

Climbing and Work at Height

Requirement Specification



Executive Summary

This standard defines Ericsson global minimum requirements of the Health, Safety, and Well-being (HSW) aspects of Climbing and Working at Height.

Application

This standard applies to Ericsson suppliers, suppliers' employees and other personnel engaged by suppliers involved in Climbing and Working at Height activities.

Where there are stricter or more restrictive requirements from Ericsson local organizations, customers, site owners, or local regulations, these shall always supersede the corresponding specification in this standard.

Contents

1	Instruction	3
1.1	Definitions.....	3
1.2	Requirements	4
1.2.1	Competence & Training.....	5
1.2.2	Fitness to Climb and Work at Height	7
1.2.3	Risk Assessment	8
1.2.4	Falling Objects and Drop Zones	9
1.2.5	Work at Height during Hours of Darkness.....	10
1.2.6	Adverse Weather Conditions.....	10
1.2.7	Personal Protective Equipment (PPE) and Fall Arrest Systems.....	10
1.2.8	Lifting and Lowering	11
1.2.9	Mobile Elevating Work Platforms (MEWP) and Crane Man Baskets	12
1.2.10	Scaffolds.....	13
1.2.11	Ladders.....	13
2	Responsibilities.....	14
3	References	15
4	Change Information	16



1 Instruction

1.1 Definitions

Anchor Point: Structurally sound and designated location along the Telecommunication Structure to which Fall Restraint and Fall Arrest Systems are securely attached. Although standards and guidelines around anchor points vary, it is strongly recommended that they have a documented load capacity of at least 3.5 kN (363 Kg) for Fall Restraint and 22 kN (2270 Kg) for Fall Arrest.

Climbing: Climbing is the activity of using one's hands, feet, or any other part of the body to ascend/descend a steep structure.

Competent Person: Individual with sufficient training, experience, and knowledge in the applicable subject.

Drop Zones: area at the base of an above-ground working area identified as where items could fall and potentially cause injury or property damage.

Fall Arrest System: A safety arrangement designated to stop a workers fall already in progress from an elevated surface. The primary goals are to safely stop the fall, protecting the worker from serious harm, and facilitating prompt rescue if needed.

Fall Restraint System: A safety arrangement designed to prevent workers accessing areas where there is a risk of falling from an elevated surface. It typically involves the use of specialized equipment to limit a worker's range of movement. The aim of a Fall Restraint System is to proactively eliminate the possibility of a fall.

Free Climbing: Refers to Climbing (ascending or descending), moving sideways or stationary working on a Telecommunication Structure, when the definitions of "Work at Height" and "Climbing" are met, without the use of any fall protection, Fall Restraint or Fall Arrest device for any amount of time.

Telecommunication Structures: Refers to any structure where Climbing and Work at Height is performed, such as self-supporting towers, cable stayed towers, monopoles, billboards, concrete or wooden poles, posts, masts, rooftops, water towers, and others.

Unprotected Edge: Any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway, where there is no wall, fence or guardrail system.

Work at Height: Occupational activity in any place where, if there were no precautions implemented, a person could fall a distance (from one level to a lower level) liable to cause personal injury.



Note: The safest practice is using fall protection measures when one begins climbing or when exposed to a potential fall to a lower level. This protection can be in the form of physical barriers (engineering controls), safety procedures (administrative controls), or wearable safety gear (PPE). In many jurisdictions, these protections are mandatory when working above 1.8 meters. However, always follow the strictest guidelines, whether they come from legal regulations, customer, or site owner requirements.

1.2 Requirements

For all Works at Height, the concept of the hierarchy of controls must be applied, giving priority to avoiding Work at Height (e.g., use of drones) and engineering controls (e.g., platforms with guardrails). The use of Fall Restraints and Arrest Systems shall be considered the last line of defense.

Free Climbing is strictly prohibited, always, and without exception. Any supplier personnel (e.g., ASP) found Free Climbing may be subject to disciplinary action. If any personnel from an Authorized Service Supplier's (ASP) is found Free Climbing, Consequence Management [shall be applied.

