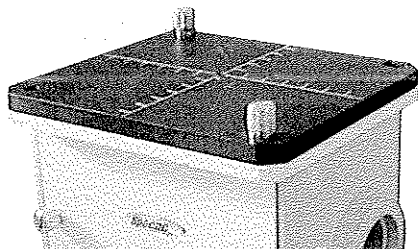


Micro Specular Reflectance Top-plate



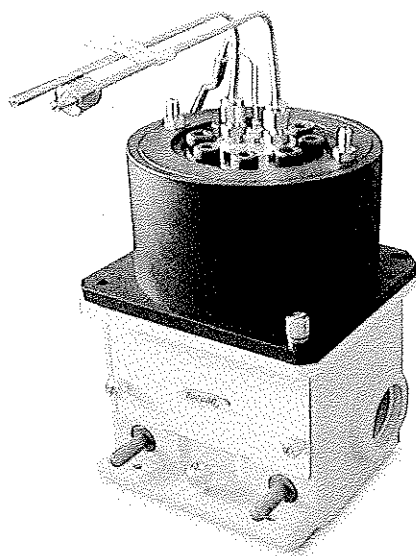
A 45° angle Micro Specular Reflection Top-plate is available for flat samples of greater than 2mm x 2mm, or powders that can be pressed into a self-supporting wafer.

A scribed reference grid allows accurate repeat positioning of samples.

Applications

- Micro reflectance samples
- Very highly absorbing samples
- Carbon black containing polymers

Golden Gate Reaction Cell



The Reaction Cell allows in-compartment reaction monitoring over a broad range of extreme conditions.

This Top-plate has the diamond ATR crystal and tungsten carbide mounting contained within a high pressure reaction vessel.

The unique strength and durability of the diamond element makes it ideal for withstanding combinations of aggressive chemical contact at high temperatures and pressures.

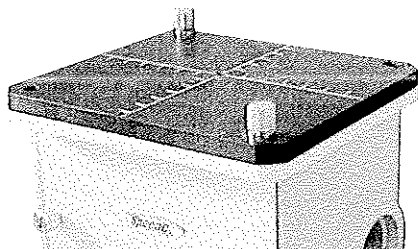
Features

- Controlled temperatures to 200°C
- Low voltage (30V)
- Cell volume 28µl
- Pressures up to 3000psi
- Water jacket to prevent overheating
- Stainless steel construction with a choice of other materials
- Stirring option
- Flow through configuration option

Applications

- Chemical reaction analysis at high temperatures and pressures
- Caustic solutions
- Slurries with abrasive particulates
- Acidic reactions
- Optimization of process parameters

Micro Specular Reflectance Top-plate



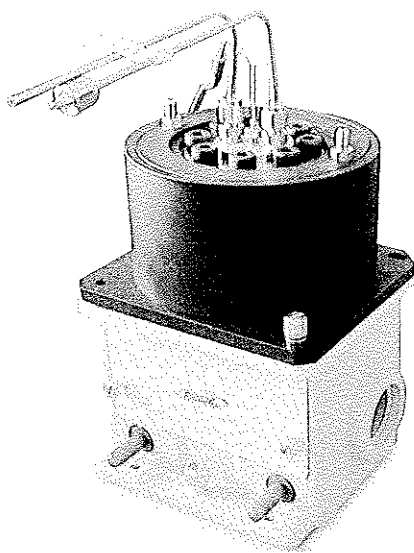
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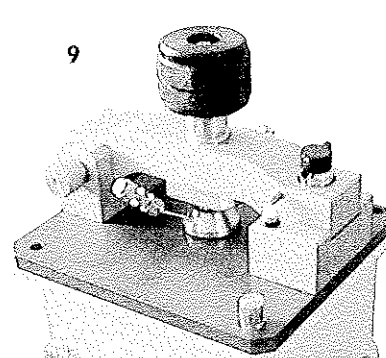
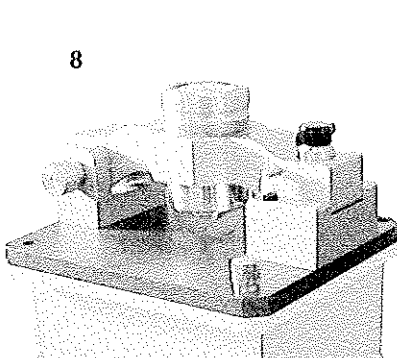
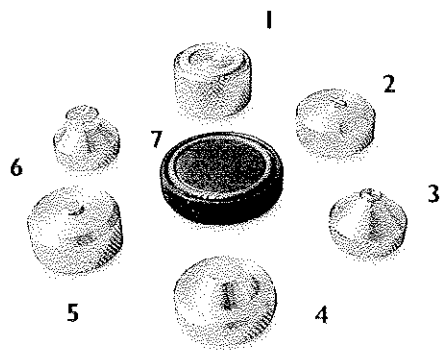
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Anvil Options

A variety of special anvils exist for use with the Golden Gate Top-plates. The use of an appropriate anvil improves the

sample handling capabilities of the Golden Gate Single Reflection ATR System.



1 Reactive Sample Anvil

Samples which are sensitive to air or moisture can be loaded and pressed in a dry box. The anvil has a seal which compresses as the sample is pressed, thus keeping it in an inert environment during analysis.

2 & 5 Grooved Anvils (Narrow and Wide)

To study the coating on transformer wire the grooved anvils hold the wire exactly in the middle of the diamond.

3 Sapphire Anvil

This is the standard anvil and is used for most sample types. It has the advantage of being very hard, and easy to clean to prevent sample carry-over. It is also self-levelling to accommodate non-flat samples.

4 Stainless Steel Flat Anvil

This is used for fibers or fine wires. It is not self-levelling, which is an advantage with this type of sample.

6 Pellet Anvil

Polymer pellets are held firmly in position with this concave anvil. With a flat anvil they could move when pressure is applied.

7 Volatiles Cover

If liquid samples are very volatile the cover is useful to minimize evaporation.

8 View-Thru Anvil

The View-Thru Anvil allows the sample to be viewed through a 4x lens system with a built-in reflective illuminator. The lower window of the anvil acts as a viewing window so the sample may be positioned accurately and observed as pressure is applied. The anvil does not rotate as it presses on the sample, thus preventing movement of the sample and also minimizing any heating effects due to friction.

9 Flow-Thru Anvil

This micro flow cell anvil seals under pressure around the diamond. Its volume is 28 microlitres and it can operate at 1000 psi. The pipe flow fittings are $\frac{1}{16}$ " O.D. stainless steel. It may be used as a flow cell or as a micro reaction chamber in conjunction with the heated Golden Gate. It has also been used for the study of polymers in the presence of a supercritical fluid.