DATA SHEET

SMC GROUP
MASTS - ANTENNAS - RF COMMUNICATIONS

WTM Series

WTM/1, WTM/2, WTM/3, WTM/4

The side surface area is 2200 cm² for all WTM series models. Each model has a bottom section with a diameter of 152mm. The antenna mounting spigot is 50mm in diameter and 150mm long, unless specified otherwise when ordered. The WTM Series is suitable for most types of rotators.

The masts are built from durable, heat-treated aluminium alloy, ensuring a robust and long-lasting construction. Full-length splines are included to prevent any relative rotation between sections, while a stainless steel rope system enables all sections to be extended simultaneously.

The mast features a specially designed winch, available in both hand-operated and electric options. This winch includes a grooved drum to prevent wire bunching, a disc brake for safety, and fully machined involute gears for smooth and quiet operation.

WTM/1 and WTM/2

These masts will support large 3 element antennas, providing that the maximum operating heights specified in this table are not exceeded. The figures are for a typical antenna with a boom lenght of 4.3m (14ft) and element length of 8.2m (27ft) giving wind loads of 45kgs (100lbs) at 36m/sec (80mph).

WTM/3

This mast is intended for smaller antennas, where maximum height is of prime importance. It is particularly useful for experimental work and field strength measurement. However, if under extremely windy conditions, the operating heights are reduced to those shown in the above table, it will withstand the same wind loading as the WTM/2 mast.

WTM/4

This mast has been developed to withstand high head loads at heights of up to 9 metres. It will safely support a 0.6rm (2 ft) diameter dish at a wind speed of 160 kph or a 1.0m (3 ft) diameter dish at a wind speed of 100 kph. It has a retracted length of only 2.98m (9.78 ft), making it ideally suitable for fitting to the rear of telecommunications vehicles. A 2.0 metre extension is available if required.

WTM/7

Robust construction - mast sections constructed from heat treated aluminium alloy. Full length splines prevent relative rotation. Sections extended simultaneously by a stainless steel rope system. 5cm (2") Mounting spigot supplied as standard. Maximum surface area of headload 2200 sq cms. Manual winch included.

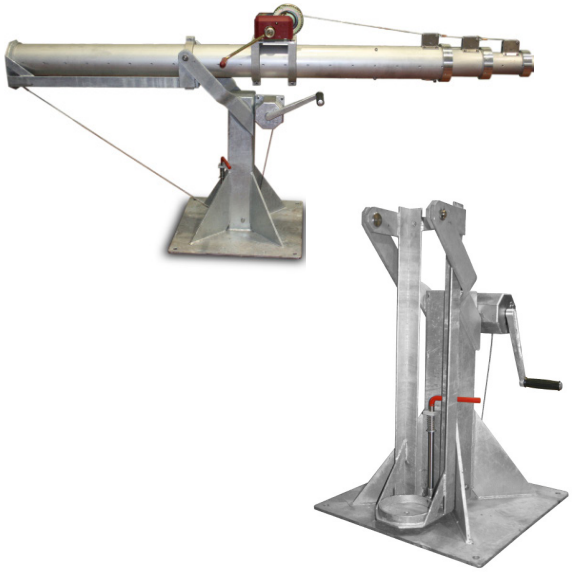
Mast	Height Extended (m)	Height Retracted (m)	Number of Sections	Diameter of Top Section (mm)	Vertical Head Load (kgs)	Horizontal Head Load (kgs)	Max. Wind Speed Unguyed (kph)	Basic Weight of Mast (kgs)
WTM/1	13	5.37	3	102	50	23	130	80
WTM/2	17	5.48	4	76	45	16	96	92
WTM/3	21	5.63	5	50	20	10	80	102
WTM/4	9	2.98	4	76	55	38	160	62
WTM/7	7	2.6	4	76	55	38	160	N/A

Mast Mounting Options

Tilt Over Mechanism

The tilt over mechanism offers easy access for fitting and servicing, thanks to its innovative design and robust galvanised steel construction. The mast can be conveniently removed, allowing flexibility for use with other applications as needed.

It comes equipped with foundation bolts and a bolt-setting template, simplifying installation. The required foundation block measures 1.2 meters square and 0.75 meters deep, ensuring stability and support. With a total weight of 110 kilograms, this mast is built for durability, however, it is not suitable for WTM/4. applications.



WTM Trailer

With 4 telescopic outriggers with wind-down legs this trailer mast is very stable. It has robust construction and is designed for easy shipment. The Standard tilt-over mechanism WTO/1 and electric winch make this trailer mounted mast very easy to erect.

The power supply is taken from the towing vehicle battery or separate battery, as preferred and can be erected by just one person. Quick operation - from parking the vehicle to fully extended mast takes just 15 minutes.

Side Mounting Bracket

For mounting masts to vertical surfaces of vehicles or buildings. Comprising two aluminium alloy castings, giving full protection to the mast tube, bolted to galvanised steel bars formed to give a distance of 260mm. Between the centre of the mast and the mounting face. (Hole centres are 460mm. apart for M 12 bolts). These brackets are not designed to support the weight of the mast.