



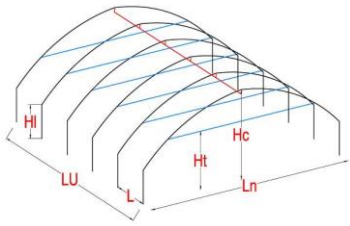
EASYART




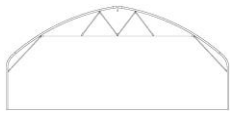



SOMMARY

PROJECT	3
DESCRIPTION	4
TECHNICAL FEATURES.....	4
SHEETING AND PERIMETER CLADDING.....	5
FASTENING SYSTEMS FOR SHEETING.....	6
ACCESS DOORS.....	7
ROOF VENTS	7
ELECTRICAL CONTROL.....	8
MATERIALS CERTIFICATION	9

PROJECT			
TECHNICAL MEASURES			
Bay width (Ln)	6,40 8,00 9,60	M.	
Pillar height (HI)	1,50	M.	
Useful height (Ht)	2,60	M.	
Ridge height (Hc)	3,30 3,70 4,05	M.	
Arch spacing	2,00	M.	
Side pillar spacing (L)	2,00	M.	
Total length (LU)	20,00 30,00 60,00	M.	
Floor area	128,00 / 192,00 / 384,00 160,00 / 240,00 / 480,00 192,00 / 288,00 / 576,00	M ²	
Number of greenhouses	1	N.	
REFERENCE REGULATORY			
Norms	<ul style="list-style-type: none"> • European UNI EN 13031-1, "Greenhouses: calculation and construction - Part 1: Production greenhouses" • EN 1993-1-1 "Eurocode 3" • D.P.R. 6 June 2001, n. 380: "Consolidated text of legislative and regulatory provisions on building" • D.M. 17 January 2018: "Technical standards for construction" • Circ. Min. Infr. Trasp. 2 February 2009 n° 617, "Instructions for the application of new technical standards for buildings" 		

DESCRIPTION	
Sheeting	Single transparent sheeting 180-200 µm with long-life and anti-drip treatment
Roof	N. 1 single roof on the whole bay length
Gables	Single transparent sheeting 180-200 µm with long-life and anti-drip treatment
Sides	Single transparent sheeting 180-200 µm with long-life and anti-drip treatment
Doors	N. 2 Sliding doors

TECHNICAL FEATURES			
Feet "to be screwed"	Feet with welded ribs to be screwed into the ground <u><i>The structure has no cemented parts and therefore is considered mobile and not subject to seismic calculations</i></u>		
Semi-arch	Ø60x1,5 mm	Z275	
Side pillars	Ø60x2,00 mm	Z275	
Horizontal tie-rods	Ø32x1,5 mm	Z275	
Truss	N. 4 tie-rods Ø27x1,5 mm	Z275	
Diagonal tie-rod for Arch-pillar connection	Ø32x1,5 mm	Z275	
Extremity wind bracing	N.8 tie-rods Ø32x1,5 mm	Z275	
Bolts and screws	Hot dip galvanized	Cl.8.8	

SHEETING AND PERIMETER CLADDING

TRANSPARENT FILM SKY EVO 8 LAYERS

- The sheet is produced with 7-layer extrusion lines to which an 8th layer is added to the surface of the film to give a long-lasting anti-drip effect
- It is equipped with an anti-drip system that reduces the outcrop of additives and that increases their average life with a consequent advantage in the management of humidity
- The EVO sheet does not cause fog
- Thanks to its particular composition, the film allows greater illumination in the greenhouse. This effect becomes even more pronounced with a low incidence angle
- Provides excellent performance even at very low temperatures
- It's also effective for greenhouses with a lower roof inclination



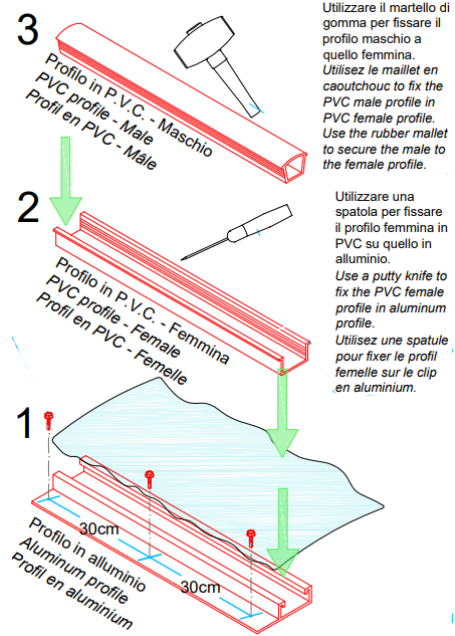
FASTENING SYSTEMS FOR SHEETING


PLASTIC FILM FASTENING WITH ALU/PVC PROFILES


- The plastic film is rolled out onto the aluminium housing and then blocked by means of a double PVC joint (consisting in M/F bars). This system is mainly used to install a double film sheeting and its advantages are:



