

N25 ACCESS AND SAFETY EQUIPMENT SPECIFICATION CLAUSES

PivotLoc Ladder Systems

To be read with The Main Contract Preliminaries, General Conditions, Sub-Contract Preliminaries.

MINIMUM CONTRACTOR STANDARD

This equipment is highly specialised and the Tendering Sub-Contractor must provide the following information with the Tender – failure to provide this information will disqualify the Tenderer;

- Evidence of sub contractor's **Professional Indemnity Insurance**, €6.5 million minimum. Professional Indemnity Insurance provided by third parties will not suffice.
- Evidence of **ISO9001 & OHSAS 18001** Quality Systems Accreditation.
- The name of the **Health & Safety Manager** within the organisation and evidence of qualifications.
- Confirmation that the Tendering company has been in the fall prevention industry for at least 10 years.

On request of the architect / design team the Tenderer must forward confirmation of the following:

- Employers Liability Insurance to €13m.
- Public Liability Insurance to €13m.
- Products Liability Insurance to €13m.
- Appropriate Professional Indemnity Insurance to €6.5m as above.
- Three years audited accounts.
- Membership of CIRI
- Membership of Irish Health and Safety associations like NISO, ISHA etc.
- Membership of an Irish based Trade Union.
- Membership of the CFOPS pension / CIF sick pay scheme.
- Names of the proposed installation crew and proof that they are trained as banksmen and have training in Work at Height, particularly Rescue from Height.

- Name of company Safety Representative along with copies of their certification / qualifications.
- Name and qualifications of the company's FETAC Level 6 Trainer on staff to undertake handover training.
- Names of three PivotLoc projects of equal size completed in Ireland in the last 3 years along with contact names and numbers for reference checks.
- Contact names and telephone numbers for the facilities manager in charge of each of the above three PivotLoc projects, (to check that on-going maintenance contracts are in place and that the installations are fit-for-purpose).

4.01 Reference Documents

The schedule of references is not exhaustive and shall also be supplemented by those listed under each related work section. Note that where a standard comprises a number of parts, the latest issues and amendments of each part shall apply.

The Sub-contractor must comply with all relevant standards, etc. at the time of supply.

EN and B.S. Documents Referred to in this Section Include:

EN 795 1997 or 2012 Personal Protective Equipment against Falls from a Height - Anchor Devices - Requirements and Testing.

BS7883 2005: Application and Use of Anchor Devices Conforming to BS EN 795.

EN 354 2002: Personal Protective Equipment against Falls from a Height - Lanyards.

EN 355 2002: Personal Protective Equipment against Falls from a Height - Energy Absorbers.

EN 358 2000: Personal Protective Equipment against Falls from a Height - Work Positioning Systems.

EN 361 2002: Personal Protective Equipment against Falls from a Height - Full Body Harnesses.

EN 363 2008: Personal Protective Equipment against Falls from a Height - Fall Arrest Systems.

EN 365 2004: Personal Protective Equipment against Falls from a Height - General Requirements for Instructions for Use and for Marking.

BS8437 2005: Code of Practice for Selection, Use and Maintenance of Personal Fall Protection Systems and Equipment for use in the Workplace.

EN970 1997: Non-destructive Examination of Fusion Welds. Visual Examination.

HSA documents referred to in work section N25 are:

Health, Safety and Welfare at Work Act 2005 and Regulations as follows;

- Construction Regulations 2013
- General Applications Regulations 2007; Part 4 Working at Height.



Figure 1: PivotLoc Ladder with twisted top and side step

4.02 RELATED WORK SECTIONS

X20: Fixings/adhesives

TYPE(S) OF SYSTEM/EQUIPMENT

210 GUIDED TYPE FALL ARREST SYSTEM FOR: PIVOTLOC LADDERS

- Drawing reference(s) see Architect's drawing # _____.
- Manufacturer: Skyway Safe Access Equipment Ltd (046) 9241771 or equivalent.
- Anchorage device: PivotLoc - Aluminium Track.
- Overall system height: 1000 above parapet with a twisted top section (or 200 below hatch if inside an access hatch).
- Intermediate wall bracket spacing: 1400 maximum or as sub-contractors design.
- Ladder not to be supported off the floor slab.
- Twisted top section to be attached to adequate structure on the roof.
- The maximum cantilever at the top of the PivotLoc above the highest fixing is 525mm.
- Accessories/other requirements: as subcontractors design.
- System to be installed in accordance with the BS 7883 and EN 795 by the system manufacturer or a contractor approved by the system manufacturer.
- System to be continuous – shuttle to move freely up and down as the user moves.
- Stiles to pivot about the fall arrest track and lock in place to prevent unauthorised use.
- The parapet or hatch to be flush with the wall on which the PivotLoc is mounted.

