



Customer

Mobile telecoms



Industry

Telecommunications



Destination

Streetside



Services

- CAD design
- Laser cutting
- Bending
- Fabrication
- Powder coat
- Assembly



Background

Most of us will have walked past one of these cabinets, whether it's popping to the post box or walking the dog, however you probably didn't even notice!

These cabinets are in fact enclosures that wrap around a structure, a telephone mobile mast in this case, to house equipment and cabling for the structure. This telecoms metal enclosure is made from pieces of stainless steel with a powder coated finish.

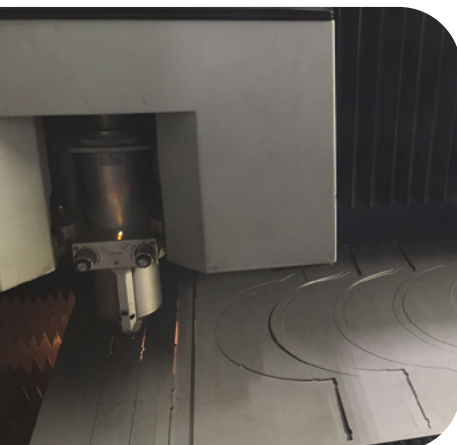


Approach

CAD design

Our client, let's call them Client A for this case study, provided all the drawings and instructions for the enclosure. Constant's team of [CAD engineers](#) imported the CAD files and aligned them for our machines and procedures, to give the most efficient manufacturing process for the enclosure.

The enclosures are constructed from several sheets of special grade stainless steel at 1.5mm thick.



Punching and Laser cutting

The phone mast's enclosure main body was cut on our Trumpf TruPunch 3000, and the secondary parts such as internal pieces and the top hood were cut on our [Laser machine](#).

Having a range of machines at Constant allows us the flexibility to use different machines for different parts, producing the best and most cost effective method of manufacturing for the project at hand.

Press brake

Up next is the bending phase on the press brakes. The metal enclosure is large so front arm rests are used on the press brake as a bending aid.



Fabrication

First process is tack welding the roof of the cabinet together, mating the bent parts together to fabricate the complete roof section. The next stage is to tack weld the roof to the main cabinet body. The preferred welding method on this project is TIG welding using high quality stainless steel wire. The precise and neat nature of TIG welding means that the next stage of weld clean up is minimal.

The process of cleaning up the weld is done by our skilled fettling department.



Finishing

The cabinets are hung on the [powder coating](#) line and go through the pre-treatment line to remove any dust or grease on the metal, and then make their way through the drying ovens to be spot on for the paint process.

Assembly

This contract is classed as a 'full assembly contract and packing' job. This means we have been provided with, or sourced, parts to add into the cabinet when assembling.

Hinges: The metal enclosure has branded tamper proof hinges which the client provided for us to attach during assembly.

Labels & Cables: The customer requires two labels to be affixed to the enclosure. The first is their company branding label with technical information and contact details (blurred for contractual reasons) and another to indicate the earthing point.



Final product

The customer attaches their own locking mechanism when they install their electrical components inside and place on site. This unit is designed to fit around a telephone mast/mobile phone mast and reduce the amount of ground space used up by metal cabinets on pavements and path ways.