

Aluminium Profile Manufacture NWA

Step 1

Thickness and girth of materials are determined, the products are then either punched out on out trumpf punching machine or on our Durma pressbrake. +/- .75mm tolerance.

Step 2

Angles and fold measurements are determined and bending programme is set up on one of the following machines,

- Cidan folding
- Durma press brake
- Ras folding
- Safan pressbrake

A sample section is done to confirm piece can be folded and to make sure measurements and angles are correct.

With sections between 3000mm and 4000mm the tolerance in angles from each side can be +/-2 degrees.

With sections between 1499mm and 2999mm the tolerance in angles from each side can be +/-1.5 degrees.

With sections between 0mm and 1500mm the tolerance in angles from each side can be +/-1.2 degrees.

Step 3

Welding of profiles are done using TIG welding either fused welded or filler rod 53/56 depending on the application.

If smooth surface is required welds are buffed using flap discs and then sanded using a low grit sandpaper and working up to a high grit paper.

Step 4

All aluminium profiles to be powder coated are pre-treated in a 4 stage system.

- Tank 1 - acid etching (20-30 mins)
- Tank 2 - wash (15 mins)
- Tank 3 - warm rinse (12-15 mins)
- Tank 4 - chemical undercoat (8-12 mins)

- Flashings are then placed in drying oven to completely dry prior to coating.

Step 5

All profiles to be powder coated are hung for coating in our spray booth, copper hooks are used to ensure correct charge runs through and powder coats properly.

Powder to the correct RAL is then sprayed on to a thickness of 60 micron $\pm 10\%$.

The profiles are then placed in the curing oven for the correct time and temperature depending on the powder.

The temperature of the drying oven and the curing can distort the angles slightly.

Step 6

Profiles are then taken off the rails, checked and packaged and made ready for dispatch.