

Audit Master Pro Training

Air Reports

This tutorial will act as a guide to create and input all data required for the selected air studies.

Audit Master Pro Air Report Training

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Audit Master Pro Training

Starting a Project

This tutorial will act as a guide for project creation after which air studies can be created.

TESTING & BALANCING TECHNICIAN

- Dashboard
- Projects
- Personal Documents
- Test Equipment
- Team members

Emergency Support

SECURED BY instantSSL

AMMP Audit Master PRO Visit Our Website

DASHBOARD

AMP Dashboard.

Testing Unit Cost | Global Energy Prices

Time Card | Estimated Time | Daily Log

CURRENT PROJECT

Name: Test Project
123 Main Street, Wheaton, Illinois, 60187

view details

PROJECT DATABASE

1
Projects for current company

view details

COMPLETED PROJECTS

0
Completed projects for current company

view details

FIELD TEST EQUIPMENT - LIST & CALIBRATION

view details

Click "Projects"



TESTING & BALANCING TECHNICIAN

- Dashboard
- Projects
- Personal Documents
- Test Equipment
- Team members
- Emergency Support



ACTIVE PROJECTS

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	

[View Completed Projects](#)

Active project(s) which you have been part of before







Type	Project ID	Code	Name	Building	Created Date
------	------------	------	------	----------	--------------

Completed Projects are shown here

ACTIVE PROJECTS

[View Completed Projects](#)

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	    

Search

Active project(s) which you have been part of before

Type	Project ID	Code	Name	Building	Created Date
------	------------	------	------	----------	--------------









1st Icon: Go to Project

ACTIVE PROJECTS

[View Completed Projects](#)

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	    

Search

Active project(s) which you have been part of before

Type	Project ID	Code	Name	Building	Create Date
------	------------	------	------	----------	-------------









2nd Icon: Project's Document Library

ACTIVE PROJECTS

[View Completed Projects](#)

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	    

Search

Active project(s) which you have been part of before

Type	Project ID	Code	Name	Building	Created Date
------	------------	------	------	----------	--------------









3rd Icon: Project's Picture Library

ACTIVE PROJECTS

[View Completed Projects](#)

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	    

Offline mode. Download project. Coming soon

Search

Active project(s) which you have been part of before

Type	Project ID	Code	Name	Building	Created Date
------	------------	------	------	----------	--------------









4th Icon: Offline mode. Download Project. Coming Soon.

ACTIVE PROJECTS

[View Completed Projects](#)

Current Project

Type	Project ID	Code	Name	Building	Created Date	
	956	PROJ-956-20230316	Test Project	Your Building	03/16/2023	    

Offline mode. Upload project.
Coming soon

Search

Active project(s) which you have been part of before

Type	Project ID	Code	Name	Building	Created Date
------	------------	------	------	----------	--------------



5th Icon: Offline mode. Upload Project.
Coming Soon.

PROJECT HEADQUARTERS Address: 123 Main Street, Wheaton, Illinois, United States (USA)

Automatically Generated Code	PROJ-956-20230316	<div style="background-color: #28a745; color: white; padding: 5px; display: inline-block;">\$</div>	<div style="background-color: #17a2b8; color: white; padding: 5px; display: inline-block;">🕒</div>	<div style="background-color: #28a745; color: white; padding: 5px; display: inline-block;">📅</div>
		Testing Unit Cost	Time Card	Estimated Time
Project Name	Test Project			
Created Date	03/16/2023			
Proposed Start Date	03/30/2023	Proposed Start Time	08:00:00 AM	
Actual Start Date	4/7/2023	Actual Start Time	08 : 00 AM	
Select Location	Your Building			
	Address: 123 Main Street, United States (USA), Illinois, Wheaton, Zip: 60187 Building Serial #: B-665-03162023			
Measurement System:	Imperial System			
Supplied Power Grid Frequency	60 Hz			
Total square feet (Sq/Ft) of audit area being tested:	100,000 ft ²			
Total cubic feet (Cu/Ft) of audit area being tested:	1,000,000 ft ³			
Parking area is part of this test	<input type="checkbox"/>			
Project Description	Test and Balance Building			
Required Comprehensive Energy Test	Yes			
Contracted By	Building XYZ			
Purchase Order #	123456			
Contact Person	Jane Doe			
Contact Phone Number	(911) 911-9119			
Print Drawing(s) Available On-Site	Yes			

Main Project Page:

All AMP projects will have standardized project information shown on this page.

