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The Swedish Work Environment Authority's Statute Book



Provisions of the Swedish Work Environment Authority on Scaffolding, together with General Recommendations on the implementation of the Provisions

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The Swedish Work Environment Authority lays down¹ the following by virtue of Section 18 of the Work Environment Ordinance (1977:1166) and Section 3 of the Accreditation and Conformity Assessment Ordinance (2011:811) and adopts the following general recommendations.

Purpose, scope and definitions

Purpose

Section 1 The purpose of these provisions is to prevent cases of ill-health and accidents during work with scaffolding and encapsulation constructions.

¹ See *both* European Parliament and Council Directive 2009/104/EC of 16 September 2009 concerning the minimum safety and health requirements for the use of work equipment by workers at work (second individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (EUT L 260, 3.10.2009, p. 5, Celex 32009L0104),

as well as Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum safety and health requirements at temporary or mobile construction sites (eighth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) (OJ L 245, 26 August 1992, p. 6, Celex 31992L0057).

See also European Parliament and Council Directive 98/34/EC of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations (OJ L 204, 31 July 1998, p. 37, Celex 31998L0034).

Scope

Section 2 These stipulations govern the work of scaffolding and encapsulation construction erection, work on scaffolding and under encapsulation constructions, which product requirements are applicable to scaffolding and encapsulation constructions and how these are to be designed.

The stipulations apply to scaffolding that is used:

- as a workplace,
- as a means of access,
- as fall protection during work on a roof or other high level,
- as a protection fan, or
- to bear encapsulation constructions.

They do not apply to temporary structures for storage, or temporary structures at trade fairs, festivals and the like. Nor do the stipulations apply to stages and grandstands.

The stipulations do not apply to encapsulation constructions that are less than 3 m in height or which has a horizontal surface area of less than 6 m². However, the stipulations always apply to encapsulation constructions that are put up on scaffolding or other temporary structures.

General recommendations: Some common scaffolding types to which the stipulations apply include scaffolding, façade scaffolding, tube and coupler scaffolding, modular scaffolding, wooden scaffolding, mobile access tower, system scaffolding, aluminium scaffolding, frame scaffolding, bracket scaffolding, eaves scaffolding and room scaffolding.

Certain structures are not covered by the stipulations, even if they are built with scaffolding components. Exempted structures are those that do not meet the definition of the word scaffolding in Section 4. Props, propped structures, falsework, sign towers, etc. are therefore not counted as scaffolding.

Other provisions in the Swedish Work Environment Authority's Statute Book are partly applicable to temporary structures such as stages, grandstands and similar structures, such as the provisions on protection from injury due to falls, the provisions on protection against injury due to falling objects, the provisions on ergonomics, the provisions on use of work equipment, the provisions on use of personal protective equipment and the provisions on systematic work environment management.

To whom the stipulations are directed

Section 3 These stipulations shall be followed, in various parts, by those who

- are employers,

- control a worksite,
- manufacture, import, deliver or provide scaffolding and encapsulation constructions,
- erect scaffolding and encapsulation constructions and thus install a technical device,
- are site building work environment coordinators during the planning phase and the execution phase of building and civil engineering work, respectively,
- certify or type examine scaffolding.

Each main heading is followed by an indication of who is responsible for regulatory compliance.

The word 'employer' is equated to those who hire personnel.

The provisions are not applicable to the Swedish Armed Forces during field exercises and training prior to deployment.

The requirements in Sections 25, 47, 53 and 55-57 are not applicable in the case of teaching which takes place on school premises or any other site which is arranged specifically for teaching.

General recommendations: Self-employed persons are to follow these stipulations in their entirety when erecting, using or dismantling scaffolding in connection with building and civil engineering work. This follows from the Work Environment Act.

It also follows from the Work Environment Act that when self-employed persons work at a joint worksite – where it does not involve building and civil engineering work – the whole of these stipulations apply to them, with the exception of the ergonomics stipulations in Sections 54 and 68.

It also follows from the Work Environment Act that when self-employed persons work with scaffolding – where this does not involve building and civil engineering work or a joint worksite – these stipulations in their entirety apply to them, with the exception of the stipulations on access delimitation in Section 48 and the ergonomics stipulations in Sections 54 and 68.

Definitions

Section 4 In these stipulations, the following words have these meanings.

