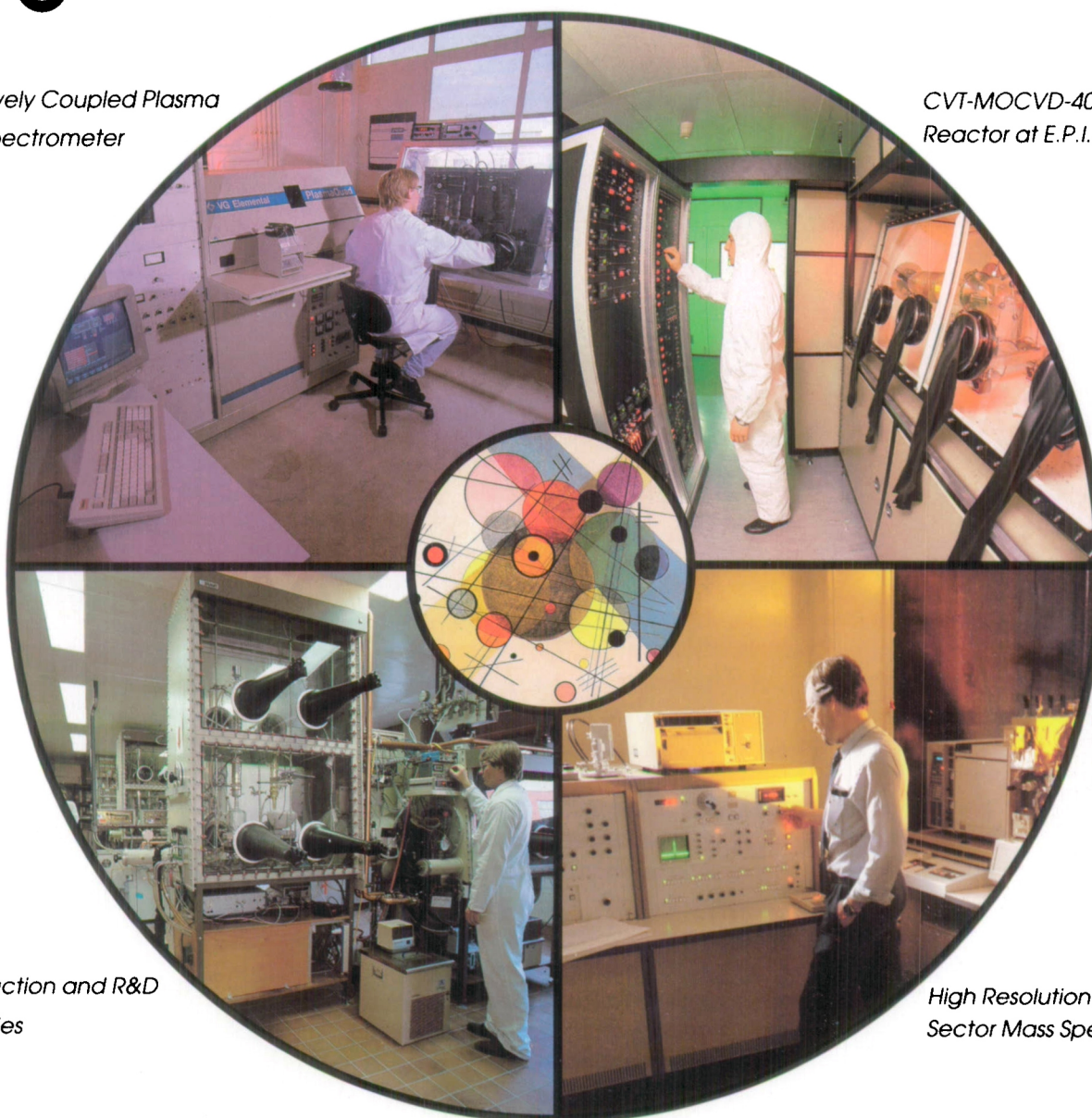


Organometallics for Electronics

Inductively Coupled Plasma
Mass Spectrometer

CVT-MOCVD-4000
Reactor at E.P.I.



Production and R&D
facilities

High Resolution Magnetic
Sector Mass Spectrometer

Organometallics produced and analysed by Billiton Precursors B.V.* are tested by Epitaxial Products International Ltd. and other institutions ensuring products of consistent high performance. Certificates of Analysis and Performance are supplied with each batch.

Typical Precursor Performance

Precursor	Epitaxial layer grown	Temp. °C	Pressure, mbar	V/III	n(300K)	μ(300K)	μ(77K)
TMGa	GaAs	650	100	110	7e13(C-V)	8900	155,000
TMIIn	InP	650	200	270	3e14(C-V)	4600	120,000
TMAI*	Al _{0.25} Ga _{0.75} As	760	950	50	2e15(Hall)	3200	6,500

* FWHM (5K) of Bound Exciton: (Al_{0.10}Ga_{0.90}As) 4.0 meV; (Al_{0.25}Ga_{0.75}As) 4.5 meV



Billiton Precursors B.V.

Billiton Precursors B.V.*, Dr R.G. Lythe, P.O. Box 639,
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Billiton Metals Japan K.K.*, Mr H. Neriishi, Kasumigaseki Bldg 29f,
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Tel (Int'l) 81-3-581-6303. Fax (Int'l) 81-3-592-0903. Telex j22373, j22901.

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IN R&D, THE FUTURE BELONGS TO THE FLEXIBLE



▲ A typical UHV internal arrangement for co-sputtering.

▼ Model 6000 modular UHV deposition system.

For as much as superconductivity is changing the future, there will also be changes in the projects you're working on.

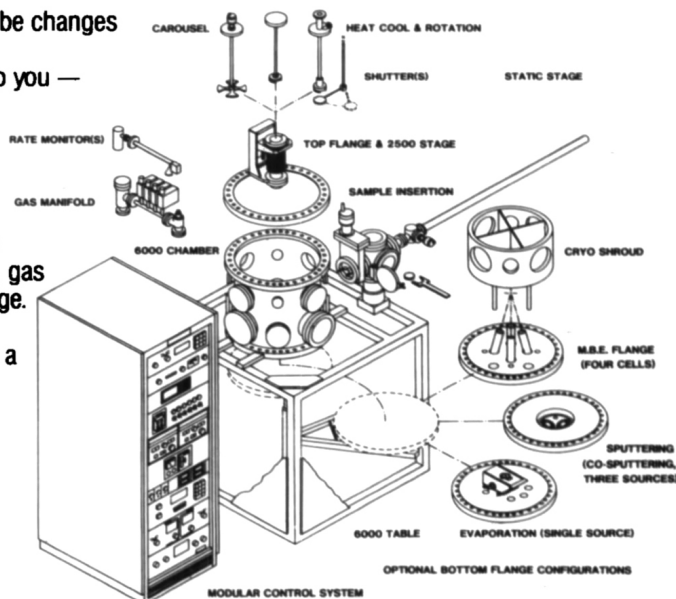
That means the equipment you buy today should be designed to help you — not limit you — in the future.

If you decide on UHV's modular approach to deposition and sample processing, you can stay flexible enough to handle changes as they occur in superconducting, semiconducting, optical, diamond or any other rapidly developing area of materials research and development.

A UHV system begins with the basics, a standardized ultra-clean, ultra-low pressure 5×10^{-11} Torr vacuum chamber (two sizes), pumps, vacuum gauges, gas controls, electrical distribution system, and a versatile sample manipulation stage.

To this, you can add (now or later) any one of dozens of options, including RF-DC sputtering, evaporation, MBE, ECR, ion sputtering or others, to create a unique R&D tool.

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