- **PLACEMENT:**

- Extremities gables
- Longitudinal side lines



ACCESS DOORS	
N. 2	
<ul style="list-style-type: none"> ▪ N. 2 leaves in galvanized steel ▪ Dimension: mt 3,20 x 2,50 ▪ Sliding upper rail with wheels ▪ Upper finishing bended steel ▪ 2 handles each leaf ▪ Positioned at the center of the frontal ▪ Cladding with polycarbonate 	

ROOF VENTS	
SINGLE ROOF VENT	N. 1
<ul style="list-style-type: none"> ▪ 60x30mm on top used as base for opening hinges ▪ Opening arm: Ø60 mm ▪ Window's edge and extremity with square 60x30 steel and aluminum profile ▪ Window's stop on roof framework with with square 60x30 steel and aluminum profile ▪ Vent width: 2,00 m ▪ Opening with rack and pinion system ▪ Tubular transmission shaft Ø33,7x2,7 mm ▪ Three-phase gearmotor 0,37 kw - 1A ▪ Opening with rack and straight pinion system ▪ Anti-infiltration sheets in the ends ▪ Ø32 mm extremity wind bracings 	

ELECTRICAL CONTROL	
CONTROL UNIT	
<ul style="list-style-type: none"> ▪ Electrical panel, with electronic control unit and temperature detector (user-selectable) for the automatic operations management <ul style="list-style-type: none"> ✓ N. 1 roof vent 	
WIND AND RAIN SAFETY	
<ul style="list-style-type: none"> ▪ Security system for the wind speed and the presence of rain, allowing the total or partial closing of the windows. 	

MATERIALS CERTIFICATION

Steel used S280GD + Z275 obtained from galvanized coils UNI EN 10346 coated by continuous hot immersion (bearing structure)

Steel used S280GD + Z450 obtained from galvanized coils UNI EN 10346 coated by continuous hot immersion (gutters)

Steel used S235JR + ZC UNI EN ISO 1461 *Hot dip galvanizing coatings on ferrous finished products and steel articles - Specifications and test methods and the typical aggressiveness in Italy of the exhibition environment (hot galvanized materials where required by contract)*

Construction steels (STRUCTURAL) are carbon-manganese steels, characterized by guaranteed minimum yield strength and breaking strength. Our products are characterized by a surface coating layer applied by means of a continuous hot bath of the steel (substrate) within a solution containing elements capable of protecting the sheet from corrosion.

They are generally available in various formats and have a good ductility, therefore being suitable for a great variety of applications. The description of the symbols used is described below:

- **S:** indication of the type of steel (S = structural steel)
- **XXX:** numerical indication of the unit yield strength
- **G:** indication of other characteristics
- **D:** indication of the coating by hot dipping
- **+ Z / + ZA / etc:** indication of the type of coating

MECHANICAL CHARACTERISTICS

Quality	Coating	R _e (MPa)	R _m (MPa)	A ₈₀ (%) t=0.7	A ₈₀ (%) t>0.7
EN10326:2004		min	min	min	min
S220GD	+Z,+ZF,+ZA,+AZ	220	300	18	20
S250GD	+Z,+ZF,+ZA,+AZ,+AS	250	330	17	19
S280GD	+Z,+ZF,+ZA,+AZ,+AS	280	360	16	18
S320GD	+Z,+ZF,+ZA,+AZ,+AS	320	390	15	17
S350GD	+Z,+ZF,+ZA,+AZ,+AS	350	420	14	16
S550GD	+Z,+ZF,+ZA,+AZ	550	560	-	-

