



# F&J SPECIALTY PRODUCTS, INC.

*The nucleus of quality air monitoring programs*

## TRITIUM COLLECTION SYSTEM F&J MODEL TCS-3000E-BL

### NOTABLE FEATURES:

- Microprocessor controlled electronics
- Flow rate measurements and volume totalizations are corrected to a factory settable reference Temperature and Pressure (4 options)

Classical STP	0°C, 760mm Hg
Normal T and P	20°C, 760mm Hg
Modified Normal T and P	21,1°C, 760mm Hg
Standard Ambient T and P	25°C, 760mm Hg
- RS-232 Port
- LED Display
- Precision machined orifice
- Flow rate accuracy within  $\pm 4\%$  F.S.
- Flow rate / volume options:

sccm / scc
SLPM / SL
- Brushless motor
- 220-240VAC; 50/60Hz, single phase



### GENERAL DESCRIPTION:

The Model TCS-3000E-BL Tritium Collection System is a tritium collection system consisting of a diaphragm pump, a brushless DC motor, automatic flow control and 2 removable polycarbonate Indicating Silica Gel columns. The flow and volume of air passing through the system is adjusted and measured by a microprocessor controlled Digital Flow Meter (DFM). The DFM utilizes a precision-machined orifice to measure flowrate. The DFM displays on-board calculations on a bright large character LED display. Flowrate and totalized volume are both corrected to a reference T and P. Elapsed time, flowrate and volume are displayed at operator selection.

Multiple operator selectable data download frequencies are available through the RS232 port for collection and/or storage of real-time data.

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

The typical operating flow range is 100 - 250 sccm (0,10 – 0,25 SLPM). Other flow ranges available upon request.

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# TCS-3000E-BL Tritium Collection System (220 – 240VAC)

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## SPECIFICATIONS:

<b>PUMP TYPE:</b>	Diaphragm
<b>MOTOR:</b>	Brushless; 12VDC
<b>CAPACITY:</b>	Maximum capacity dependent upon pump size and flow sensor design.
<b>POWER REQUIREMENTS:</b>	220 – 240VAC; 50/60 Hz; 1 ampere; single phase
<b>CIRCUIT BREAKER PROTECTION:</b>	1 amperes
<b>ELECTRICAL CORD:</b>	All temperature, 3-wire, 14 gauge; ~9 feet
<b>DIMENSIONS:</b>	9”D × 24”W × 20”H
<b>WEIGHT:</b>	67 lbs. (30,3 kg)
<b>INSTALLATION CATEGORY:</b>	Pollution Degree 2

## ELECTRONIC SPECIFICATIONS

### MEASUREMENT ACCURACY

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

**OPERATING TEMPERATURES:** 10° - 104°F (-12° - 40°C)\*

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

\* With optional heating system

**CALIBRATION:** Calibration-verification once per year; Factory calibration as needed.

**COMMUNICATIONS INTERFACES:** RS-232

### ON-BOARD CALCULATIONS

- Flow calculation from differential pressure value corrected to a reference T and P
- Elapsed Time
- Cumulative Volume corrected to a reference T and P

### OPTIONS:

- FlashCard Datalogger system for collection and storage of real-time data exiting the RS232 port.
- FlashCard data storage device: P/N: 232FCDS
- FlashCard 2 GB; P/N: 372239
- FlashCard Reader; P/N: SDDR-199-A20

### NOTE:

Other tritium absorbing media may be utilized, such as molecular sieve, water or ethylene glycol.