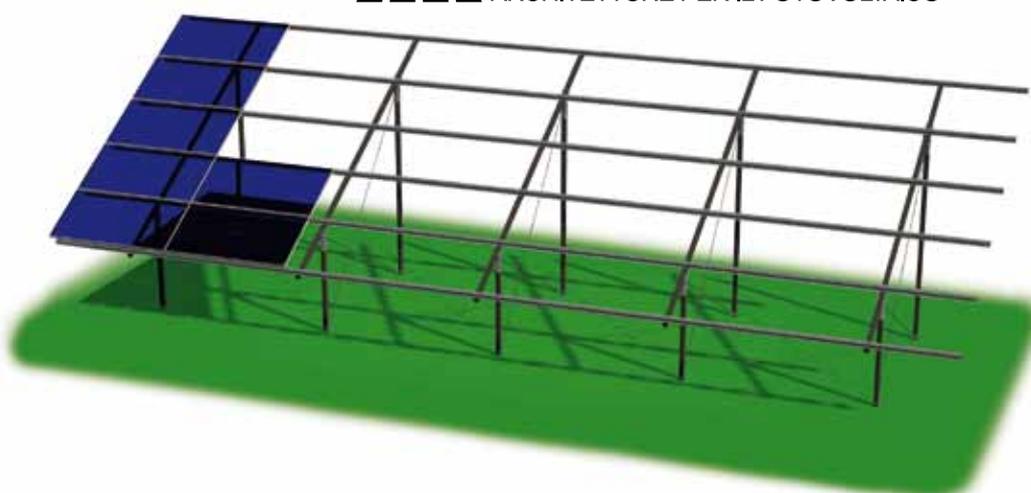




20 years



ZENITH PLUS MODEL

Overhead and greenhouse system, with double support pole and wind-bracing.

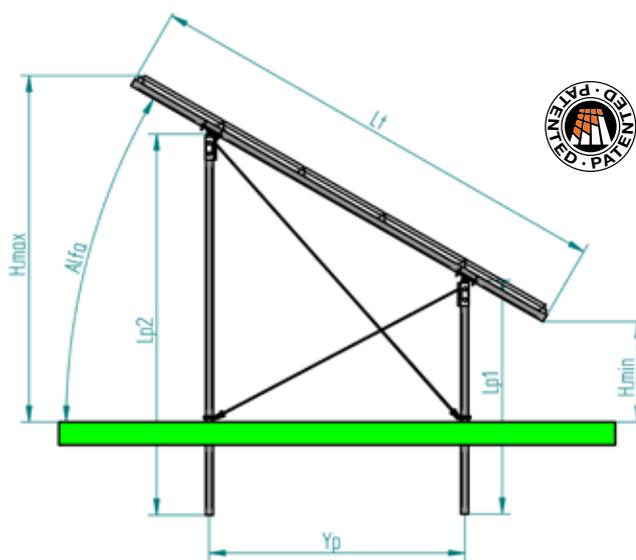
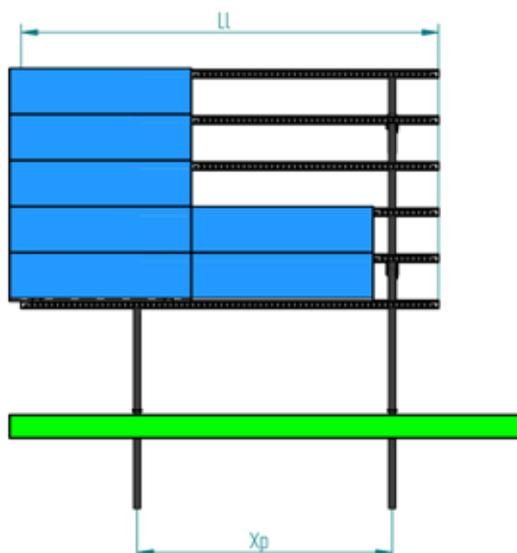
THE BASE CONFIGURATION INCLUDES:

2 TO 5 MODULES IN VERTICAL ARRANGEMENT

UP TO 8 MODULES IN HORIZONTAL ARRANGEMENT

HMIN max: 2.500 mm

HMAX max: 6.500 mm



KEY:

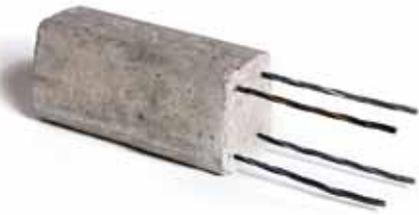
- Alfa** Module tilt angle to horizontal plane;
- Lp1** Overall length of short pole;
- Lp2** Overall length of long pole;
- Lt** Overall length of beam;

- LI** Horizontal beam length;
- Xp** Horizontal center distance of poles;
- Yp** Vertical center distance of poles;
- Hmin** Minimum installation height from ground;
- Hmax** Maximum installation height from ground;

