



ROUTESETTING & SPORT EQUIPMENT LIST

IFSC Event

This document is an annex to the IFSC Hosting Agreement and outlines key considerations for routesetting operations and a list of materials required to be available during the entire routesetting and competition period. It should be always read in conjunction with the IFSC Rules, IFSC Hosting Agreement, and the annex Wall and Venue Requirements.

1. Routesetting Key Considerations

1.1. Routesetting operations

Routesetting operations shall start **at least 5 days** before the first day of the competition. The IFSC will propose a detailed routesetting schedule to the Local Organising Committee (LOC).

Before routesetting begins, the competition and warm-up walls shall be fully constructed, including all finishing work such as painting and cleaning. The walls shall be free from all holds, macros, and volumes (unless otherwise agreed with IFSC), and mats and/or belaying points must be installed and secured to allow climbing and testing of the routes. The venue must provide all necessary conditions and equipment to support the routesetting operations according to the agreed timeline. Routesetting storage rooms and associated equipment shall be fully operational, with all essential sport equipment securely stored to prevent damage and loss.

Furthermore, the LOC shall submit the wall design to the IFSC according to the annex Global Timeline of the IFSC Event. The IFSC has sole responsibility for advising and validating the final design of the climbing wall.

1.2. Lift operations

For the installation of the climbing structures, panels, and routesetting, lifts are essential vehicles, and their operating spaces must be taken into consideration. This includes the lift parking space when it is not in use (i.e., close to the FOP and behind the climbing walls), and when the lift is in use by the FOP (i.e., in front and side of the FOP).

Consequently, the LOC should anticipate the **lift circulation path** (minimum 3m wide), including its contingency space in case the lift is immediately required during the competition sessions in order to solve any unforeseen technical issues.

Furthermore, the type of lift should be carefully studied in advance before its procurement, and the LOC should seek approval IFSC approval for the selected lift type. Given these lifts are heavy vehicles, their circulation path must resist their weight, and if outdoor, be solid under any weather conditions and be as flat as possible.

2. Routesetting Safety Protocol

The routesetters are required to perform their duties under the guidance of the IFSC safety protocols, in addition to the host country's relevant regulation as communicated by the LOC. In principle, the routesetters shall use protective equipment such as helmets, gloves, earplugs, safety glasses, etc. when necessary, and wear **closed shoes** during work.

2.1. Boulder routesetting-specifics

- Working behind the curtains: In case the host country's regulations, such as wind or fire regulations, prevent routesetters from working behind the curtains, they must adhere to safety protocols that may necessitate the removal of the curtains. The LOC should notify the IFSC of relevant regulations in advance during the event planning.
- The Boulder team shall remain attentive regarding the presence of holds, materials, equipment on the mats, ensuring the areas are maintained tidy as much as possible. **Have a clear landing space that is free of any objects during testing.** Be mindful of sharp objects that could potentially damage the mats or pose a risk of injury for routesetters.



2.2. Lead routesetting-specifics

- The LOC should notify the IFSC of relevant host country regulations for driving the lift vehicles if any. The IFSC ensures the IFSC officials possess valid driving licenses either international or foreign licenses of their home country where routesetters primarily operate.
- The maximum occupancy of the aerial lift’s working basket per lift is restricted to two persons (unless differently applied in each event), and this must be followed at all times.
- It is mandatory for routesetters to wear harnesses, and helmets and **remain attached** to the lifts at all times using the safety systems when working at heights.
- During the Lead routesetting when utilizing aerial lifts, a **safety zone** will be established by placing markings around the Field of play stage, restricting access to non-routesetters. Access to the working area is only permitted upon approval of the IFSC Head Routesetter and IFSC Event Delegate.

3. Sport Equipment

3.1. Holds, Macros, and Volumes

When the IFSC Event includes Boulder or Lead disciplines, the LOC must consult the *IFSC Official Sport Equipment Catalogue – Holds, Macros, and Volumes*, available on the IFSC website under [Sport Equipment](#) section. This regulation outlines the minimum number of brands and quantities needed for hosting an IFSC event.

