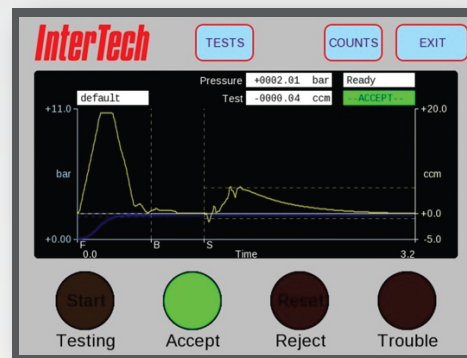


This is a compact instrument designed for the high speed testing of medical products ranging in volume from several cubic-centimeters to several liters. InterTech's patented mass flow test technology results in a cost effective solution to the requirements of high speed testing.



TESTS		COUNTS		EXIT	
Clear					
Total Accept	1040	Zero Fault	0	Reset	2
Total Reject	21	Temp Comp Fault	0	Cal Pre Zero	+0.0000
Average	+0.594	Cal Zero	-0.1196	Cal Gain	+0.000
Std Dev	+2.424	Cal Temp	+0.00	Total Cycles	1073
Upper Reject	5				
Accept	1040				
Lower Reject	1				
Low Press	5				
High Press	3				
Scale Fault	5				
Bias Fault	0				
Valve Fault	0				

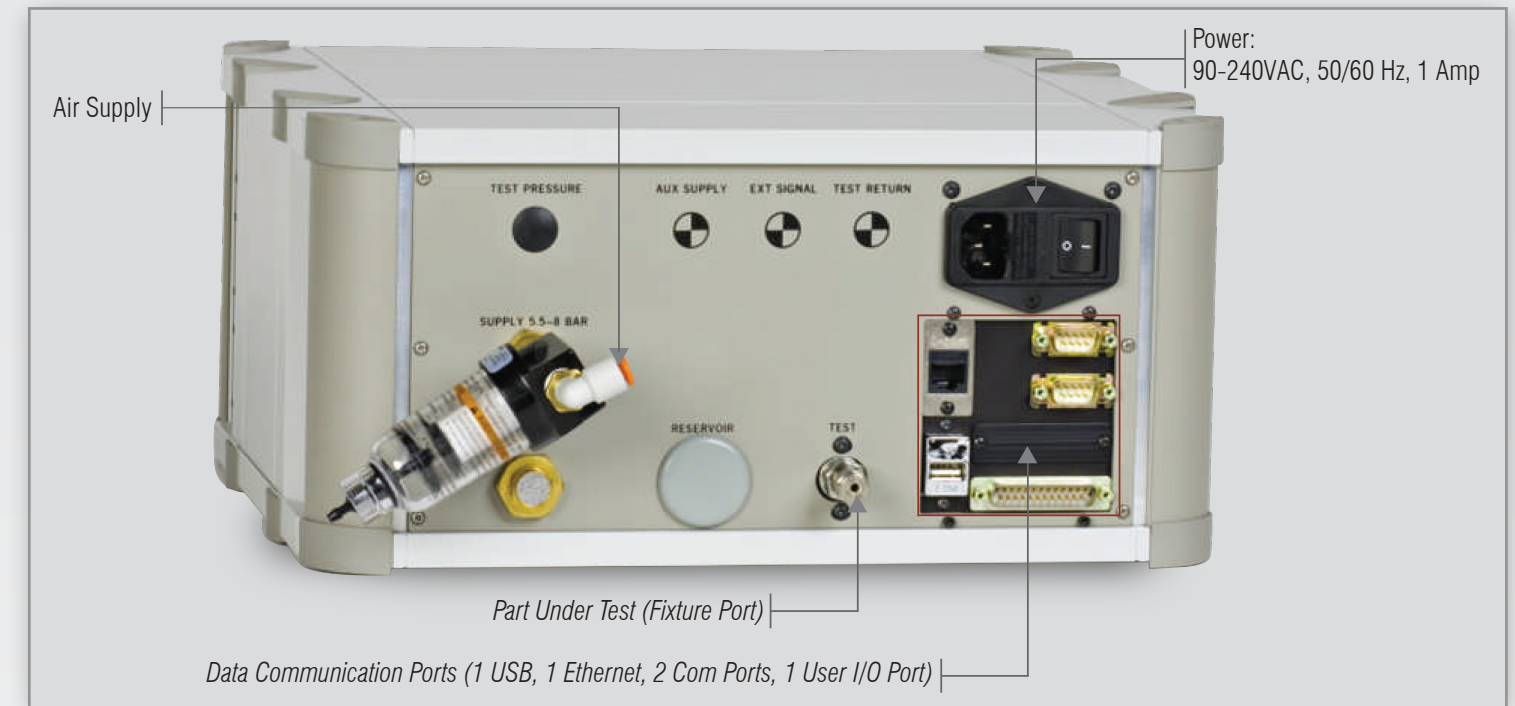
Touch-screen control panel, dual USB ports, Ethernet connectivity, and embedded Web page.

