TracerMate CS

Tracer Gas Charge Instrument

Providing world-class leak test and assembly verification solutions to industries around the globe.

Tracer Gas Test Types

Standard Test Types

- Basic Sniffer Mode or Pressure Decay
- Evac/Fill Only no Adv. Test Type

Optional Test Types

- **Proof Test**
  Up to 10 steps
  Single Pressure
  Muilple Ramp Points (up to 500 PSI) with electronic regulations
  Muilple Ramp Points (up to 1000 PSI) with electric regulation
- **Pressure Decay Test**
  With Additional Pressure Source
- **Capillary Test** with Back Pressure or Mass Flow
- **Reclaim Valve**
- **N2 Back Fill/Part Clean**

Advanced Test Types

- **Advanced Sniffer Mode**
  Available with up to 20 test regions with a single part profiles
- **Purging Clam-Shell Mode**
- **Accumulation Mode**
- **Hard Vacuum** - No Chamber Control
- **Hard Vacuum** - Chamber Control

Automatic Program Calibration w/Leak Standard

- Tests master production part
- Ensures accurate results
- Easy to perform
- Values may be manually edited if averaging of parts is required

Environmental Drift Correction:

- Maintains calibration accuracy by monitoring a automatically making continuous small adjustı changes in temperature and environmental cc

Quik Test Function:

- Monitors the instantaneous in-test results and testing process early when it is obvious that a accept result is imminent
- Reduces test time
- Analyzes test results in real time

Digital Inputs:

Each user configurable for:

- 6 programmable

Digital Outputs:

User configurable for:

- 6 programmable

Dedicated and Selectable Valve Drivers

- 8 outputs

99 Test Programs:

- Application flexibility including user programmed:
  - Test types
  - Timers
  - Pressure limits
  - Reject limits
  - Calibration parameters
  - Units of measurement
  - Digital I/O
  - Tooling control

High Speed 32-bit Processor & 24-Bit A/D Converter:

- Exceptionally fast, high resolution test processing
- Stable yet extremely responsive low pressure/flow measurements

Absolute Pressure Transducer:

- Unlike gauge transducers, environmental conditions (barometric pressure changes) do not impact test results

Pressure Transducer Ranges:

- Vacuum 100 psig
- Vacuum to 200.0 psig
- Vacuum to 400.0 psig
- Vacuum to 750.0 psig
- Vacuum to 1000.0 psig
- Transducer accuracy 0.05% full scale (all ranges)

Mass Flow Transducer Ranges:

- Many custom ranges available from 10 to 250,000 sccm thermal and differential pressure flow based
- Transducer accuracy 0.5% full scale (all ranges)

Transducer Verification/Recertification:

- Pressure or Flow transducers can easily be performed by user by utilizing available NIST traceable digital pressure gauges and flow standards
  - 6-point standard pressure calibration
  - 5-point standard flow calibration
- Up to 32 point calibration of either transducer type available (menu selectable)

Auto Supply-Shutoff

- Saves compressed gasses (typically nitrogen when used for higher pressure applications) when used for leak/flow testing

Includes a shutoff valve between customer tank and instrument regulator to prevent loss of gas due to naturally bleeding precision pressure regulators

Large 480 x 272 Pixel Full-Color LCD Display

- User-friendly icon-based menus
- Menu operating modes:
  - Basic (simplified)
  - Advanced (detailed)
- Graphing of Pressure or Flow vs. Time with plot position and zoom capability
- Displays active/inactive status of digital inputs & outputs

Key or Password Security:

- User selection of menu items to secure or unsecure
  - Calibration
  - Program Selection
  - Program Configuration
  - Instrument Configuration
  - Clear Test Data
  - Clear Counters
  - Hold Function
  - Reject Release
  - Monitor Screens

Multiple Menu Languages:

- User selectable:
  - English
  - Spanish
  - Chinese
  - Korean

Help Button:

- On-screen popup window description of parameters
- Minimizes need to have the manual present when programming the instrument