The LOC is responsible for organizing the selection of holds, macros, and volumes in collaboration with the IFSC and must obtain IFSC approval before finalizing the selection and procurement.

3.2. Safety Gear

The IFSC has an exclusive partnership with Trango for safety gear for IFSC Lead events. The IFSC will provide the LOC with a written list of materials supplied by Trango, to be delivered free of charge, including shipping expenses covered by Trango. The LOC must exclusively use the safety gear provided by Trango and coordinate with the company to ensure timely delivery of the equipment and inspect the equipment for any damage upon receipt. The LOC should proactively manage customs procedures to guarantee the gear is cleared with sufficient time.

To mitigate any risks of unforeseen issues, the LOC should prepare back-up items to be delivered to the event.

3.3. Sport Equipment List

The following list outlines sport equipment used by routesetters, athletes, and staff during IFSC events, including routesetting tools, warm-up and competition equipment, and other essential items.

The equipment list and quantities may vary based on the scope of the event (e.g., IFSC World Championships, World Cups, World Youth Championships), as well as the number and format of disciplines. Therefore, the LOC should work closely with the IFSC to confirm the final equipment list according to the event’s specific requirements. Additionally, the IFSC Head Routesetter may submit further requests, subject to IFSC approval, to address specific event needs when necessary.

Discipline	Item	Descriptions	Quantity
Walls			
All	Competition Walls	Subject to the competition format and IFSC consultation. Refer to the Wall Requirements . Para specific: Both speed and lead wall should be wheelchair accessible	-
All	Warm-up Walls	Subject to the competition format and IFSC consultation. Refer to the Wall Requirements . Para specific: Both speed and lead wall should be wheelchair accessible	-

Holds, Macros, and Volumes			
Lead Para Boulder	Holds, Macros, and Volumes	Refer to IFSC Holds, Macros, and Volumes Catalogue list. All detailed requirements in terms of number of brands and minimum quantities are included into the catalogue.	Refer to IFSC catalogue
		Selection: The LOC must coordinate with IFSC to select holds, macros and volumes for approval, in line with the <u>Global Timeline</u> annex.	
Speed	Official Speed Holds	IFSC Official Speed Holds (including footholds) <ul style="list-style-type: none"> • Speed event: Two 15m sets required (2 lanes) • Speed 4 event: Four 15m sets required (4 lanes) • Additional set should be secured for the warm-up wall and the contingency in case of damage/loss. 	Speed: 2 sets x 15m 1 set x 15m Speed 4: 4 sets x 15m 2 sets x 15m
Speed	Warm-up holds	Refer to IFSC Holds, Macros, and Volumes Catalogue list	Vary
Essential discipline-specific equipment			
Lead Para	Aerial lifts	Quantity: <ul style="list-style-type: none"> • Minimum 2 lifts required for routesetting. • Minimum 1 additional lift to be reserved for contingency in case of technical issues of existing lifts and for other operational uses by LOC (e.g., installation of timing system, remote cameras, banners and branded items, etc). Type: Boom/telescopic lift with baskets (working platform) that can have a long horizontal reach to access various profiles of the Lead wall. This is not a scissor lift that can only work in the vertical direction. Dimension: The lift should have a working height (vertical) of up to 20m, and a horizontal reach of 15-17m to access the wall from the front of the wall, given there is a stage. Working platform with baskets: It must be spacious to accommodate a minimum of 2 people, holds, macros, and volumes on the platform. The LOC shall check all possible legal requirements on working on lifts or on heights. The LOC shall communicate them to the IFSC 9 months prior to the IFSC Event. Additionally, the LOC should provide a lift operator, with a valid license to drive the lift according to the host country regulation.	3
Lead Para	Dynamic Ropes	Lead-specifics: Length: 50m Diameter: 9.3 to 9.5mm Dynamic ropes for fluidity for high-level performance and catching the athletes softly when falling. Contingency quantity should be considered in case of wet rope under weather conditions, requiring frequent changes of the rope for athletes. Para -specifics: Length: in addition to above, additional ropes of 70m or 80m to facilitate dual belay system when needed Diameter (preferred): 9.3 to 9.5mm Dynamic ropes for double top rope installation when needed in the lead wall.	Provided by Trango 10 for Lead and Para 12 for Youth World Championships 4 additional 70m rope for Para

