



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

TRITIUM COLLECTION SYSTEM F&J MODEL TCS-5000E-BLDC

NOTABLE FEATURES:

- Microprocessor controlled electronics
- Brushless Motor
- Automatic flow control
- Flow rate measurements and volume totalizations are corrected to a factory settable reference Temperature and Pressure. Options for Reference T and P are:

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:

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



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GENERAL DESCRIPTION:

Model TCS-5000E-BLDC is a portable tritium collection system consisting of a brushless DC motor powered diaphragm pump, a digital flowmeter with automatic flow control and a removable polycarbonate indicating Silica Gel column. The flow and volume of air passing through the system is 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 screen. Data download capability is available through the RS232 port on a real-time basis utilizing an optional F&J data storage device.

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 100-300 cc/min (0.10 - 0.3 LPM). Other custom flow ranges are available upon request. Additional fees may apply for custom ranges.

Rev: 31 May 2018

TCS-5000E-BLDC Tritium Collection System (220 – 240VAC)

SPECIFICATIONS:

- PUMP TYPE:** Diaphragm
- MOTOR:** Brushless PWM motor; 12VDC
- CAPACITY:** Minimum 100 cc/min; Maximum 300 cc/min. (Different ranges are available)
- POWER REQUIREMENTS:** 220 – 240 VAC; 50/60Hz; 1 ampere; single phase
- CIRCUIT BREAKER PROTECTION:** 1 amperes
- ELECTRICAL CORD:** All temperature, 3-wire, 16 gauge
- DIMENSIONS:** 16 ½ ”L × 12 ”W × 15”H (42L × 30.5W × 38 cm H)
- NOISE LEVEL:** Average dB 51.00 @ 1 meter
- AVERAGE dB:** 51.0
- WEIGHT:** 12.5 lbs. (5.7 Kgs.)
- INSTALLATION CATEGORY:** Pollution Degree 2

ELECTRONIC SPECIFICATIONS

MEASUREMENT ACCURACY

- Air flow: ± 4% of Full Scale (F.S.)
- Temperature: ± 2°F (1°C) (Not displayed); available from RS232 output
- Barometric Pressure: ±1 inche Hg (Not displayed); available from RS232 output

- OPERATING TEMPERATURES:** 32° to 104°F (0° to 40°C)
- STORAGE TEMPERATURE:** -20° to 122°F (-28° to 50°C)
- CALIBRATION:** Calibration-verification once per year; Factory calibration as needed
- COMMUNICATIONS INTERFACE:** 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:

- | | | |
|--------------------------|---|--------------|
| Data Storage Device | — | 232FCDS |
| 2 GB Secure Digital Card | — | 372239 |
| PC Flash Card Reader | — | SDDR-199-A20 |

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