Data Management & Storage:

- Up to 5,000 tests stored in on-board memory, expandable through USB port
- Statistic data tracking for trending capability
  - History length
  - Accept %
  - Reject %
  - Accept Average
  - Reject Average
  - Accept Std Deviation
  - Sample Size (since last reset)
- Resettable production counters:
  - Accept
  - Reject
  - Malfunction
- Test result log viewable on display

CTS Connect Actuator Ports (optional):

- Up to max 5 - 3-way pneumatic tooling control valves to actuate pneumatic seals or tooling motions

Modular Pneumatic Manifold

- Versions available:
  - 750 psig max
  - Above 750 psig is special order manifold
- CNC machined modules allow optimum repeatability of internal test volume (allows much closer agreement of test results instrument to instrument)
- Unique function modules can be added/removed to facilitate easy instrument modification of pneumatic capabilities as testing needs change

Test Ports:

- Choice of:
  - 1/4" FNPT
  - 3/8" FNPT
  - Other Size available for adapters for special order

Manual or Electronic Pressure Regulation

- High precision pressure control
- Electronic allows automatic adjustment of pressure between tests
  - 20 point regulator range calibration
- Up to max 4 manual regulators available
- Vacuum to 1000 psi

Internal Vacuum Generator (optional)

- Compact 2-Stage venturi
- External electric vacuum pumps also available

Units of Measure:

All industry units of measure included

Self -Test Functions:

- Gas Mix Verification
- Program calibration verification (when leak standard used)

Leak Standards:

- External (via quick-disconnect port)

  Selected globally or per test program

  - Gas Mix Capillary, introduced in test port
  - Helium Permeation for helium verification, front port of instrument
  - Chamber Calibration Leak external on (purging clam-shell, accumulation chamber, or hard-vacuum chamber

Built-In Inputs/Outputs and Tooling Control

- Supplied 24VDC isolated internal power supplely exclusively for I/O use (2.5A fused)
- 6 - 24VDC digital inputs (sinking)
- 6 - 24VDC digital outputs (sourcing)
- 8 – 24VDC Valve Drivers
- Tooling control for up to 5 motions with feedback

3-Color Light-Ring Indicator:

- Unique indicator per test port provides clear feedback of test results
- Colors:
  - White: In Test
  - Green: Accept
  - Red: Reject
- Brightness menu adjustable in 20% increments
- Duration menu adjustable:
  - Always On
  - Always Off
  - 3-Sec Accept/Reject

Audible Alarm

- For faults and reject result tests
- Volume menu adjustable in 20% increments.

Compact Benchtop Design:

- Dimensions: 11.25" high x 9" wide x 15" deep (285 mm high x 230 mm wide x 380 mm deep)
- Weight : Up to 40 lbs (configuration dependant)

Input Requirements:

- Electrical: 90-260VAC, 50/60 Hz
- Pneumatic:
  - Pressure Input = 20 psig above maximum test pressure, clean dry compressed air or nitrogen
  - Pilot Input (if required) = 90 psig, clean dry compressed air or nitrogen

Ambient Operating Conditions:

- Temperature: 41 to 109°F (5 to 40°C)
- Humidity: 90% (non condensing)

Tracer Gas Mixing Options

- **100 % Tracer Gas**
- **75% Tracer / 25% N2 or Shop Air**
- **50% Tracer / 50% N2 or Shop Air**
- **25% Tracer / 75% N2 or Shop Air**
- **Custom Mix %**

TCP/IP and (2) RS232 Communication Ports:

- 2-Way Telnet communication
- Test result data transmission with selectable fields
- Pressure streaming (20 samples/sec)
- Report transmission
- Email of reports, test data and alerts (TCP/IP only)
- Barcode unique part identification (RS232 only)
- Leak Detector Communications Profile
    - For most Tracer Gas Leak Detection Devices

USB Port:

- Backup/Restore
- Cloning
- Report storage
- Test result data storage & result synchronization (appends data when synchronized USB drive inserted)