



**G r o u p**

**Engineering Enterprises**  
for Civil & Steel Constructions S.A.E.  
Since 1975



# STEEL TOWERS

## Telecommunication



EEC Tower

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**EEC Group** has over **25 years** of experience in providing full turnkey telecom sites.

- Site acquisition & design
- Site preparation & civil works
- Tower & shelter erection
- Maintenance
- Equipment installation & commissioning

**EEC Group** is licensed by the National Telecom Regulatory Authority (**NTRA**) to own, construct, lease & operate telecom sites in Egypt.



## OUR CLIENTS



**EEC Group** is a leader in the mobile telecommunications sector since mid- 1990s in **Egypt, Libya, Iraq, Jordan, Oman, Burundi, Algeria, Sudan, Mali, Senegal, Lebanon, Bangladesh,..... etc.**

**Our Engineering, Construction, and fabrication capability is geared to design, produce, and erect steel towers and associated accessories for the mobile network operators and equipment providers.**

Our steel tower manufacturing production forms part of the manufacturing complex spanning 140,000M<sup>2</sup> using CNC lines producing the highest quality towers according to international standards and specifications.

We have the capability to produce a full range of telecom towers for any client environment & loading conditions designed according to ANSI/TIA-222-G.



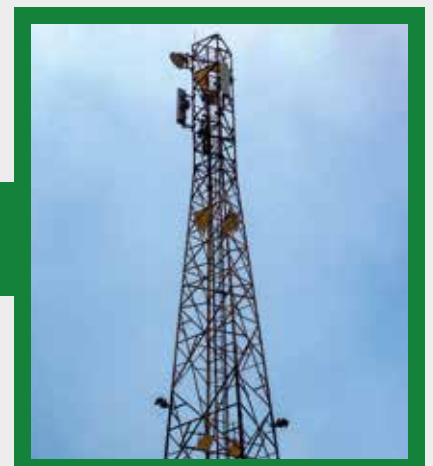
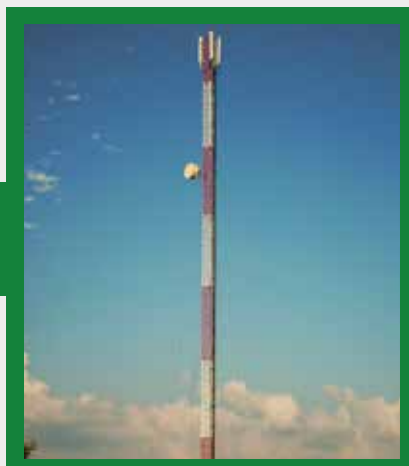
## ... Telecom Product Range ...

### Self Supported Towers (SST)

- Designed to customer's specific loading conditions, varying from light to heavy-duty applications to withstand wind speeds up to **220 KPH** & equipment loads up to **60M<sup>2</sup>** FPA offers the most economical site solution with the most optimized foundation designs to minimize the site total costs.
- A wide range of lattice structures are offered with tapered/straight shapes, angular or tubular construct, 3 or 4 legged for heights up to **130M** to suit site requirements while considering an economical shipping packaging.

### Guyed Masts

- EEC offers a time-efficient and economical construction solution where height & loads are essential The masts are carried light to heavy equipment loads up to **60M<sup>2</sup>** FPA & withstand wind speeds up to **220 KPH**.
- Its advanced design provides the most economical foundation solution applicable for several soil conditions & roof Structures lowering the total cost of site implementation.
- It is suitable for Greenfield & Rooftop sites with a height of up to **130M**, where enough area is available for installation.
- They are straight lattice masts with Guyed wires where the masts structures are made of three-legged tubular main legs & rod/angular bracing supplied in welded sections or unassembled sections where shipping volume or heavy loads are the concern



## Rooftop Structures

EEC offers a variety of rooftop structures designed as lightweight and modular structures to be fast & easy for implementation and offer economical foundation & fixation solutions for most roof conditions.

The Rooftop structure is designed according to **ANSI/TIA-222-G** to carry Equipment load up to **30M<sup>2</sup>** FPA & to withstand wind speeds up to **220 KPH** designs can also be customized to meet special site space & load restrictions upon request.

Roof Top structures are three / four-legged with penetrating / non-penetrating solutions and supplied with various shapes either Tapered/Straight lattice stub towers, poles, or Parapet Mounts with Tubular / Angular sections.

## Ground Rapid Deployment Solutions

Ground Rapid Deployment solution (**GRD**) offers the flexibility to build & dismantle permanent and temporary sites where a limited area or fast implementation is essential or the presence of poor soil characteristics where normal foundations are expensive.

The GRDs are designed according to **ANSI/TIA-222-G** to withstand a wide range of applied loads of wind speeds up to **144 KPH** and carry 6 GSM antennas (**2.7M x 0.27M x 0.15M**) + **4MW** Dishes (**0.6M**).

The GRDs are supplied with heights up to 55m with a compact equipment shelter, Power generator and steel net fence offering a comprehensive site model with an area of **6mx6m to 6mx8m**.

## Environmental Disguised Sites

EEC disguises telecom towers in areas where consideration must be given to the surroundings.

Freestanding monopoles have been designed and manufactured for up to **45M** heights and with different antenna loads, camouflaged as an artificial Arabian Palm Tree with hanging fronds or fruit bunches The product is durable with highly resilient coatings and perfectly blends with the surroundings.

## Mobile Tower Solutions

Mobile radio base stations guarantee full operation in restricted spaces.

Their use is strategic for the rapid extension of cellular networks, putting into service point to point radio connections, as well as supporting the increased traffic volume in case of extraordinary events (trade fairs, sporting events & concerts, emergencies, catastrophic events).

They are telecom infrastructures with telescopic towers placed on trailers or trucks approved for road use.

The antenna supporting structures are either self-supported or guyed in case of excessive loads as they could be designed to withstand wind speeds up to **160KPH** and carry **3 GSM** antennas + **2MW** Dishes.