

# PRO.SIS.TEL.

Produzione Sistemi Telecomunicazioni

## Vertical HF multi band trapped antenna PST1524VC - VF

### Assembling instructions:

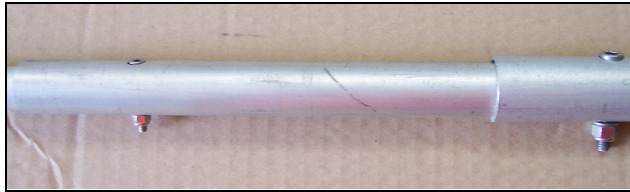
After unpacking antenna, you will find the main antenna tubes pre-assembled already, following diameter steps.

Tilting it down, do in the way to have all tubes heads coming out from the main tube.

Assembly them as in the picture below.

**Lightly lubricate the threads of all bolts before installing (the steel tends to be nailed very easily).**

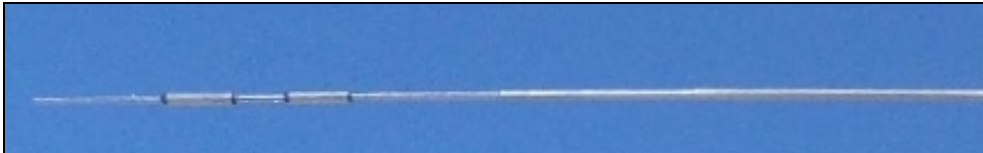
The fastening of the elements takes place by inserting the bolt from the wider hole side so that the bolt cylindrical head passing thoroughly sit and rests on the inner tube as show fig.1.



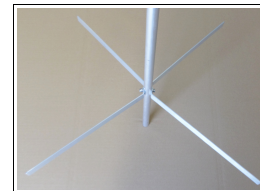
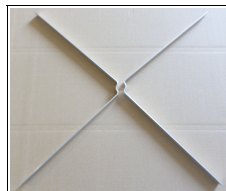
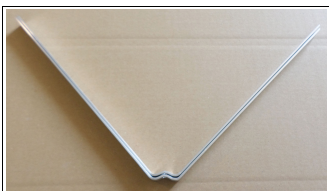
Tighten the nut. Make sure that all bolt heads are on the same side.

Using the same way, extract and connect all sections, less than the larger diameter that has to be assembled before on the antenna base and then proceed to final assembly.

When all diameters are assembled, insert the set of traps in the sequence 10m, 15m and terminal end. Traps have two drainage holes that need to look down.

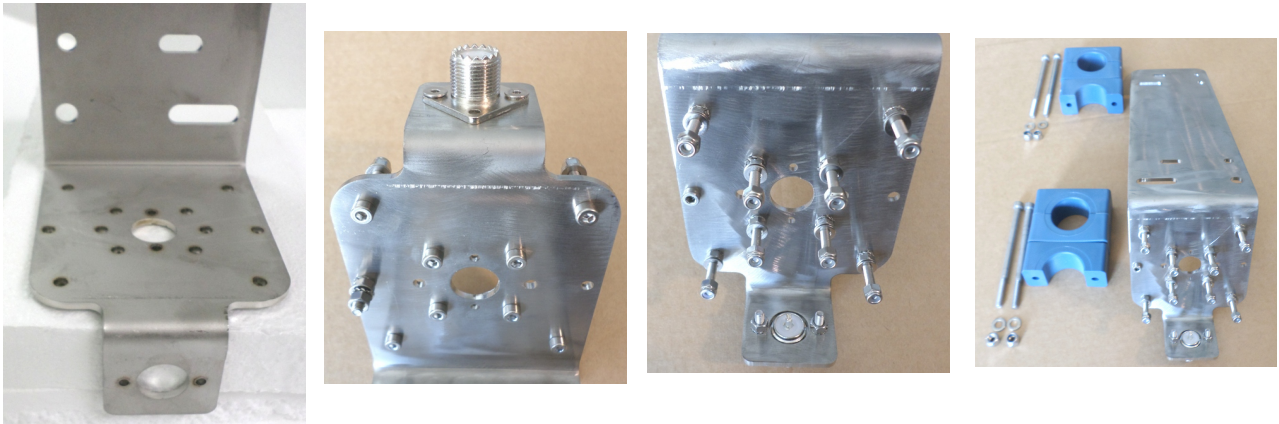


If you bought the version with 40m, also enter the 20m of the trap. and lock it with the same system. Mount the terminal and the capacitive hat. See pictures below.



