

TECHNICAL DETAILS SHADING SYSTEMS "GALLOP" AND "GLAZETECH"

1. GENERAL

This work concerns the study, desing, construction and installation of shading aluminium leaf of Gallop or Glazetech system.

2. DESCRIPTION OF WORK

A. The work/construction will include:

1. Aluminium frame sections.
2. Profile leaves of Gallop or of Glazetech shading system.
3. All components for the full posting/application on a metal base.

B. Moreover the construction will include:

1. Structural design of the structure.
2. Construction plans and details.
3. Manufacture and delivery to site:
 - All aluminum sections that form the skeleton of the building in shape and form shown in detailed drawings.
 - Shading profiles.
 - All components support/suspension of construction.
4. Suspension/support of construction.

3. TECHNICAL INFORMATION

3.1 Main features of shading systems

1. Controlled lighting conditions and privacy inside the building by turning the leafs till 120 degrees.
2. Stability in use. The guides provide immediate response and the leafs are in constant synchronization.
3. Possibility of manual or electric mechanism rotational with remote control mechanism can drive remote places without access in an easy way of use.



4. Applicability to any construction and architectural requirements for mobile or fixed shading.
5. Flexibility in shape (pyramidal, curved, vaulted, etc).
6. Controlled shading and full ventilation.
7. Watertight and protection (System Pergola)
8. Excellent mechanical strength.
9. Profiles Aluminum: According to international standards
10. Brackets: Stainless steel screws throughout the system.
11. Coating: Powder coating quality thickness 60-80 microns in any RAL color or anodeioli thickness 20-25 microns.
12. Guarantee 10 years.

3.2 Aluminum cross section

The shading construction may consist of one of the following systems:

- Steady or open-closed watertight double sheet (for insulation) aluminum shading system **GALLOP GA 2000**, with inox connections. Usually we use it over an atrium or where we need only shade and not waterproof conditions.

Shading when closed : 100%.

- Steady or open-closed watertight double sheet (for insulation) aluminum shading system **GALLOP GA 300** with inox connections. Ideal for industrial sites.

Shading when closed : 100%.

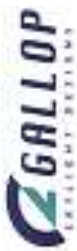
- Steady or open-closed watertight double sheet (for insulation) aluminum shading system **GLAZETECH GE** with inox connections. Shading when closed :

100%.

- Steady or open-closed watertight double sheet (for insulation) aluminum shading system **GLAZETECH DE** with inox connections.

Combination of aluminum shading system and polycarbonic lexan sheet (in colour of your choice). Light transmittance of 35%.

- Steady or open-closed watertight cover-decorative aluminum shading system





GLAZETECH EV with inox connections. Its main part is polycarbonic lexan sheet (in colour of your choice). Light transmittance of 75%.

- Sliding watertight double sheet (for insulation)aluminum shading system

GLAZETECH MI with inox connections. Select translucent from 0 to 22%.

- Steady or open-closed watertight one aluminum sheet shading system

GLAZETECH FA with inox connections. Shading when closed : 100%.

- Sliding watertight one aluminum sheet shading system **GLAZETECH FA SLIDING** with inox connections. Shading when closed : 100%.

3.3 Rubber Gaskets

For purposes of full waterproofing of construction and not to intrude into the gap of the plates, water, dust, insects, etc., it is used special gaskets as shown in detail drawings.

The different types of gaskets that can be used are compatible with other materials of construction.

All gaskets that will be used :

A. Have physical, chemical and mechanical properties according to BS4255 and BS 7412.

B. Methods of control of their properties are consistent according to BS 4255 part 1and part 2.

C. They have declared chemical composition and hardness category"Hardness Classification"(minimum acceptable 65 IRHD), and

D. On the packages there is a factory label where it is cleared mentioned and usually on the same gaskets

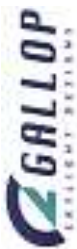
I. The name and "trademark"of the manufacturer.

II. Month and year of production.

III. Class and type of rubber

IV. Colour.

V. Number and date of BS (for example BS 4255 part 1: 1996).



3.4 Protective and decorative painting of aluminum.

Preparation and finishing coating of aluminum (sheet and profile).

A. Preparation / protection of aluminum - «Pretreatment»

All aluminum, leaves and profiles, prepared in base of QUALICOAT specifying the method of Surface Passivation of aluminum to accept the color. This process is called chromiosis which will not only protects the aluminum from corrosion but also for the proper adhesion of paint onto the metal.

B. Aluminum painting

After preparing the surface of aluminum follows the process of coating color powder coating. The electrostatic powder coating is polyester and have a minimum thickness of 60 microns (PM).

