

# Tarasola®



# Tarasola Technic

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**TARASOLA BIOCLIMATIC PERGOLA  
AND COMPONENTS USE  
AND MAINTENANCE MANUAL**

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## 1 SUBJECT OF THE DOCUMENTATION

The purpose of this documentation is to familiarize the user with the intended use of the structure, its principles of operation, and rules regarding handling of the Tarasola-branded product. This booklet also contains guidelines for use and service activities.

## 2 PRODUCT IDENTIFICATION

The following describes a louvered roof with the trade name Technic. The structure's supporting frame is made of extruded aluminum profiles, while the roofing is a set of chamber profiles rotating around their own axis louvers, enabling ventilation and light penetration. After it is closed it forms a tight structure that can withstand heavy wind and snow loads.

In light of the strength testing performed, the product meets the standards' criteria for building structures.

Tarasola TECHNIC was designed according to the following standards:

- Eurocode 0: EN 1990: Basis of structural design.
- Eurocode 1: EN 1991: Actions on structures.
  - EN 1991-1-1: General actions. Densities, self-weight, imposed loads for buildings.
  - EN 1991-1-3: General actions. Snow loads.
  - EN 1991-1-4: General actions. Wind actions.
  - EN 1991-1-5: General actions. Thermal actions.
- Eurocode 3: EN 1993: Design of steel structures.
- Eurocode 8: EN 1998: Design of structures for earthquake resistance.
- Eurocode 9: EN 1999: Design of aluminum structures.
- Eurocode of the corresponding National Annexes.
- EN 1090: Execution of steel and aluminum structures.
- 2006/42/EC: Machinery Directive.
- PN – EN 13561 + A.1:2009 EXTERNAL BLINDS – performance requirements including safety.

The louvered roof of Tarasola Technic was tested and the resistance to wind and snow loads was determined in relation to two cases of extreme dimensions:

- 4,2 m x 6 m – 1 module,
- 4 m x 7 m – 1 module,

The test result ensures the structure's strength up to a maximum snow load of 120 kg/m<sup>2</sup> and simultaneous wind pressure up to 80 km/h.

The Tarasola Technic was designed for wind, rain, and sun protection, for commercial clients as well as for residential and private buildings.

The Tarasola Technic is controlled by electric drives.

The product may be enhanced with additional functionalities such as: heat radiators, glass walls, roller screens, integrated LED lighting, audio system, weather sensors (additional products are described in detail in a separate guide), creating a comprehensive design of a terrace bioclimatic pergola.

Familiarizing oneself with the manual shall ensure the proper functioning of the product.

Compliance with the guidelines therein shall ensure durability of the construction.