<i>Working deck</i>	A horizontal surface on a scaffold, consisting of working deck components which may be stepped on and loaded. A working deck is often intended
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	for work or as an access route but does not necessarily have to be so.
<i>Component</i>	An individual part of a scaffold or encapsulation construction which cannot operate independently. A component may be prefabricated but does not necessarily have to be so.
<i>Coupler</i>	A detachable technical device used to connect two tubes where at least one of the tubes has a nominal outer diameter of approx. 48.3 mm (also called a pipe joint).
<i>Prefabricated façade scaffolding</i>	A prefabricated scaffold without wheels, primarily intended for use with façades.
<i>Prefabricated room scaffolding</i>	A prefabricated scaffold, with or without wheels, intended to be used independently and which has a maximum height of 1.25 to 2 metres to the working deck.
<i>Prefabricated mobile access tower</i>	A prefabricated scaffold with wheels, intended to be used independently and which has a maximum height of 2.0 to 12.0 metres to the working deck.
<i>Prefabricated scaffolding</i>	Scaffolding in which all or some parts are prefabricated with given dimensions and which has fixed connection points (also called system scaffolding).
<i>Product</i>	A prefabricated scaffold, a coupler or a prefabricated component for a prefabricated scaffold.
<i>Tube scaffolding</i>	Scaffolding in which the frame consists of tubes connected with detachable couplers (also called tube and coupler scaffold).
<i>Protection fan</i>	A sealed and lined or sheathed construction on scaffolding that is intended to catch objects that fall from higher parts of the scaffolding. Protection fans are often overhanging, but they may also be located inside the scaffold.

<i>Scaffolding</i>	A technical device which is temporarily erected or suspended that consists of at least two components and which is intended as a worksite, means of access, protection fan or fall protection when working on roofs or otherwise at height. Height from the ground or other underlying plane to a horizontal working deck or equivalent is at least 1.25 metres.
<i>Provide on the market</i>	Every delivery of a product for distribution, consumption or use on the community market in connection with commercial operations, for payment or free of charge.
<i>Wooden scaffolding</i>	Scaffolding in which all load-bearing components are made of wood.
<i>Type approval</i>	An activity in which the then National Swedish Board of Occupational Safety and Health reviewed a product and found that it met the requirements of applicable stipulations and issued a type approval certificate.
<i>Type examination</i>	An activity in which an accredited body reviewed a product and found that it met the requirements of applicable stipulations and issued a type examination certificate.
<i>Encapsulation construction</i>	A temporary structure intended to cover or encapsulate an area where building or civil engineering work is taking place in order to protect workers and structures from the climate. Encapsulation constructions always includes a roof, but walls may also be included.

General recommendations: More terms are explained in the standards to which the provisions refer.

Sheeted façade scaffolding is not considered encapsulation constructions, even if the sheeting is folded in towards the façade above the scaffolding.

There are often temporary buildings on construction sites, such as storage sheds, workshops, and personnel spaces. These buildings are not considered encapsulation constructions.

Product requirements for scaffolding and encapsulation constructions

Section 5 Sections 6–10, 12, 15–16, 18, 21 and 22 are directed at manufacturers, importers, and those who deliver scaffolding, scaffolding components, and encapsulation construction components. They contain requirements that must be met when unused products are provided on the market or put up for sale.

Sections 6–9, 11, 12, 15, and 16 are also directed at those who provide scaffolding and encapsulation constructions, and the requirements must be met when the transfer of possession takes place.

Sections 6–10 are also directed at those who deliver used products.

Sections 13–14 and 16–20 are directed, in whole or in part, at those who type examine scaffolding.

Section 6 Prefabricated scaffolding, couplers and other scaffolding and encapsulation construction components must provide sufficient safety during erection, use, and dismantling, especially regarding

- load-bearing capacity, strength, stability, and protection against deformations,
- fall protection, and
- ergonomics and manageability.

General recommendations: It is important that scaffolding and encapsulation construction components are robust enough to withstand normal handling at worksites.

Material requirements

Section 7 Prefabricated scaffolding, couplers and other scaffolding and encapsulation construction components must be of a quality suitable for their purposes.

The material must be protected against external influences to the extent necessary to prevent deterioration in load-bearing capacity.

Components that will be stepped on may not be treated such that it becomes slippery.

Rimming steel materials may not be used in scaffolding.

General recommendations: Materials in accordance with the standards of the SS-EN 12811 series are usually acceptable.

Steel materials should be galvanised, painted or treated in a manner that provides good corrosion protection.

Section 8 Tube scaffolding tubes shall have material qualities and dimensions suitable for the couplers that are normally used. The nominal material thickness of steel tubes shall be at least 3.2 mm and aluminium tubes at least 4.0 mm.

General recommendations: The tubes used for steel tube scaffolding in Sweden normally have the following characteristics:

- nominal outer diameter of 48.3 mm,
- nominal material thickness of 3.5 mm,
- lower tensile yield limit of 300 N/mm², and
- elongation at failure A5 at least 17 %.

Section 9 Timber for scaffold boards or other load-bearing components made of wood shall be made of structural timber.

Components that consist wholly or partly of wood may not be surface treated such that the material's structure is concealed.

General recommendations: Timber for scaffolding decks or other primary load-bearing components should be at least class C24 (according to Swedish Standard SS-EN 338:2009 'Structural timber - Strength classes') or equivalent.

