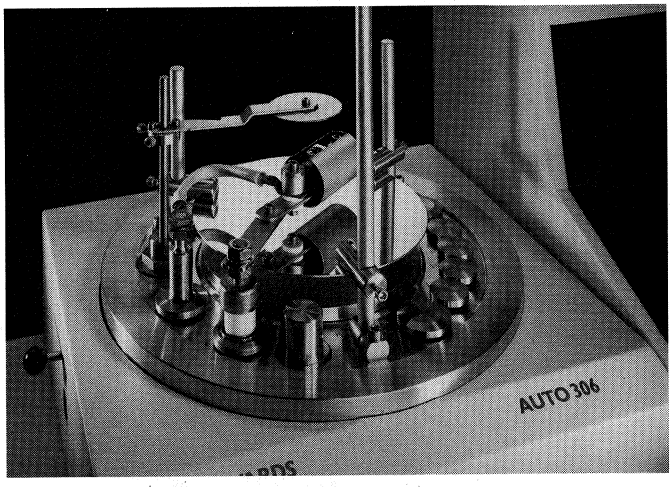
## Resistance evaporation

Resistance evaporation is often the most simple and cost-effective deposition technique. In this technique, most commonly used metals (such as aluminum, chromium, silver, gold and many others) are readily evaporated.

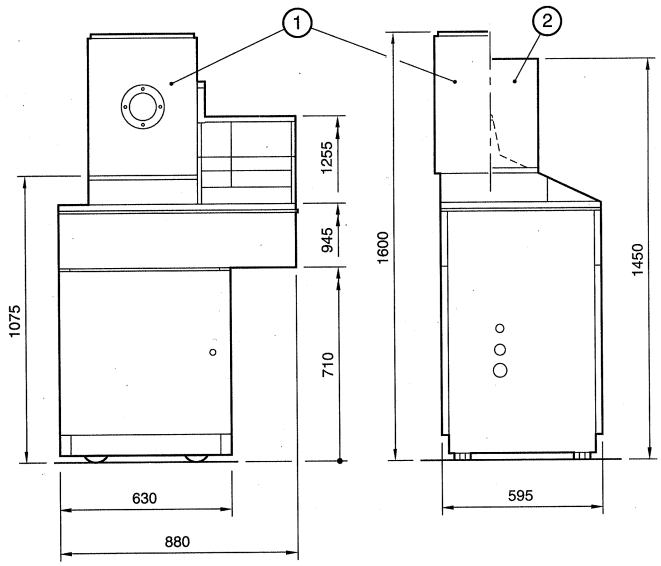
BOC Edwards Auto 306 resistance evaporation systems provide researchers with an affordable but capable tool that can be upgraded as required by adding more sophisticated deposition techniques.



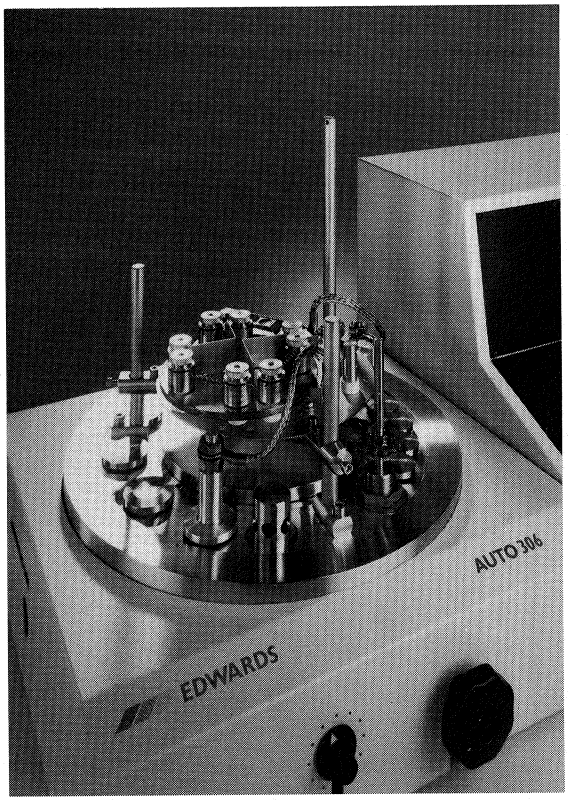

*Resistance evaporation source for filament or boat evaporation. A built-in shield prevents unwanted coating of the vacuum chamber and adjacent deposition accessories.*

| | |
|---|---|
| Ultimate vacuum | |
| 600 $ls^{-1}$ diffusion pumped | 2 x $10^{-7}$ mbar |
| 350 $ls^{-1}$ turbo pumped | 7 x $10^{-7}$ mbar (no liquid $N_2$ trap) |
| 500 $ls^{-1}$ turbo pumped | 2 x $10^{-7}$ mbar |
| 800 $ls^{-1}$ cryo pumped | 1 x $10^{-7}$ mbar |
| Liquid nitrogen trap capacity* | 1.4 l |
| Pump oil/ fluid capacity | |
| RV12 rotary pump | 750 ml, Ultragrade 19 |
| E04/160K diffusion pump | 175 ml, Santovac 5 |
| Weight (approximate) | 200 kg |
| Electrical supply | 240 or 220 V 1 ph 50 Hz<br>or 210 V 1 ph 60 Hz |
| Electrical supply cable | 2 m x 3 wire |
| Maximum power consumption | 3 kVA |
| Enclosure rating | IP20 |
| Cooling water flowrate | 1.2 $lmin^{-1}$ at 20 °C |
| Pumpdown time | |
| Time to $10^{-5}$ mbar | 4 minutes |
| Time to $10^{-6}$ mbar | 25 minutes |
| Tested leak rate | ≤$10^{-9}$ mbar $ls^{-1}$ |

* Trap fitted to diffusion pumped and 500 $ls^{-1}$ turbo pumped versions only.




1 With FL400 chamber
2. With Glass chamber




*Four position turret evaporation source capable of sequentially depositing up to 4 different metals without breaking vacuum. Sources are selected and rotated into the evaporation position using a simple handwheel control. The sources can be configured to evaporate from the center or the side of the vacuum chamber for optimum film thickness uniformity onto a choice of static or rotating substrate fixtures.*