

IFSC CLIMBING WALL REQUIREMENTS

The document describes technical specifications and its intended purposes of the climbing walls and surrounding elements on the Field of Play.

WALL PROVIDER QUALIFICATIONS

- **Safety:**

In general, the company must prioritize the safety of the athletes who will climb on the walls, and the IFSC officials as well as the OC staff who might operate around the walls as required by the event delivery.

All climbing walls must comply with the European Standard (EN) as specified in the IFSC Rules and the IFSC Speed License Rules.

- **Foundation:**

The company must have a significant experience in producing and installing climbing walls, which can be reflected through:

- sufficient financial liability as defined by the Event Organiser contract;
- legal and financial implication of the contracts with similar entities as Event Organisers;
- experience in the international shipping and dedicated installing team that could be projected in any country or agreement with the respective local installers;
- dedicated project personnel for engineering and availability of 3D modelisation.

- **Experience in supplying competition walls:**

The company must highlight their experiences on the competition walls delivered for the international events, including the history of the participation on the IFSC climbing competitions (i.e., IFSC Climbing World Cups, IFSC Climbing World Championships, IFSC Climbing Youth World Championships) or high-level national competitions organized by the IFSC Member Federations.

The company must demonstrate its ability to deal with the indoor and outdoor venue, and to manage the weather protection in case of the latter. List minimum three events, at least one indoor and one outdoor project.

The company must prove its ability to install the walls on a temporary basis (including the need to install and dismantle multiple times when required) on all type of the surface (e.g., grass, sand, concrete).

- **IFSC Homologation:**

The IFSC will be involved and validate at several steps the characteristic of the walls, including the final inspections and validation.



In particular, the Speed wall must be provided by the IFSC Certified Speed Wall Manufacturers, and follow specific IFSC speed regulation.

The company will need to consider as much as possible any regulation developed by the IFSC or adjustment required by the Rules during the course of the project.

- **International profile and project management**

The company have proficient communication/media management and project implementation experience meeting strict deadlines in a multicultural environment.

The company may provide further information on their regional distribution channels, factory locations (if multiple) existing in different regions or countries and established relations with a team of international (or local) operators and partners.

Ability to assign a dedicated project manager to the event, with proven experiences in the similar level of projects. The candidate personnel to have a proficient spoken and written English level to ensure technical specifications and requirements are well understood across stakeholders.

WALL SPECIFICATIONS (MINIMAL)

Area / Space	Technical Specifications & Guidelines
Lead Wall	<ul style="list-style-type: none"> ○ Height: Shall be at least as high as the speed wall and it should be minimum 15m high. It can be higher of few more meters if that aesthetically makes sense or the space is used for Look of the event ○ Width: 12m – 15m (capacity for 4 routes) ○ Profiles: varying inclinations from minimum 15° up to 60° ○ Orientation (if outdoor): subject to the season/country, shall be north or northeast in northern hemisphere; south or southeast in southern hemisphere. Sun exposure is avoided. ○ Cover: Wall must be protected from heat/rain with the roof ○ Hanger (for Multi-sport Games, to be confirmed with the IFSC): No fixed hanger and easily removable ○ Friction: uniform and medium range ○ Alignment between panels displaying flatness and no visible gap (max. tolerance 1mm) ○ Comply with to EN 12572-1 <p>Wall size and other specifications subject to competition format and consultation with IFSC.</p>
Boulder Wall	<ul style="list-style-type: none"> ○ Height: 4.5m Note: Measured from the surface of the boulder mat to the TOP signage, 4.5m is max. ceiling of routesetting for the safety purpose in accordance with EN. The wall may be higher up to 5m if the extra space is intended for the Look of the event. ○ It shall be possible for the athletes to top out in a safe manner, allowing to form a standing position according to the IFSC Rules, and be able to get down from the Top platform behind the wall in a safe and efficient manner (e.g., stairs). ○ The Top platform shall also be accessible for TV operators and photographers in order to place remote camera. ○ Width: 30m (capacity for 10 problems) ○ Profile: 4-5 different profiles with varying inclinations from -5° up to 45° ○ Orientation (if outdoor): subject to the season/country, shall be north or northeast in northern hemisphere; south or southeast in southern hemisphere. Sun exposure is avoided. ○ Cover: Wall must be protected from heat/rain with the roof ○ Inserts: No t-nut inserts on the panel, especially on slab. Acceptable t-nuts on more over hanged profile ○ Friction: uniform and low range ○ Alignment between panels displaying flatness and no visible gap (max. tolerance 1mm) ○ Comply with Standard EN 12572-2 <p>Wall size and other requirements subject to competition format and consultation with IFSC.</p>