Finger jointed timber should not be used in scaffold boards.

Impregnation, glazing and similar treatments do not normally hide the timber's structure.

Type examination

Section 10 Prefabricated scaffolding, prefabricated scaffolding components, and couplers may be provided on the market or put up for sale only if they are covered by a valid type examination certificate and the examination pursuant to Section 17 has been completed.

The type examination certificate for a product pursuant to the first paragraph shall be issued by a certification body within the European Economic Area (EEA) that has been accredited to perform type examinations of the rel-

evant type of products. The body shall be accredited in accordance with Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93.²

Used prefabricated scaffolds, components for prefabricated scaffolds and couplers may be transferred only if they are covered by:

- a valid type examination certificate,
- a type examination certificate which is no longer valid for new delivery, or
- a type approval pursuant to older stipulations.

Those who provide a product on the market without following the requirements of the first and second paragraph shall pay a sanction charge of SEK 2 000 for each component supplied, though not exceeding SEK 100 000 for each delivery occasion (see Section 75).

General recommendations: Because scaffolding made by a user for his/her own use is neither placed on the market nor put up for sale, it need not be type examined.

Section 11 Prefabricated scaffolding, prefabricated scaffolding components, and couplers may be provided only if they have been approved by type examination.

General recommendations: The requirement means that they must have been type examined by an accredited body as per stipulations applicable at that time. However, the type examination certificate may be expired. The requirement also means that the products which were previously type approved by the then National Swedish Board of Occupational Safety and Health can no longer be provided unless they have been type examined at a later date.

Section 12 Type examination is not needed for

- prefabricated scaffolding of which less than ten are made and where no more than 100 pieces of any single component are made,
- couplers of which fewer than 100 pieces are made, or
- duckboards implemented pursuant to Annex 4.

However, the requirements in Annex 1 are also applicable to these products.

² EUT L 218, 13.8.2008, p. 30 (Celex 32008R0765).

tested. A verification of fewer components can be performed on simpler products.

Section 18 Manufacturers, importers and assigners of type examined products are to have access to the documents on which the type examination was based, including reports from the examination as per Section 17. These documents shall provide the following in Swedish or English:

- Descriptions of the product as a whole and its components,
- Statements and reports on tests and calculations,
- Assessments of the product,
- Draft of instructions for erection, use, dismantling and maintenance, and
- Reports from the examination as per Section 17.

Section 19 Upon request of a regulatory body, a certification body shall provide the documents which formed a basis for the type examinations of individual products, including reports from the examination as per Section 17.

General recommendations: The Swedish Work Environment Authority is the regulatory body for these products.

Section 20 The certification body that has type examined a product shall, if so required, participate in coordination activities arranged by a regulatory body.

General recommendations: Consultation meetings are a type of coordination activity and are usually arranged once or twice a year.

Markings

Section 21 Type examined products shall be marked in accordance with Annex 1.

Instructions

Section 22 Type examined products are to have instructions in Swedish for erection, use, dismantling and maintenance.

The instructions are to be drawn up as follows:

- For prefabricated façade scaffolding and components (where applicable) for prefabricated façade scaffolding: according to Swedish Standard SS-EN 12810-1:2004.

- For prefabricated mobile access towers and components (where applicable) for prefabricated mobile access towers: according to Swedish Standard SS-EN 1298:1998 'Mobile access and working towers - Rules and guidelines for the preparation of an instruction manual'.
- For couplers: according to applicable Swedish Standards of SS-EN 74-1:2005, SS-EN 74-2:2008 or SS-EN 74-3:2007.
- For prefabricated room scaffolds and components for prefabricated room scaffolds: where applicable, according to Swedish Standard SS-EN 1298:1998.

They must also demonstrate how erection, use, dismantling and maintenance are to be performed.

The instructions must accompany provided scaffolding.

General recommendations: It is important that it is clear how erection, modification and dismantling are to be carried out so that fall risks are minimised, for example, where personal protective equipment is to be anchored (where applicable).

It is also important that the specific restrictions of use, such as maximum vertical or horizontal loads, are precisely specified in the instructions.

Planning and layout of scaffolding and encapsulation constructions

Section 23 Sections 24–44 are directed at those who erect or significantly modify scaffolds or encapsulation constructions.

Section 26 is also directed at site building work environment coordinators (for both the planning and execution phases) in building and civil engineering work.

Planning

Section 24 The choice of scaffolding must always be a scaffold which contributes to a good working environment, both for those who erect the scaffolding and for those who use it. The following must be taken into account:

- The scaffolding components' weight and manageability
- Fall protection during erection, dismantling and use
- Load-bearing capacity and stability
- Ergonomics at use, and
- The means of access' quality.

General recommendations: It is important to choose scaffolding which consists of components which are as light as possible.

