

## WEATHER STATION MASTS

**DESCRIPTION** Masts from ten to 50 metres are available for the MEA Automatic Weather Station range. Masts are manufactured from 165mm x 3mm hot dip galvanised tube, in 3 metre



long sections. These are guyed in four directions at up to 6 levels for the 50 metre tower, (fewer levels for shorter towers) using stainless steel guy wires (5mm high tensile galvanised wires as an option).

The mast is placed on the ground using a base plate; no expensive footings are needed which simplifies installation and significantly reduces the cost of both installation and removal.

A gin pole is used to raise the mast. Guy wires are secured with screw in earth anchors. For sandy soils more secure anchor blocks are used with trenches to ensure a secure and robust installation. The inner anchor radius for a 50 metre mast is 30 metres and the outer anchor radius is 33 metres.

An earthing kit is included with each mast.

**HOW IS IT USED?** When measuring climate conditions, the height of the mast is a common variable. For example, in wind prospecting studies, a 50 metre mast is generally used. Instruments can be mounted at a number of positions on the mast.

In general, sensors are attached to the mast using boom arms to ensure that the sensor is not affected by the mast itself. For wind prospecting studies, sensor installation is in accordance with Recommended Practices for Wind Turbine Testing, Wind Speed Measurement and Use of Cup Anemometry (1999) which specifies the vertical and horizontal separations of sensors for cylindrical towers.

Cabling from sensors to the data logger at the base of the mast is enclosed in flexible conduit which protects the cables from wildlife, particularly birds.

Installation of the masts can be contracted by MEA in any location in Australia.