Tensile tests carried out on transverse specimens

CHEMICAL COMPOSITION

Quality	Coating	C (%)	Si (%)	Mn (%)	P (%)	S (%)
EN10326:2004		max	max	max	max	max
S220GD	+Z,+ZF,+ZA,+AZ	0.20	0.60	1.70	0.10	0.045
S250GD	+Z,+ZF,+ZA,+AZ,+AS	0.20	0.60	1.70	0.10	0.045
S280GD	+Z,+ZF,+ZA,+AZ,+AS	0.20	0.60	1.70	0.10	0.045
S320GD	+Z,+ZF,+ZA,+AZ,+AS	0.20	0.60	1.70	0.10	0.045

S350GD	+Z,+ZF,+ZA,+AZ,+AS	0.20	0.60	1.70	0.10	0.045
S550GD	+Z,+ZF,+ZA,+AZ	0.20	0.60	1.70	0.10	0.045

The sendzimir galvanizing process is described below:

Anticorrosive coating obtained by hot dip galvanizing after steel rolling, with "continuous" process of:

- surface preparation
- immersion in molten zinc at about 450 ° C
- rolling
- chromatization

These last two stages are used for surface finishing and for maximum polishing and corrosion resistance (DIN 17162, UNI-EN 10346).

The thickness of the zinc layer is about 20 µm for that Z 275 (275 gr / m²). This type of galvanization guarantees anticorrosive protection even in the shearing areas of the laminate, having a thickness equal to or less than 3 mm, thanks to the zinc that sacrifices itself, acting as an anode, transforming itself into the form of zinc oxide that migrates covering the surfaces of cut.

BOLTS

The nuts and bolts used will be of **TYPE 8.8 HOT GALVANIZED** ie protected from corrosion. The material used has, as indicated by class 8.8, high breaking strength.

The classification is made according to the UNI EN ISO 898-1: 2001 standard, which distinguishes the following classes, with their relative mechanical properties.

Class	Resistance to cut (fk,V)	Tensile/compressive strenght (fk,N)	Yield strenght (fy)	Ultimate resistance (ft)	Elongation % (A%)
4.6	170 MPa	240 MPa	240 MPa	400 MPa	22
5.6	212 MPa	300 MPa	300 MPa	500 MPa	20
6.8	255 MPa	360 MPa	480 MPa	600 MPa	16
8.8	396 MPa	560 MPa	640 MPa	800 MPa	12
10.9	495 MPa	700 MPa	900 MPa	1000 MPa	9
12.9	594 MPa	840 MPa	1080 MPa	1200 MPa	8

Classes **8.8**, 10.9 and 12.9 are called high resistance while the previous classes are called normal. The galvanizing is hot which, unlike the electrolytic one, guarantees greater thicknesses and therefore offers a much longer lasting protection. Its function is to protect the treated parts from environmental corrosion. The zinc reacts with the steel forming intermetallic compounds that make the coating possible. According to the regulations, the Zn-Fe reaction must take place at temperatures between 455 ° C and 480 ° C and the coating, which must have an average thickness of 50 µm, is formed in a few minutes of immersion. Subsequently, to eliminate the excess zinc, a centrifuge is carried out.

Why using zinc?

- The zinc layer is continuous and waterproof. This favors the barrier effect: the zinc coating insulates the ferrous material to be protected from the aggressive agents present in the environment; moreover it causes the sealing effect: the zinc corrosion products tend to cover any discontinuity present in the coating;
- The electrochemical properties of zinc determine the cathodic protection of the steel. That is, in the presence of an aggressive environment zinc behaves as an anode corroding instead of steel.
- The zinc layer thickness is about 20 µm for Z 275 (275 gr/m²). This type of zinc plating guarantees anti-corrosion protection even in the shearing areas of the laminate, but with a thickness equal to or less than 3 mm, thanks to the zinc that sacrifices itself, acting as an anode, transforming into the form of zinc oxide that migrates covering the cutting surfaces.

Why choose hot dip galvanization?

- The metal cladding also completely covers the inner parts of hollow items (e.g. nuts);
- It creates a strong alloy between steel and zinc that is tenaciously welded to the steel;

GENERAL TERMS OF SALES

1. The supply terms (Annex 1,1.1 and the attached documents (Annex 2,2.1,2.2,3,3.1,4,5) are an integral and essential part of this contract.