Section 25 Before scaffolding erection begins, a plan must be drawn up which indicates how erection, use, and dismantling can be done safely. Any encapsulation construction that is included in the structure shall also be covered by the plan. The plan shall be prepared by a person who has good knowledge and experience of working with scaffolding.

The plan shall contain information on:

- The scaffolding or encapsulation construction to be used,
- How the scaffolding or encapsulation construction is to be erected, used and dismantled,
- How those who erect or dismantle the scaffolding or encapsulation construction will be protected against falls and musculoskeletal injuries, and
- How any other possible risks are to be prevented.

General recommendations: The plan's scope and level of detail depend on the complexity of the scaffolding structures concerned.

Plans for scaffolding that is erected, used and dismantled in a similar manner and in comparable environments can apply to several occasions of use.

The provisions on building and civil engineering work in the Swedish Work Environment Authority's Code of Statutes require a work environment plan to be prepared and available before a worksite is established and that said plan shall be adjusted to the working conditions on an ongoing basis. It is advisable that the scaffolding documentation be inserted as an annex to the work environment plan.

Supporting surface and placement

Section 26 When planning for scaffolding or encapsulation constructions, the supporting surface must be inspected to ensure that it can safely and securely support the loads that may arise. The same applies for façades and other structures to which scaffolding must be anchored. The scaffolding must be able to be safely erected and used at the location in question.

General recommendations: Above all, it is important to check whether the parts of a building or other structure, which are affected by the scaffolding's load, are of sufficient strength and stability.

It is particularly important to check the strength when anchoring to facing bricks.

Layout of scaffolding and encapsulation constructions

Section 27 The layout of a scaffold is to be based on the plan for erection, use and dismantling as described in Section 25.

Fall protection and falling object protection

Section 28 Scaffolding must be equipped with guardrails where there is a risk of falling two metres or more. Where there is particular risk, there should be guardrails at lower fall heights as well.

The guardrail must be of sufficient strength and be securely fastened. It must be sufficiently high and consist of a principal guardrail, intermediate guardrail and toeboard, or provide equivalent protection by other means.

The toeboard may be omitted from parts of the scaffolding that are neither used for work or as means of access. Toeboards are usually not needed in stairway flights, either. In mobile access towers, toeboards are only needed on the working deck.

The guardrail shall be mounted in connection with the working deck so that a dangerous gap does not arise between the working deck and the guardrail.

If an encapsulation construction roof need to be walked upon, it shall be equipped with technical devices to protect against falling to lower levels.

General recommendations: An example of a particular risk when a guardrail may be needed in the case of a lower fall height is when a scaffold is erected next to water or liquid-filled containers, tanks, etc.

A guardrail should be executed according to Swedish Standard SS-EN 12811-1:2004 or SS-EN 1004:2005 respectively, where an absolute minimum height of 950 mm is specified. However, a guardrail may need to be higher depending on the risks.

Slits or openings between working decks and toeboards should be as small as possible.

The most common technical devices to protect against falls from encapsulation construction roofs are guardrails or anchor points for personal protective equipment.

Section 29 Scaffolding must have protection fans if there is a particular risk of falling objects that can cause harm to persons. The cover shall be sufficiently large, strong, and tight to catch falling materials and objects in a safe manner. It shall also be securely attached or propped up.

General recommendations: Examples of where protection fans may be necessary include areas adjacent to stairway towers, at other means of access, or at work positions directly adjacent to the scaffolding.

A protection fan which is designed pursuant to a proposal for Swedish standard FprEN 12811-4:2013 is usually sufficiently safe.

Section 30 Scaffolding that is used to protect against falls from an abutting structure shall be strong enough and anchored such that it can be sure to safely catch any persons who may fall against it.

A guardrail shall normally be at least 1.00 m high, measured perpendicular from the working area surface.

General recommendations: The roof of a building is an example of an abutting structure.

Swedish Standard SS-EN 13374:2004 'Temporary edge protection systems - Product specification - Test methods' is an example of how scaffolding guardrails can be executed with sufficient safety. A two-rail guardrail with a toeboard is sufficient on the working surface of the abutting structure inclined at 0–10 °, at an inclination at 10–30 ° the rails need to be closer together, and at an inclination more than 30 ° a net or other device that serves the same purpose is usually needed.

Section 31 In order to avoid persons falling to a lower level, and to avoid the risks of improper workloads, the distance between a scaffolding deck and a wall or other abutting structure shall be as small as practicable. The distance may normally not exceed 0.30 metres.

General recommendations: It is important to carefully plan the scaffolding placement, particularly at curved or irregular façades or other surfaces.

If it is not possible to erect scaffolding close enough to the façade, a bracket decking unit can be installed or a guardrail can be put up also on the inner side of the scaffolding.