### **3 TECHNICAL SPECIFICATION**

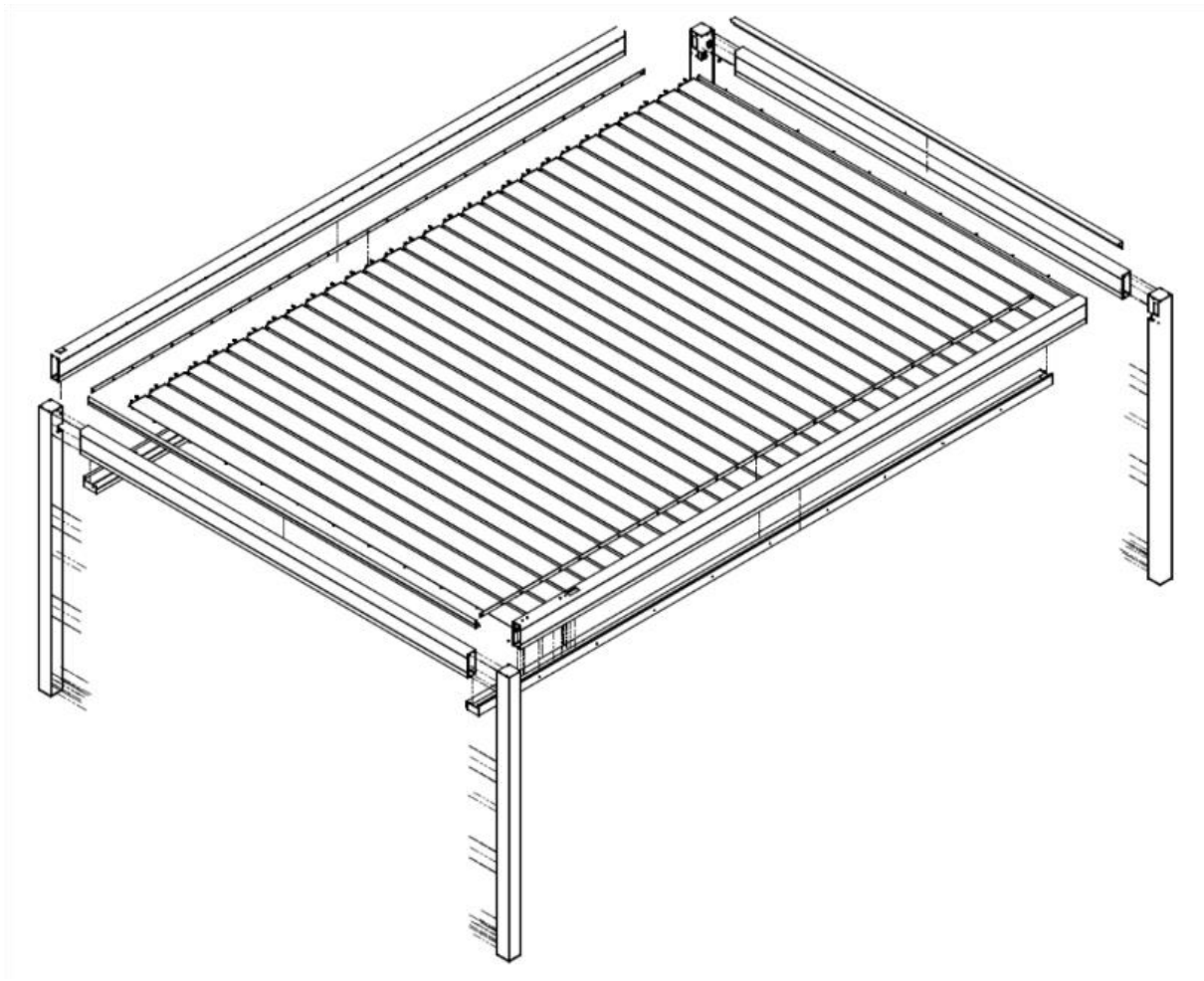
#### **3.1 Structure**

The Tarasola Technic's structure consists of an aluminum substructure. The structural elements are thick-walled extruded profiles, coated with a layer of thermally hardened powder varnish.

Supporting structure consists of the following elements:

- Aluminum guides - the number and spacing of the guides depends on the width of the unit.
- Front beams - structural profile made of aluminum.
- Gutters - profiles collecting and draining water.
- Support pillars - aluminum leg profile together with an integrated water drainage system. The number of supporting legs depends on the width of the module. The supporting pillars are equipped with brackets intended for screwing to the base.
- Closing profile - complementary and LED lighting profile.
- Aluminum canopy - consisting of rotating slats, aluminum chamber slats.
- Complementary profile - aluminum profile that completes the construction.
- Aluminum profile - tightens the construction elements.
- Wall mounting bracket.

**Note:** there may be slight color differences between various suppliers of paint powders.



**Fig.1 Graphical representation of the Tarasola Technic structure**

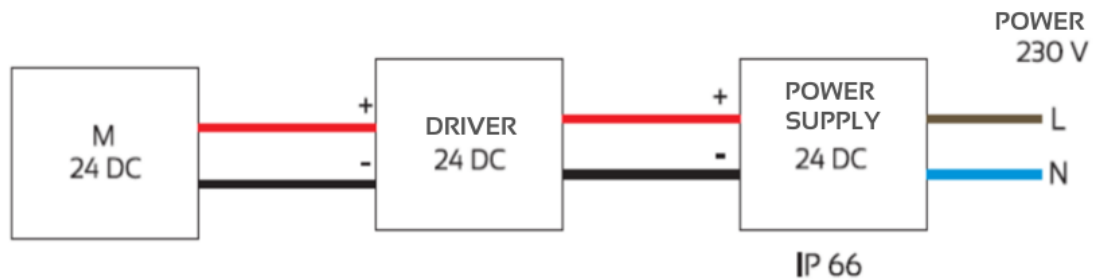
### 3.2 Electrical components for Tarasola Technic

Tarasola cooperates with the best suppliers on the market in order to ensure the highest level of offered products. Thanks to the electrical components used in our products, we are offering a comprehensive product to our Clients - the best on the market.

**WARNING!** Due to the complexity and specificity of the product, installation shall be performed by qualified personnel. Any actions inconsistent with the guidelines may cause a potential threat and void the warranty.

**ELECTRIC MOTOR.** A motor with a built-in radio receiver and an electric limiter. Secure coding system. Simple programming and maneuvering. All operations are controlled by the motor, and it works at low speed. Operation via remote or local controller.