215 DESIGN / LAYOUT OF SYSTEMS:

- The Tenderer's submission must allow for safe access to the roof areas – operatives must be able to maintain 100% tie-off while using the PivotLoc and most importantly while exiting from the PivotLoc onto the roof, (and vice versa).
- The Tenderer must, if necessary, advise that safe access equipment is required in areas where the architect or design team may have missed potentially hazardous areas.
- The Tenderer must advise the design team if the access hatch is not flush with the structural wall and allow for additional support structure for the PivotLoc ladder in their Tender.
- AutoCAD Drawings must be submitted to the design team for approval.

However, note that the architect is not an approving authority. The architect may comment on drawings as submitted for approval but it remains the responsibility of the Tenderer to meet the design requirements of all Health & Safety Regulations and Standards as listed above.

225 PERSONAL PROTECTIVE EQUIPMENT

- Supply the following for storage on site and used by trained personnel only:
 - 2 Skyway Miller Full Body Harness – front attachment type.
 - 2 Skyway Miller Standard 2m shock absorbing lanyards (to exit safely from the PivotLoc at the top).
 - 2 Skyway Pivotloc Shuttles.
 - Accessories/Other requirements: as per Bill of Quantities Description.

- *Note all PFPE must be CE marked – CE marking does not apply to the elements fixed to the building (brackets etc) but does apply to the PivotLoc ladder.*

310 INFORMATION TO BE PROVIDED WITH TENDER

Submit the following:

- General arrangements drawing(s) at suitable scales showing the proposed layout of access/safety equipment.
- Proposed details of all necessary fixings and abutments with the building fabric.
- Location, direction and magnitude of all significant loads imposed on the building structure/fabric by the equipment.
- Schedule of builder's work, with drawings as necessary, showing extent and details of all work associated with the installation for which the equipment manufacturer/supplier is not contractually responsible.
- Schedule of special provisions and special attendances by others.
- Confirmation that safe access to the workplace is achievable – i.e. 100% tie-off. If this is not the case the reasons why must be highlighted. Refer to Clause 215 above. No extra work/variations will be entertained by the client/design team at a later stage.

320 INFORMATION TO BE PROVIDED AFTER ACCEPTANCE OF TENDER:

Detailed AutoCAD drawings to fully describe fabrication and installation as follows:

Drawing content:

- Contractor's name and contact number.
- If non-PivotLoc ladder is proposed provide the manufacturers name along with model numbers, specification and photos of equipment proposed.
- General arrangement of the complete installation.
- Detailed description on how operatives exit at the top of the PivotLoc and how they remain safely tied off especially when transferring from the PivotLoc to the roof mounted fall prevention system.
- Restricted areas/ other areas not covered by the design and reasons why.
- Proposed details on how each element (brackets etc) are attached to the building.
- Full Design Notes with design loads (as applied to the building), notes on use, installation and certification of the systems.

DESIGN/ PERFORMANCE REQUIREMENTS

420 WIND LOADING (If exterior PivotLoc).

- General: Design the access/ safety system to withstand specified wind loads with equipment in position of maximum exposure and in parked position.
- Wind loads: Severe.

430 FINISHING

- General: The equipment as installed must have no irregularities/ projections capable of inflicting personal injury.
- Finished surfaces and edges of all accessible parts: Regular and smooth.

440 DESIGN LIFE/ MAINTENANCE PROGRAMME

- Design life of access/ safety system: Not less than 30 years.
- Schedule for maintenance and for replacement of components: Submit.

460 ASSESSMENT/ TESTING OF FIXING POINTS FOR ANCHOR DEVICES

- Design and installation of fixings in steelwork or timber: Verified by calculation to be capable of sustaining the relevant static and dynamic test forces specified

in BS EN 795, clause 4.3.

- Fixings in other materials: Verify suitability by carrying out a test in a sample of the material. The sample must be capable of sustaining the relevant static and dynamic test forces specified in BS EN 795, clause 4.3. Thereafter, each structural anchor installed in that material must be subjected to an axial pull out force of 6 kN to confirm the soundness of the fixing. The structural anchor must sustain the force for a minimum of 15 seconds.

FABRICATION, ASSEMBLY AND INSTALLATION

510 FABRICATION AND ASSEMBLY GENERALLY

- Machine cutting, drilling and assembly: Carry out as much as possible in the workshop. Obtain approval for any reassembly on site.
- Dissimilar metal surfaces of assembly components/ supports/ fixings: Isolate to prevent electrolytic or bi-metallic corrosion.

