

SEPMASTMTER - 2000

FAST GAS CHROMATOGRAPH

SAKS
EQUIPMENTS Pvt. Ltd
EXPERIMENT THE FUTURE !



FAST

RELIABLE

ACCURATE

INTRODUCTION

The SEPmaster 2000 – Your Ultimate Solution for Fast, Reliable, and Accurate Gas Chromatography



The SEPmaster 2000 from SAKS Equipments is designed to meet the evolving needs of industries worldwide. Delivering unparalleled performance, this advanced model brings precision, simplicity, and efficiency to gas chromatography applications. Built with cutting-edge technology.




The SEPmaster 2000 offers enhanced features over its predecessor, the SEPmaster 1000, catering to industries like food and beverage, environmental testing, petrochemicals, pharmaceuticals, and more..

Key Features



Unmatched Flexibility: Modular inlet systems including split/splitless, packed, and valve inlets make the SEPmaster 2000 adaptable to a wide variety of applications.

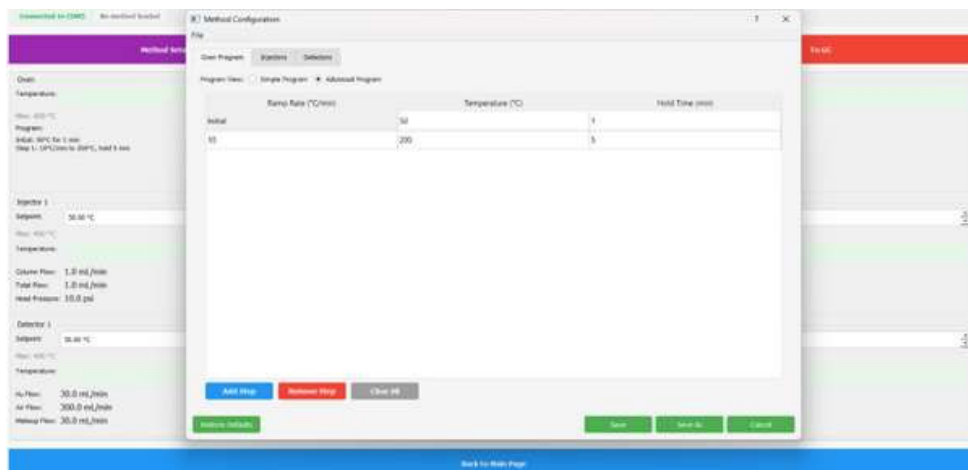
Intelligent Digital Control: iDPC (Intelligent Digital Pneumatic Controller) ensures precise control over injector and detector flows, ensuring consistency and reliability.



Enhanced Detection Options: Available detector systems include FID, TCD, PID, HID, and more, rigorously tested and meeting ASTM standards for top-tier performance.

Advanced User Interface: A large, intuitive 7" multi-touch display offers seamless navigation, control, and real-time monitoring, enhancing user experience.

Technology Highlights



Precision Temperature Control: The latest digital PID control, supported by new-generation ADCs, guarantees exceptional temperature stability and repeatability, comparable to leading global manufacturers.

Rapid Cooling: The low thermal inertia oven, enhanced by strategically placed cooling fans, ensures swift temperature transitions, optimizing analysis times and throughput.

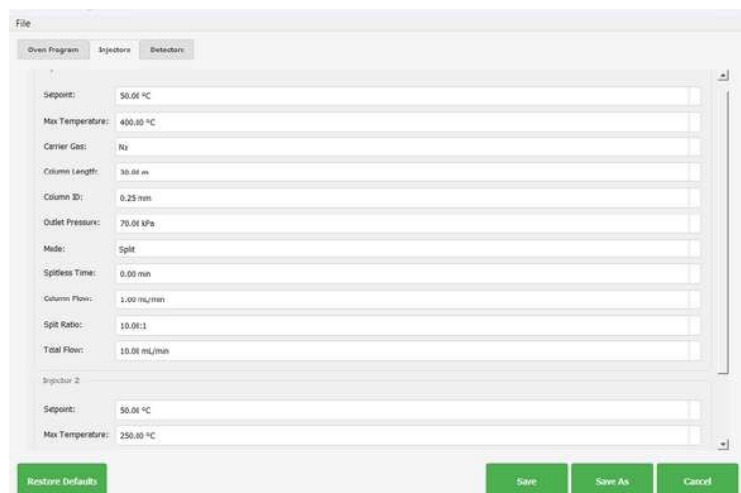
Real-Time Control & Automation: With features like programmable auto on/off, diagnostic tools, and leak detection, the SEPmaster 2000 minimizes downtime while maximizing operational efficiency..

Next-Level Gas Control

Multiple Channels: The SEPmaster 2000 offers up to 24 integrated channels for both injection and detection systems, providing flexibility for various carrier gases.