All the sections of tubing and the tip, have multiple holes that serve to make small tuning touches on the various bands. Some parts are pre-assembled and pre-calibrated, if needed remove the bolt and move the tuning point. Calibrate the antenna starting with the highest band and proceed to the lowest bands. Longer elements lower frequency, shortening elements increase frequency.

After completing the assembly of the radiator, proceeding to the assembly of the base which presents a whole series of holes, which have to be equipped and prepared following the pictures sequence.



Install the 8 bolts 4x25MA in the holes in X shape and 4x16 bolt in the side hole as pictures. Correct assembling sequence for all the bolts: bolt, serrated washer, normal nut, two flat washers and self-locking nut. **Block all tightening bolts thoroughly normal nut.**

Continue the assembly with the two insulators in which is placed the wider pipe section 35mm. Leave loose bolts so you can easily move the tube into its final position with the lower side protruding approximately 2cm from the insulator. Install on the radial 4x20MA bolt and lock, insert a flat washer, eyelet RF wire, another flat washer and normal nut. Lock bolts of isolators and assembling the RF choke coil (choke). Making sure that the chock is vertical for a better drainage of the rain. The choke will short to ground any electrostatic discharge and will reducenoise.

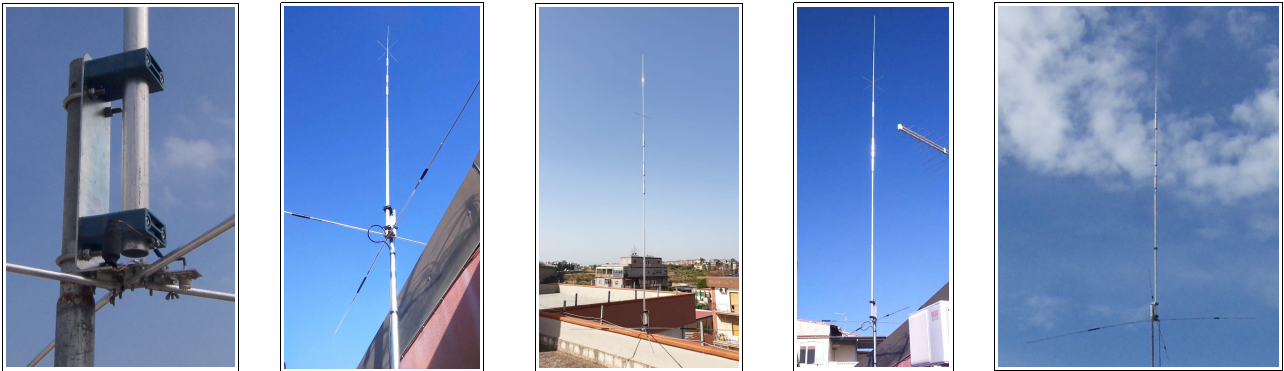


The care and precision of this assembly will ensure a long life to the antenna. Check that all bolts have been properly secured and completed the radiator assembly.

With the aid of the U bolts, install the base on the supporting pole and install the solid radials. The U bolt is 50mm wide, it can get poles or tubes from 40 to 50mm. If radials rows being installed, take care doing the work as they can also heavily influence the final tuning. You may have to try to attempt the best point of risonance.

If you have chosen the version with solid radials, they must be installed on the two bolts that are located under the base plate, taking care to follow the order for bandwidth, in order from highest to lowest or vice versa. Each radial has an adjustable tip that allows small frequency change for each band.

When assembled antenna will looks like the one in the pictures .



Antenna with solid radials can be installed at any height. Version with wire radials will have greater performance if installed 10-20cm over the ground with radial on the soil or roof.

Before to rise up antenna in the sky, make sure that all bolts and connections are well tightned.

