

TRIMO



INSTRUCTIONS FOR USE AND
MAINTENANCE OF TRIMO MODULAR UNITS

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1 INTRODUCTION

The instructions are intended for the **inspection and maintenance** of Trimo modular units.

On a regular basis a caretaker or user of facilities and persons with adequate professional qualifications **shall inspect, maintain and organise cleaning** of all structural elements of the facility in scope of regular maintenance works. An inspection carried out **minimally once a year** is obligatory; it may be carried out even several times if the environment is less favourable.

The table at the end of this document presents a list of required procedures and measures that are to be implemented during the annual inspection of the facility, instructions for damage repairs, washing of roof and façade panels and other aspects of maintenance.

In case of questions about the inspection and maintenance of Trimo modular unit, you are kindly requested to contact Trimo MSS.

2 TECHNICAL DATA

Dimensions

Type	Lenght ¹		Width		Height	
	External	Internal ²	External	Internal ²	External	Internal ³
10`	2989 mm	2809 mm	2435 mm or 2989 mm	2255 mm or 2809 mm	2591 mm or 2765 mm	2326 mm or 2500 mm
15`	4550 mm	4370 mm				
16`	4880 mm	4700 mm				
20`	6055 mm	5875 mm				
24`	7325 mm	7145 mm				
30`	9125 mm	8945 mm				

Loadings

	Standard [kN/m ²]	Optional [kN/m ²]
Floor load	2.0	5.0 (do 10.0)
Snow load	1.0	2.0 (do 6.0)
Wind load	0.5	acc. to EN 1991-1-4

U Thermal transmittance

	Standard [Wm ² K]	Optional [W/m ² K]
Floor	0.35	0.24 (do 0.14)
Roof	0.36	0.19 (do 0.11)
Walls	0.58 ²	0.25 (do 0.16)
Windows	1.60	1.30
Doors	1.90	1.60

¹ Custom lengths are possible upon confirmation with sales dept.

² Valid for wall thickness 60 mm.

³ Internal height up to 3500 mm is possible upon confirmation with sales dept.

Voltage:	400/230 V, 50 Hz
Maximum connection power:	23 kW
Water pipeline working pressure:	max. 6 bar

Technical data is valid for standard modular units. Please check with Trimo MSS technical support for your specific individual project requirements.

3 MAINTENANCE OF TRIMO MODULAR UNITS

- To prolong the lifetime of Trimo modular unit the following maintenance measures are recommended that should be performed:
- **Gutters and drain water pipes of a modular unit are to be regularly cleaned. Special attention is to be paid to modular units that are mounted near trees. Possible blocking-up of gullies or rainwater pipes for meteorological water from the modular unit roof can cause serious damage to the modular unit (water might penetrate the ceiling of a modular unit).**
- **After snowfall it is necessary to remove snow from the roof.**
- In-built original elements such as radiators, boilers, kitchenettes are to be maintained according to the instructions of producers. All original instructions for built-in elements are inside the modular unit.
- At least once a year you need to lubricate the moving parts to keep the windows and doors operating properly and, if necessary, adjust them.
- When temperatures are low, corner elements should be checked. If ice appears in them it should be removed.

3.1. Repair of mechanical damage (touch up)

The following procedure is recommended for repairs of mechanical damage to paint on the outer surfaces of the Trimo modular unit:

- The damaged place should be cleaned to the basic material.
- Dust and fat are to be removed.
- The prime coating is applied to a clean and dry surface.
- A top coating has to match the shade of pre-painted sheet metal (a spare tin of 0.25 kg paint in the shade of a modular unit is stored in each Trimo modular unit).

3.2. Removal of small metal particles

Small metal particles that appear as a result of cutting and drilling corrode very quickly and cause mechanical and visible damage to the organic coating. They have to be completely removed from panel surfaces immediately or latest when the daily work has been finished. Soft clean brooms or suction are used for removal viz. cleaning. The use of tools with integrated power nozzles for suction of waste particles is recommended.

Hot filings that fall on sheet metal surface are extremely dangerous. They sink deeply in the protective coating and cause permanent local damage. Obligatory protection of a sheet metal surface against the subsequent impact of hot filings is recommended.