Precision Settings: Pressure can be adjusted with fine precision (up to 145 psi), ensuring optimal performance under varying conditions.

Standby Mode: Gas saver mode allows significant resource savings by putting the device into a low-power state during idle periods.



The SEPmaster 2000 excels in gas management through its state-of-the-art Intelligent Digital Pneumatic Controller (iDPC), offering precise and reliable control over gas flow and pressure:

- **Multichannel Flexibility:** Manages multiple injectors and detectors simultaneously, ensuring accurate gas flow and pressure.
- **Carrier Gas Options:** Choose from helium, hydrogen, nitrogen, and argon-methane.
- **Precision and Fine-Tuning:** Adjusts pressure in fine increments of 0.01 psi for delicate analyses.
- **Advanced Programmability:** Programmable up to 7 pressure or flow ramps for precise control.
- **Atmospheric Pressure Compensation:** Built-in compensation for atmospheric pressure variations for stable results.



OVEN



A well-engineered oven is crucial to consistent and efficient chromatographic analysis, and the SEPmaster 2000 features one of the most

advanced oven systems available:

- **Low Thermal Inertia:** Reduces heat retention for faster temperature changes and analysis turnaround.
- **Optimized Airflow and Cooling:** Strategically placed cooling fans and oven flaps provide better temperature control.
- **High-Temperature Capability:** Operates across a broad temperature range from ambient +3°C to 450°C.
- **Fine Temperature Control:** Ensures precise temperature programming for retention time repeatability and peak resolution.
- **Versatility and Robustness:** Supports multiple column configurations and can be adapted for advanced techniques like multidimensional GC or MS coupling.

Split/Splitless Injector

The Split/Splitless Injector on the SEPmaster 2000 offers flexible sample introduction for both trace and high-concentration analyses:

- Supports various sample sizes for trace level detection and larger sample injections.
- Ensures precision control via iDPC, regulating gas flow with pinpoint accuracy.
- Operates in split and splitless modes, adjusting split ratio from 1:1 to 12,500:1.
- Allows seamless switching between split and splitless modes for flexibility in analyzing compounds of different volatilities.
- Allows temperature programming to meet specific analytical requirements, enhancing control over sample vaporization.
- Designed for simple cleaning and maintenance, minimizing downtime and ensuring long-lasting operation.



All other injection systems based on multimode injection techniques available

ON COLUMN INJECTOR

PACKED COLUMN INJECTOR

**PROGRAMMED TEMPERATURE VAPORIZER
(PTV) INJECTOR**

GAS SAMPLING VALVES



Flame Ionization Detector(FID)

Flame Ionization Detector with quartz jet and intelligent Digital Pneumatic Controller(iDPC) for all gases with excellent response to most organic compounds. Compatible with packed and capillary columns. High sensitivity, high linearity and wide dynamic linear range. Automatic flame switch on, flame out detection and automatic re ignition. Tested as per ASTM E 594-96. Operating Temperature: Ambient to 450 C

Sensitivity: Hi & Lo; Amplification: 1/2/4/8/16

Sensitivity :< 1.8 pg Carbon / Sec (For Tridecane)

Linear Range: 1×10^7

Noise: Less than 1%/ day (< 2 μ V)

Drift: Less than 1%/ day (< 5 μ / min)



Thermal Conductivity Detector(TCD)

Thermal conductivity Detector with intelligent Digital Pneumatic Controller(iDPC) . Compatible with packed and capillary columns. Harnessing the power of precision thermal measurements, our Thermal Conductivity Detector delivers reliable, universal gas detection.

- Universal Response

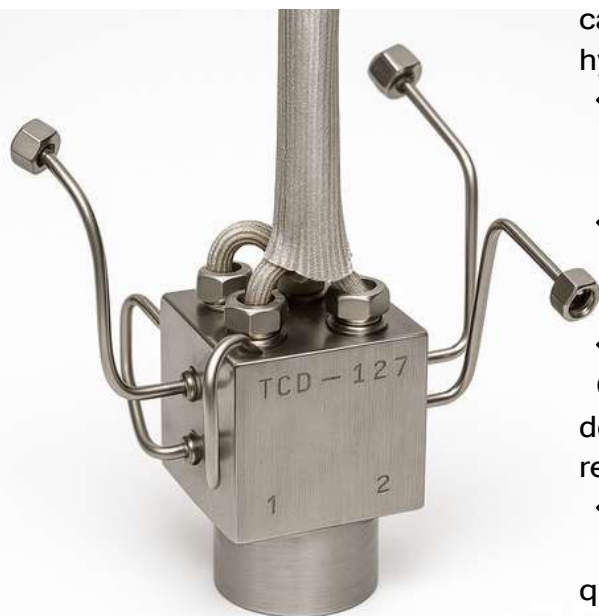
Detects any compound with thermal conductivity differing from carrier gas—ideal for permanent gases (H_2 , O_2 , N_2) and light hydrocarbons

- Low-noise Wheatstone bridge design and precision temperature control ensure stable baselines and low ppm-level sensitivity across long runs
- Machined from corrosion-resistant 316 stainless steel and plated fittings withstand high temperatures and aggressive carrier gases.
- Fast Thermal Recovery

Compact cell volume and optimized heat-exchange minimize dead volume and recovery times, improving peak shape and resolution.

