HUNTINGDON FUSION TECHNIQUES HFT

ARGWELD®

Flexible Welding Enclosures®

Frequently Asked Questions

1. **Do these Argweld® Flexible Welding Enclosures® really work and are they good enough for welding titanium?**

   Yes, there are over thousand in successful use all over the world by many of the major airlines, sports car companies and aero engine manufacturing companies like Rolls Royce. A customer list is available.

2. **What about all the sparks, don't they melt the plastic?**

   It is not usual for TIG/GTAW or Plasma PAW welding to produce sparks.

3. **Won't the hot metal melt the plastic?**

   Yes, hot metal parts must not be allowed to touch the plastic.

4. **Can Huntingdon Fusion Techniques HFT® supply the internal baseplate and purge lines?**

   Our concept is to ship the Argweld® **Flexible Welding Enclosures®** internationally for the user to manufacture their own metalwork to suit. Most people welding titanium or other reactive metals have their own manufacturing capabilities and it is more appropriate for them to fabricate their own.

5. **Is it possible to use a vacuum pump to evacuate the enclosure quickly to purge it faster?**

   Because Argweld® **Flexible Welding Enclosures®** can be collapsed around the parts to be welded, purge volume is so small that the purging time is minimised.

6. **What is the largest component I can put into the Enclosure?**

   The standard zip lengths are:

   900 mm Ø Round Enclosure 1430 mm long
   1200 mm Ø Round Enclosure 1900 mm long
   1500 mm Ø Round Enclosure 2390 mm long
   1800 mm Ø Round Enclosure 2900 mm long

   Parts, which can go through the above mentioned openings can be put into the standard Argweld® Flexible Welding Enclosures®.

   Special Enclosures are available made to measure.

7. **Why does the Enclosure deflate when I turn the gas off?**

   All purging applications require a continual flow of inert gas until the welding and requirement for purging is complete.

   The Argweld® **Flexible Welding Enclosure®** is recommended to be purged with a flow rate between 2 to 5 litres per minute. Continuous purging will remove traces of oxygen and hydrogen generated during welding.

8. **Should gas be escaping from the valve?**

   The exhaust is designed to vent gases from inside the Argweld® **Flexible Welding Enclosure®.** Gas will escape through the valves as the enclosure inflates and when operators put arms inside sleeves.

   The valves can exhaust flow rates of 1 to 10 LPM. There are two membranes inside the valve. One can be removed by the operator if desired. Our intention is that the valves will only exhaust low flow rates, to minimise gas consumption and eliminate turbulence.

9. **Is it possible to have a demonstration of an Argweld® Flexible Welding Enclosure®?**

   Certainly. Customers may visit our facility, an enclosure can be seen and inspected and checked for results. As mentioned, we have many users who can confirm their satisfaction with their enclosure and its concept.

10. **The enclosure bulges when I inflate it?**

    This is a symptom of over-inflation and too high a flow rate. It is recommended to purge at between 2 to 5 litres per minute. When higher purge rates are desired, although this is not encouraged, we suggest the removal of one of the membranes from inside the exhaust valve.

11. **How can I sample the level of oxygen inside the Flexible Welding Enclosure®?**

    One of our Argweld® **Weld Purge Monitors®** will be required, depending on the oxygen level to be measured.

    A gas sampling port at the top of the **Flexible Welding Enclosure®**, next to the valve is available to connect an external **Weld Purge Monitor®**, such as one of our 1 ppm monitors (PurgEye® 300 Nano, 500, 600 or 1000).

12. How do I get cables inside the Argweld® Flexible Welding Enclosure®?

Cables can be passed through the glands provided in the service panel. This panel has a series of tubular glands with a membrane which seals around the cables and hoses.

Two separate glands which appear like 'pockets' are intended for the welding torch cable. One is situated for the left-handed welder and the other for a right-handed welder. These pockets are 50 mm in diameter. To seal the weld torch hoses inside these pockets, we provide accessory kits.

13. How can I get small parts inside the Argweld® Flexible Welding Enclosure® once it is inflated?

An entry/exit sleeve is fitted as standard to all Argweld® Flexible Welding Enclosures®. This allows parts to be passed into an enclosure without opening the zip. The sleeve is sealed on despatch and can be cut if required and used as a purge lock with a two-way clamp, to avoid contaminating the inside of the enclosure.

Once the seal is cut, the operator will need a tool to clamp the sleeve opening. The two way clamp allows the sleeve to be purged independently. There is a gland and a gas relief valve in the sleeve for this purpose. The component is passed from the sleeve to the main enclosure once the gas environment inside the sleeve is adequately purged.

14. How can I repair a small puncture or tear?

A repair kit containing PVC material and some adhesive is included with the Argweld® **Flexible Welding Enclosure®**.

15. Before I weld, the Argweld® Weld Purge Monitor® shows a low value but upon welding, the weld looks oxidised?

Our range of Argweld® **Weld Purge Monitors®** will detect traces of oxygen when purging with an inert gas. However, if dirt, moisture or unsuitable materials are placed in the Argweld® **Flexible Welding Enclosures®**, outgassing of oxygen and water vapour may occur as the temperature rises.

By striking an arc on a piece of scrap titanium when the purge level is ready, prior to welding, the scrap piece will absorb or "getter" residual traces of oxygen and hydrogen. All parts must be cleaned, degreased, washed and dried prior to placing in the enclosure.

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