Contact Phone Number	(911) 911-9119
Print Drawing(s) Available On-Site	Yes
Print Drawing(s) Bid for this Project	
Print Addendum Date Used for Proposal	3/19/2023
Print Project Number	12345
Specifications Provided	Yes
Addendums Bid for this Project	None
Equipment Description and Quantity	10 AHU, 100 VAVs
Lift Work Required	No
Lift On-Site	No
Lift Provided By Others	No
Additional Lift Instructions	
Roof Access / Hatch Available	Yes
Ladders Required	Yes
A-Frame	<ul style="list-style-type: none">• 6'• 8'
Extension	
Other	
Control Contractor Name	Control XYZ
Contact Person/Technician	John Doe
Control Contractors Contact Phone Number	(911) 911-9119
Installed Controls Manufacturer	XYZ Controls
Installed Controls Type	DDC
Installed Controls Version	
Auditors/Technician	<ul style="list-style-type: none">• Christina Moreci Test• John Doe
Safety Equipment	<ul style="list-style-type: none">• Safety glasses• Hard hat• Steel toe boots
Building Pressurization	Positive +
Additional Project Instructions/Directions	

Main project page continued

Close

Next Step -->



Daily Log:

The technician is required to click "Start Time" to begin working on any project.

Daily Log



#	Log Type	Time	Comment	Date
12	Start - End of Work Day Time	16:43:42	Closed due to system logout	2023-03-28 08:28:49 AM
11	Start - End of Work Day Time	5:14:6	Closed due to system logout	2023-03-27 03:44:34 PM
10	Start - End of Work Day Time	1:27:25	Closed due to system logout	2023-03-27 10:24:41 AM
9	Start - End of Work Day Time	0:26:50	Closed due to system logout	2023-03-24 09:07:01 AM
8	Start - End of Work Day Time	0:1:0	Closed due to system logout	2023-03-24 08:15:50 AM
7	Start - End of Work Day Time	1:49:17	Closed due to system logout	2023-03-23 10:01:47 AM
6	Start - End of Work Day Time	0:45:12	Closed due to system logout	2023-03-22 03:55:16 PM
5	Start - End of Work Day Time	1:13:36	Closed due to system logout	2023-03-22 03:09:45 PM
4	Start - End of Work Day Time	18:48:37	Closed due to system logout	2023-03-22 11:21:59 AM

Daily Log

▶
Start Time

⏸
Begin Break

◻
End Break

⏸
Begin Lunch

◻
End Lunch

◻
End of Work Day

↺
Down Time

↺
Project Meeting

↺
Safety Meeting

↺
Travel Time Leave

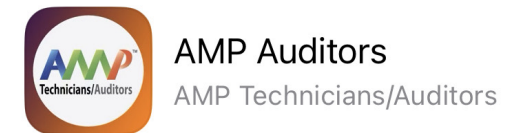
↺
Travel Time Arrive

↺
Other

#	Log Type	Time	Comment	Date
13	Start Time			2023-03-28 08:40:34 AM
12	Start - End of Work Day Time	16:43:42	Closed due to system logout	2023-03-28 08:28:49 AM
11	Start - End of Work Day Time	5:14:6	Closed due to system logout	2023-03-27 03:44:34 PM
10	Start - End of Work Day Time	1:27:25	Closed due to system logout	2023-03-27 10:24:41 AM
9	Start - End of Work Day Time	0:26:50	Closed due to system logout	2023-03-24 09:07:01 AM
8	Start - End of Work Day Time	0:1:0	Closed due to system logout	2023-03-24 08:15:50 AM
7	Start - End of Work Day Time	1:49:17	Closed due to system logout	2023-03-23 10:01:47 AM
6	Start - End of Work Day Time	0:45:12	Closed due to system logout	2023-03-22 03:55:16 PM
5	Start - End of Work Day Time	1:13:36	Closed due to system logout	2023-03-22 03:09:45 PM

The daily log allows the technician to document all time aspects of a work day.

Note: Time clock updates may also be accessed through the "AMP Auditors" app.



