

How To: User Guide

How To: Set Up

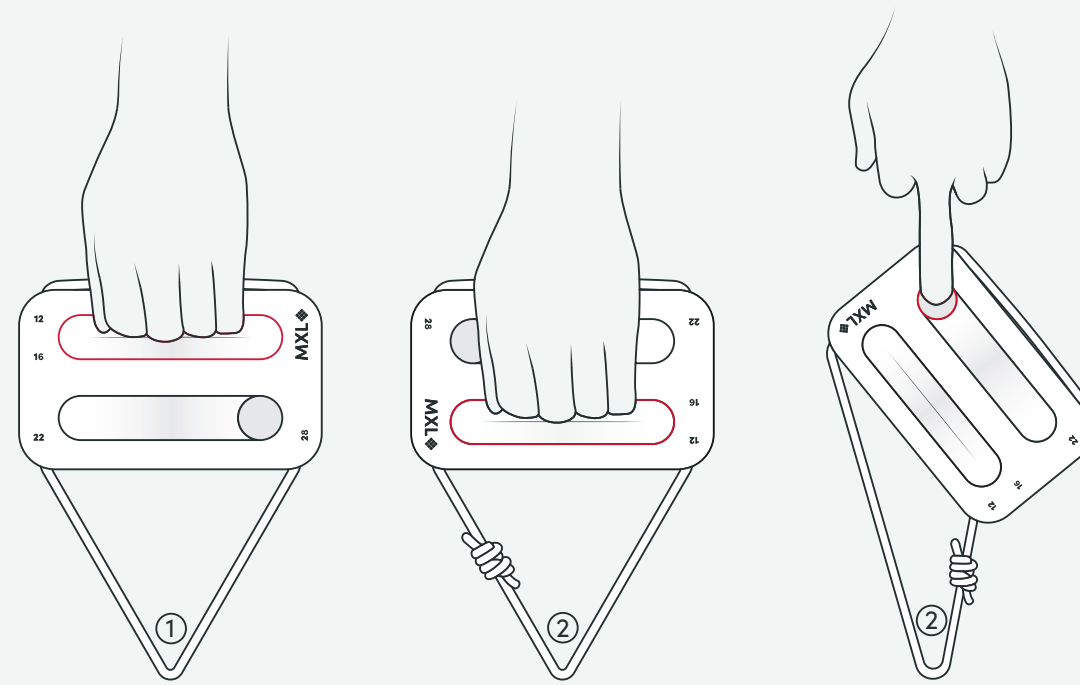
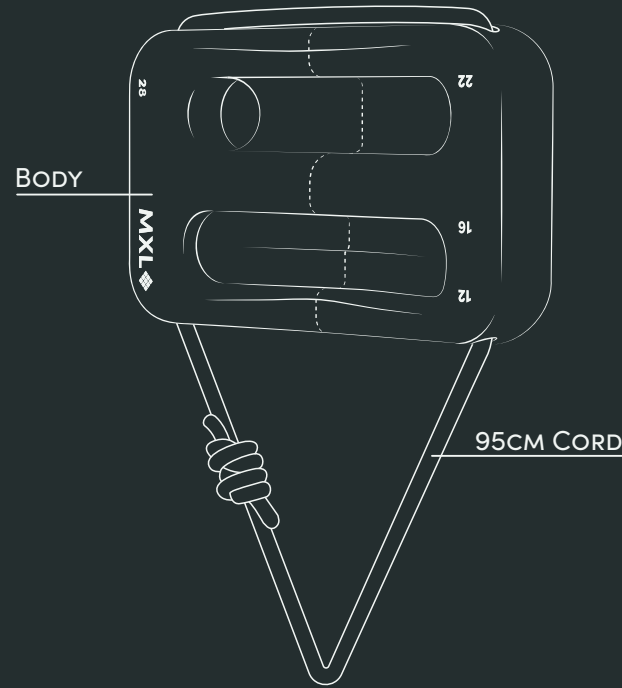
How To: Grip Form

How To: Lifting Form

How To: Systems

How To: Training

How To: Testing



How To: Grip

Whether climbing inside on resin or outdoors on rock, a wide variety of grip positions are required. Hand positions depend on the size, shape and position of the hold; as well as the amount of force required. On any given route you may need to use a combination of all of these positions. It is therefore important to properly adapt our bodies for them through training.