Discipline	Item	Descriptions	Quantity
Lead, Para	Static Ropes	Length 50m. For routesetting or when the lift is not available.	2
Lead, Para	Bolt hangers	Hangers are installed on the wall and may be provided by the wall manufacturer. Easily removable (preferred), fixed hanger (acceptable)	70-90
Lead, Para	Bolt hanger covers	Non-textured holds that cover the bolt hangers.	50
Lead, Para	Accessory cord	For routesetting. Diameter 3mm and length 50m.	1
Lead, Para	Ascender / descender	To carry large objects/volumes on the wall by using semiautomatic blocant (or pulley with integrated blocant) to hold the volumes in place.	2
Lead, Para	Karabiners	Karabiners with Bent Gate (Provided by Trango)	50
Lead, Para	Karabiners	Karabiners with Self Locking	15
Lead, Para	Quick Links	For the wall and routesetting	80
Lead, Para	Quickdraw slings	Various lengths (provided by Trango)	-
		12-15cm (short)	15
		17cm (medium)	50
		27cm (long)	25
Lead, Para	Other Slings	Various lengths: 60cm, 80cm, 100cm (Provided by Trango)	15 per each length
Lead, Para	Manual belay devices	For belaying athletes (Provided by Trango)	15
Lead, Para	Assist braking belay devices	For routesetting	5
Lead, Para	Belay gloves	For belaying (Provided by Trango).	5
Lead, Para	Harnesses	Varying sizes (XS-XL) for routesetters and belayers (Provided by Trango)	6-10
Lead, Para	Tape	Blue tape for marking a blue cross	2
Lead, Para	Ladders	For setting up the warm-up wall and other needs	2
Boulder	Curtains	Curtain for Boulder wall as in the IFSC Wall Requirements . Consult with IFSC on the size and material and installation methodology.	1
Boulder	Mats	Refer to the Wall Requirements	
Boulder	Tarp for mats	Tarp that covers the entire surface of mats for Boulder wall and warm-up wall if outdoor. To prevent overnight dust, storms, water entering to and leaking from underneath the mats. Recommend either one large tarp or several pieces of smaller tarps that can be securely connected.	Several
Boulder	Ladders	Minimum 6 ladders, with at least 2 of each size (2.0 m, 3.2m, 4 m).	6-8
Boulder	Ladder end cap	Soft non-marking caps for ladders to avoid black rubber markings on the wall panels	
Boulder	Tapes	Various colours for marking starting positions and zone(s). Colours and materials to be discussed with IFSC to ensure visual matching and durability to stay on the wall against rain/humidity.	Min. 5 colours x 5 rolls
Speed	Aerial lift	Minimum 1 lift required, with reach span 2-4 meters. For routesetting and timing systems installation.	1
Speed	Bolt hangers	To attach auto belay lanyard at the bottom of the wall.	2