Close ← Click "Close" to continue

Total System GPM Tolerance

10 +

10 -

No studies have been created

Create Study



Complete Project

Click "Create Study"

Outside Air Ventilation Data Tables

Select the type of report X

AIR REPORT TEMPLATES

FANR Engineered Fan Report	FANA Engineered Fan Array Report
COFA Electric Coil AHU Mixed Air Report	COFT Electric Coil Terminal Device Report
STAT Static Pressure Report	PITO Pitot Traverse Report
PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR	VELG

For Additional Report Sheets Scroll Down

Close

All "Air Report" studies are shown in **ORANGE**

Select the type of report



VAV Test Report



CAV Test Report

FPBR



FPB Test Report

VELG



Velgrid Report

MATR



General Matrix Report

RVAR



Rotating Vane Anem Report

FOIL



Air Foil Report

HOTW



Hot Wire Anemometer Report

WATER REPORT TEMPLATES

PUMP



Pump Report

COIL



Coil Terminal Device Report

COAH



Coil AHU Mixed Air Report

BOIL



Boiler Test Report

For Additional Report Sheets Scroll Down

Close

Continued "Air Report" studies are shown in
"ORANGE"

Select the type of report X

AIR REPORT TEMPLATES

FANR Engineered Fan Report	FANA Engineered Fan Array Report
COFA Electric Coil AHU Mixed Air Report	COFT Electric Coil Terminal Device Report
STAT Static Pressure Report	PITO Pitot Traverse Report
PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR	VELG

For Additional Report Sheets Scroll Down

Close

Click "Engineered Fan Report" to create study

Engineered Fan Report

Enter Quantity:

1

Accept

Cancel

Create Study:

Every time you create a study you will be prompted to enter the quantity of the study you would like created.

Search

Clear



Delete



Duplicate

Select All Reports

Grid View

ENGINEERED FAN REPORT (FANR) 



PROJ-FANR-14970

Last modified date: 03/16/2023 4:07 PM

Status: New



Select



After a study is created it will be shown here.

Search

Clear



Delete



Duplicate



Select All Reports



Grid View

ENGINEERED FAN REPORT (FANR) 



PROJ-FANR-14970

Last modified date: 03/16/2023 4:07 PM

Status: New



Select



ENGINEERED FAN ARRAY REPORT (FANA) 



PROJ-FANA-14971

Last modified date: 03/16/2023 4:08 PM

Status: New



Select



Any study created can be selected on the project page and be deleted or duplicated.

Warning X

Are you certain you want to delete the selected reports?

Deleting a report will generate this warning to confirm report deletion.

Confirmation X

Are you certain you want to duplicate selected reports?

Duplicating a report will generate this warning to confirm report duplication.

Duplicate study

Enter Quantity:

Include/Copy actuals for this Report

Accept duplicate quantity desired.

Note: When duplicating a study, you have an option to duplicate all of the previously entered data.