520 PROTECTION

- General: Do not deliver to site any components or assemblies that cannot be installed immediately or unloaded into a suitable well protected storage area.

530 SUITABILITY OF STRUCTURE/ FABRIC

- Visual, geometric and structural survey of supporting structure and fabric: Carry out before commencing installation of access/ safety system. Report immediately if structure/ fabric will not allow required accuracy or structural adequacy or security of fixing.

540 MECHANICAL FIXINGS

- Materials: Unless otherwise recommended by equipment manufacturer:
 - Connecting bolts and other fixings fully accessible for inspection: Mild steel hot dip galvanized to BS 7371-6.
Nuts: Tapped after galvanizing.
 - Cast-in anchors and other fixings not accessible for routine inspection: Zinc plated or austenitic stainless steel, grade 1.4401 (316) to BS EN 10088-1.

560 FIXINGS FOR SECURING EQUIPMENT

- Adjustment capability: Adequate three dimensional adjustments to accommodate building structure/ fabric irregularities.

570 FIXING ANCHOR INSTALLATION

- Site drilling or cutting into structure/ fabric: Permitted only in approved locations.
- Distance between all fixing devices and edges of supporting material: Not less than recommended by fixing manufacturer.

610 IDENTIFICATION AND REGISTRATION LABELS FOR FALL PREVENTION SYSTEMS

- Provision: Provide and fix to each piece of equipment a permanent label giving:
 - Manufacturer's name, address and telephone number.
 - Name and/ or reference code of installation/project.
 - Maximum number of users that may be sustained by the equipment.
 - Name of certifying engineer and date of certification.
 - Indicate restriction of use by pictogram or other suitable marking.
 - Any other special features or restrictions.
- Location: In positions such that labels can be easily read prior to attachment to the system.

810 SERVICE/ MAINTENANCE OF FALL PREVENTION SYSTEM

- General: Following acceptance of the completed installation, service and maintain the equipment for the period stated below as and at intervals recommended by the manufacturer. Such maintenance to include a 'call-out' service during normal working hours to maintain the equipment in an acceptable and safe condition.
- Service/ Maintenance period: As recommended by manufacturer but not more than 12 months between certification visits.

820 OPERATING INSTRUCTIONS

- Equipment and accessories: Where appropriate, mark in such a way that it is possible to identify the correct mode of operation for their safe use.

830 OPERATING AND MAINTENANCE MANUAL (SAFETY FILE)

- General: Before Completion provide, for inclusion in the Building Manual/Safety File, printed instructions and recommended procedures to be

established by the Employer for operating and routinely maintaining the equipment. Provide diagrams where appropriate.

- **Content:**
 - As-built drawings as per clause 840 below.
 - Instructions for pre-use inspections and attachment to equipment.
 - Comprehensive operating/use instructions, including training required and safety/emergency procedures.
 - Certificates showing that all equipment is certified to governing standards and is fit for use.
 - Servicing and planned maintenance procedures, including assembly instructions where maintenance necessitates dismantling of parts.
 - List of replacement parts, with references if necessary.
 - Recommended procedures for testing / recertifying equipment.

840 AS BUILT DRAWINGS

- **General:** After commissioning/testing of the equipment and before Completion provide As-Built drawings for inclusion in the Safety File - Number of sets: 2.

Drawing content:

- Contractor's name and contact number.
- Date of Certification/As-Built.
- Equipment Manufacturer's name, model and type numbers – if not PivotLoc.
- General arrangement of the complete installation.
- Detailed description on how safe access from the PivotLoc to the roof is achieved.
- Restricted areas/ other areas not covered by the design.
- Accurate details on how each element (brackets etc) are attached to the building.
- Full Design Notes with design loads (as applied to the building), notes on

use, installation and certification of the systems.

851 TRAINING

Allow for one free training session for the client / facility manager / building owner as follows:

- Company to have at least one FETAC Level 6 Trainer on staff to oversee training.
- Training plan to be submitted to the client for approval prior to training session.
- Training to include initial class room session on the correct storage, inspection and use of PFPE (harnesses etc).
- All trainees to demonstrate competency in the use of PFPE before going to the PivotLoc location.
- All trainees to be shown how to use the PivotLoc and demonstrate competency in use of same.
- Training to be assessed by the trainer using standard bank of questions and feedback forms.
- Training certificates to be issued within 24 hours of completion of training.

End of Section