

PRODUCT STANDARD SPECIFICATIONS

Viticulture posts

FORWARD

This document has been issued by PanMetal following requests by customers for specifications and methods of measurement. It must be utilised as a guide only. Certain parts may not apply to special materials. PanMetal may amend product specifications without notice and customers ought to verify the validity of the specifications they are using.

ANNOTATIONS:

The following standards and specifications have been added or updated:

EN 10143 : 2006	Continuously hot-dip coated steel sheet and strip - Tolerances on dimensions and shape
EN 10326 : 2004	Continuously hot-dip coated strip and sheet of structural steels - Technical delivery conditions
ENV 1993-1-1 Eurocode 3	Design and construction of steel structures. Part 1.1: general design rules, design rules for building construction.
28148-R-02-12/07	Comparison of tolerances on an axial load between metallic rod cross section- of equal angle type L size 40x40x4mm and metallic rod cross section Viticulture post of Panmetal, put forward by the Metallurgical Industrial Research & Technology Development Centre (MIRTEC), Volos, Greece

Outline

This document consists of delivery and manufacturing of the Viticulture posts. These specifications are in accordance with the EN 10326 and 10143 and is using ENV 1993 Eurocode as a point of reference due to the lack of EN standardisation.

Materials

Hot dipped galvanised strips of structural steel

All tests on the strips are performed prior to the forming of the profile.

The steel strips used for the manufacturing of the posts are of steel grade S320GD (1.0250) + Z275

Tensile strength: strips used for the manufacture of posts, have a minimum tensile strength of 390 MPa equal to 390 N/mm^2 according to EN 10326.

Elongation: strips have an elongation of no less than 17%.

Zinc coating: the amount of zinc is determined in accordance to Table 3 in the EN10326-2004- and it is equal to 275gr/m^2 .

Adhesion of zinc coating: the adhesion of the zinc coating to the strip is tested using a method chosen at the manufacturer's works according to EN 10326-2004.

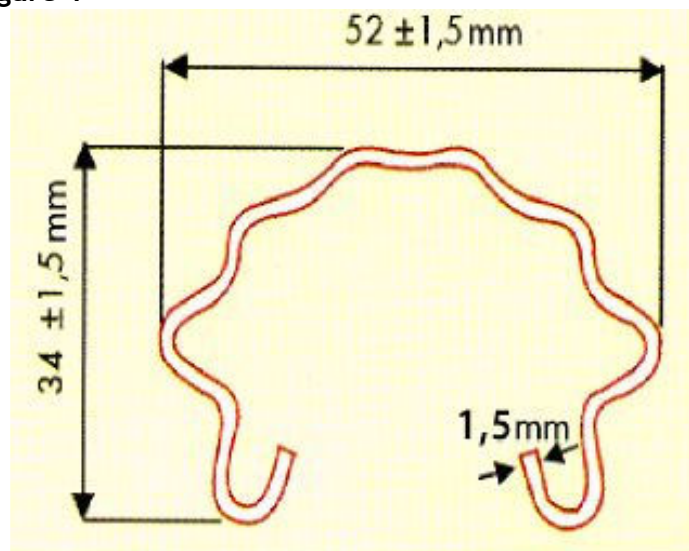
Galvanised (zinc coating) Viticulture posts (Type Omega profile):

Profile opening: Nominal Dimension = 52 mm, as in Fig.1

Profile width: Nominal Dimension = 34mm, as in Fig.1

Thickness: 1.50mm

Figure 1



Viticulture post Properties

The post's Pressure Stress Test have at least strength equal to 3800 kg/m or 38 kN/m while tested on a Tinius Olsen 60mt press, according to 28148-R-02-12/07

Tolerances

Strips: Zinc coating: according to EN 10326 Table 3, Z275.
Thickness: according to EN 10143 Table 3, $1,60 < t \leq 2,00$
Profile dimensions: $\pm 3 \%$ on the length, width, and $\pm 0.5 \%$ height.

Manufacture

The profile type Omega is produced and shipped following strict certified production supervision. The profile has a helpful hook system, having various built-in options for fixing the wires. The posts have a height ranging from 1.50 to 3.00 meters to serve the different varieties of vines and vine growing techniques utilized in modern cultivation.

Panmetal's posts are long-lasting, robust and flexible. It is a modern product which offers consistent quality and reliability and higher mechanical properties compared with wooden or cement posts.



Installation Requirements

Outline

The posts are ideal for installation with the use of machinery capable to work with them. Additionally, manual installation is possible with the use of some accessories that will be provided by us upon request. The posts can be used for any kind of soils, although the depth of the posts into the ground will vary from one area to another.

Intended Use

The posts have been designed for the trellis system applied in viniculture and must be used accordingly. The posts ought to be used in soils and under conditions that are typical for the vine growing. Areas such as marshes or areas with constant wetness, adjacent to the sea, directly under power cables or on the vicinity of industrial sites which produce emissions, or the direct contact of posts with aggressive substances will accelerate the corrosion of the zinc coating.

The use of stainless steel wire and components are not recommended as the properties of the stainless steel may cut through the steel. Extra care should be taken if such parts are to be used so as to minimize damage and corrosion of the posts.

In respect to the posts set up, it is recommended not to exceed spacing between one another of 5.00 meters as it would cause the trellis system to swing strongly with windy conditions, hence causing extreme stress. In areas where extreme winds are common this space between posts should be adjusted accordingly, especially in the Greek Isles where squalls are common.

The depth values that is offered by Panmetal is for indication only. This will be determined by the user taking into consideration the soil quality and wind strength in the area. It should be noted that it is recommended that the posts are installed deeper than wooden posts.



Storage and installation

It is highly recommended to respect the following instructions for the storage and installation of the posts. The below terms and requirements for hygiene, security and environment protection must be met.

Possible risks during works

During transport and distribution of materials

- Loading and unloading of heavy materials.
- Movement manually or mechanically heavy objects
- Movement manually or mechanically of sharp edged material.

Use of manual tools

- Use of cutting and lacing tools.
- Use of installation tools (ie hammer etc)

Use of machinery

- Installation of posts using machinery specially designed or modified to meet the requirements.
- Wrongful use of mechanical equipment during installation.

Handling equipment and tools during installation must be conducted only from experienced personnel.



Sanitary and security measures

Compliance with the directive 92/57/EEC is mandatory, “Minimal security and health requirements at temporal and movable building lots” and any regulations, laws or directives applying on the national level.

It is mandatory that means for individual protection at work are used. The minimal requirements are the following:

EN 863:1995: Protective clothing - Mechanical properties - Test method: Puncture resistance

EN 388:2003: Protective gloves against mechanical risks

EN 397:1995: Industrial safety helmets (Amendment A1:2000)

EN 345-2:1996: Safety Footwear for Professional Use - Part 2. Additional Specifications Superseded by EN ISO 20345: 2004 Personal protective equipment - Safety footwear.

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