Less frequently used and unfamiliar grip types are inherently more risky to train, but not training them at all leaves us under prepared to utilise them while climbing. Instead we should use progressive training in a controlled style to make the necessary adaptations to properly apply our strength when we need it. If you've never used these grip positions before, the best place to start is on a hangboard well below your maximum effort. Once familiar you

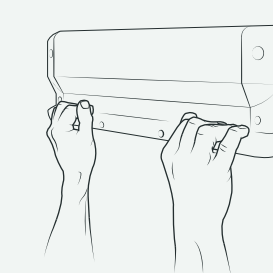
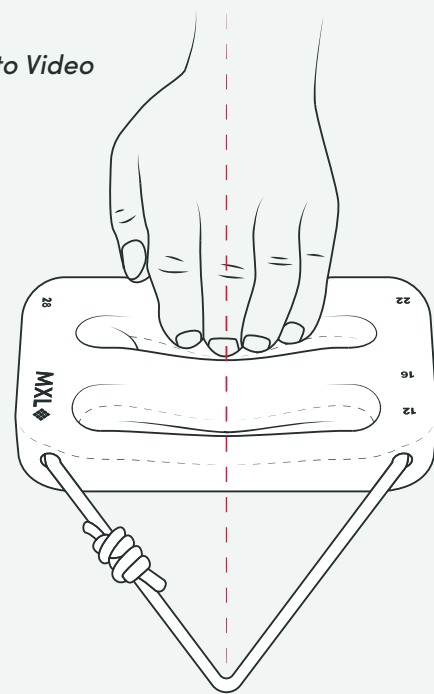
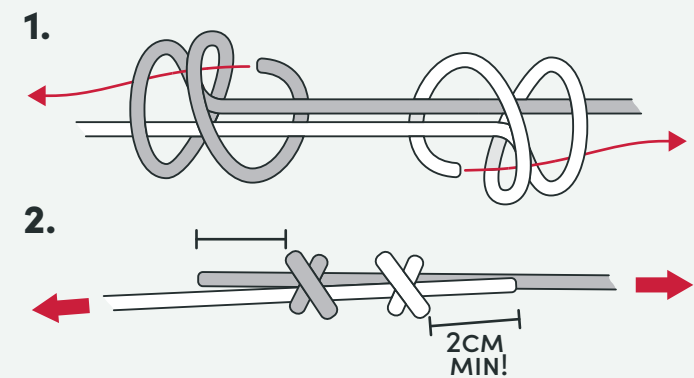
should progressively increase the load, with small increments, over a number of sessions.

Half Crimp and Open 4 are typically the most popular grip positions due to their versatility and force output. For most climbers, Open 3 and Full Crimp tend to be used less frequently, but this varies due to rock type and anatomy. You should consider this when developing your own training plans.



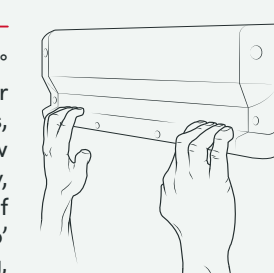
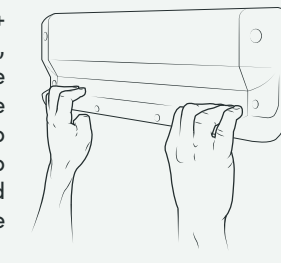
How To: Set Up

It's time to tie in! We've left it to you to put the final touch on your new training tool, this allows us to better pack your product while reducing its box size. Less wasted space and fewer damaged units subsequently improves upon our environmental impact.



