Case Study

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THE CUSTOMER:

Defence Prime Contractor

A local business with over 50 years experience in the design, manufacture and sale of High Pressure, High Flow Control Valves and application specific systems for both military and industrial applications.

Many of their products and systems carry NATO approvals and approval for medical oxygen use.

THE PROBLEM:

Portable Charging Units (PCU)

Nitrogen has many uses in industry, whether it is commercial or military applications. All braked wheels on aircraft tyres must be serviced with dry nitrogen. This greatly reduces the possibility of a brake fire being fed by a tyre filled with air. Airlines & Defence Ministries find it much easier to use nitrogen on all tyres instead of specifying non braked tires.

Aircraft tyres come in many different sizes, often with their own connectors. The manufacturer wanted to produce a nitrogen recharging system which contained all of the different parts needed, but remained portable for use on airfields.

Space was needed to house a nitrogen canister, various valves and a 5 meter hose. All small removable parts were to be secured with chains to prevent foreign object damage (FOD). The units also had to be certified to TPED (Transportable Pressure Equipment Directive).

The end customer for this application was the RAF so the correct case selection was essential.

THE SOLUTION:

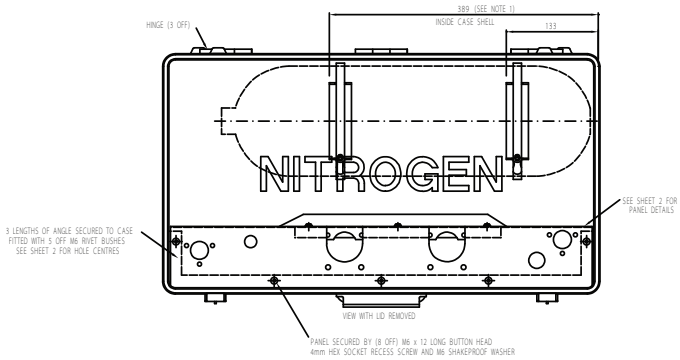
CP AluCurve Aluminium Cases

After meetings with the local business and understanding their vision for a lightweight, 'briefcase' style PCU, our team decided that AluCurve was the best case for the application.

Made from 2mm flat stock aluminium, AluCurve is constructed without an edge corner weld to prevent seam splitting.

AluCurve is the ideal balance between style and protection. The tough pre pressed corners add extra strength and exceptional resistance to drop damage.

Every aspect of the AluCurve case has been given very careful consideration. Recessed catches & handles, indents for stacking and radius edges are some of the key features.



The case interior needed carefully constructed supports, partitions and fixings. The internal also had to be multi layered due to the height variation of the valves.

Despite the different depths of equipment, the case had to lie flat on the ground during use and therefore needed to be cut 50/50 along the length.

The case had to endure being dragged along the ground as engineers moved between tyres. To reduce the damage to the case, stacking glide points were fitted to the outside corners and stainless steel edge buffers helped to maintain rigidity.

The lid of the case was also designed to be functional, storing the 5 metre hose, gauges and operating instructions.

The AluCurve case was finished off in a range of powder coated colours including yellow, blue and military green.