4 CLEANING OF EXTERNAL TRIMO MODULAR UNIT SURFACES

Trimo modular units are made of materials that do not require any special cleaning. Washing of all areas of the facility is recommended minimally once a year. Modular unit elements should be cleaned cold (max. up to 25°C). Modular unit surface should not be cleaned in the strong sun or when sheet metal is very hot, if modular unit is constantly exposed to the sun.

Washing is carried out under pressure (Kercher, Wap) under consideration of the following parameters:

- Temperature of washing water: max 60°C.
- Water jet pressure: up to 10 bars.
- Detergent solution, concentration: up to 10%.

To avoid damaging the coating, cleaning detergent should be used cold (max. up to 25°C). Use of hot steam cleaning devices is not permitted. All the cleaning detergents with unknown contents and too strong or inadequate cleaning detergents are not allowed.

Appropriate PH solutions for panel surface:

- PH solutions: min. 6 up to max. 9 – for polyester organic coating (SP, PUR),
- PH solutions: min. 4 up to max. 9 – for plastisol organic coating (PVC) and
- PH solutions: min. 4 up to max. 9 – for polyvinylidene fluoride (PVDF).

The complete surface of Trimo modular unit is to be washed by aqueous solution of an alkaline detergent in the prescribed concentration. After cleaning by a detergent, the complete surface is rinsed with clean water. Rinsing is to be carried out from top to bottom so that the cleaning agent is completely removed. After rinsing with clean water, wet surfaces are to be wiped by dry cloths.

Always clean complete modular unit surface so that the surface gets uniform appearance after cleaning.

Waste water as a product of cleaning has to be treated in accordance with the relevant legislation in force.

Use of rough polishing substances, acids or strong alkaline agents are not permitted. Organic solutions that contain ester, ketone, alcohol, aromatic compounds, glycol-ether, or halogen hydrocarbon should not be used.

4.1. Special recommendations

If mould appears the surface has to be cleaned with a suitable solution having the following composition:

- Household detergent – 0.5%
- Trisodium phosphate – 3.0%
- 5% solution of sodium hypochlorite – 25.0%
- Clean and fresh water – 71.5%

After cleaning the surface is to be rinsed with running water.

The use of isopropyl alcohol (2n-propanol) or an alcohol cleaning agent (INCIDIN, producer Ecolab d.o.o.) or mineral cleaning agents based on hydrocarbons (white spirit, Tessarol) is allowed for the removal of stains. Preliminary conduct of a test is recommended on a small surface. When the stain is removed, the surface has to be rinsed well with clean water.

Cleaning detergent	
INCIDIN LIQUID Supplier: Ecolab d.o.o. Vajngerlova 4, p.p. 1007 SI - 2001 Maribor Telephone: + 386 (0) 2 42 93 100 Fax: + 386 (0) 2 42 93 152	Mineral cleaning agent: TESSAROL Producer: HELIOS d.o.o. Količevo 65, SI - 1230 Domžale Telephone: +386 (0) 1 72 13007 Fax: +386 (0) 1 72 12 257

5 CLEANING OF INNER TRIMO MODULAR UNIT SURFACES

The interior surface of Trimo modular unit is lined with steel – sheet (when FTV panels are used), or with chip-board, coated with white or wood pattern foil (when FTVL panels are used). PVC profiles fit cladding panels together to give a professional quality finish. Floor are laid with vinyl flooring in grey or brown colour.

5.1. Steel - sheet inner surface

If a modular unit is lined with a steel - sheet metal, it should be cleaned as its exterior. Procedures are described in Section 4.

5.2. Chip-board inner surface

Modular unit walls can be washed with clear water with addition of neutral or poorly alkaline detergent (pH = from 7 to max. 10). Soft cotton wool cloths without rough mechanical cleaning components can be used for cleaning.

Use of aggressive cleaning agents that might damage the wall surface is prohibited.

Windowpanes need to be cleaned with detergent suitable for cleaning glass surfaces. For cleaning the PVC frames, the same detergent can be used as for cleaning the inner modular unit walls.

5.3. Cleaning of modular unit floor

Initial cleaning - The PVC floor covering is basically not protected by a protective coating against damage/ wear. To extend lifespan and better resistance against damage and wear, protect the floor covering with polymer dispersion (coating). For very busy, intensive and heavy-duty working environments, perform a preservation through applying at least two layers of an agent for floor covering preservation.