The motor connection diagram – LINAK LA 23 LINEAR ACTUATOR – is presented below.



**Fig.2 Motor connection diagram**

TECHNICAL SPECIFICATION:

ACTUATOR – LINEAR ACTUATOR

**Properties and options:**

- Push force: 1800N,
- Pull force: 1800N,
- Protection rating: IPX4, IPX6 or IP66 dynamic,
- Motor: 24V DC,
- Stroke length: 200mm,
- Noise level max. dB (A) 58,5, measuring method EN ISO 3743-1, with no load,

Terms of use:

- Duty cycle: 10%, 2 minutes continuous use followed by 18 minutes not in use,
- Usage temperature: from -30°C to +55°C (in accordance with the ISO7176-9 standard),
- Storage temperature: from -45°C to +70°C (in accordance with the ISO7176-9 standard),
- Compliance with standards: ICE60601-1:2005 (3<sup>rd</sup> edition), ANSI / AAMI ES60601-1:2005 (3<sup>rd</sup> edition), LA 23 non-compliant with medical standards in combination with CBD4, CBD5, CBD6
- Flammability rating: UL94-V0 enclosure.

It is not recommended to connect more than one motor to one switch (and vice versa). The exception is having a switchboard.

**Warning!**

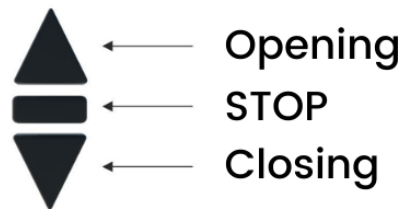
All wiring connection diagrams shall be obeyed, otherwise warranty may be voided.

REMOTE CONTROLLER

- Manual radio control of one or more RTS drives and/ or radio receivers or a group of RTS drives and/ or radio receivers.
- Handling of a single device or a group of devices is possible.

- Stopping the motion and/ or forcing the motion via a convenient button.
- Remote controller is equipped with an adjust function which enables, for e.g., intensity of illumination to be adjusted.
- A convenient LED indicates that an action was requested by the user and enables selection of a channel in the remote controller (in case of multi-channel remote controllers).
- Wireless, battery powered remote controller(CR 2430 battery).
- Working temperature: 0°C/ +60°C.
- Protection rating: IP 30 / IP 40.
- Radio frequency: 433.42 MHz.

Electrical components are handled with ease by an integrated motor system. Wind and rain covers unfold and fold in full or to the desired extension, thus enabling either shade or sunlight to shine through.



**IN THE EVENT OF A FAILURE OF THE ELECTRICAL SYSTEM OF THE STRUCTURE, IMMEDIATELY DISCONNECT THE MAIN POWER SUPPLY OF THE CONSTRUCTION AND REPORT THE FAILURE TO THE MANUFACTURER. ONLY QUALIFIED PERSONNEL SHALL ENGAGE IN REPAIRING THE ELECTRICAL SYSTEM. ANY ACTIONS CONSTITUTING SELF-REPAIR AND NEGATIVE EFFECTS OF SUCH ACTIONS MAY RESULT IN THE WARRANTY BEING VOIDED.**

A detailed description of the operation of electrical components can be found in a separate user manual.

#### **4 TARASOLA TECHNIC USER MANUAL AND GENERAL SAFETY REGULATIONS**



Proper functioning and avoidance of breakdowns resulting from improper use shall be ensured by following the rules below. The entirety of the support is burdened with a load which may cause oscillatory motion. This motion is not an indicator of structural weakness but shall be considered normal for a complex structure. Therefore, deviations and motions of the structure shall be allowed.



Repeated opening and closing of the louvered roof may overheat the electric drive, thus activating the thermal switch which shall disconnect the power supply. The motor shall remain off until the temperature is adjusted.



It is forbidden to use the construction in conditions and for purposes different to those provided for by the manufacturer, which shall be to act as sun, and rain protection.



It is forbidden for third parties to place any items, install additional fixings, hooks, hangers on the construction structure without manufacturer's consent. This increases the risk of product failure and shall result in the product warranty being voided.



Be careful when opening and closing the louvered roof. Due to the risk of damaging one's hands, it is forbidden to touch the structure when it is in work mode.



The structure is not of a self-cleaning nature. Cleaning shall be performed only after turning off the electric power supply of the construction. Cotton cloth and water with light detergent are recommended to clean the structure.



Please contact the Manufacturer in the event of a construction malfunction or failure. Users shall not make any repairs to a faulty construction.



Due to temperature difference, dew may appear on profiles, as well as condensation of water vapor under the construction may occur – this is not a product defect.



