

## Cert-Pro Hoods Certification Tool Data Sheet

### Purpose

The Cert-Pro Hoods program is a fully automated solution to the test and certification of all types of hoods used in the Cleanroom, laboratory and contamination control fields. All work orders, hood test reports, test specifications and client information are stored in the relational databases and recalled at will to fully automate this process. In addition, all field test data is collected and entered automatically from the test instruments to eliminate any need for data entry by the field technician.

After the field test is complete, all calculations are automatically performed and the Certification reports are generated automatically at the end of the test.

### Features

- Fully automated collection of data using wireless Bluetooth technology. This includes all data collected from supported anemometers, Micromanometer, particle counters and flow hoods.
- One button click to generate test reports. The reports include all acceptance criteria, test grid requirements and equipment locations.
- Fully automatic calculations required for certification.
- Automatic generation of test reports and raw data reports. After completion of the certification test, reports are populated and ready for printing at the click of a button.
- Tracking of complete repair history of all hoods in the database.
- Full certification history for every hood in the database.
- Client/Server application allows for fully automatic transfer of all work orders and test data from the office to an unlimited number of field technicians. The synchronization of this data may be performed across the company intranet, or through the internet, allowing for remote support for all your technicians from anywhere in the world.
- Very easy to use menu driven program with tooltips to guide all users.
- Tracking of all test instruments for ease of reverse traceability, and calibration due reports.

### Supported Equipment Types for Automatic Certification

- Biological Safety Cabinets (BSC), including:
  - Type A, B1 and B2 cabinets using exhaust filter inflow calculations, DIM Measurements on Constricted Inflows.
  - Zoned or uniform downflows.
  - Select certification requiring airborne particle counts, or no particle counts depending on various customer requirements.
- Unidirectional Flow Hoods (*Laminar Flow Hoods*).
- Fume Hoods including Variable Air Volume (VAV) or Constant Air Volume (CAV).
- Ventilated Balance Safety Enclosures (VBSE) or powder weigh hoods.
- Cleanrooms with up to 18 HEPA filters and 18 particle count locations. (*For larger Cleanroom certifications, see the Cert-Pro Cleanroom Classifier program*)

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### **Test Instruments Supported for Fully Automatic Data Collection:**

#### **Air Velocity Meters**

TSI Models with RS232 interface. For those TSI instruments with datalogging capability, the Cert-Pro program can automatically poll the instrument allowing for additional capability.

Shortridge Instruments with RS232, including ADM860 and ADM870.

#### **Micromanmeters**

TSI and Shortridge with RS232.

#### **Flow Hoods**

TSI and Shortridge with RS232. Full backpressure compensation support for the shortridge ADM instruments.

#### **Particle Counters**

Climet CI-150

Climet CI-550

Climet CI-8060

Climet CI-6300

Climet CI-7000 Series

Met One 200L (with RS232)

Met One 2448

Lighthouse Instruments

Other instruments are being added by request. If you have an instrument that is not listed, let us know and we will add support for this instrument wherever possible.

Database capacities are only limited by available disk space. This means essentially unlimited capacity for storage of Client Records, Work orders, Hoods, Test Standards, Test reports, Repair reports

Test report text is fully modifiable by the client to allow for different test descriptions and requirements without any custom programming required.

### **How It Works**

The Cert-Pro Hoods program consists of two separate versions of the program, an Administrator version and a Field Technician version.

The Cert-Pro Hoods program requires the purchase of a single Administration version of the program.