2. The contract is concluded by the receipt by Europrogress srl of the signed proposal for acceptance.

3. CONDITION OF SALE

3.1 Europrogress srl undertakes to respect the delivery terms of the materials, the days always refer to working days.

The selling company will be exonerated from responsibility for delay if the failure and / or delay in delivery depends on the fact of the third party and / or on atmospheric and / or force and / or major cause events that prevent timely fulfillment within the agreed terms. In the event of a delay for these reasons, which, individually or cumulatively, is such as to affect the delivery of the materials, each party may terminate the contract, retaining what has been received in the meantime, without prejudice to the obligation to pay the price for the goods delivered, without further right to compensation for damage, since it is a delay and / or non-delivery due to a fact not attributable to the seller.

3.2. The selling party undertakes to ensure the goods are transported upon written request and payment of the related charges, in advance, by the buyer. The agreed packaging is intended as standard, any special packaging must be requested in writing and will be subject to a separate cost, which Europrogress srl will communicate to the buyer and which must be paid together with the first payment deadline.

3.3. The terms of payment for the goods are indicated in attachments 4. The above amounts include standard packaging and transport to the agreed destination.

3.4. In the event of non-payment of even a single tranche with a delay of more than fifteen days (see attachment 1-2), Europrogress reserves the right to terminate this agreement with immediate effect and ipso iure, by means of a simple written communication, via pec and / or ar.

In this case, in addition to withholding any amount paid, Europrogress reserves the right to request compensation for damages from non-fulfillment, pursuant to art. 1453 C.C.

3.5. Furthermore, each party may withdraw from this contract with immediate effect, and without having to pay the other compensation or indemnity whatsoever, by means of communication to be sent by registered letter with acknowledgment of receipt, in the event that the other party applies to be admitted or is subjected to insolvency proceedings, or in any case its solvency is diminished.

3.6. Europrogress guarantees the goods being traded in accordance with Articles 1489 and 1490 of the Italian Civil Code, as well as in the terms set out in Annex 5.

3.7. Europrogress undertakes to supply the materials according to the conditions set out in Annex 1,1.1 (supply conditions).

ACTIVITIES RELATED TO THE SUPPLY

4. Europrogress srl undertakes to install the materials referred to in the conditions included in Annex 2,2.1,2.2,3,3.1 (installation conditions).

4.1. Anything not expressly included is understood to be excluded.

4.2. The start of the assembly work is scheduled according to what is established in Annex 4.

4.3. For the assembly activity and for the activities related to the supply, the parties agree on the amount and payments indicated in the conditions set out in Annex 4.

4.4. Furthermore, each party may withdraw from this contract with immediate effect, and without having to pay any other compensation or indemnity, by means of communication to be sent by registered letter with acknowledgment of receipt, in the event that the other party applies to be admitted or is subjected to insolvency proceedings, or in any case its solvency is diminished.

5. Before and during the execution of the works, the purchaser must carry out the activities referred to in the supply conditions (Annex 1,1.1,2,2.1,2.2,3,3.1), under "mandatory charges to be paid by the customer", promptly and without delay. Any delay in the execution of the work resulting from delay and / or failure to comply with one of these obligations will exempt Europrogress srl from liability. In the event that non-fulfillment and / or delays are such as to jeopardize the execution of the works, or result in a delay of more than fifteen days, a penalty to be paid by the customer equal to 30% of the amount established for the activity is established. of installation, to be paid within thirty days of Europrogress's formal request to be implemented by e-mail, it being understood that these days of delay and the related direct and / or indirect consequences cannot in any way be attributable to Europrogress.

5.1 The carrying out of the works by Europrogress srl must be coordinated with the customer's activities, in order not to cause interruptions or delays as far as possible.

5.2 Europrogress srl undertakes to use, for the performance of the services entrusted, exclusively its own staff (partners and / or subordinate workers and / or external collaborators) whose costs are fully borne by it.

5.3. Europrogress srl may entrust all or part of the execution of the works, without the prior written consent of the customer.

MISCELLANEOUS

6. Except for the case referred to in clause no. 3.4., Each party can invoke the immediate termination of the contract for non-fulfillment, by registered letter with acknowledgment of receipt and / or by certified e-mail, in the event that the other party has defaulted on one of its obligations, after fifteen days of receipt, again by registered letter with acknowledgment of receipt, of a warning to comply, without remedying the non-fulfillment, or in the event that the other party has failed to fulfill the same obligation several times obligation, despite previous disputes in writing.

7. In the event of disputes regarding the interpretation and / or execution of the aforementioned conditions and related attachments, the Court of Modena will have exclusive jurisdiction.

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