un-weighted (it is very difficult to release the system when there is weight on the rope). Pull the pull line slowly increasing the force until the Smooth Operator pops out of the stone knot. When the Smooth Operator pulls free it will sometimes fly out of the knot and over the rappel sailing to the bottom (fig. 23). Don't look up - no one likes a Smooth Operator in the eye. The pull line will fall separately from the rappel rope.

Pull the rappel rope (fig. 24). The rappel rope should pull very easily since only a few feet of rope need be pulled around the anchor.

13 – TYING THE STONE KNOT TWIST-FREE

While not absolutely necessary, tying the stone knot twist-free can reduce the risk of the rope sticking in some situations. It is good practice to always tie the stone knot so it will be free of twists after the Smooth Operator has been removed. With most knots it is good practice to dress the knot well and have no extra twisting inside the knot. The stone knot, when used with the Smooth Operator, is counter intuitive in regards to rope twists. If you dress the stone knot well and make sure there are no twists within the knot, then you **WILL** have a 360 degree twist in the rope after the Smooth Operator has been removed and the stone knot releases.

There are circumstances where a single twist in the rope can cause the rope to become difficult or impossible to pull down. It is important to know how to tie the stone knot so it will not be twisted when released. Making a habit of tying the stone knot twist free may serve you well. For information on how to tie the stone knot twist-free, refer to videos on BG Gear.com