Regular cleaning – Cleaning should be performed on a regular basis, at specified intervals depending on the intensity of traffic. Dust and other impurities from the floor are to be removed by a wet cloth.

Periodical cleaning – As regular cleaning, only an agent suitable for cleaning of PVC flooring is to be added to the water.

Detailed cleaning - Is to be performed sometimes a year, depending on floor dirtiness. The flooring is to be cleaned by agents suitable for PVC flooring. When the flooring is dried, it must be protected with an agent that creates a protective film.

Cleaning agents should be based on emulsions, soaps and detergents that are exclusively intended for maintenance of PVC flooring. Cleaning agents are to be used according to the instructions of the producers.

NOTE:

Over-wetting during cleaning can cause damage to the chipboard floor.

6 VENTILATION OF TRIMO MODULAR UNIT

During the use of the modular unit, special attention should be paid to the ventilation of the rooms. It is important to minimize the air moisture content within a building by properly ventilating. Condensation can damage the interior finishes of the modular unit.

To prevent condensation and to achieve appropriate living conditions in the room, optimal air exchange is required. Special attention should be paid to ventilation in the winter and spring-autumn periods.

In order to minimize the air moisture content procedure:

- Switch off all heaters.
- Fully open room windows several times a day for 5-10 minutes.

It is necessary to ventilate the rooms where activities are performed, which are a major source of moisture (shower, washbasins, cooking, drying laundry). It is also necessary to carry out adequate ventilation in rooms where there are many people (kindergartens, offices).

Ventilation is performed by manual opening of windows or with ventilation devices.

Indoor relative humidity levels should be between 40 to 50 percent and should not exceed 60 percent.

Ensure a uniform temperature across many rooms with proper heating. Fluctuations in day and night temperature should not be more than 5 ° C.

7 WARNINGS

Panel surfaces should not be cleaned in the strong sun or when sheet metal is very hot, if products are constantly exposed to the sun.

The use of strong organic solvents and aggressive cleaning agents or brushes is prohibited for cleaning varnished / painted surfaces.

No exaggerated cleaning or rubbing of the surface is to be carried out since it may damage the high-quality top viz. final varnish. Dark shades and shades having metal appearance are especially sensitive to cleaning.

Bitumen stains have to be immediately cleaned with Tessarol viz. white spirit and concrete stains have to be removed by a wet cloth immediately when they appear!

Before switching on the boiler, it should be checked if it is full of water. In opposite case it should not be switched on.

In sanitary modular units that are not used in winter water should be removed from toilet pans and an anti-freezing agent poured in them.

Before transportation, the water boilers are to be emptied.

Important: Each intervention in the structure of Trimo modular unit (construction of openings, assembly of additional elements, ...) without the approval of Trimo results in termination of the guarantee period.

8 NOTES

- Making an open fire near modular unit is prohibited. Heat could damage the top varnish on the modular unit panels – a fire might catch the modular unit.
- All necessary repairs on the modular unit or modular unit equipment should be implemented by an expert.

Annex 1: Table of activities of regular annual inspection of the Trimo modular units

INSPECTION	IRREGULARITIES	CONSEQUENCES	MEASURES
PANELS	DIRT (in areas that are not washed by rainwater e.g. under eaves)	It spoils the appearance of the facility and can cause damage to the paint.	Washing of the areas as described in Section 4.
	MOULD (It appears rarely, but can grow in exceptional conditions)	It spoils the appearance, corrodes, reduces the in protection, causes poor hygiene.	Washing of the area (Section 4.1.) and protection by an anti-mould agent.
	MECHANICAL DAMAGE (uncorroded, corroded)	It spoils the appearance of the facility, corrodes, reduces service life of the facility.	Procedures are described in Section 3.1. (A 0.25 kg pot of paint is enclosed).
	PRESENCE OF FILINGS (corroded)	They corrode and leave stains on sheet metal surfaces.	They have to be removed as soon as they appear. Procedures are described in Section 3.2.
GUTTERS AND DISCHARGE PIPES	DEPOSITS	"Water and dirt accumulate, coats may appear and cause corrosion"	Removal of deposits and washing of the area, if necessary.
	CLOGGED GUTTERS	Obstacles can cause penetration of water into a container.	
CORNER ELEMENTS	ICED WATER IN CORNER ELEMENTS		Removal of ice.



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