Test Technology and Operation

The mass flow transducer is connected to both the reservoir, and the test part. When this circuit is filled with air and isolated from the supply, any leak results in a flow of air from the reservoir to the test part through the transducer. The transducer output provides a direct measurement of leakage.

- Leak range: 0 - 20 sccm.
- Pressure range: 0 - 100 psig.
- Transducer repeatability: 0.05% F.S.D.
- Transducer sensitivity: 0.05% F.S.D.
- AD Conversion: 24 bit, 400 samples/sec.
- Timer increments: 0.01 sec.
- NIST traceable calibration to less than 5% R&R.

User Connections and Controls



Pneumatic Connection

- Air Supply Port - 1/4 inch (standard) / 6 mm (metric) tube.
- Test Port - 1/4 inch (6 mm) tube.
- Reservoir Port - 1/4 inch (6 mm) tube.
- Calibration 1 Port (front side) - 1/8 inch (4 mm) quick connect type tube.

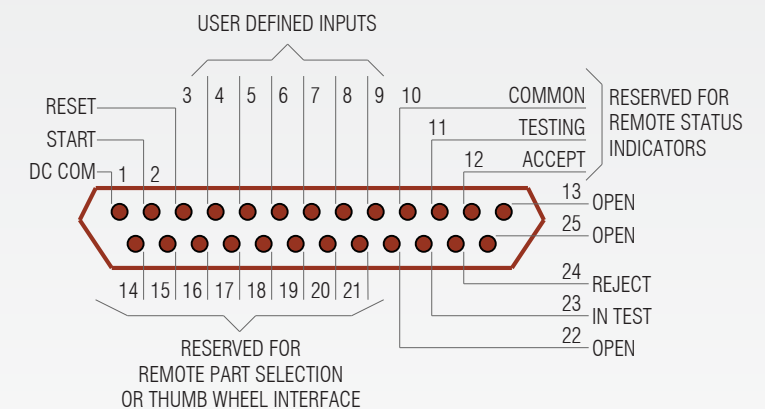
Communication Connection

- USB Ports to upload/download data files & to program restore/backup.
- RS232 Com1 Port - data and control.
- RS232 Com2 Port - serial port available for additional capabilities or RS485 option.
- Ethernet Port to connect with factory/host network (TCP/IP).
- Embedded web page server for remote viewing of instrument data and files.

User I/O Connection (see also specifications)

- 25-Pin male user I/O Port - Inputs: Start, Reset, Part Select, Outputs: In Test, Reject.

Optional - additional (2) 25-Pin female user I/O connectors (machine/fixture controls).



Calibration

Calibration is NIST traceable using a transfer standard such as the CalMaster CM-15 which can be connected to the panel mounted calibration port. A menu driven sequence results in the independent calibration of instrument zero and span.

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Operator Displays and Keypad

6.5 inch color monitor with touch-screen key-pad provides a user friendly and flexible operator interface.

- Password protection is a standard feature.
- Amber, green, red displays indicate test-in-progress, accept, reject, and trouble status.
- User selectable language: English, German, French, and Spanish.

Test Displays and Menus

All functions are Menu driven with touch-screen prompts for ease of use.

The normal test mode display includes:

- Test state: Ready, Fill, Bypass, Stabilize.
- Test status: Accept, Cause of Reject.
- Leak rate in sccm.
- Real-time display of supply pressure, leak, and time remaining.
- Real-time test graph shows trace of test transducer verses cycle time (with upper and lower user specified limits).
- Gauge R&R screen display of test records, automatically calculates R%R percentages based on the number of trials.

