Thermal desorber is intended for volatile and semi-volatile organic compounds determination in air and other samples by GC or GC-MS. TDS-1 thermal desorber is the cost-saving solution for many GC and GC/MS applications with thermal desorption.

Application range:

- Volatile and semi-volatile compounds determination in ambient and indoor air by thermal desorption
- VOCs determination in water by purge&trap technique
- Food, flavor and fragrance analysis
- VOCs determination in test chamber, toxins/VOCs extracted from different materials (paints, packages, construction materials, plastics)

TDS-1 Key features:

- Sample path temperature up to 250°C allows C2 – C20 proven determination. Sample path is effectively heated on its way from sorption tube to GC in order to avoid heavy analytes condensation
- High heating rate of the trap (up to 2000°C/min) provides instant release of components and transferring into GC column in a narrow band
- Desorption from the trap has reversed direction to sorption flow. This way heavy analytes avoid strong sorbent in multilayer tubes
- Leak test before desorption
- Inert sample path prevents from target compounds loss
- No cooling agents need with trap Peltier cooling technique
- Tube conditioning is carried out by separate gas flow
- Built-in digital gas flow controllers provide easy connection to any GC
- Simple connection to GC inlet makes it possible to use the same inlet for liquid injection
Technical Specification:

**General Specification:**
- Operating principle: 2 stage thermal desorption
- Capacity: Single tube
- Sampling tubes: 6 x 115mm glass or SS 316 (activity tested)
- User interface: 4-line LCD display and keyboard on the front panel, remote control by Chromatec Analytic SW
- Repeatability: RSD < 2%
- Data communication: RS-232
- Compatibility: GC Chromatec-Crystal series
- Sample path: SS 316 (activity tested), 0.8mm internal diameter
- Electronic pressure and flow control: 2 digital gas controllers: carrier gas flow (0-200 ml/min), blowing gas flow (0-200 ml/min)
- Methods storage: Up to 10 methods storage

**Primary desorption:**
- Sorption tube temperature: T (amb) +10 ... 400˚C
- Desorption time: 0 ... 60 min
- Leak test: Automatic before desorption

**Trap:**
- Trap cooling principle: Electrically powered Peltier
- Temperature range: – 20 ... +400˚C
- Heating rate: Up to 2000 ˚C/min
- Desorption time: 0 ... 15 min
- Material: Borosilicate glass

**Switching valve:**
- Temperature: +150 ... +250 ˚C
- Valve actuator: Electrical
- Material: Stainless steel

**Transfer line:**
- Temperature: +150 ... +250 ˚C
- Length: 1 m

**Environmental Conditions:**
- Ambient Operating Temperature: from 10 to 35˚C
- Relative humidity: not more than 80%
- Storage Temperature: from -50˚C to 50˚C
- Power Requirements: ~220V ±10%, 50Hz
- Power consumption: 700 W

**Other specification:**
- Dimensions: (Wx Dx H): 280 mm x 480 mm x 550 mm
- Weight: 20 kg

**Safety and Certification:**
Products designed and manufactured under regulations of GOST R ISO 9001 quality standard.
At electromagnetic compatibility the chromatograph meets the requirements of IEC 61010-1

Information and technical specification in this publication are subject to change without notice.

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