While using a Fall Restraint Systems or Fall Arrest Systems, climbers shall be anchored or attached to an approved Anchor Point at all times (100% tie-off).

Lone or unsupervised Work at Height is strictly forbidden.

Where Work at Height in Telecommunication Structures is performed, at least one crew member shall be a Rescue Climber and have available rescue equipment.

Where Work at Height is performed, an emergency rescue plan shall be in place and understood by all involved.

Where Work at Height in Telecommunication Structures is performed, at least one crew member shall be trained in first aid, preferably ground-based personnel, e.g., the Person in Charge of Works / Team Leader.

Climbing and Work at Height is not permitted on a Telecommunication Structure (e.g., towers, wooden poles) when an inspection plate, label or certification is missing or illegible, and is required by local regulations.

All work within 1.8 meters from an Unprotected Edge requires the implementation of a fall protection system, i.e., guardrail, Fall Restraint System or Fall Arrest System.

When working near Electromagnetic Fields (EMF) and Radio Frequencies (RF) fields, work should comply with Exposure to Radio Frequency and Electromagnetic Fields Standard [\[1\]](#)

When working near electric installations and power lines, arrangements shall be made to ensure safe distance requirements are met.



Local legal requirements regarding safety signage (e.g., danger, warning, caution, note) to be posted at the workplace shall always be followed.

1.2.1 Competence & Training

All personnel Climbing and Working at Height shall be trained on Work at Height basics, fall prevention and arrest systems, and the specific equipment to be used to reach the location of Work at Height, according to classification defined below:

- Basic Climber: performs Work at Height on portable ladders, stairs, scaffolds, protected roofs and platforms, or roofs with fixed or engineered fall-from-height protection (e.g., guardrails). [*Mostly applicable to personnel dedicated to maintenance of sites*]
- Advance Climber: performs Climbing or Work at Height on Telecommunication Structures and Unprotected Edges or uses specialized equipment such as temporary climbing devices.
- Rescue Climber: An Advance Climber able to perform rescue maneuvers of self and others during Work at Height.
- Vertical (Rope Access) Workers: perform Work at Height on vertical or near vertical surfaces using rope and other support systems anchored from above.

1.2.1.1 Climbing and Work at Height Training Requirements:

- Be specific to the equipment to be used to reach the location of Work at Height (e.g., ladders, fixed ladders, scaffolds, Mobile Elevating Work Platforms, Crane Man Baskets, etc.)
- Be relevant to the telecommunication industry and Telecommunication Structures to be climbed (e.g., poles, masts, billboards, monopoles, towers, etc.)
- Be completed before Climbing and Work at Height is carried out.
- Contain theoretical and practical modules, where the latter makes up most of the course.
- Cover use and maintenance of Fall Restraint, Fall Arrest, and positioning equipment.
- When applicable or required, cover (self) rescue techniques and the use of rescue equipment.
- Refreshed or re-examined in accordance with local legislation but in no event at greater intervals than two years.
- Cover local legal requirements.



- Provide a knowledge test or competence assessment.
- Provide a certificate of completion that clearly states the scope of the training and period of validity.

1.2.1.2 Minimum Requirements for Work at Height Training Content:

1. Advance Climber:

- a. Duration: minimum 16 hours.
- b. Ratio: 10 students to 1 instructor. (Recommended)
- c. Content:
 - i. Work at Height Hazards:
 1. Hazards associated with working on towers and structures.
 2. Hazards specific to working on towers in the local region, e.g., wildlife, seasonal weather, security risks.
 3. Principles of work restraint and positioning.
 4. Hazards associated with working on rooftops, including as a minimum:
 - a. Unprotected edges.
 - b. Fragile surfaces (e.g., skylights).
 - c. Exhaust fumes / vents and chemicals.
 5. General Hazards:
 - a. Weather and other environmental conditions.
 - b. Electromagnetic Fields. (Recommended)
 - c. Basics of electrical safety. (Recommended)
 - d. Basics of fire safety. (Recommended)
 - ii. Fall protection systems and components – Practical:
 1. Introduction to the fall protection systems used in the local region.
 2. Components of the fall protection systems.
 3. Use and operation of different fall protection systems.
 4. Fall Restraint for working on a rooftop.
 5. Selection of different anchor points.
 - iii. Work Positioning:
 1. Fall Factors.
 2. Use and work positioning techniques.
 3. Selection and use of different anchor points.
 - iv. Inspecting and wearing PPE:
 1. Explanation of the PPE needed for safe Work at Height.
 2. Various attachment points on a harness.
 3. Use of connectors and lanyards.
 4. Identification of anchorage points.
 5. Use of ropes and associated equipment.
 6. Ascending and descending using double lanyards.
 7. Cleaning of PPE.
 8. Pre-use and periodic inspection of PPE.