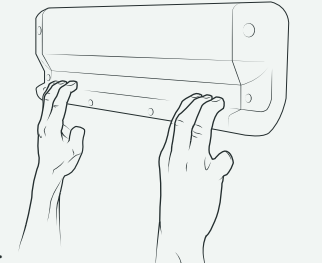
Half Crimp — No more than a 90° bend at the first finger joint in all four fingers, without the thumb. Allow the pinky to sit naturally, turning the palm if necessary. The 'go to' grip position for training, for its direct load to the finger flexors.

Full Crimp — All four fingers with a 90°+ bend in your PIP joints, the thumb wraps over the index finger to utilise the thumb flexors. Thought to apply the highest load to the finger pulleys, used effectively it can produce very high forces.



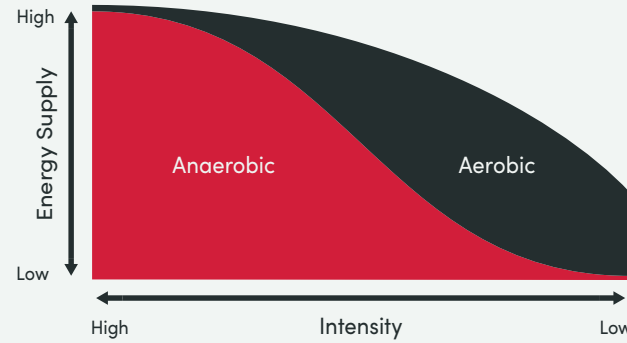
Open 4 — Similar to the half crimp, but the index finger is more extended for a more passive load, requiring less effort from the finger flexors. You may need to turn the palm further to fully extend the index finger while still using the pinky.

Drag 3 — Front three fingers only, in an extended (straight) position. As with Open 4, this is a more passive load and thought to be a more efficient way to hang from edges. This translates particularly well to pockets.



How To: Systems

The different energy systems in our forearms enable us to exert force with our fingers in a range of climbing scenarios. The anaerobic systems provide energy for high intensity efforts whilst the aerobic system contributes to energy production for those of a lower intensity. The aerobic system also allows us to recover between more intense efforts where we are relying on our anaerobic systems. Well trained aerobic and anaerobic systems compliment each other and allow us to perform across a range of intensities and durations.



We can use a range of hangboarding protocols across the intensity duration spectrum to train the different energy systems. Compared to training these energy systems through climbing, hangboarding minimises the technical aspect and allows us to focus on physiological adaptations in the forearm. To maximise the transfer of these adaptations to performance, these energy systems should also be trained through targeted climbing sessions.

LEARN MORE ON OUR BLOG

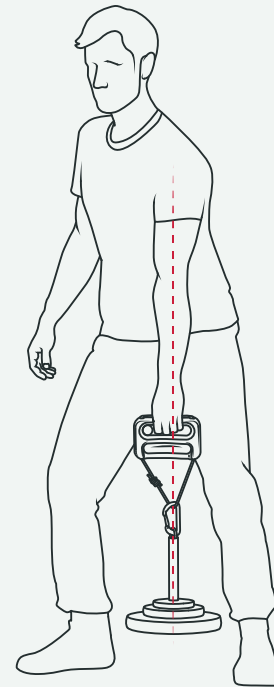


How To: Lift

Start with the weights fully on the floor and positioned between your feet as illustrated. Make sure your feet and limbs are clear of the weights to limit chances of weights hitting your feet if you fail suddenly.

- Line up your shoulder with the centre of your weights to limit any swinging.
- Straighten your arm and assume the lifting stance by bending at the hips, knees, and ankles.
- Optimise your grip position and level the edge directly above the weights.

You're now ready to lift, extend your legs and hinge at your hips to an upright position. Don't brace the lifting edge or hand against your legs, this will skew your results.



Please note: Correct form can look different for each individual, this is a general guide and not a substitute for professional coaching. Form is important when training for both maximising efficiency and avoiding injury. Remember that training and climbing, like any sport, is never 100% free of risk.

How To: Train

Training session intensity can be calculated using your max load score from your last testing session. Each session is split into sets, separated by rests. Sets are made up of reps that consist of work time and, where applicable, rest time (both in seconds).