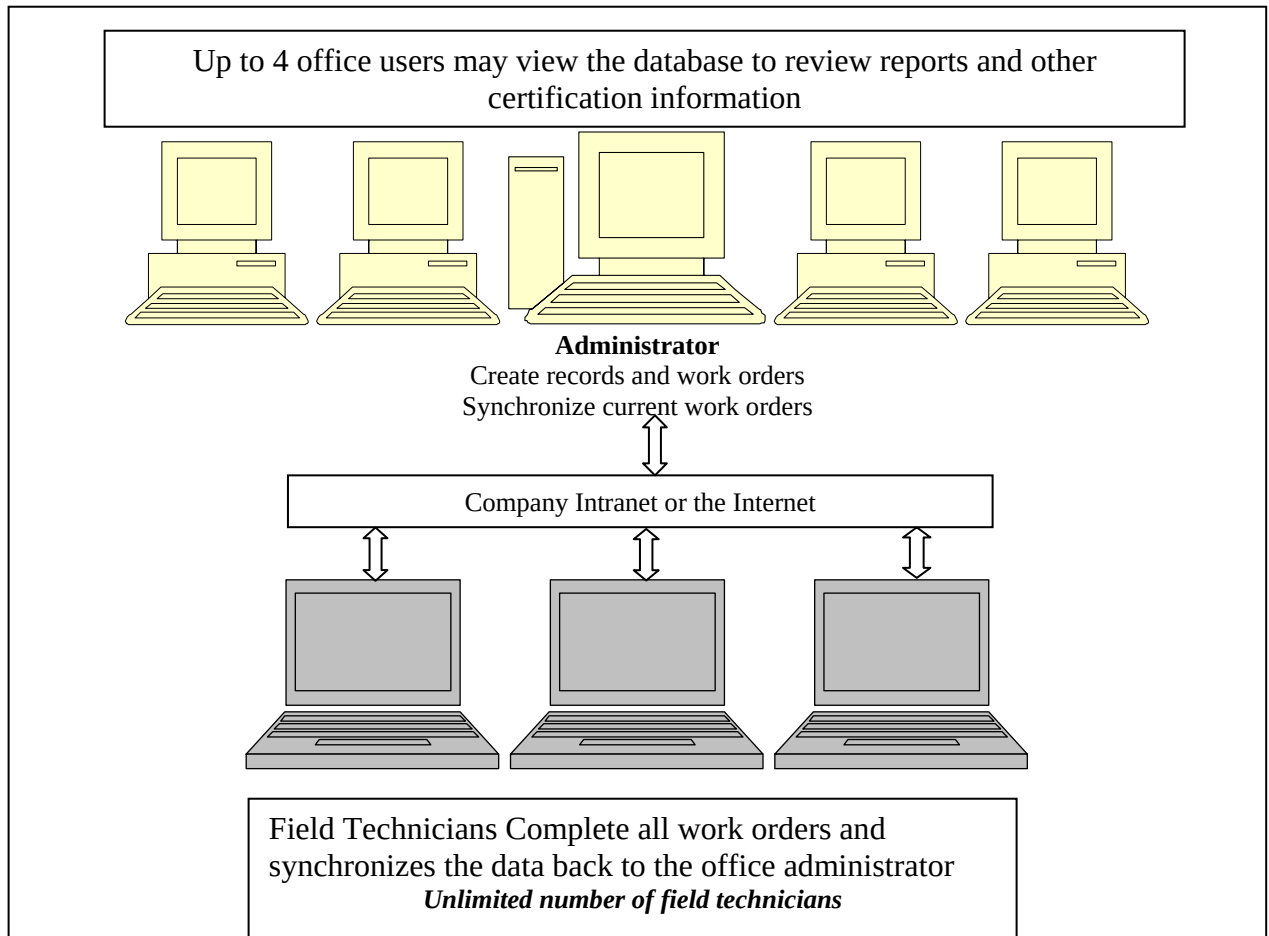
#### **Administrator Copy**

The Administrator version is installed on a single company office computer. The Administrator version of the program is used to create all database records including clients, hoods, work orders and test reports. Once work orders and test reports are created, the records are synchronized with one or more Field Technician copies of the program for field execution. The Administration copy of the program may be shared with up to 5 simultaneous users at the same time. ( If administrator sharing is desired, each simultaneous user requires a copy of Filemaker version 8.5 installed on their computer)

**Cert-Pro Hoods Certification Tool Data Sheet****Technician Copies**

A separately purchased copy of the Technician program is required for each field technician performing field certification simultaneously. The Field Technician copy of the program is installed on a technician laptop computer which will be taken into the field to perform the actual test, certification and repair of client equipment. Once the field technician completes the data collection for a work order, the data is synchronized with the Administrator copy for permanent data storage and report distribution.