2. Rescue Climber:



- a. Duration: minimum 8 hours.
 - b. Ratio: 10 students to 1 instructor. (Recommended)
 - c. Content:
 - i. Emergency Procedures:
 1. Planning for emergencies.
 2. Assessing potential for emergencies.
 3. Considering emergencies specific to the local conditions.
 - ii. Equipment used for Work Height Rescue:
 1. Explanation of the rescue equipment used within the local area.
 2. Instruction on the care, inspection, and maintenance of the equipment.
 3. Instruction on the use and limitation of the equipment.
 - iii. Techniques Required to Perform Work at Height Rescue:
 1. Selection and checking of anchor points.
 2. Rope access techniques for rescue.
3. Vertical (Rope Access) Workers:
- a. Duration: minimum 32 hours.
 - b. Ratio: 4 students to 1 instructor.
 - c. Content: according to local legal requirements.

1.2.1.3 Minimum Requirements for Work at Height Trainers:

- Be certified by an internationally recognized standard for Work at Heights.
- Have a minimum of five years' experience as a Work at Height trainer.
- Have experience as a trainer in the telecommunication sector.

1.2.1.4 Minimum Requirements for Work at Height Training Facilities:

- Be of a suitable standard for the delivery of training.
- Have appropriate facilities for classroom training.
- Have access to and use simulated environments for practical exercises.
- Inspect regularly all structures used during training.
- Have in place an adequate emergency procedure.
- Have rest facilities.

1.2.2 Fitness to Climb and Work at Height

Personnel trained as Advance Climbers, Rescue Climbers, and Vertical (Rope Access) Workers, shall provide evidence of being fit-to-climb through a medical health assessment, where allowed by local regulations. This



requirement serves to identify physical or health conditions that may put self or others at risk of injury during Climbing and Work at Height.

Fit-to-climb evidence must be available before any Climbing and Work at Height is carried out.

Medical health assessments for fit-to-climb purposes must be conducted at a minimum every two years.

A typical fit-to-climb medical health assessment includes the following checks:

- Physical fitness.
- Medical history review.
- Cardiovascular health.
- Respiratory health.
- Musculoskeletal examination.
- Vision and hearing.
- Balance and coordination.
- Drug & alcohol.

In addition to providing medical fit-to-climb evidence, workers are recommended to perform a self-assessment of their physical and mental readiness every time before and during any Climbing or Working at Height is carried out.

This self-assessment should include:

- Physical health: Ensure feeling physically fit and free from any health conditions that could impair concentration or affect the safety of safety performance due to the symptoms or any medication.
- Hydration: Maintain proper hydration to prevent heat-related illnesses during tasks.
- Rest: Ensure enough rest and sleep before taking on tasks to stay sharp and focused.
- Ergonomics: Pay attention to body posture and equipment use to prevent unnecessary physical strain and injuries during tasks.
- Mental well-being: Ensure feeling calm and mentally focused and free from any health conditions that could impair concentration or affect safety performance due to symptoms or any medication.

1.2.3 Risk Assessment

For all Climbing and Working at Height activity a risk assessment shall be carried out prior to its commencement by the Team Leader or Person in Charge of Work (PICW). The risk assessments shall include, but it is not limited to:

- Nature of the tasks/activities.
- Layout of the place of work (including emergency exit routes).
- Access to and exit from the climb site.
- Weather (current and forecasted).



