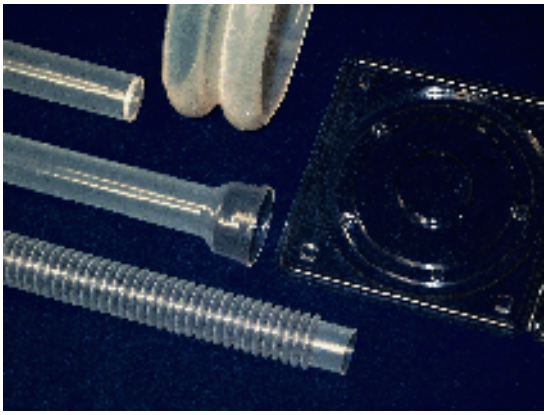
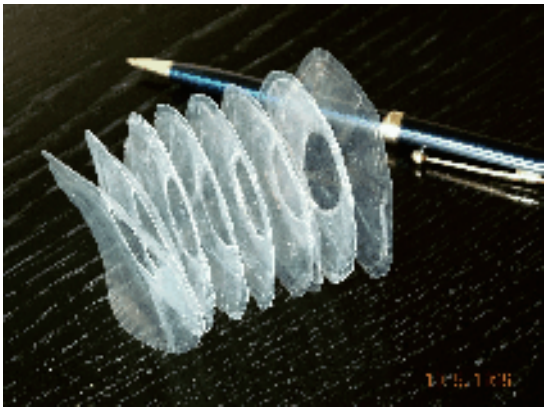
FABRICATIONS IN FLUOROPLASTICS

Fluoroplastics show remarkable physical and chemical properties, but they are costly materials compared with more conventional thermoplastics. Therefore they are often used in specialist applications where the quantities required may be small. This means that conventional plastic processing is inappropriate, even if it is possible. ADTECH have developed a number of novel thermoforming and welding techniques that can be applied to fluoroplastics so that products can be made in a cost effective way. These processes include heat shrinking, jig fusion welding, vacuum forming, compression and transfer moulding.

The number of different products that can be produces this way is infinite.

This leaflet contains examples of some of the products that we have made, and the techniques used in theirmanufacture.



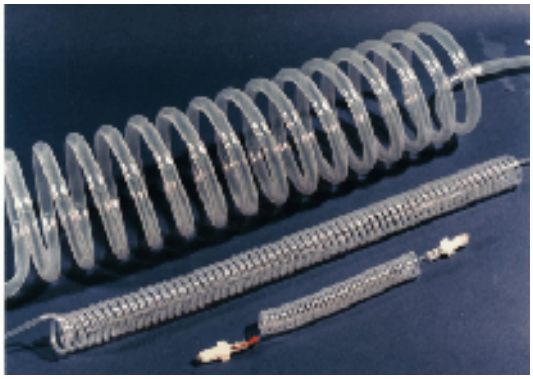


Very light duty bellows used to protect delicate reciprocating mechanism from attack by chemical vapours.

The bellows were made by vacuum forming thin FEP film into conical disks and then alternate inside and outside diameters of the disks were fusion welded together. The completed bellows were spark tested at 5000 volts to ensure integrity of each of the welds

A small impeller made from PFA, with magnets encapsulated inside. These are for items for stirring very agressive chemicals in a sealed environment in the semiconductor industry. They are made by transfer moulding the basic shape with a hollow inside, inserting four small powerful magnets, them fusion welding a cap onto the moulding to completely encapsulate the magnets inside.

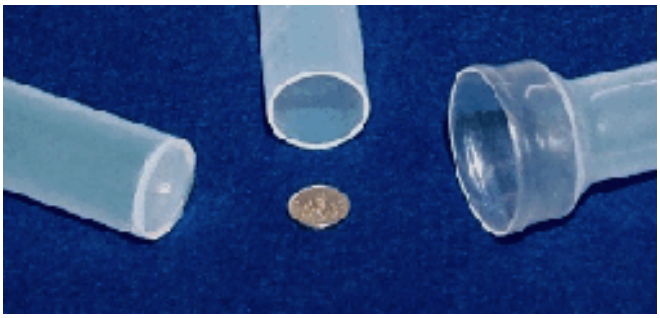
The stirrer is rotated by an externalmagnetic field.



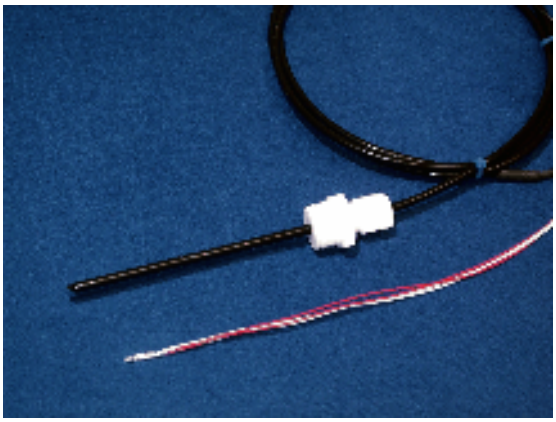
Formed extension coils in FEP and PFA made by heat setting extruded tubin ADTECH can make coils of any size and extension. Ends can flanged ar supplied with suitable end fittings if required.

Micro flanging of fluoroplastic tube.

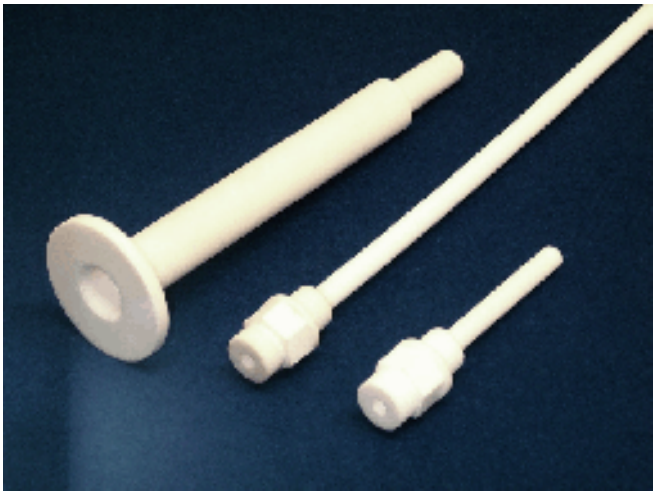
Adtech produce many thousands for flanges each year, many iincluding connector fittings in PEEK. PVDF, nylon, stainless steel etc.



Thermoforming and end closure of all sizes of tubing. Our pecial process enables ud to mould flat or shaped end closures into tubed



Temperature measurement probes incorporating thermocouple or platinum resistance elements. Any size or length can be made to order. The fluoroplastic sheath gives the probe complete chemical resistance up 250 degrees C.



Fabrications from “solid” PTFE where tube, flanges & fittings are welded together by process unique to Adtech.

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