Synchronization of data between the office and field technician can be performed using the company intranet connection, if properly configured, through the internet. The use of the internet allows for technicians in the field to perform all field duties without the need to return to the office to collect new work orders and deliver the previously executed work orders and test reports.



## Cert-Pro Hoods Certification Tool Data Sheet

### Program Screen Shots



Figure 1. Admin Main Screen



Figure 2. Technician Main Screen



Figure 3. Work Order Screen

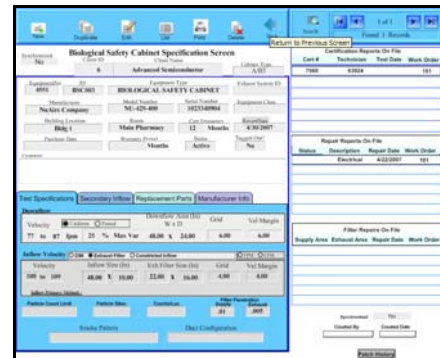


Figure 4. Equipment Entry Screen

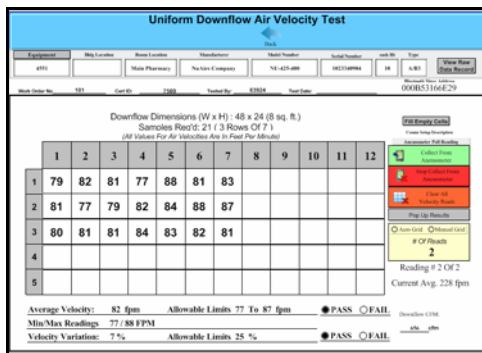


Figure 5. Typical Air Velocity Screen

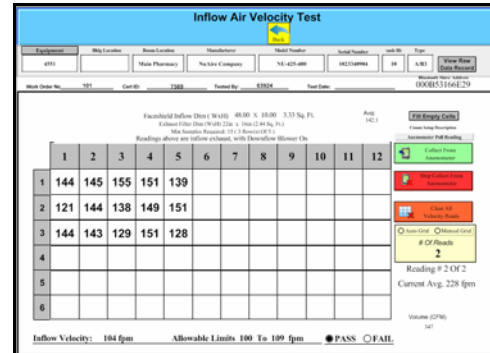


Figure 6. Exhaust/Inflow Velocity Screen

## Cert-Pro Hoods Certification Tool Data Sheet Program Screen Shots

**Raw Data Report Biological Safety Cabinet**

DEMO VERSION  
Your Logo Here

Cert ID: 7569  
Equipment No: 4051  
Bldg Location: Main Pharmacy  
Room Location: Main Pharmacy  
Tested By: J201

Work Order No: 101  
Manufacturer: NuAire Company  
Model Number: N61-425-400  
Serial Number: 102310004  
Test Date:

**Uniform Downflow Air Velocity Test**  
Downdraft Dimensions (W x H): 48" x 24" (sq ft)  
Sample Area: 2.17 (sq ft)

60" Holes for Air Velocity Are in Feet Per Minute

|   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8 | 9 | 10 | 11 | 12 |
|---|----|----|----|----|----|----|----|---|---|----|----|----|
| 1 | 79 | 82 | 81 | 77 | 88 | 81 | 83 |   |   |    |    |    |
| 2 | 81 | 77 | 79 | 82 | 84 | 88 | 87 |   |   |    |    |    |
| 3 | 88 | 81 | 81 | 84 | 83 | 82 | 81 |   |   |    |    |    |
| 4 |    |    |    |    |    |    |    |   |   |    |    |    |
| 5 |    |    |    |    |    |    |    |   |   |    |    |    |

Average Velocity: 82 fpm Allowable Limits 77 To 87 **PASS** ☒ PASS ☐ FAIL  
Velocity Variation: 7 % Allowable Limits 25 % **PASS** ☒ PASS ☐ FAIL  
Min/Max Readings: 77 / 88 FPM

