

# 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  $0.1^\circ\text{C}$  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](http://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  $0.1^\circ\text{C}$  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	XR11851 Sample Cooler
<b>Temperature range:</b>	-40°C to +100°C	-80°C to +100°C
<b>Flow rate:</b>	28 liter/minute (1SCFM)	28 liter/minute (1SCFM)
<b>Inlet air:</b>	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.)
<b>Delivery line/nozzle:</b>	8 ft. (244 cm) from cabinet to nozzle	8 ft. (244 cm) from cabinet to nozzle
<b>Flexible length:</b>	7 ft. (214 cm)	7 ft. (214 cm)
<b>Nozzle housing:</b>	2-1/2" (6 cm) diameter x 12" (30.5 cm) long	2-1/2" (6 cm) diameter x 12" (30.5 cm) long
<b>Nozzle diameter:</b>	5/16" (8 mm)	5/16" (8 mm)
<b>Optional line/nozzle:</b>	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.
<b>Safeties:</b>	High and low temperature alarm. Heater over-temperature cutout.	High and low temperature alarm. Heater over-temperature cutout.
<b>Dimensions:</b>	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)
<b>Weight:</b>	40 lbs (18 kg)	80 lbs (36 kg)
<b>Electrical:</b>	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
<b>Model number AD80:</b>	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) XR11851 - 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
<b>Model number AF6:</b>	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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