- Broader Dynamic Range

Linear response over 5 orders of magnitude simplifies quantitation of major and trace components without column splits.



With its universal detection capability, exceptional stability, and rugged design, our TCD-127 is the perfect partner for environmental, petrochemical, and process-control laboratories seeking dependable, low-maintenance performance.

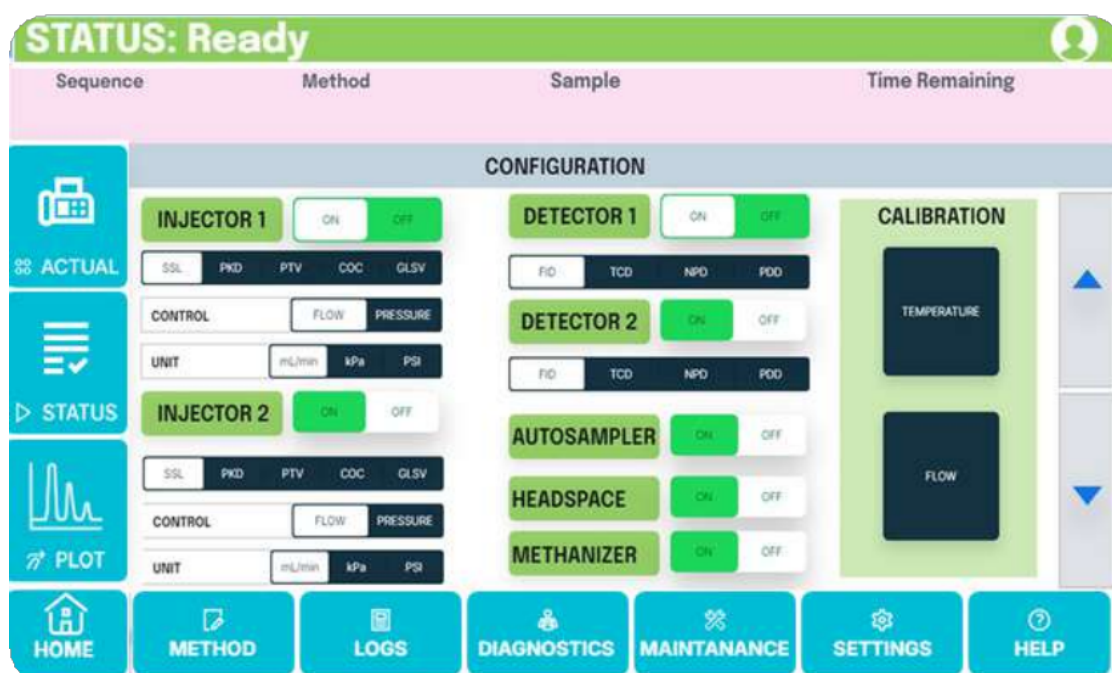
Tested as per ASTM E 516-95. Operating Temperature: Ambient to 350 C

Sensitivity: Hi & Lo; Amplification: 1/2/4/8/16, Sensitivity :< 1.8 pg Carbon / Sec (For Tridecane)

Linear Range: 1×10^7 , Noise: Less than 1%/ day (< 2 μ V), Drift: Less than 1%/ day (< 5 μ / min)

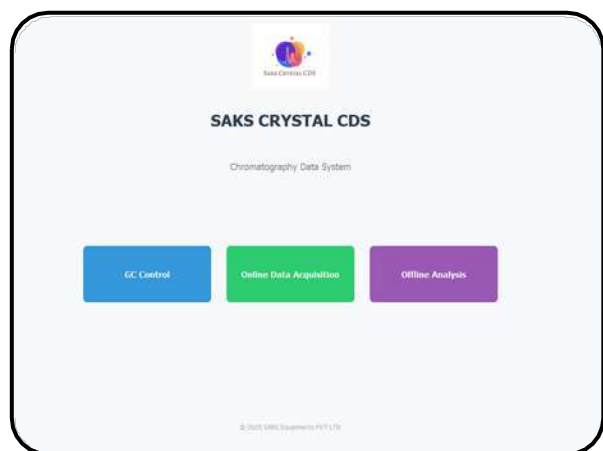
SEPmaster 2000's 7" Multi-Touch Display

- Our GC's integrated 7 inch (800 × 480) color touchscreen delivers a seamless, intuitive user experience. Vibrant, High-Contrast Display
- 24-bit color depth with adjustable brightness and anti-glare coating ensures clear visibility under all lab lighting conditions.
- Responsive Capacitive Touch
- Smooth, multi-gesture navigation with glove-compatible sensitivity—swipe through menus, pinch-zoom chromatograms, and tap icons with precision.
- Intuitive Icon-Driven UI
- Logical button layout and contextual menus guide you through startup, method selection, status monitoring, and maintenance tasks in just a few taps.
- Real-Time Status & Controls