**Inflow Velocity Test**  
Faceshield Inflow (Dist. Wall): 40.0" X 20.0" = 3.33 Sq Ft  
Isolator Filter Dist. Wall: 20" x 16" (3.33 Sq Ft)  
Readings above are inflow values, with Downdraft Blower On

|   | 1   | 2   | 3   | 4   | 5   | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|-----|-----|-----|-----|-----|---|---|---|---|----|----|----|
| 1 | 144 | 145 | 155 | 151 | 139 |   |   |   |   |    |    |    |
| 2 | 125 | 144 | 138 | 149 | 151 |   |   |   |   |    |    |    |
| 3 | 146 | 145 | 129 | 151 | 128 |   |   |   |   |    |    |    |
| 4 |     |     |     |     |     |   |   |   |   |    |    |    |
| 5 |     |     |     |     |     |   |   |   |   |    |    |    |

Inflow Velocity: 134 fpm Allowable Limits 100 To 150 **PASS** ☒ PASS ☐ FAIL

Airflow Smoke Pattern Test Results: **PASS** ☒ PASS ☐ FAIL  
HEPA Leak Test Results: **PASS** ☒ PASS ☐ FAIL  
HEPA Leak Upstream Concentration: 1.1 ug/l

Figure 7. Typical Raw Data Report

**Certification Report Biological Safety Cabinet**

DEMO VERSION  
Your Logo Here

Cert ID: 7569  
Equipment No: 4051  
Bldg Location: Main Pharmacy  
Room Location: Main Pharmacy  
Tested By: J201

Work Order No: 101  
Manufacturer: NuAire Company  
Model Number: N61-425-400  
Serial Number: 102310004  
Test Date:

**HEPA Filter Leak Test:**  
A HEPA filter leak test was performed to ensure filter integrity. The entire filter face and seals were scanned using an aerosol photometer and an aerosol challenge. The filter is scanned at a rate of not more than 10 linear feet per minute. The HEPA filter leak test results are reported below.  
Supply Filter Leakage: .001 % Allowable Limits <.01 **PASS**  
Exhaust Filter Leakage: .003 % Allowable Limits <.005 **PASS**

**Downdraft Air Velocity Profile:**  
The supply HEPA filter velocity is measured using a thermal anemometer. The air velocity is measured on a grid and distance, as specified by the manufacturer. The manufacturer of this cabinet specifies the average downdraft HEPA filter air velocity must be within the requirements specified in the acceptance criteria listed below. The air velocity test results are reported below.  
Average Velocity: 82 fpm Allowable Limits 77 To 87 fpm **PASS**  
Velocity Variation: 7 % Allowable Limits 25 % **PASS**

**Faceshield Inflow Test:**  
In order to ensure operator safety, airflow at the work area opening must flow into the cabinet in a uniform manner, at a velocity range specified by the manufacturer. The air velocity acceptance criteria and the test results are reported below.  
Inflow Velocity: 134 fpm Allowable Limits 100 To 150 **PASS**

**Smoke Test:**  
A small volume smoke test was performed on this cabinet to ensure the airflow patterns for this cabinet perform per the manufacturers specifications. The airflow patterns at the front work opening and the downdraft air velocities above the work surface were tested. The results of the smoke test are reported below.  
Smoke Pattern Acceptance Criteria: **PASS**

**Inflow Velocity Monitor Type**  
We hereby certify that the test results contained within this report were true and accurate at the time of the tests.

Figure 8. Typical Cert Report

**Hood Certification Configuration Screen**

DEMO VERSION  
Your Logo Here

Program Configuration | Test Inst. | Bio Hoods | Fume Hoods | Unidirectional Hoods | VBSE | Isolators | Cleanroom | Data Files

**Default Program Configuration**  
For General Program Configuration and Operation

Certification Report Print Style: ☐ Text Report ☐ Raw Data ☒ Text and Raw Data

Default Technician: 56655

Velocity Configuration | Sample Grids | Air Velocity Readings | Single Sensor | Multi Sensor | Com Port | Bluetooth

**Air Velocity Configuration**  
For Air Velocity Measurement Configuration and Operation

Controller Beeper On: ☐ Yes ☒ No

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**Cert-Pro Hoods  
Version 1.1**

Figure 9. Comprehensive Configuration Options