**Do not use guy wires, do not seal traps and tubes joints.**

**Specifications:**

Bands: 10-15-20-40m

Gain = 0 dBi

Impedence = ~50 ohm SO239

Maximum power: 2KW pep SSB, 1KW CW-RTTY

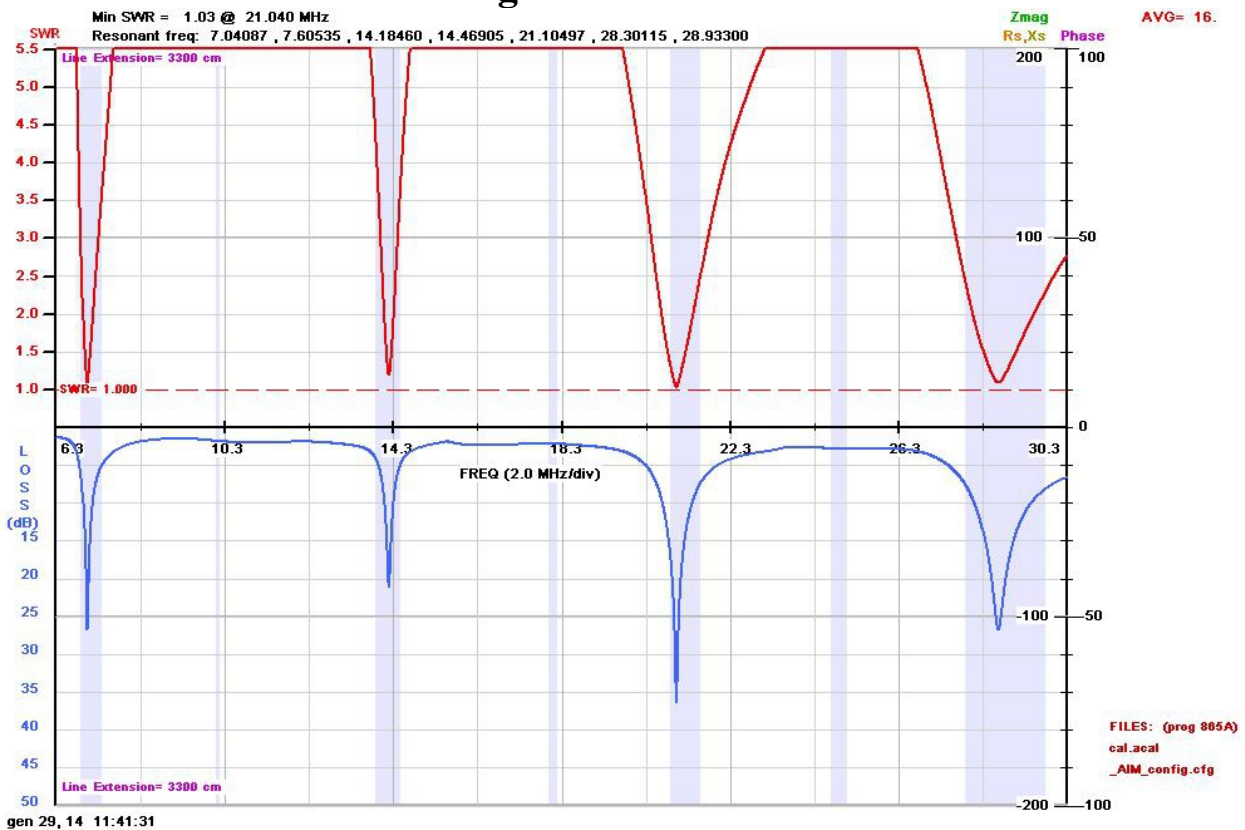
ROS = Within 1:1,5 at center band

Lenght = about 5.9 - 6,2m (4 bands version)

Weight = about 5 kg

Material = alluminum Al 6060 T6 stainless steel hardware

## SWR diagram for each one band.



Note: The SWR curves, refer to an antenna installed at about 2m in height on draining soil, in semi-dry condition, free from obstacles in the immediate vicinity. The same curves are also valid for the version with wire radials installed a few cm from the ground on the same ground and in the same type of space.

The antenna, when installed, may be affected by environmental influences, so it may be necessary to recalibrate all or part of it.

If possible avoid to install it close to metal object parallel to antenna radiator.

If necessary, start the tuning operation from the higher band and step up moving to the next band.

If main radiator and solid radials tuning are well balanced, you may easily have 1:1 of SWR

### Average usable bandwidth using version with solid radials:

40m = ~ 120Kc/s

20m = ~ 240Kc/s

15m = ~ 500Kc/s

10m = ~ 800Kc/s

VF version cover full bands



### Warning:

Do not install the antenna near power lines or equipment that could result in electrical contacts. You could be seriously injured or killed.