For example, 1 set of 18x7:3 would be 7 seconds work, followed by 3 seconds rest, repeated 18 times. For the aerobic capacity exercise below you would repeat this set 5 times with 4 minutes rest between each set.

WARM UP!

Without an adequate warm up you increase the risk of injury and reduce your training effectiveness. Increase your heart rate and progressively load your body before attempting any of these sessions.



Make sure to tag @latticetraining and #latticetraining when posting any of your lifting sessions or going for a big PB. We love seeing what you're up to!

Please note: It is not advisable to suddenly increase your training load. Progressively increase loading over many sessions to avoid injury. If unsure, please seek professional advice.

Aerobic Capacity

30% MAX

18x7:3 SEC
4 MIN REST
X5 SETS

AIM: to promote capillarisation and increase mitochondrial density in slow twitch muscle fibres.

FOR: increasing the level you can operate at aerobically, and to aid recovery on and in between climbs.

Anaerobic Capacity

70% MAX

5x7:3 SEC
3 MIN REST
X6 SETS

AIM: to develop longer high intensity force outputs, reduce fatigability of fast twitch muscle fibres and improve overall strength.

FOR: long boulders & short routes.

Aerobic Power

50% MAX

12x7:3 SEC
4 MIN REST
X6 SETS

AIM: to increase power endurance by fine tuning the forearm muscles ability to contribute to force output using both the aerobic and anaerobic systems.

FOR: moderate intensity for a longer duration.

Max Strength

85% MAX

1x10 SEC
2 MIN REST
X6 SETS

AIM: to increase the max force your fingers can exert in a single effort and to increase the force you're able to transfer onto a climbing hold.

FOR: short boulders & crux moves.

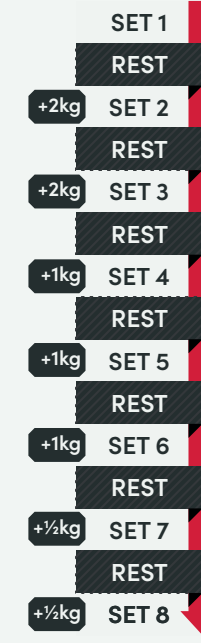
How To: Test

Complete up to 8 sets (on each arm) of progressively heavier lifts until you reach a maximum score. You may reach a higher score on one arm but please record both for more detailed results. Rest for 3 minutes between each hold on the same arm. This means you can attempt a hold every 90 seconds on alternating arms.

Each lift must follow the rules below:

- Lift the weight from the floor using the chosen grip position.
- Each hold must last a full 7 seconds from the weight leaving the floor to hitting the floor.
- Your arms should be straight or bent slightly.

A max score is the highest load completed for the set time staying in the same grip position. Once the load is too high for you to complete a full 7 second hold you have reached failure. Increase the load of each set slowly. Increments of up to 2kg should be used.



Start testing at a moderate intensity.



Minimum 2 mins rest between sets or until recovered.

*If you have not reached your max load within 8 sets, finish testing and retest another day.



Find your strengths & weaknesses to target your training for effective gains.

Max Load Score*

Aim: To isolate and test grip strength using a standardised lifting protocol

Who: Recommended for adult climbers who regularly hangboard and climb above V4/6b+

When: After a rest day, post warm-up, with skin in good condition

Why: Assess before and after a training cycle to measure training effectiveness

Using your chosen testing edge, complete the heaviest hold possible for the set 7 seconds. You can use either a 4 finger open grip position or a 4 finger half crimp position for this testing but your thumb should not be in contact with the hold. Do not use full crimp. If you have not reached a max load within 8 sets, finish testing and complete this session on another day.

Record the weight used on each hand for both grip positions, including the pin & edges. Remember you need to complete a full 7 second hold for it to count! Once you've completed the testing scan this QR code to send us your results and we'll analyse your data and send you a report.



Compare your results & get a free finger strength report

Warning: Finger strength testing and training can cause injury! Avoid hangboarding when fatigued or injured. Please warm up thoroughly before any assessment and only test once properly adapted to hangboarding. If under 18 or unsure, please seek professional advice.