Boulder Mats	<ul style="list-style-type: none"> ○ Thickness: average 40cm ○ Length: min. 1.5m in every direction from the most advanced point of wall ○ Comply with Standard EN 12572-2 ○ Cover: Must be protected from heat and rain with the FOP roof. A separate mat coverage to be provided to protect the surface when it is not in use Be able to place additional Look of the event on the mat
Speed Wall	<p>Requirement: Must meet official speed regulations according to IFSC Speed License Rules. Subject to IFSC homologation and certification as IFSC Certified Speed Wall.</p> <ul style="list-style-type: none"> ○ Height: 15m (Wall starts 20cm above the ground. Ceiling height is 16.7m with top protection point) ○ Width: 6m (2 lanes, 3m each) ○ Profile: 5° overhang inclination ○ Orientation: subject to season/country and sun exposure to be avoided ○ Cover: Wall must be protected from heat/rain with the roof ○ Friction: uniform and low range ○ Alignment between panels displaying flatness and no visible gap (max. tolerance 1mm) ○ Comply with Standard EN 12572-1 (no hanger)
Look of the Walls (L, B, S)	<p>In an event in which the format features three or more disciplines of Sport Climbing; the look and feel of the walls must be the same across three walls to achieve the highest consistency in aesthetics and presentation of the Field of Play (e.g., good matching of the walls, quality of finish, light reflection and tones of the panel colors for broadcasting)</p>
Roof (FOP Cover)	<p>For outdoor venues, the roof is essential to protect the competition walls and surrounding elements on the Field of Play from the weather conditions such as heat and rain. Depending on the local climate, the back and sides of the wall structure may also be covered additionally.</p> <p>For rain protection, an inclination of 15° in any direction shall be consider. The climbers, the entire surface of climbing mats and the start of the route shall stay protected and dry.</p> <p>When designing, important criteria to consider include, but not limited to:</p> <ul style="list-style-type: none"> ○ Architectural designs and its aesthetics in relations to overall venue concept ○ Dimension according to the wall specifications and the FOP stage ○ Maintaining back of the wall space and access from the behind ○ Resistance to the wind according to the weather data and recommendations provided by the local sources <p>More technical details are defined and adjusted according to the venue layout and the latest technology available.</p>

<p>Wall Panels (L, B, S)</p>	<p>Quality: When deciding the level of plywood quality, considerations to be made together with climate conditions (if outdoor venue) and OC's legacy plan, in order to evaluate long-term maintenance prospects of panels. The manufacturer shall respect EN636 Plywood Classification (EN636-1 Dry Environment; EN636-2 Humid Environment; EN636-3 Exterior Environment). Testing and samples may be required to minimize traces of the rubber of the climbing shoes.</p> <p>Friction: Panel is layered with coating, sand and paints that must ensure to achieve long-lasting friction and that could easily be cleaned. Sample with 3 different ranges of friction (low, medium, strong) must be provided during the tender/selection process. The ideal Static Friction Coefficient is 1,5. Minimum Statics Friction Coefficient shall be 1.</p> <p>Coloration: Painting process to ensure even color and consistent uniformity across all panels for a clean visual display of the wall when the panels are assembled.</p>
<p>Wall Structures (L, B, S)</p>	<p>Primary frame of the wall structures can be attached to an existing, self-standing infrastructure or fixed to the ground. The weight of the walls and reaction forces that the ground can support must be well studied in the planning phase, in order to evaluate the construction method and the option of creating an elevated platform (fixed or temporary). This also helps ensuring necessary materials are sourced in advance thus avoiding unexpected material shortage.</p> <p>In general, the Lead wall can weight up to 70 tons while Boulder and Speed walls are up to 30-40 tons, however, this will depend on the dimension of the wall and materials used.</p> <p>Manufacturers shall consider primary and secondary frames that would allow necessary operational intervention (e.g., scaffoldings coverage by the Look of the event) or attachment of equipment (e.g., remote cameras) in an efficient way.</p> <p>It is necessary for the manufacturer to present sufficient technical explanation and knowledge how the wall should be installed and dismantled, and a contingency plan to protect the wall in case of the postponement of the event or weather occurrences.</p>
<p>Front of the Wall</p>	<p>The venue should be structured with a large empty space in front of the walls. The area should be designed to welcome spectators, with minimum capacity of 2000 people. The space for spectators could be designed as seated area, or simply standing space.</p>