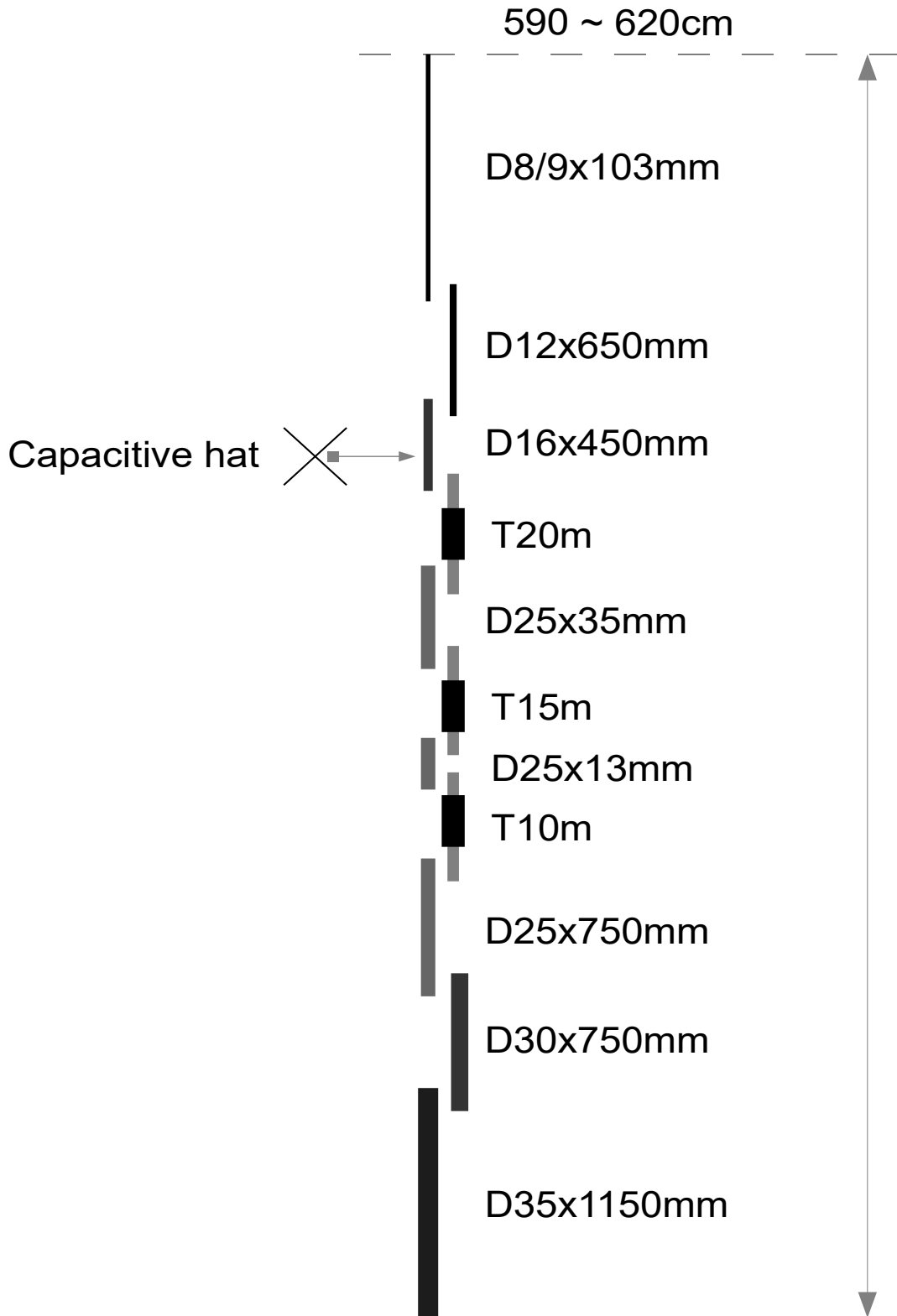
The antenna must be installed in accordance with / local / national laws.

If necessary get a professional installer.

Prosistel can not be sued for damages for non-compliance of equipment rules.



**Main antenna parts drawing version 10-40m**



**The antenna and solid radials length can change in according with tuning setting and/or possible environmental influences**

## Solid radials

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D16 - ~63cm + T + ~20cm

D8/9 - ~65cm gross - 10m

D8/9 - ~55cm gross - 15m

D8/9 - ~115cm gross - 20m

D8/9 - ~110cm gross - 40m

**Specifications may change without notice.**

Dear customer,  
thank you for purchase a **Pro.Sis.Tel.** if you are happy with it please talk to everybody, if you are unhappy with it please talk with us.

Your feed back and suggestions, will be very appreciated, to improve our products.

**Annamaria Fiume**  
***IK7MWR***

***MADE IN ITALY***

**Protect your environment, in case of discontinuing of this unit, consign it to specialized metal waste collector.**