- Hours of darkness.
- Overhead power lines.
- Telecommunication Structure conditions.
- Building access.
- Rooftop conditions and associated hazards.
- Lifting and lowering operations.
- Local conditions.

Prior to accessing the site, any available records (e.g., Site Surveys) shall be checked for pre-existing hazards that are listed.

The risk assessments shall be documented.

1.2.4 Falling Objects and Drop Zones

To reduce the risk of falling objects, all tools and equipment shall be tethered to the climber or securely stored.

For small items such as nuts and bolts that cannot be tethered, alternative means of preventing them from falling shall be used, e.g., fine mesh nets suspended below the work area. Only after all other alternatives have been considered and deemed unsuitable should the Drop Zone be established.

Drop Zones shall be clearly marked using suitable brightly colored temporary barriers, cones, caution tape or rope, and accompanied by adequate signage to protect those on the ground. Under normal operating conditions, no individuals are permitted within the Drop Zone. Only trained personnel with a clear, essential purpose and appropriate safety precautions may enter, and even then, only with prior communication and coordination.

Drop Zones are recommended to be sized half the working height and may be reduced if other controls are in place such as tool tethers and safety nets.

When working on rooftops or Unprotected Edges, Drop Zones shall consider the area around the building or infrastructure where the Telecommunication Structure sits, in addition to the area around the base of the Telecommunication Structure itself.

Where neighbouring property is within the Drop Zone, it shall be coordinated with, and communicated to, the neighbours prior to the Work at Height.

Materials and equipment shall never be thrown or allowed to free fall to the ground.



1.2.5 Work at Height during Hours of Darkness

Planned activities involving Working at Height on Telecommunication Structures and Unprotected Edges during hours of darkness are to be avoided.

Exceptions include: 1) activities not finished until darkness, 2) emergencies, i.e., corrective maintenances, and 3) where established in standing customer contract requirements. Under these circumstances, the following apply:

- The project Risk Assessment and EHS Project Plan shall address mitigation measures for Work at Height during Hours of Darkness, if applicable.
- All planning and preparation activities shall be completed during the daylight.
- Temporary lighting shall be used, whether it is head lamps for climbers, or floodlights on the ground or on the structure. The preferred option shall be both, taking care that glare from lights shining from the ground is avoided.

Note: Appropriate consideration shall be taken to minimize neighbor's disturbance from temporary lighting and noise from generator(s).

No lifting/lowering activities are to take place during the hours of darkness unless the provisions of Section 1.2.3., Risk Assessment, are addressed and agreed.

1.2.6 Adverse Weather Conditions

Climbing and Working at Height in Telecommunication Structures and Unprotected Edges shall not be carried out during:

- Approaching or ongoing lightning storms. Note: there are several instruments, applications, and websites available to detect lighting storms.
- Gusting winds or winds exceeding Beaufort Scale 6 (13,8 m/s) or higher.

Other conditions such as weather events (e.g., tornados), temperature extremes, precipitation, and fog shall be considered in the Risk Assessment, including impact on the personnel (e.g., illness) and structure (e.g., slippery surfaces).

1.2.7 Personal Protective Equipment (PPE) and Fall Arrest Systems

All personnel involved in Climbing and Work at Height shall be outfitted with suitable clothing in good state, in addition to safety footwear and gloves in accordance with the Personal Protective Equipment (PPE) Standard [\[2\]](#)



Mandatory PPE and Fall Arrest Systems for Advance Climbers, Rescue Climbers, and Vertical (Rope Access) Workers shall meet an approved international standard and include, as a minimum:

- Climbing helmet with chinstrap always fastened.
- Four- or five-point full body harness.
- Double Fall Arrest lanyard with shock absorber and snap hooks.
- Rope Grab (for towers equipped with vertical lifelines).
- Suspension trauma relief device (strongly recommended).

Recommended emergency equipment for Rescue Climbers:

- Rescue rope (static construction) of at least 100 meters.
- Descender.
- Pulley system.
- Carabiners and connectors.
- Cutting tool or knife.