Discipline	Item	Descriptions	Quantity
Speed	Ladders	For setting up the warm-up wall and other needs	2
Speed	Static Ropes	In case the lift or auto belay are not available	2
Speed	Speed automatic belay systems	<p>IFSC Official Speed Automatic Belay Systems</p> <ul style="list-style-type: none"> Speed event: 2 sets required for competition wall and 4 sets for warm-up wall Speed 4 event: 4 sets required for competition wall and 4 sets for warm-up wall Contingency set to be reserved 	<p>Speed: 6 sets + 2 reserves Speed 4: 8 sets + 2 reserves</p>
All	Chalks	For routesetting. Chalks and chalk balls	Varies
All	Chalk bags	For routesetting	5
All	Impact driver	<p>Minimum 6 drivers per Lead, Boulder Minimum 3 drivers per Speed National routesetters are encouraged to bring extra drivers due to less travel restrictions (if involving flights).</p>	3-8
All	Impact driver cord	Drill fall prevention cord	4
All	Bolts	In case if the walls and the holds have t-nuts and bolt holes. If needed, consider M10 x 40mm - 210mm range.	According to need
		M10 x 40 (if needed)	10
		M10 x 50 (if needed)	10
		M10 x 60 (if needed)	10
		M10 x 70 (if needed)	10
		M10 x 100 (if needed)	10
		M10 x 110 (if needed)	10
		M10 x 130 (if needed)	10
		M10 x 150 (if needed)	10
		M10 x 170 (if needed)	10
		M10 x 190 (if needed)	10
		M10 x 210 (if needed)	10
All	Screws	All screws must have countersunk head, galvanized steel, and certified. All screws to have a Torx head of the same size (Torx TX 20). Quantities are based on single discipline World Cup. For more disciplines, below quantities must be adjusted through consultation with IFSC.	
		4.5mm x 30mm (full thread). TX 20	1000
		4.5mm x 40mm (full thread). TX 20	1000
		4.5mm x 50mm (full thread). TX 20	1000
		4.5mm x 60mm (full thread). TX 20	1000
		5.0mm x 80mm. TX 20 (or TX 25)	300
		5.0mm x 120mm. TX 20 (or TX 25)	200
All	Washers	5mm screw washers	500
		6mm screw washers	100

Discipline	Item	Descriptions	Quantity
All	Drill bits	Bit TX 20 (or TX 25)	10
All	Hex wrench	Bit Hex 8mm. Ideally 60mm long.	1
All	Long brushes	For cleaning holds. Long and medium length with telescopic stick.	10
All	Short brushes	For cleaning holds	10-15
All	Hangboards	Hangboard/fingerboards for warming up Various wooden board sets for warming up	4-6 sets
All	Helmet	For routesetting	10
All	Laser pointer	For routesetting and judging	2
All	Binocular	For routesetting and judging	2
All	Shoe wiping mats	For cleaning climbing shoes before climbing. Protect pathway to prevent climbing shoes from getting wet under weather contingency	30
All	Sub-mats or crash pad	For additional safety when landing. Smaller mats are used at the bottom of the Lead or Speed wall, in case athletes fall too early part of the route.	2-3
Other items			
All	First aid kit	To be available at all times behind the wall to treat minor incidents (e.g., scratches, bleeding) during routesetting	1
All	Holds Trolleys	Trollyes are required. Easily portable with wheels and fences to securely store the selected holds for competition rounds and transport when needed.	15
All	Holds boxes	To store holds. Plastic boxes with 100L volumes.	30
All	Holds pallets	To transport panels and holds between equipment storage to the FOP with pallet truck or trolleys	5-10
All	Racks/shelves	Organizing and stocking holds in the equipment storage	15
All	Dryer or Fans	For drying holds or equipment if wet	3
All	Holds cleaner	For cleaning holds before and after the event	1-2
All	Equipment cleaning tools	Various cleaning tools to clean and maintain the FOP (e.g., large sized mops, squeezes to sweep and remove excess water on the stage/mats after rain.)	Several
All	Towels	For drying spaces, athletes, and others in case of weather occurrence	200-300
All	Umbrellas	Large-sized umbrellas for weather protection and small/portable umbrellas	Vary
All	Plastic shoe covers	Covering athlete's shoes when pathway is wet.	Vary
Lead, Para	Rope bag	For transporting and coiling the rope during belaying	8-10
Lead, Para Boulder	Permanent marker	For marking holds on the wall between Qualification and SemiFinal	Several
Lead, Para Speed	Arial bins for lift	Tool buckets, lift or harness attachable tool bags for organizing routesetting tools	5-8