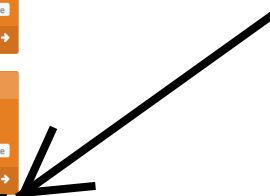
Select All Reports Grid View

ENGINEERED FAN REPORT (FANR) AHU 1 Last modified date: 03/16/2023 4:07 PM Status: Complete <input type="button" value="Select"/> 6 Sub-Studies Available →	ENGINEERED FAN ARRAY REPORT (FANA) AHU 1 Last modified date: 03/16/2023 4:08 PM Status: Complete <input type="button" value="Select"/>
ELECTRIC COIL AHU MIXED AIR REPORT (COEA) AHU 1 Last modified date: 03/16/2023 4:08 PM Status: Working <input type="button" value="Select"/>	ELECTRIC COIL TERMINAL DEVICE REPORT (COET) PROJ-COET-14973 Last modified date: 03/16/2023 4:08 PM Status: New <input type="button" value="Select"/>
STATIC PRESSURE REPORT (STAT) PROJ-STAT-14974 Last modified date: 03/27/2023 3:45 PM Status: Working <input type="button" value="Select"/>	PITOT TRAVERSE REPORT (PITO) PROJ-PITO-14975 Last modified date: 03/16/2023 4:08 PM Status: New <input type="button" value="Select"/>
PITOT FAN REPORT (PITF) AHU 1 Last modified date: 03/27/2023 10:54 AM Status: Complete <input type="button" value="Select"/>	OUTLET MASTER REPORT (OUTM) PROJ-OUTM-14977 Last modified date: 03/16/2023 4:08 PM Status: New <input type="button" value="Select"/>
VAV TEST REPORT (VAVR) PROJ-VAVR-14978 Last modified date: 03/16/2023 4:09 PM Status: New <input type="button" value="Select"/>	CAV TEST REPORT (CAVR) AHU 1 Last modified date: 03/27/2023 11:06 AM Status: Complete <input type="button" value="Select"/>
FPB TEST REPORT (FPBR) AHU 1 Last modified date: 03/27/2023 12:17 PM Status: Complete <input type="button" value="Select"/>	VELGRID REPORT (VELG) AHU 1 Last modified date: 03/27/2023 10:32 AM Status: Complete <input type="button" value="Select"/>
GENERAL MATRIX REPORT (MATR) PROJ-MATR-15025 Last modified date: 03/27/2023 8:58 AM Status: Complete <input type="button" value="Select"/>	ROTATING VANE ANEM REPORT (RVAR) AHU 1 Last modified date: 03/27/2023 8:58 AM Status: Complete <input type="button" value="Select"/>
AIR FOIL REPORT (FOIL) AHU 1 Last modified date: 03/27/2023 8:58 AM Status: Complete <input type="button" value="Select"/>	HOT WIRE ANEMOMETER REPORT (HOTW) AHU 1 Last modified date: 03/27/2023 8:58 AM Status: Complete <input type="button" value="Select"/>

Thumbnail View of Studies:

All generated reports will be shown on the project page.

Note: Projects may be dragged to reorganize via the move/drag icon on the top right of the thumbnail view.



Search

Select All Reports

Grid View

Select	User Order ▾	Study	System	Last Modified Date	
<input type="checkbox"/>	1	Engineered Fan Array Report (FANA) Status: New	PROJ-FANA-14971	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input checked="" type="checkbox"/>	2	Engineered Fan Report (FANR) Status: New	PROJ-FANR-14970	03/16/2023 4:07 PM	<input type="button" value="→"/>
<input type="checkbox"/>	3	Electric Coil AHU Mixed Air Report (COEA) Status: New	PROJ-COEA-14972	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	4	Electric Coil Terminal Device Report (COET) Status: New	PROJ-COET-14973	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	5	Static Pressure Report (STAT) Status: New	PROJ-STAT-14974	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	6	Pitot Traverse Report (PITO) Status: New	PROJ-PITO-14975	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	7	Pitot Fan Report (PITF) Status: New	PROJ-PITF-14976	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	8	Outlet Master Report (OUTM) Status: New	PROJ-OUTM-14977	03/16/2023 4:08 PM	<input type="button" value="→"/>
<input type="checkbox"/>	9	VAV Test Report (VAVR) Status: New	PROJ-VAVR-14978	03/16/2023 4:09 PM	<input type="button" value="→"/>
<input type="checkbox"/>	10	CAV Test Report (CAVR) Status: New	PROJ-CAVR-14979	03/16/2023 4:09 PM	<input type="button" value="→"/>

Rows per page: 10 ▾

« < 1 2 > »

Grid View of Studies:

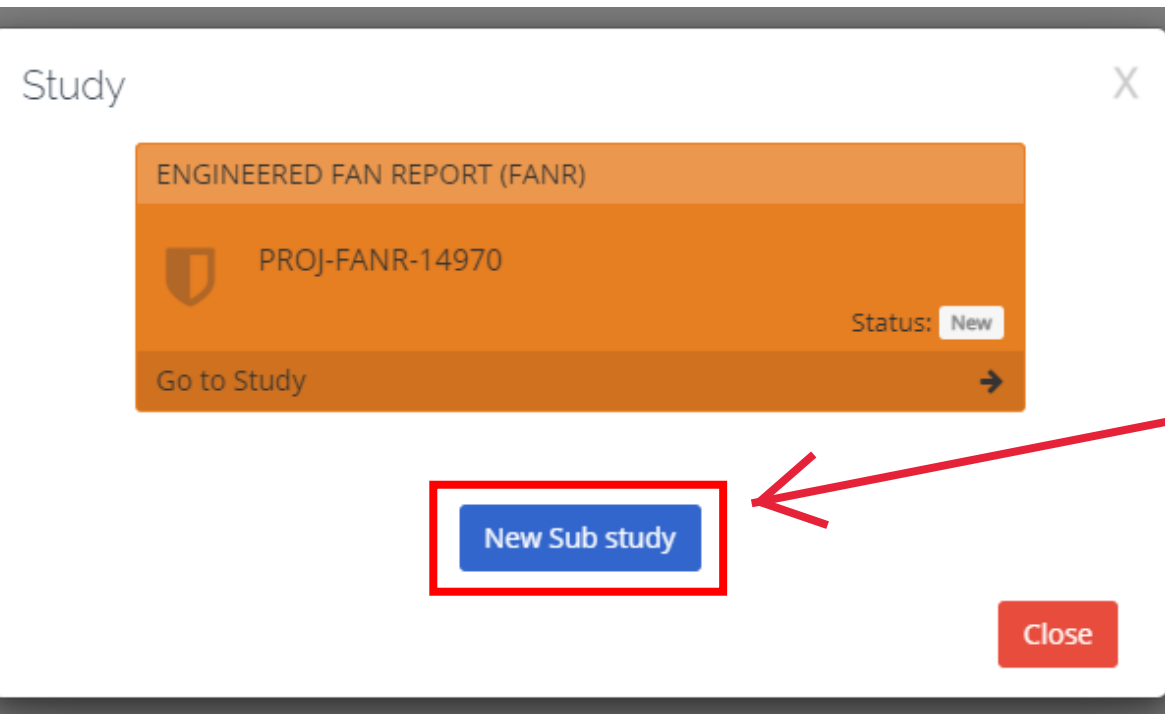
You may switch to grid view by clicking the box shown.

Note: Projects may be organized via the title bar icons on top of the grid view.

Audit Master Pro Training

Engineered Fan Report

This tutorial will act as a guide to create and input all data required for the selected air study.



When creating a study you will have the option to create a Sub-Study. A Sub-Study contains the exact same information as a main study but will be shown under the main studies report.

Example: An AHU is created through a "Engineered Fan Report" study, static pressures are also required for the equipment. A Sub-Study will be selected and "Static Pressure Report" will be chosen.

Select the type of sub-study

AIR REPORT TEMPLATES

FANR

Engineered Fan Report

FANA

Engineered Fan Array Report

Static Pressure Report

Enter Quantity:

1

Accept

Cancel

VAVR

VAV Test Report

CAVR

CAV Test Report

FPBR

VELG

For Additional Report Sheets Scroll Down

Close

Enter the quantity of Sub-Studies you would like created and click "Accept."

Hydronic Terminal Devices GPM Tolerance

Study

X

ENGINEERED FAN REPORT (FANR)



PROJ-FANR-14970

Status: New

Go to Study



Order	Report	System	Status
-------	--------	--------	--------

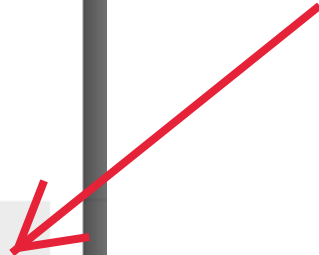
1	STAT - Static Pressure Report	PROJ-STAT-14986	↑ New
---	-------------------------------	-----------------	-------



New Sub study

Close

The Main Study will now show a Sub-Study listed under the Main Study.



Select All Reports

ENGINEERED FAN REPORT (FANR) 



PROJ-FANR-14970

Last modified date: 03/16/2023 4:07 PM

Status: New



Select

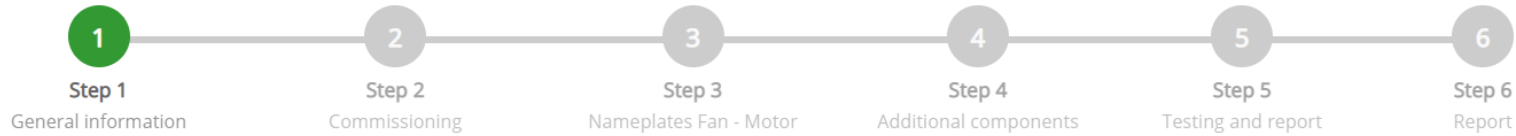


Click here to begin entering data for the study.

If a Sub-Study exists under a main study, it will be shown here.

