GC Equipment

Detector Hardware for Retrofit on Thermo Trace, Agilent 6890, Varian, HP 5890, or SRI GC Models - Compact detector towers made of stainless steel and ceramic mount onto the existing FID or NPD base on the GC, and use the GC's existing controls for setting detector temperature and gas flows. Ion Sources identical to those used for the Agilent 6890/7890 NPD are on a self-aligning flange that fits the tower top.

Electronics - A stand-alone **DET Current Supply** provides a precision controlled constant heating current for the Ion Source for best response stability versus time, plus a selection of Ion Source polarization for optimum response in all modes. **Thermo Trace NPD electronics** provide the most versatile control of heating current and polarization, while Agilent, Varian, and SRI NPD electronics are more limited. The **Thermo Trace and Agilent 6890/7890 NPD Electrometers, Varian TSD Electrometer, and SRI NPD Amplifier** suffice for signal measurement. Otherwise, a **Keithley Model 6485 Picoammeter** provides a stand-alone unit for signal measurement for DET hardware mounted on HP5890 or the Agilent 6890/7890 FID detector base, as well as all DET stand-alone Transducer equipment.

Compact GC Analyzer - DET tower hardware, ceramic Ion Sources, and a Detector Current Supply are combined with a compact SRI model 310 GC. Analyzer features a glass lined flash vaporization injector, and a 15 m or 30 m x 0.32 mm fused silica column. Connection to a laptop computer provides data analysis and time programming of column temperature and carrier gas pressure.

Stand-alone Transducers and **Detection Modules** - TID/NPD transducers are hardware assemblies fitted with Tube or Swage-type inlet fittings for easy attachment to standard gas line connections. Detection modules include these transducers in a thermally insulated box containing a temperature controller and pneumatics controls where required. An **RTIA (Reactor Thermionic Ionization Analyzer)** module includes a heated reactor chamber as the inlet for the TID/NPD transducer.

Some examples of DET equipment uses:

- inexpensive, best performance, highest quality ion source replacements for the Agilent 6890/7890 NPD - TID-2 (black ceramic for sharp P peaks) or TID-4 (white ceramic for best N-response), $350. each new or $315 each recycled.
- more stable Constant Current type ion source heating power for the Agilent 6890/7890 NPD - substitute DET Current Supply ($1760) for the 6890/7890 Bead Voltage (Constant Voltage type) - other modes of thermionic detection also accessible with this equipment change.
- convert Agilent 6890/7890 NPD to selective detection of Oxygenates or volatile Halogenates - use DET Current Supply as above and replace NP ion source with TID-1 or TID-3 ($350. ea.).
- replace Varian TSD with DET NPD/TID hardware for lower cost ion sources and much improved P-peak shapes - DET NPD/TID/FID tower ($1650), TID-2 or TID-4 source ($350), and use compatible Varian TSD electronics. Add a DET Current Supply for detection modes other than NPD.

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