Access

Section 32 There must be a sufficient number of suitable means of access to each working deck and each area of deck where work is to be carried out. There shall be sufficient numbers of these in respect of the work to be performed, and they shall be designed in a manner which is appropriate for the work. There shall also be an appropriate transport route, where necessary. Scaffolding that consists of two or more bays lengthwise must be executed such that safe access is provided to each bay.

The means of access must be ergonomically designed and should usually consist of stairways or ramps. Stairways and ramps shall be of adequate width and have an appropriate slope. Ramps shall be at least 0.60 metres wide.

This section does not apply to means of access in mobile access towers or room scaffolds.

General recommendations: It is important that safe access is provided around corners, past balconies, etc.

In long scaffolding structures, where several means of access are needed, the distance between them should not exceed 25 metres.

A vertical or near-vertical ladder is usually unsuitable as a means of access.

Stairways should be designed according to Swedish Standard SS-EN 12811-1:2004.

Stipulations on means of access and communication routes are also available in the provisions on building and civil engineering work in the Swedish Work Environment Authority's Code of Statutes.

Section 33 A mobile access tower must have a means of access in the form of an inclined ladder, a stairladder, or a stairway according to Swedish Standard SS-EN 1004:2005, if the height to the working deck is greater than 2.5 metres.

Each level that can be walked upon must be fully covered with working deck components if the means of access consists of an inclined ladder.

General recommendations: Building and civil engineering work usually requires a stairway for a means of access in mobile access towers.

Section 34 There must be a safe means of access to the roof of an encapsulation construction, if needed.

General recommendations: Access to the roof of encapsulation constructions may be needed for snow removal and repairs.

Working deck

Section 35 The levels and surfaces that need to be used for work or as means of access shall be fully covered with working deck components.

The working deck shall be installed in such a way that its parts are not inadvertently dislodged from their positions.

General recommendations: The second paragraph means that the working deck components usually need to be mechanically secured to the scaffolding. However, this is not usually the case for scaffold boards connected with planking cross bars other than in the end bays.

Section 36 A working deck shall be as level as possible. The risk of tripping must be prevented if there are level differences.

General recommendations: In order to facilitate transports and reduce the risk of tripping, it is advisable to put a bent-over edge plate or a wedge-shaped block of wood at the scaffold board ends if the scaffold boards overlap.

Section 37 Both ends of overlapping scaffold boards shall extend beyond the frame far enough to minimise the risk of collapse.

At the end supports, the possibility to walk on extending sections of scaffold boards, duckboards, or other working deck components is to be prevented if they cannot be walked on with sufficient safety.

General recommendations: Scaffold boards should extend at least 0.15 metres beyond the frame.

Section 38 All individual scaffold boards shall be connected on a working deck made of scaffold boards on façade scaffolding.

General recommendations: There are specific planking cross bars for such purposes.

Encapsulation constructions

Section 39 There shall be space so that work can be carried out under encapsulation constructions without cases of ill-health and accidents. The clearance height where workers need to be shall normally not be less than 2.10 metres.

General recommendations: Tie-rods and the like may sometimes be necessary and may infringe somewhat on the clearance height.

Scaffolding and encapsulation construction design

Scaffolding

Section 40 Before scaffolding erection begins, it must be designed with sufficient security against material failure, instability and deformations that are significant for safety during erection, use and dismantling. It is to be dimensioned for the most unfavourable combination of external loads that do not reasonably exclude each other. The external loads that one shall normally take into account are the working deck load and wind load. One shall take into account the weight of people, materials, and tools when estimating the loads imposed on a working deck.

Scaffolding shall be dimensioned according to Swedish Standard SS-EN 12811-1:2004 'Temporary works equipment - Part 1: Scaffolds - Performance requirements and general design' or according to any other document with an equivalent level of safety.

The design shall be based on calculations and shall be documented in writing in specific design documents.

General recommendations: One should usually choose a load class from Swedish Standard SS-EN 12811-1:2004.

The dimensioning is usually performed by one of the following options:

1. Compliance with the standard design in the type examination certificate (for prefabricated scaffolding).
2. Compliance with the standard design in type configurations (for tube scaffolding).
3. Type examination certificate or type configurations and additional, simplified calculations for deviations from the designs indicated in the certificate or type configuration.
4. Specific calculations for the individual case.

- the base allows the mobile access tower to be moved easily,
- work from the mobile access tower can essentially be performed from the first working deck level (a maximum of approximately 2.5 m above ground), and
- the means of access are safe and appropriate.

A prefabricated mobile access tower is designed for a horizontal load of 300 N.

Section 72 The wheels of mobile access towers must be locked when the scaffold is in use.

Section 73 When a mobile access tower is moved, no persons or materials that can fall may be on it, irrespective of the height at which the working deck is located.

If a mobile access tower has stabilisers, they may not be removed during movement.

