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*The Nucleus of Quality Air Monitoring Programs*

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# Tritium and Carbon 14 Collection System Model FJ-H3C14CSE

### NOTABLE FEATURES:

- Total Carbon 14 Collection System
- Dual Silica Gel columns for tritiated water
- Flow Control
- Digital Flowmeter displaying flow, elapsed time and accumulated volume
- Large, bright LED Display
- Correction of flow rate and volume to ambient temperature and pressure
- Enclosure see-through glass panel door



### GENERAL DESCRIPTION:

The Model FJ-H3C14CS Tritium/Carbon 14 Collection System consists of dual color indicating silica gel columns for collection of tritium in water vapor and a total carbon 14 system utilizing ethanolamine for capture of CO<sub>2</sub>. A dual diaphragm pump with manual flow adjustment system in combination with an F&J digital flowmeter system moves the air through the collection system and measures the flow rate accurately as well as elapsed time and accumulated sample volume on the large bright LED display. Typical flow range is 30 to 300 sccm.

Real-time data download is available through the RS232 port.

The unit is designed for continuous indoor use. Please consult the product specifications for the design temperature range and the installation category.

Ambient enclosures available upon request.

REV: 29 September 2005

# **FJ-H3C14CS Tritium/C14 Collection System (220 – 240VAC)**

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## **SPECIFICATIONS:**

<b>PUMP TYPE:</b>	Diaphragm
<b>MAXIMUM CAPACITY:</b>	Typical 30 cc/min; Maximum 300 cc/min. control range Other flow ranges available upon request.
<b>POWER REQUIREMENTS:</b>	230 VAC; 50 Hz; 1 ampere; single phase
<b>CIRCUIT BREAKER PROTECTION:</b>	5 amperes
<b>ELECTRICAL CORD:</b>	All temperature, 3-wire, 16 gauge
<b>DIMENSIONS:</b>	24"W × 24"H × 21"D (60.9cmW × 60.9cm H × 53.3cm D)
<b>WEIGHT:</b>	126 lbs. (57.2 Kgs.)
<b>INSTALLATION CATEGORY:</b>	Pollution Degree 2

## **TRITIUM COLLECTION SYSTEM:**

- Removable Polycarbonate Silica Gel Columns
- Columns; P/N 26800 Containing ~ 400gms of color columns Indicating Silica Gel

## **CARBON 14 COLLECTION SYSTEM:**

- Ethanolamine collection fluid in 20 ml plastic vials
- Palladium furnace for conversion of organic carbon to CO<sub>2</sub> with over/under temperature alarm
- Sensitivity 1E-10 μCi/cc

## **AIR FLOW MEASUREMENT SYSTEM**

- Air flow: ± 4% of full scale
- Temperature: ± 0.9°F (0.5°C) (Not displayed)
- Absolute Pressure: ± 0.6 inches Hg (15.24mm Hg) (Not displayed)

## **ON-BOARD CALCULATIONS**

- Flow calculation from differential pressure value corrected to STP
- Elapsed Time
- Cumulative Volume corrected to STP

**OPERATING TEMPERATURE:** (0°-40°C) (32°F-104°F)

**STORAGE TEMPERATURE:** (-17°C-50°C) (0°F-122°F)

**COMMUNICATIONS INTERFACES:** RS-232 available for real-time data download of airflow data

## **OPTIONS:**

- Flash Card Data Storage Device 232FCDS
- Flash Card (128) 372239
- PC Flash Card Reader 515177