

XR Air-Jet™ Sample Coolers

Overview

FTS Systems XR401 and XR11851 Air-Jet sample coolers provide sample temperature control for X-ray diffraction, NMR, EPR and other applications. These mechanically-refrigerated systems control the temperature of a supplied gas stream between -40°C and +100°C, and -80°C and +100°C respectively.

When dry air or dry gas passes through the Air-Jet, it is cooled by the mechanical refrigeration system. The unique temperature controller provides precise regulation of heat input to produce a temperature stability of $\pm 0.1^\circ\text{C}$. It also provides a 0.1°C indication for both setpoint and actual temperature display.

The 8 ft. or 15 ft. flexible delivery lines allow you to position the air stream for proper temperature control of the sample. The delivery line is non-magnetic, so that it may be used with an NMR magnet. An optional air dryer allows for the use of a house-compressed air supply. The XR401 requires 70 psi of compressed air and the XR11851 requires 100 psi.

- ▶ Precise regulation of supplied gas streams
- ▶ Choice of two delivery line lengths
- ▶ Air dryer available
- ▶ Non-magnetic delivery line



Call 800-824-0400
or visit www.ftssystems.com

Controlled temperature air streams from -80°C to +100°C

Features at a Glance

- Control temperature from -80°C to +100°C
- $\pm 0.1^\circ\text{C}$ temperature stability
- Digital temperature control
- Choice of delivery line length
- Non-magnetic delivery line
- CE compliant



Applications

- X-ray diffraction
- NMR cooling*
- EPR cooling

**NMR application note: Use optional 15 ft. delivery line for systems greater than 400MHz.*

Temperature Control/Indication

The digital panel displays both set point and actual temperature to 0.1°C resolution with stability of $\pm 0.1^\circ\text{C}$. The standard controller provides digital control and indication. Options include programmer, RS-232 or IEEE-488 computer interface.

XR Air-Jet Sample Cooler Specifications

| | XR401 Sample Cooler | XRII851 Sample Cooler |
|------------------------------|--|--|
| Temperature range: | -40°C to +100°C | -80°C to +100°C |
| Flow rate: | 28 liter/minute (1SCFM) | 28 liter/minute (1SCFM) |
| Inlet air: | Supplied dry air or dry gas with dew point below -60°C. (Optional air dryer available.) | Supplied dry air or dry gas with dew point below -60°C. (Optional air dryer available.) |
| Delivery line/nozzle: | 8 ft. (244 cm) from cabinet to nozzle | 8 ft. (244 cm) from cabinet to nozzle |
| Flexible length: | 7 ft. (214 cm) | 7 ft. (214 cm) |
| Nozzle housing: | 2-1/2" (6 cm) diameter x 12" (30.5 cm) long | 2-1/2" (6 cm) diameter x 12" (30.5 cm) long |
| Nozzle diameter: | 5/16" (8 mm) | 5/16" (8 mm) |
| Optional line/nozzle: | 15 ft. (458 cm) delivery line with a flexible length of 14 ft. (428 cm). Nozzle assembly as above. | 15 ft. (458 cm) delivery line with a flexible length of 14 ft. (428 cm). Nozzle assembly as above. |
| Safeties: | High and low temperature alarm. Heater over-temperature cutout. | High and low temperature alarm. Heater over-temperature cutout. |
| Dimensions: | 10.5"W x 16.5"D x 9.5"H (27 x 42 x 24 cm) | 10"W x 20"D x 18-1/2"H (25 x 51 x 47 cm) |
| Weight: | 40 lbs (18 kg) | 80 lbs (36 kg) |
| Electrical: | 120V/60 Hz, 5A or 220-230V/50-60 Hz, 3A | 120V/60 Hz, 9A or 220-230V/50-60 Hz, 7A |

XR Air-Jet Sample Cooler Accessories

| Air dryer | Description |
|---------------------------|---|
| Model number AD80: | Supplied with 5 ft. (1.5m) air line for direct connection to Air-Jet. (requires AF6 pressure & flow regulator.) |
| | Air connection: 1/4" (6mm) male, quick disconnect |
| | Air requirements: XR401 - 70 psi, 1 SCFM (28 lpm) XRII851 - 100 psi, 1 SCFM (28 lpm) |
| | Dimensions: 12-1/2"W x 7"D x 21"H (32 x 18 x 53 cm) |
| | Weight: 30 lbs (14 kg) |
| | Electrical: 120V/60 Hz, 1 A or 220V/50 Hz, 1A |

| Air flow regulator | Description |
|--------------------------|--|
| Model number AF6: | Regulates and monitors air flow and pressure through the AD80 air dryer. Air inlet and outlet quick-connects mounted on rear of compact 6" x 6" x 8" cabinet for easy insertion into air flow system upstream of AD80. |



Committed to Product Excellence...and Continuous Support

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