VALUE TABLE FOR ZENITH-PLUS STANDARD

Module arrangement	Rows	Columns	Alfa °	h.min mm	h.max mm	Lp1 mm	Lp2 mm	Lt mm	LI mm	Xp mm	Yp mm	Modules No.	Starting Watts installed Watt
Horizontal	4	4	10÷35	0÷2500	300÷6500	2500	4250	4000	6000	3000	1735	16	3200÷3840
	5	4	10÷35	0÷2500	300÷6500	2500	4750	5000	6000	2750	2600	20	4000÷4900
	6	4	10÷35	0÷2500	300÷6500	3500	4750	6000	6000	2500	1735	24	4800÷5760
	7	4	10÷35	0÷2500	300÷6500	3500	5250	7000	6000	2250	2600	28	5600÷6860
Vertical	8	4	10÷35	0÷2500	300÷6500	3500	5750	8000	6000	2000	3460	32	6400÷7680
	2	6	10÷35	0÷2500	300÷6500	2500	3000	1600	6000	4000	500	12	2400÷2880
	3	6	10÷35	0÷2500	300÷6500	3000	3800	2400	6000	2750	700	18	3600÷4410
	4	6	10÷35	0÷2500	300÷6500	3500	4250	3200	6000	2000	950	24	4800÷5760
	5	6	10÷35	0÷2500	300÷6500	4000	4500	4000	6000	1750	1150	30	6000÷7350

COMPRISING PARTS



KONCRETO POLES AND BEAMS

KONCRETO poles and beams are made with the technique of prestressing that provides **greater strength** and **durability**, according to the experience of Valente SpA, a market leader in the production of reinforced vibrato and prestressed poles. **The concrete is made up with substances (gravel and sand), deriving from natural materials, which are riddled, weighed and washed.** This material gives the concrete a very strong resistance, much more than inert matter produced from grinding rock. The sand and gravel are mixed with cement that acts as "glue" that keeps them

united and gives a **very high resistance to compression. The steel used is highly resistant ($r=1870 \text{ N/mm}^2$) and is formed by plaits that adhere perfectly to concrete.**

Characteristics of KONCRETO:

Lack of corrosion over time even if driven in acid soils and in the presence of salt.

Frost resistance.

Resistance to stray eddy currents, as the concrete is not electrically conductive.

- Elasticity and flexibility in case of shock and vibration.
- Structural stability due to the high inertia of the product.

KONCRETO quality is guaranteed through a special certificate from DNV Product Quality, which certifies durability, frost resistance and outstanding mechanical strength.



MAIN JUNCTION

The main hub is made of galvanized steel according to the UNI-EN-ISO 1461, with linking screws in galvanized steel. It consists of two main elements that allow the installation and longitudinal adjustment of the KONCRETO support poles and crossbeams. The joint is preset (15 to 30 degrees) and factory pre-assembled for faster installation time. Vertical and angular adjustments may be modified during installation, using high-strength bolts, respect to the horizontal plane.

CROSS-MEMBER

The cross-members are made from profiled stress-resistant steel belts. The profile contains a continuous groove for fastening the modules and a continuous place for cross-member attachment in order to provide maximum flexibility in mounting. The choice of the "omega" open profile is aimed at optimizing load distribution, to avoid the stagnation of rain water and provide support for the passage of the cable sheaths. To solve the problem of oxidation and galvanic corrosion of rails in contact with the photovoltaic panels, the steel surface is protected through the **innovative Teknocover** coating.

FLEXI

The cross-members are secured to the beams through the universal "Flexi" attachment, patented by Valente SpA.



JOINT PROFILE

The modular structure makes it possible to join continuous sections of strings: the cross-members are joined by linking profiles with an interlocking system that use the same profile of the groove.

MODULE BRACKETS

The photovoltaic modules are fixed to the frame with brackets made of anodized aluminum, according to current market standards. This solution ensures the fair distribution of the spaces between the modules and allows free thermal expansion without burdening the structures or triggering dangerous residual stress on the modules themselves. It also allows assembly time optimization.

CROSS-BRACING (only in the Zenith Plus model)

To improve the performance of the system support in the event of strong winds and snow overload, each bearing section is stiffened with a cross-bracing system, made of steel wire rope and tensioning system. This solution enables later stress to be discharged directly to the ground thus making the structure very stable without use of additional weights. In addition, there is a significant benefit in the cost of production and installation.



**20 YEAR WARRANTY - CONCRETE POLES WITH DNV CERTIFICATE
PATENTED STRUCTURES - DISPOSAL OF THE ENTIRE
STRUCTURE AT END-OF-LIFE - CERTIFICATION EUROCODICE 1**



ZENITH PLUS SYSTEM FEATURES:

- ◆ **NO FOUNDATION OR ANCHOR:** the KONCRETO poles are driven into the any type of soil by vibro-percussion (granular, clayey, sandy).
- ◆ **RELIABILITY** in the event of **OVERLOAD** and **STRESS** in extreme weather conditions, thanks to its engineering properties of KONCRETO concrete poles.
- ◆ **REDUCED INSTALLATION TIME** thanks to the limited number of components and simplicity of connections.
- ◆ **NO MAINTENANCE:** KONCRETO poles are not subject to corrosion over time even if in acid soil and the cross-members, thanks to the protection teknocover, do not oxidize in contact with photovoltaic panels.

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