All physical properties appearance and behavior of the paint is in accordance with the requirements of QUALICOAT on:

- Color
- Gloss
- Adhesion
- Cupping Test
- Scratch Resistance
- Impact test for Cure
- Resistance to Mortar
- Resistance to Acetic Acid/Salt Spray
- Weathering Tests
- Resistance to Humidity
- Resistance to Sulfur Dioxide
- Permeability
- Storage Properties

for which there are relevant certificates according to certified laboratory test based on specifications of QUALICOAT.

3.5 Bolts

The type, number and size of bolts covered in structural design.

3.6 Movement Motors

For the initiation of shading leaves mounted drive motor depending on the section type UCS 200, 450 or 1000. Motors electrical connection will not include.

4.0 INFORMATION OF STRUCTURAL DESIGN AND DETAILS

Structural Design

You must submit for approval structural design for construction whereas:

- a. We meet the geometrical requirements, such as shape and size shown on the drawings.
- b. Construction will be mounted on a metal handrail.
- c. The study should be done in accordance with the requirements of relevant British or German standards for:
 - The load
 - The design of the load
 - Analysis of construction
 - Dimensioning of the cross sectional
 - The permissible limits of material strength

We accompanied it with a summary of the machine where you explained / fixed the above sections on aluminum.

- d. Static analysis from computer should be accompanied with full explanations. Should be given to import and export data analysis and model construction.

It should also provide explanations regarding the assumptions supporting the construction of the parapets.

4.1 Drawings

Submitted complete set of construction plans and details of construction. Note that the sizes of aluminum sections, bolts and flanges support determined in accordance with the structural design.

4.2 Design Loads

The structural design is based on the following charges:

1. Dead Load - Same weight of the construction of RHS and aluminum «Dead Load» including all parts coating and waterproofing components.

2. Mobile Load - The load cell used will conform to the British or German specifications (standards) for housing of this type whereas there is only access for cleaning the construction.
3. Wind Load - Maximum wind speed of 150 km per hour. «Dynamic wind 50 km / h Pressure».
4. Temperature Changes in 60 C
5. Seismic forces - 10% of dead load line and mobile according to «Earthquake Loading» and Greek regulations.

4.3 Signed and Drawings Study

The structural design and drawings shall be signed by a licensed engineer.

5.0 QUALITY ASSURANCE

5.1 Responsibility / Qualifications of Manufacturer

1. The construction should be designed and manufactured by the same company. It is not acceptable to be undertaken by different companies the design and construction.
2. The manufacturer - designer bears full responsibility for the quality of labor and the elaborate display of the project in general.

5.2 Quality Control / Laboratory Tests Certificates

The system used necessarily has the following certificates of inspection by an independent agency / center, institute controls.

Certificates

The System offers the following as a minimum acceptable price based on the British or German standards.

I. Vertical Weather Test Certificate - BS 6375 as follows:

- Air Infiltration : Pass Grade "C"
- Water Penetration: 300 - 600 P.A.
- Wind Loading : 2000 P.A.
- Unit Rating : Severe Exposure
- Specimen : Multi Glazed Panel

II. Sloping Weather Test Certificate - BS 6375 as follows:

- Air Infiltration : Pass Grade "C"
- Water Penetration: 300 - 600 P.A.
- Wind Loading : 2000 P.A.
- Unit Rating : Severe Exposure
- Specimen : Multi Glazed Panel

5.3 Authorized Workshops Installation

The work for the placement of the construction is done by teams that:

- Are authorized by the designer - manufacturer and under his supervision.
- Are familiar with handling and with full knowledge base on the proper installing / placement of construction.
- Have at least five years' experience in performing similar kind, quality, and size of work.

6.0 EXECUTION OF WORK

6.1 Examination of worksite

The manufacturer / contractor:

1. Examines in time (before the assembly and erection) and in detail the parapet concrete where the leading members of the construction will build.
2. Gives written notice to the Architect for any problems and weaknesses that could affect the normal progress of the project.
3. The manufacturer / contractor will not proceed with any work if not overcome all the problems that may be identified in collaboration with the architect.

6.2 Worksite protection

The contractor is obligated to protect all adjacent structures before commencing any work.

6.3 Construction / Installation Construction

The building / installation of construction shall comply fully with the construction plans as approved by the Architect and in accordance with the instructions / recommendations of the manufacturer to be located on site.

6.4 Cleaning

Upon completion of construction, the manufacturer is obliged:

1. To cleanse the full construction to be checked and received by the Architect.
2. To repair any damage caused during construction.
3. To clean / remove anything from the site moved to protect the underlying structures.

6.5 Check

Upon completion of the project should be conducted of construction and to provide written certification that states that construction was in accordance with approved construction plans and specifications.

6.6 Guarantee

The manufacturer will provide a written guarantee of ten years for the quality of construction._