General recommendations: It is important that a mobile access tower is moved carefully so that it does not become unstable. When moving mobile access towers with stabilisers, the stabilisers may need to be lifted slightly.

Specific requirements for use of room scaffolds

Section 74 Room scaffolding may normally only be used for light jobs where the scaffolding needs to be moved frequently. They may only be used on flat and paved or reinforced surfaces and only on horizontal surfaces if the legs cannot be adjusted for height.

Room scaffolds may only be used by one person at a time. The wheels must be locked when they are in use, irrespective of the height at which the working deck is located.

Only work that exposes the scaffolding to minor horizontal forces may be carried out.

General recommendations: A room scaffold is usually designed for a horizontal load of 100 N.

Provisions on sanction charges

Section 75 The provisions in the first and second paragraph of Section 10 and the second and third paragraph of Section 47 are provisions under Chapter 4(2) of the Work Environment Act (1977:1160).

Those who violate these provisions shall pay a sanction charge according to Chapter 8(5)–(10) of the Work Environment Act. The size of the sanction charge is calculated according to the grounds specified in Sections 10 and 47 of these provisions.

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1. This statute enters into force on 1 January 2016 in respect of 11 Section and in respect of training requirements for encapsulation constructions in Section 47, and otherwise on 1 July 2014.
 2. This statute simultaneously abrogates the Swedish Board of Occupational Safety and Health's Scaffolding provisions (AFS 1990:12).
 3. Type examinations for prefabricated scaffolding, prefabricated scaffolding components, and couplers under the Swedish Work Environment Authority's scaffolding provisions (AFS 1990:12) are also valid as type examinations pursuant to Section 10 of these provisions. The requirements in Sections 17–18 do not apply to these products. Type approvals for prefabricated scaffolding, prefabricated scaffolding components, and couplers under the Swedish Work Environment Authority's scaffolding provisions (AFS 1990:12) or under older provisions are not valid as type examinations.

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Annex 1 – Product requirements for prefabricated scaffolding and couplers

Prefabricated façade scaffolding and independent components for prefabricated façade scaffolding

Prefabricated façade scaffolding shall meet the technical requirements contained in the following Swedish Standards:

- (a) SS-EN 12810-1:2004 'Temporary works equipment - Façade scaffolds made of prefabricated components - Part 1: Product specifications'
- (b) SS-EN 12811-1:2004 'Temporary works equipment - Part 1: Scaffolds - Performance requirements and general design'

The standards apply under this provision, with the following clarifications:

- Clearance headroom between working decks: The headroom class shall be H2 according to Chapter 4 in (a) and Chapter 5.3 in (b).
- Access to the working deck: The vertical access class shall be ST or LS according to Chapter 4 in (a).
- Load class: The load class shall be at least class 2 according to Chapter 6 in (b).
- Building height for load class: Minimum building height of 24 m applies to at least one configuration for each load class indicated in the type examination certificate according to Chapter 7.2.2 in (a).

Prefabricated mobile access towers and independent components for prefabricated access towers

Prefabricated mobile access towers must meet the technical requirements of Swedish Standard SS-EN 1004:2005 'Temporary works equipment - Mobile access and working towers made of prefabricated elements - Materials, dimensions, design loads, safety and performance requirements'.

The standard applies under this provision, with the following clarifications:

- Clear height between working decks: The height class shall be H2 according to Chapter 7.2.
- Access to the working deck: There shall at least be class A, B, or C in accordance with Chapter 7.6.1, i.e. not just class D.
- Maximum distance between platforms: For access with ladders (classes C and D according to Chapter 7.6.3), the intermediate platforms must be fully covered with platform components.
- Loads: All loads indicated in Chapter 8.1 shall be presumed to be characteristic static loads.

In addition, the design of scaffolding as a whole may not presume the friction coefficient between the stabilisers or outriggers and the supporting surface to be greater than 0.2.

Prefabricated room scaffolds

Room scaffolds shall meet the following requirements:

- The load-bearing capacity shall be adequate by having a load class equivalent to at least class 2 according to SS-EN 1004:2005 'Mobile access and working towers made of prefabricated elements - Materials, dimensions, design loads, safety and performance requirements', or by the load-bearing capacity otherwise being capable of being regarded as satisfactory.
- All wheels shall be lockable.
- Stability should be adequate with a safety margin against turning over of at least 1.20 with the following loads:
 - Tipping horizontal load of 100 N on the working deck in the most unfavourable direction.
 - Stabilising vertical load of 750 N placed 0.100 m from the side of the working deck.
 - The above loads are to be placed in the most unfavourable way.
 - The scaffolding should be whole, but normally without guard-rail, and the components and any wheels must be placed in the most unfavourable positions.
- All primary components for prefabricated room scaffolds are to be marked to indicate to which product the component belongs, the manufacturer, and the year of manufacture.

It shall be possible to get up to and down from the scaffold's working deck in a safe manner.

