

Kori-xr

Specification sheet

Kori-xr™ aids the analysis of humid air using Markes' TD equipment, by removing water from on-line and canister samples and allowing the analysis of polar species, pinenes or sulfur compounds.



1. System features

- **Electrically cooled water-removal trap** selectively removes water from sample stream without affecting target analytes and without extending the overall cycle time.
- **Trap heated and flushed** with carrier gas between samples to remove water collected.
- **Compatible with gas-phase samples** ranging in pressure from below atmospheric pressure to 50 psig.
- **Integrates with:** UNITY–Air Server-xr and UNITY-xr–CIA *Advantage* systems.

2. System controls

- **Markes Instrument Control (MIC)** automatically detects the instrument and amends the parameter options in the software. The software allows:
 - Automated, unattended sequencing of tube and on-line samples.
 - Editing of active sequences.
 - Rapid set-up of TD methods using pre-programmed parameters for standard methods including VDA 278, US EPA TO-17 and PAH analysis.
 - Pre-loading of an internal standard on a tube or trap.
 - System self-checking.

2.1 Desorption modes

- Kori-xr is used in conjunction with Air Server-xr and CIA *Advantage* desorption modes.

2.2 Water removal trap

- Constructed from quartz (3 mm i.d.).
- Trap low temperature:
 - Range: –30°C to 50°C.
 - Adjustable in 1°C increments.
 - Uniform electrical cooling applied over 60 mm.
- Trap high temperature:
 - Range: 35°C to 425°C.
 - Adjustable in 1°C increments.
 - Uniform heating applied over 60 mm.

2.3 Sample flow path

- Temperature range: 50°C to 210°C.
- Adjustable in 1°C increments.
- Uniform heating.
- Constructed entirely of inert materials: PTFE, quartz, inert-coated stainless steel.
- Flow capabilities: Independent, manual flow control between 25–100 mL/min.



2.4 Pneumatics

- Requires a pressurised supply of dry air or nitrogen (dewpoint below -50°C) at 50–60 psig (340–415 kPa). The dry gas is used for both pneumatic actuation of the valve and for purging the cold trap box.
- Note that helium cannot be used as the dry gas supply.

3. System specification

3.1 Dimensions and weight

- Height: 46 cm (18.1”).
- Width: 16 cm (6.3”).
- Depth: 54 cm (21.3”).
- Weight: 16 kg (35 lb).

3.2 Ambient operating conditions

- Temperature: 15°C to 30°C .
- Relative humidity: 5–95% RH (non-condensing).

3.3 Power requirements

- 100–240 V, 50/60 Hz, 650 W (Kori-xr self-adjusts to local voltage input).

3.4 Gas consumption

- Dry air or nitrogen: ~ 100 mL/min.

3.5 Minimum PC specification

For TD control:

- CPU: 2 GHz Pentium® (or equivalent).
- RAM: 1 GB.
- Free disk space: 40 MB (for installation).
- Operating system: Windows® 7 (32- or 64-bit).
- Minimum screen resolution: 1024×768 pixels.
- Other requirements: Windows-compatible keyboard and mouse.

Specific requirements for USB and/or serial ports recorded separately.

3.6 Safety and regulatory certifications

- The instrument is designed and manufactured under a quality system registered to ISO 9001.
- The instrument complies with the essential requirements of the following applicable European Directives, and carries the CE mark accordingly:
 - Low Voltage Directive 2014/35/EU
 - EMC Directive 2014/30/EU.
- The instrument conforms to the following product safety standards:
 - IEC 61010-1/EN 61010-1
 - Canada: CSA C22.2 No.61010-1
 - USA: ANSI/UL 61010-1.
- The instrument conforms to the following regulation on electromagnetic compatibility (EMC):
 - IEC 61326-1/EN 61326-1.

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