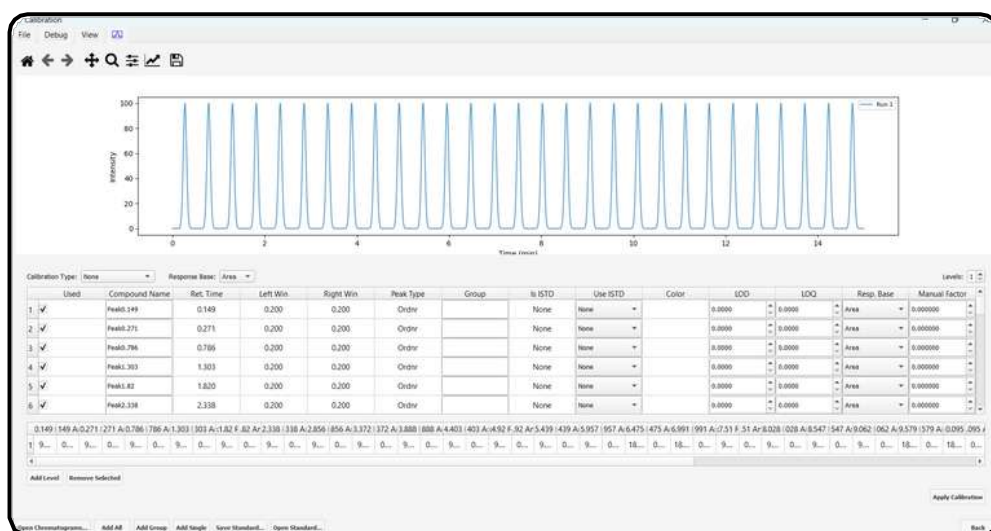
- Live readouts of column temperature, injector/FID parameters, and flow rates keep you informed at a glance. Quick-access “Start,” “Stop,” and “Prep” buttons accelerate routine operations.
- Customizable Shortcuts
- Tailor home-screen widgets to your lab's most-used methods and reports—launch sequences or view logs with a single touch.
- Multilingual & Remote-Ready
- Select from multiple language packs on-device, or connect via Ethernet/Wi-Fi to monitor and control your GC from any web-enabled workstation.
- With its clean, modern interface and powerful connectivity, our touchscreen brings next-generation ease and efficiency to your gas chromatography workflow.

SAKS Crystal Chromatography Software



Advanced software and intuitive display system.
Enhances user experience and streamlines gas chromatography process. Offers full control for routine analyses and complex separations.

- **User-Friendly Interface:** Simplifies control of system parameters, allowing users of all experience levels to operate the chromatograph confidently.
- **Live Chromatogram View:** Features a live pinch-zoom chromatogram screen, allowing users to monitor chromatograms in real time and adjust parameters.
- **Real-Time Status Updates:** Provides continuous updates on instrument status, including system health, gas flow conditions, and temperature settings.
- **One-Touch Operation:** Includes auto-zero, flame ignition, and system diagnostics for quick and easy operation.
- **Automated Control Options:** Real-time clock functions, automatic septum and column change warnings, and real-time clock functions for system readiness and energy conservation.



- **Comprehensive Instrument Control:** Allows remote control of all instrument parameters for optimal performance.
- **Real-Time Monitoring and Diagnostics:** Provides live, real-time data from the chromatograph.
- **Data Security and Compliance:** Complies with 21 CFR Part 11 guidelines for secure data handling and storage.
- **Audit Trail and Data Integrity:** Tracks every change within the system, providing complete traceability for each analysis.
- **Customizable Reports:** Allows users to create detailed, user-defined reports, including standard chromatograms and advanced group data analyses.

Why Choose SEPmaster 2000?



Reliability You Can Count On: Designed to exceed industry standards, the SEPmaster 2000 delivers accurate, repeatable results every time.



Affordable Excellence: Competitive pricing without compromising on advanced features and performance.

Future-Ready: Easily upgradable with options for multidimensional GC, online purge and trap, and MS coupling for evolving industry needs



Contact Us:

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