Couplers

Couplers shall meet the requirements of the following Swedish Standards:

- (c) SS-EN 74-1:2005 'Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 1: Couplers for tubes - Requirements and test procedures'.
- (d) SS-EN 74-2:2008 'Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 2: Special couplers - Requirements and test procedures'.
- (e) SS-EN 74-3:2007 'Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 3: Plain base plates and spigot pins - Requirements and test procedures'.

The standard applies under this provision, with the following clarifications:

- Couplers - mode of operation: All couplers shall be screw couplers (not wedge couplers) according to Chapter 3 in (c) and Chapter 3 in (d).
- Coupler classes: All couplers shall be class B or BB according to Chapter 4.2.1 in (c) and Chapter 5 in (d).
- Sleeve couplers: Couplers for axial tube joints shall be of type SF according to Chapter 4.1 in (c); neither loose spigots according to Ch. 3 in (e) nor expanding spigots.

Alternative layout

Deviations from the requirements in the standards are possible if it can be demonstrated that the product is equally as safe as if it has been designed pursuant to the standards.

Annex 2 – Type examination certificate

All type examination certificates are to contain the following information:

- Name and address of the manufacturer and at least one distributor.
- Type designation of the product.
- Description of the product and all its parts or components.
- Summarised information about the components' materials.
- Marking.
- Reference to instructions for erection, use, dismantling, and maintenance.
- Information on how the annual inspection under Section 17 shall be conducted.

Type examination certificates for prefabricated scaffolding shall also include the following information:

- Description of the product's different standard designs including dimensions, load classes and build heights.
- Means of access.
- Where personal protective equipment can be attached, if applicable.
- Components that can be used with the scaffolding but which are not provided by the manufacturer (system-free components), if applicable.

Type examination certificates for individual components for prefabricated scaffolding shall also include the following information:

- The scaffolds in which the component can be used or the specific requirements applicable to the scaffolding where the components can be used.
- Permissible loads or equivalent for the component.
- Bearing pressure that the component can transfer to the scaffolding (if applicable).

Type examination certificates for prefabricated scaffolding can also contain information and instructions for calculating the load-bearing capacity with specified deviations from the standard designs.

General recommendations: Information and instructions under the last paragraph usually consist of an indication of the permitted standard load.

Annex 3 – Training

Summary of training levels

Workers shall have received training at the level needed for their work. The following table describes the training levels in general terms and also indicates criteria and restrictions for them.

Name of training	Certificate of training	Intended for
BASIC TRAINING:		
Special information on room scaffolds	Not required	For anyone who works to a limited extent with scaffolds with no more than 2 m to a working deck and where the layout is indicated by a general assembly instruction.
Special information on mobile access towers	Required	For anyone who works to a limited extent with room scaffolds and mobile scaffolds with no more than 5 m to a working deck and where the layout is indicated by a general assembly instruction.
General training on scaffolds	Required	For anyone who works with scaffolds with no more than 9 m (four platform levels) to a working deck and where the layout is indicated by a general assembly instruction.
Special training on scaffolds	Required	For anyone who works with scaffolds where the final height is in excess of 9 m or where the scaffolds are more complex than those referred to above.
SUPPLEMENTARY TRAINING		
Supplementary training on encapsulation constructions	Required	For anyone who works with encapsulation constructions irrespective of its height and bearing method. 'Special training on scaffolds' is required as a basis for this supplementary training.
Supplementary training on special scaffolding structures	Required	For anyone who works with special scaffolding structures which are not covered by 'Special training on scaffolds'. 'General training on scaffolds' is required as a basis for this supplementary training.

Contents of the training

1 Mandatory elements for all levels of training

All information and training must include the following elements:

- Understanding of the plans for the erection, dismantling, or modification of the scaffolding in question.
- Safety during the erection, dismantling, or modification of the scaffolding in question.
- Measures to prevent the fall risk of persons or objects.
- Precautions when weather conditions change in ways that adversely affect the safety of the scaffolding in question.
- Conditions regarding permissible loads.
- All other risks which the abovementioned work with erection, dismantling, or modification may entail.

2 Additional elements for the various levels of training

In addition to Point 1, specific information on room scaffolding shall include:

- Information on of which scaffolding stipulations apply in Sweden.
- Review of type examination certificates and installation instructions for scaffolding which are planned to be used.

In addition to Point 1, specific information on mobile access towers shall include:

- Review of stipulations for room scaffolds and mobile access towers and information on stipulations for other scaffolds which are applicable in Sweden.
- Review of type examination certificates and installation instructions for the scaffolding that is planned to be used.

In addition to Point 1, general training shall include:

- Review of scaffolding stipulations in Sweden.
- Review of different types of prefabricated scaffolding and couplers
- Information on type configurations for tube and coupler scaffolds.