ENGINEERED EQUIPMENT TEST REPORT | AHU 1

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost



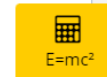
Project Name: Test Project

System: AHU 1

Equipment location: 1st Floor

Area served: 1st Floor

Cancel Next Step →



E=mc²



Conversions

Enter General Information



General Data | Commissioning - 1 | Commissioning - 2

SYSTEM DESIGN

Check box if actual CFM's are known at this point:

Grilles, Registers & Diffusers CFM Design:	<input type="text" value="0.0"/>	<input type="checkbox"/> All CFM Not Available
System CFM Design:	<input type="text" value="0.0"/>	<input type="checkbox"/> Not Available
Outside Air Ventilation Rate CFM Design:	<input type="text" value="0.0"/>	<input type="checkbox"/> Not Available
Return Airflow CFM Design:	<input type="text" value="0.0"/>	<input type="checkbox"/> Not Available
System Exhaust Airflow CFM Design:	<input type="text" value="0.0"/>	<input type="checkbox"/> Not Available

Check box if this fan system is constant volume:

← Previous Step | Cancel | Next Step →

Enter System Design Data

- Studies
- Private Notes
- Comments
- Deficiencies
- Mem of Utl
- C/W Orders
- Testing Used Cost



- Print
- Commissioning

- General Data
- Commissioning - 1**
- Commissioning - 2

- Water Coil Carryover
- Drain Pan Clogged
- Microbial Growth Suspected
- Dirty Coils
- End of coil missing a blank-off to prevent airflow bypass
- Coil Fin damage found, comb fins or repair recommended

- Wet Insulation
- Missing/Damaged Insulation
- Obvious Duct Leakage
- Canvas connection Needs Repair
- Door Seals Leak
- Restricted Airflow

- Visual Outside Air Damper Position 000 %
- Visual Ret/Air Damper Position 000 %
- Visual Mix/Air Damper Position 000 %
- Visual Relief/Exh Damper Position 000 %

- All Not Applicable
- All Not Accessible
- Not Applicable
- Not Accessible
- Not Applicable
- Not Accessible
- Not Applicable
- Not Accessible

- ← Previous Step
- Cancel
- Next Step →

Enter Commissioning-1 Data

 WARNING



Warning: % O/A & R/A doesn't equal 100%.

Do you want to continue forward?

YES

No


Click "Yes" to continue or click "No" and correct the entered data.

- Dirty Filters
- No Issues Apparent
 - Dirty Filters At Time Of Report Generation
 - Dirty Filters But Some/All Removed At Time Of Report Generation
 - Dirty Filters But Corrected At Time Of Report Generation

- Outside Air Bird Screen/Louver Dirty
- No Issues Apparent
 - Dirty Screen / Louver At Time Of Report Generation
 - Dirty Screen / Louver But Corrected At Time Of Report Generation

- Fan Cabinet internal Cleanliness
- Clean, no issues
 - Fairly clean, recommend scheduling a cleaning soon
 - Dirty, recommend immediate cleaning

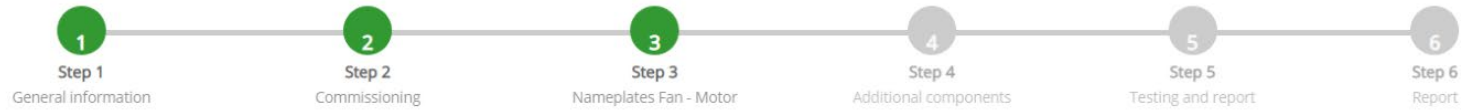
- Filters Installation
- No Issues Apparent
 - End of installed filter(s) missing a blank-off(s) to prevent airflow filter bypass
 - Filters butted seams not taped to prevent airflow filter bypass
 - Filter thickness improper as compared to the filter track/slide rail dimension

 E=mc²
 Conversion

Enter Commissioning-2 Data

MULTIPLE FAN SYSTEMS

Number Of Fan Motors:



E=mc²

Conversion

FrMt > #1

Fan Motor

Enter Fan Nameplate Data

DESCRIPTION

Fan manufacturer:

Individual Fan Tag Identifier:

Model number:

Serial number:

Fan type:

FAN/MOTOR DRIVE TYPE

Direct drive fan system:

FnMt > #1

Fan

Motor

DESCRIPTION.