Fall Arrest System components shall be inspected as follows:

- Prior to first use through a formal inspection documentation supplied by the manufacturer.
- Prior to each use by the climber. A buddy check is strongly recommended to ensure thoroughness.
- At least every 12 months thorough examination by a Competent Person.

Adverse weather clothing shall be used when required. Such clothing shall be of adequate strength and warmth and be waterproof. The clothing shall not:

- Impede movement when worn.
- Be so loose as to act as a 'sail' in windy conditions.
- Have any loose toggles, straps, buckles, or other parts that could become caught.
- Compromise any other item of PPE worn with it.

All Fall Arrest Systems subject to a fall must be removed and discarded according to manufacturer instructions or local regulations or recertified in the case of self-retracting lifelines.

1.2.8 Lifting and Lowering

All lifting and lowering operations shall be carried out by personnel trained on:

- Light lifting and lowering for loads that weigh less than 100 Kilograms.
- Heavy lifting and lowering for loads that weigh 100 Kilograms or more.

All equipment shall be independently inspected annually by a certified inspector / Competent Person and documented.



Mechanical lifting devices or aids shall be inspected annually by a certified inspector / Competent Person and documented.

All lifting and lowering solutions shall include a safety (emergency) mechanical braking system to prevent accidental release or lowering of the load.

Lifting equipment shall be fitted with suitable devices (e.g., grigri or a harken winch) to minimize any risk of an uncontrolled free fall. Loads shall always be under safe control to minimize risks to members of the public in the vicinity of the lifting operation.

It is strictly forbidden to enter the Drop Zones during any lifting activities.

Any load more than 100 Kilograms must be lifted by mechanical means.

1.2.9 Mobile Elevating Work Platforms (MEWP) and Crane Man Baskets

MEWPs and crane man baskets shall only be operated by individuals specifically trained for the model they are using. This training aims to prevent incidents of tip-over, ejection, and shall cover emergency procedures. Additionally, training must include a knowledge test or a competence assessment.

MEWPs and crane man basket shall only be operated under safe working condition as detailed in the manufacturer's specifications (e.g., maximum load, maximum wind speed etc.).

MEWPs shall be inspected daily (pre-use checklist) prior to use.

Suitable means of communication shall be maintained between the operator within the MEWP or crane man basket and all parties involved with the task on work site.

Personnel within a Man Basket/MEWP shall wear safety helmets, a full body harness, and a Fall Restraint System or Fall Arrest System using the manufacturer-approved anchor point at all times while on the equipment, whether is moving or not.

Personnel within a Man Basket/MEWP shall not reach out beyond the guardrail system or stand on, or balance on, top or mid rails.

All tools and equipment shall be securely attached with tool tethers inside the Man basket/MEWP to the individual.

When operating a MEWP all necessary precautions shall be taken to ensure that all power lines / cables and surrounding structures have been identified and included in the Risk Assessment. MEWPs shall not be operated where potential contact with power lines/cables exists. Other hazards that need to be considered and mitigated/controlled include trees, building/structures, and other MEWPs.



Where MEWP are being operated in areas where they could come into contact with other vehicles and pedestrians, the following precautions shall be taken:

- Erection of applicable signage.
- Erection of suitable barricades placed to cover the entire Drop Zone when the MEWP is in full operation.
- When the MEWP is in operation the site needs to be monitored by a suitably trained person / flag man to ensure that all traffic and/or pedestrians receive appropriate causing and working.

If the MEWP needs to operate in or on any road or part of any road a full road traffic management plan shall be in place. If applicable, approval from the local traffic authority must be included in the road traffic management plan.

The use of MEWP/crane man basket for access to another platform or work area shall be avoided. If allowed by local regulations, access shall only be allowed to flat roofs after approval by CPM or MSCOO, in consultation with the EHS organization assigned to the project. During transfer from one platform to the other, personnel shall maintain 100% tie-off.

1.2.10 Scaffolds

A qualified or Competent Person shall:

- Supervise and direct all scaffolding dis/assembly.
- Train all personnel in safe scaffolding use.
- Inspect at least weekly.

Scaffolding shall be suitably anchored and secured at all times.

Scaffolds' load capacity limit shall never be exceeded.