- Methods to protect oneself from falls during the erection and dismantling of scaffolding.
- Methods for up-and-down transports and lifting scaffolding equipment.
- Bottoming, stabilising and anchoring of scaffolds.

In addition to Point 1, specific training shall include:

- A thorough review of scaffolding stipulations in Sweden.
- General principles for the erection of tube and coupler scaffolding.
- Review of different types and makes of prefabricated scaffolding and couplers.
- How scaffolding can be used in ways other than as shown in the instructions.
- Methods to protect oneself from falls during the erection and dismantling of scaffolding.
- Methods for up-and-down transports and lifting scaffolding materials.
- Anchoring of scaffolding.
- Sheeting of scaffolding.
- Scaffolding design.
- Information on special scaffolding structures.

Supplementary training on encapsulation constructions shall include:

- A thorough review of encapsulation constructions stipulations in Sweden.
- General principles for the erection of encapsulation constructions.
- Review of various types of encapsulation constructions.
- How encapsulation constructions and scaffolding can be combined.

Supplementary training on special scaffolding structures shall include:

- Review of stipulations for the scaffolding structure in question.
- Various types and makes of the scaffolding structure in question
- Methods for erecting, significantly modifying and dismantling the scaffolding structure in question.
- Methods to protect oneself from falls during the erection and dismantling of the scaffolding structure in question.
- Other important features which affect erection, significant modification and dismantling.

Apprentice training

Apprentices (who alternate theoretical training with practice) are permitted to take part in work on erecting, significantly modifying and dismantling scaffolds, on the following conditions:

- Every apprentice is under the supervision of a scaffolder with a professional qualification or certificate of professional competence,
- Every scaffolder pursuant to the above solely looks after one apprentice,
- Every apprentice has an apprenticeship record or other documentation,
- The apprentices continue to receive training, and the training element is planned,
- Apprentices who come directly from upper secondary schools have the general training level from the outset, and
- Other apprentices achieve the general training level within 6 months of starting apprentice training.

General recommendations: It is appropriate to apply the following times for each training course:

- 2-4 hours for special information on room scaffolds,
- 8 hours for special information on room scaffolds and mobile scaffolds,
- 16 hours for general training,
- 80 hours for special training on scaffolds,
- 32 hours for supplementary training on encapsulation constructions, and
- A sufficient number of hours for supplementary training on special scaffolding structures (depending on the scaffolding structure in question).

It is important for a sufficiently large element of the training to be led by a tutor, particularly as regards the shorter training courses. The tutored part of each training course should be adapted to students' prerequisites and should exceed half of the total time.

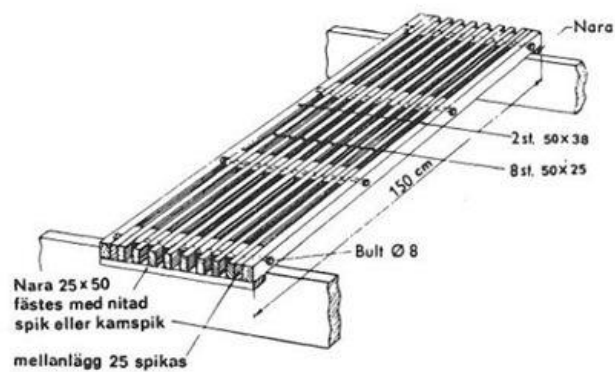
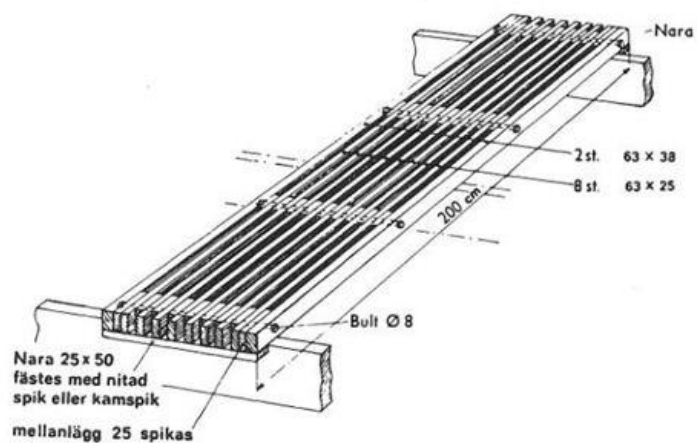
As parts of the training aim to convey knowledge of the stipulations on scaffolds which are applicable in Sweden, this means that workers with training from other countries usually need to supplement this in order to meet the requirements in these stipulations.

Apprentice training is intended to allow students to alternate training with working under supervision. It is normal for apprentices to be employed by scaffolding contractors.

Annex 4 – Duckboard design

Duckboards designed as shown below³ do not need to undergo type examination.

Timber must be selected pursuant to Section 9.



³ The terms in the figure are not translated.