Seal check facilitates troubleshooting (continuous test state display, indicating time elapsed).

Counts display shows total accepts, rejects, and related statistics. Test program Edit Menu allows the on-site entry of new test programs and changes to existing programs without the need for a remote terminal. Additional menus prompt the user through calibration, print, and diagnostic functions.

Test Programs

Up to 99 different test programs may be selected.

Test parameters include:

- Fill / bypass / stabilize times.
- Minimum and maximum pressure limits.
- Upper and lower accept limits.
- Calibration factors.

User selectable features include:

- Hold pressure on reject.
- Quick/Early Pass (optional).
- Pre-Fill pressure (requires programmable pressure regulator option): may reduce cycle time by expanding part prior to test.

Fail-Safe Operation

Test pressure and mass flow transducer status are monitored during each test cycle to ensure correct operation of all components of the test circuit. Fault conditions are signaled by a red light, error message, and test record entry. The trouble contact output can be programmed to energize after a user selectable consecutive number of rejects.

Set-up

The leak detector may operate as a stand alone instrument, or can be easily interfaced with a PLC or PC.

The test cycle is started and reset

- Manually by depressing the front panel controls.
- By the PLC using digital start and reset inputs.
- By using the Com1 RS232 port.

In addition

The required test program is externally selectable using a BCD input (selector switch, PLC) or RS232 (PC). Fixture control, using anti-tie-down palm buttons, proximity switches, and solenoid valves, is available.



Data Storage, Statistics MED75 & Communications

Two USB Ports are included for storing test records to the Thumb-Drive.

Up to 40,000,000 test records may be stored onboard and include:

- Part number, part name, date, time, test value, pass/fail status.

Statistics calculated on the buffer records include:

- Mean standard deviation.
- Mean +/- 3 standard deviation.

Counts, accumulated since last CLEAR command include:

- Total - pass - fail.

Buffer records, counts, and statistics:

- Can be recorded on demand.
- Cleared on demand, or automatically, on part changeover.
- Viewed on the counts display.
- Individual test records are automatically transferred to the Com1 RS232 port at the end of each test, and can also be printed (user selectable) at that time. Bi-directional communications, to interface with S-3085 monitoring software (or customer network), are standard.
- Past records viewable on demand.
- Copy part parameters (pdf) to the Thumb-drive.
- USB backup/restore system & configuration file to the Thumb-drive.
- Download test records to the Thumb-drive.
- Save R&R study (.pdf) to the Thumb-drive.

Specifications:

- **Dimensions:** 13.50 in W x 12.75 in D x 6.25 in H (343 mm x 324 mm x 159 mm).
- **Touch-Screen Display:** 6.5 inch color monitor, 640 x 480 resolution.
- **Weight:** 26 lbs.
- **Power Supply:** 90-240VAC, 50/60Hz, 1Amp.
- **Air Supply:** Clean, dry, and minimum 10 psig higher than test pressure.
- **Inlet Filter:** 5 micron particulate filter.
- **Pneumatic Connections:** (1) test port, (1) air supply, (1) calibration port, (1) reservoir port.
- **Test Outputs (4):** 5-30VDC, 0.3 Amp Contact closures (accept, reject, trouble, testing).
- **Test Inputs (2):** 24VDC Digital (test start & reset)
- **Fixture Control:** (1) 24VDC digital input (anti-tie-down), (3) 24 VDC digital proximity switch inputs, (1) 5-30VDC 0.3 Amp contact closure output. See also machine controls (page 3) for more user inputs and outputs.
- **Program Selection:** (2) BCD digits with strobe.
- **Data Communications:** (1) RS232 port: Com1 data and control; Com2: serial port available for additional capabilities or RS485 option; (1) Parallel printer port; (2) USB Ports data & program restore/backup, (1) Ethernet Port.

Options:

- Temperature compensation.
- Programmable pressure regulation.
- Customer specific pressure ranges (0.03-2 psig, 2-150 psig, 2-200 psig).
- Customer specific leak ranges (0 - 4 sccm, 0 - 40 sccm, 0 - 80 sccm, 0 - 400 sccm).
- Additional (2) 25-Pin I/O connectors (20 digital inputs, 20 digital outputs) for user machine/fixture controls.
- Active Com2 RS232 port.
- Profibus, Modbus TCP/IP, or CANbus interface.