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The Nucleus of Quality Air Monitoring Programs

TRITIUM COLLECTION SYSTEM

F&J MODEL TCS-3000

NOTABLE FEATURES:

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

Classical STP	0°C, 1 Atm
Normal T and P	20°C, 1 Atm
Modified Normal T and P	70°F, 1 Atm
Standard Ambient T and P	25°C, 1 Atm
- RS-232 Port
- LED Display
- Precision machined orifice
- Flow rate accuracy within $\pm 4\%$ F.S.
- Flow rate / Volume Options:
 - scm / sec
 - SLPM / SL
- 110-120VAC; 50/60Hz, single phase



GENERAL DESCRIPTION:

Model TCS-3000 is a tritium collection system consisting of a diaphragm pump, electronic airflow regulator 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 flow rate. The DFM displays on-board calculations on a bright large character LED display. Flow rate and totalized volume corrected to STP and elapsed time are displayed.

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.

The typical operating flow range is 100-400 scm (0.10– 0.4 LPM).

REV: 24 Nov. 2015

TCS-3000 Tritium Collection System (100 – 120VAC)

SPECIFICATIONS:

PUMP TYPE:	Diaphragm
MAXIMUM CAPACITY:	Maximum capacity dependent upon pump size and flow sensor design.
POWER REQUIREMENTS:	100 – 120VAC; 50/60 Hz; 1 ampere; single phase
CIRCUIT BREAKER PROTECTION:	5 amperes
ELECTRICAL CORD:	All temperature, 3-wire, 16 gauge
DIMENSIONS:	9”D × 24”W × 20”H
AVERAGE dB:	58.0
WEIGHT:	67 lbs. (30.3 kg.)
INSTALLATION CATEGORY:	Pollution Degree 2

ELECTRONIC SPECIFICATIONS

MEASUREMENT ACCURACY

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

OPERATING TEMPERATURES: 0° - 104°F (-17° - 40°C)

STORAGE TEMPERATURE: -20° - 122°F (-28° - 50°C)

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

COMMUNICATIONS INTERFACES: RS-232 available for realtime data download.

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.