All scaffolds shall provide safe ladder access – workers should never climb on braces or structural members/frames.

Scaffolds shall have guards and toe boards installed.

Scaffolds shall not be used during storms or high winds.

Scaffold manufacturer instructions shall be followed.

Mobile scaffolds shall never be moved while someone is standing on them. They shall be placed on stable ground and all wheels shall be locked when personnel are working on them.

1.2.11 Ladders

Ladders users shall be trained in the risk associated with, and proper use of, ladders. Training shall be specific to the type of ladder to be used, e.g., single, scissor, or extension.



Ladders shall have a legible manufacturer's label with safety information such as weight capacity and intended use. These shall always be followed.

Portable ladders shall be visually checked before each use and be part of a periodic inspection program.

Fixed ladders (including fixed ladders with cage) shall be inspected and certified to be compliant with local legislation and manufacturer requirements.

Ladders that are damaged, have any defect or missing components, or do not meet manufacturer's instruction, shall not be used, and shall be removed and discarded.

Workers should always maintain three points of contact (e.g., two hands and one foot or two feet and one hand) with the ladder.

Any required tools or equipment must be transported up the ladder using an appropriate tool belt or backpack.

Working at height with portable ladders requires the presence of at least two people: one person footing the portable ladder and only one person accessing the ladder at any time.

Fall Arrest System must be used according to manufacturer instructions, local legislation or guidance by Ericsson EHS SME.

During transport by vehicle:

- All ladders shall be securely fastened to the vehicle.
- The ladder should not extrude from the vehicle. If the ladder(s) does extrude from the vehicle suitable signage or marking (red flag) shall be used.
- Ladders shall not be transported in the same area as passengers.

2 Responsibilities

Supplier Project Managers:

- Ensure that, within their scope of responsibility, the requirements defined in this document are adhered to. These include, but are not limited to:
 - Competence and training for climbers (in Work at Height and First Aid).
 - Fitness to climb.
 - Risk Assessments.
 - Approve Work at Height during hours of darkness.
 - Extreme weather conditions.
 - PPE and Fall Arrest System for climbers.
 - Emergency equipment and plan.
- Secure budget and resources to implement all requirements in this standard.

Person In Charge of Works / Team Leader:



- Ensure compliance with the requirements defined in this document that are within their scope of control. These include, but are not limited to:
 - Competence and training for climbers.
 - Fitness to climb.
 - Risk Assessments.
 - Falling Objects and established Drop Zones.
 - Approve Work at Height during hours of darkness.
 - Extreme weather conditions.
 - PPE and Fall Arrest System for climbers.
 - Inspection of access tools (i.e., ladders, scaffolds, MEWPs).
 - Emergency equipment and plan.
 - Implement the Stop Work Authority Standard [3] when necessary.
- Verify and medical and health conditions of climbers which may affect their ability to conduct the task safely.
-
- Report any incident, near miss, risk observation, and HSW concern in the Global Incident Reporting Tool ([GIRT](#)).

Personnel Performing Climbing and Working at Height:

- Ensure compliance with applicable aspects of this standard, including:
 - Training (in Work at Height and First Aid).
 - Fitness to climb.
 - Use of correct PPE and Fall Arrest System.
 - Practice 100% tie-off (do not Free Climb).
 - Establishing Drop Zones
 - Solicit the Stop Work Authority Standard [3] when necessary.
- Report any medical or health conditions which may affect their ability to conduct the task safely.
- Report any incident, near miss, risk observation, and HSW concern to PICW / Team Leader.

Supplier Environmental Health & Safety Personnel

- Provide technical expertise for any Climbing and Work at Height issues.
- Ensure all parties are aware of local regulations regarding Work at Height.
- Stay current and advise on industry best practices related to Work at Height.
- Provide follow-up and guidance during incident investigations.

3

References

- [1] [Exposure to Radio Frequency Electromagnetic Fields Standard](#)
- [2] [Personal Protective Equipment Standard](#)
- [3] [Stop Work Authority Process for Suppliers](#)



4

Change Information

- 1 Revision D. Complete revision of the entire standard.