TRITIUM COLLECTION SYSTEM
F&J MODEL TCS-5000E

NOTABLE FEATURES:

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

Classical STP	0ºC, 1 Atm
Normal T and P	20ºC, 1 Atm
Modified Normal T and P	70ºF, 1 Atm
Standard Ambient T and P	25ºC, 1 Atm

- RS-232 Port
- LED Display
- Precision machined orifice
- Flow rate accuracy within ± 4% F.S.
- Flow rate / Volume Options:
  - sccm / scc
  - SLPM / SL
- 220-240VAC; 50/60Hz, single phase

GENERAL DESCRIPTION:

Model TCS-5000E is a portable tritium collection system consisting of a diaphragm pump, an electronic motor speed control and a removable polycarbonate silica gel column. The flow and volume of air passing through the system is measured by a microprocessor controlled Digital Flow Meter (DFMI). The DFM utilizes a precision-machined orifice to measure flowrate. The DFM displays on-board calculations on a bright large character LED.

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 and weather protected outdoor use. Please consult the product specifications for the design temperature range and the installation category.

The typical operating flow range is 100-400 cc/min (0,10 – 0,4 LPM). Other flow ranges are available.

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SPECIFICATIONS:

PUMP TYPE: Diaphragm

CAPACITY: Flow range is dependent on pump size and flow sensor design.

POWER REQUIREMENTS: 220 – 240VAC; 50/60 Hz; 1ampere; single phase

CIRCUIT BREAKER PROTECTION: 5 amperes

ELECTRICAL CORD: All temperature, 3-wire, 16 gauge

DIMENSIONS: 42L × 30,5A × 38 cm Alt (16 ½ ”L × 12 ”W × 15”H)

WEIGHT: 6,4 kg (14 lbs.)

INSTALLATION CATEGORY: Pollution Degree 2

ELECTRONIC SPECIFICATIONS

MEASUREMENT ACCURACY

Air flow:	± 4% of Full Scale (F.S.)	
Temperature:	± 2ºF (1,1ºC)	(Not displayed)
Barometric Pressure:	±0.6 inches Hg	(Not displayed)

OPERATING TEMPERATURES: 0º - 104ºF (-17º - 40ºC)

STORAGE TEMPERATURE: -20º - 122ºF (-28º - 50ºC)

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: 232FCDSD
- FlashCard 128 MB; P/N: 372239
- FlashCard Reader; P/N: 515177

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