The manufacturer shall not be liable for random events affecting the product, such as: weather conditions below/ above the standards presented in the product sheet; as well as electromagnetic disturbances, electrical discharges and power surges.



During rainfall, snowfall, hail, and strong winds (exceeding the permissible standards for a structure of a particular size), the louvered roof shall be opened immediately, i.e. the slats shall be set to a 90° open position. Failure to comply with the above recommendation shall increase the probability of damage, construction destruction or accident, as well as loss of warranty.



Structural gutters may overflow in the event of heavy rainfall. This, in turn, may cause outflows of water directly inside the structure, such as leaks between the



profiles. Referring to random events and unpredictable weather conditions - this is not a product defect.



The construction is not designed to withstand heavy snow loads. In the event roof panels are covered in snow or ice, such snow or ice shall be removed immediately.



In order to keep the water drainage system unobstructed, it is necessary to check and remove waste such as leaves, conifer needles, and other types of waste, from the gutters at least twice a year. This shall help maintain the flow capacity of the gutters mounted on the supporting legs of the structure. The manufacturer recommends that structures installed in the vicinity of natural environment shall be cleaned as often as it may be required.



Due to the design of the structure, construction profiles and louvers profiles shall be checked for potential icing before the roof is opened/ close, in particular during cold temperature. Icing may cause elements of the guides and electrical components to become damaged and such damages shall not be covered under the warranty. It is recommended to check the construction each time it shall be put into operation (in case any foreign matter, such as leaves, sticks, insects or animals got inside) – ICING.



Shade differences between powder coated aluminum elements coming in different batches of the product may occur.



Taking into consideration the high level of pollution which may lead to acid rain, and in case the product is installed near roads, air channels, forests, trees with a risk of resin contamination, and additionally the product is not cleaned immediately after contamination, then the profiles may get dirty, making it impossible to clean them later.



In the event of heavy wind and heavy rainfall, there is a possibility that rainwater may enter between the louvers profiles and the guides, which in turn may result in a leak inside the construction.



Do not use abrasive materials to clean the structure.



During heavy snowfall which exceeds the pressure of 120kg/m<sup>2</sup>, excess snow shall be removed from the canopy immediately.



During hail and freezing rain, it is recommended to set the the louvers to 90° open position, in order to reduce the surface exposed to damage caused by precipitation or icing.



Using the construction during conditions exceeding the indicated wind standard may result in damage or destruction of the canopy.



Deviations of the profiles in relation to each other and the distance between them are permissible due to buckling of the profiles caused by temperature changes and long-term loads (for e.g. of snow) covering the profiles.



In order to prevent any water that may accumulate on the louvers from entering under the roofing. After rainfall, it is necessary to wait approx. 120 minutes after rainfall has stopped before the louvres are opened. To allow any remaining water to drain into the gutters after waiting 120 minutes, the first opening must be carried out in stages - turn the roof in manual mode by approx. 20° and wait 20 seconds, then open the slat to approx. 45° and wait again for 20 seconds. Then open the slats to approximately 90° and wait 20 seconds.

For structures equipped with a rain sensor the controller will not allow the roof to open more than 45° for 6 hours after the rain has stopped.

THE MANUFACTURER SHALL NOT BE LIABLE FOR INCORRECT USE OF THE CANOPY RESULTING FROM FAILURE TO COMPLY WITH THE USE AND SAFETY REGULATIONS PROVIDED IN THIS MANUAL.

## 5 CERTIFICATES

**Tarasola®**



# DECLARATION OF CONFORMITY

No. 001/2022

Przedsiębiorstwo Handlowe Tarasola Sp. z o.o. Sp.k., ul. Hugo Kołłątaja 5/2, 20-006 Lublin hereby declares that the product:

**Technic**

Trademark: **Tarasola®**

It is compatible with the following provisions of implementing provisions in the scope of its regulation implementation of the directives The European Parliament and of the Council (with all the subsequent amendments and supplements):

2006/42/CE - MACHINERY DIRECTIVE  
CPR/305/2011 - REGULATION OF THE CONSTRUCTION PRODUCTS

Was used harmonized standards and / or technical specifications below:

EUROCODE 0: EN 1990  
EUROCODE 1: EN 1991  
EN 1991-1-1  
EN 1991-1-3  
EN 1991-1-4  
EN 1991-1-5  
EUROCODE 3: EN 1993  
EUROCODE 8: EN 1998  
EUROCODE 9: EN 1999

10.3.2022 *[Signature]*  
date and signature

Przedsiębiorstwo Handlowe **TARASOLA**  
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