Fan manufacturer:

Individual Fan Tag Identifier:

Model number:

Serial number:

Fan type:

Centrifugal

- Backward inclined airfoil blades
- Backward inclined flat blades
- Forward curved blades
- Radial bladed
- Radial tipped

Axial

- Vaneaxial
- Tubeaxial
- Propeller / Panel fan

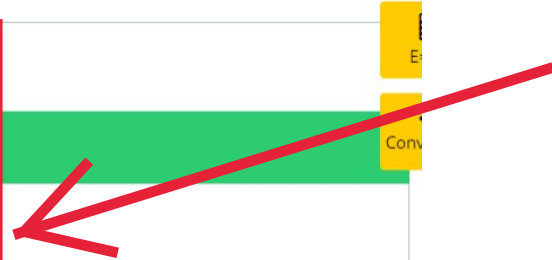
Special designs

- Plenum / plug
- Tubular inline centrifugal
- Mixed flow
- Power roof ventilators

Other fan type

- Other

Select the correct fan type.



Fraction	Decimal
1/16	0.0625
1/8	0.1250
▼ 3/16	0.1875
1/4	0.2500
5/16	0.3125
3/8	0.3750
7/16	0.4375
1/2	0.5000
9/16	0.5625
5/8	0.6250
11/16	0.6875
3/4	0.7500
11/16	0.8125
7/8	0.8750
15/16	0.9375



AMP software does not use fractions.

An information icon will be shown on the right of the data entry field to assist with conversions.

FAN/MOTOR DRIVE TYPE

Direct drive fan system:

Fan sheave manufacturer:

Fan sheave stamping (Full stamping):

Fan sheave stamping dimension Inches:

Half of the fan sheave dimension from outer edge of pulley to just the face of the fan shaft Inches:

Fan Shaft Diameter Inches:

Fan Blade Outer Edge to Fan Blade Inner Edge Length Inches:

Fan sheave dimension measured Inches:

FAN SHEAVE TYPE AND BORE

Fixed bore fan sheave:

Fan bushing stamping:

Enter Fan Data Continued

Enter Fan and
Commissioning Data
Continued

FAN SHEAVE TYPE AND BORE

Fixed bore fan sheave:

Fan bushing stamping:

Fan bushing stamping

COMMISSIONING CONTINUED

Dirty Fan Blades:

Fan Blades loose:

Fan Blades Missing:

Motor / Fan pulley Alignment

- No Issues Apparent
- Miss-Aligned At Time Of Report Generation
- Miss-Aligned But Corrected At Time Of Report Generation

Belt(s) Looseness:

- No Issues Apparent
- Loose At Time Of Report Generation
- Loose But Corrected At Time of Report Generation

Belt Tension

- No Issues Apparent
- Overtightened At Time Of Report Generation
- Overtightened But Corrected At Time Of Report Generation

Motor Frame Alignment

- No Issues Apparent
- Motor Pulley Is Slightly Out Of Plane (Cocked) With Regards To Fan Pulley, Which Is Still The Condition
- Motor Pulley Is Slightly Out Of Plane (Cocked) With Regards To Fan Pulley, But Corrected At Time Of Report Generation

Bolt(s) Securing Motor Frame

~

Enter Fan Commissioning Data Continued

- Bolt(s) Securing Motor Frame
- No Issues Apparent
 - Bolt(s) Found Loose At Time Of Report Generation
 - Bolt(s) found Loose But Corrected At Time Of Report Generation

- Mechanical Equipment Heat
- No Issues Apparent
 - Motor Appears Excessively Hot
 - Motor Bearing(s) Appears Excessively Hot
 - Fan Bearing(s) Appears Excessively Hot
 - Motor Bearing(s) Abnormal Noise Present
 - Fan Bearing(s) Abnormal Noise Present

- Mechanical Equipment Vibration
- No Issues Apparent
 - Motor Vibration May Be Present
 - Fan Vibration May Be Present
 - Fan Vibration Appears Excessive

- Mechanical Equipment Integrity
- No Issues Apparent
 - Fan Guard Found Off At Time Of Report Generation
 - Fan Guard Found Off But Corrected At Time Of Report Generation

Create a bearing report?

Update

← Previous Step

Cancel

Next Tab →

Create a bearing report?



If the fan has bearings, check the box to create a bearing report.

BEARING DATA

Add Bearing +

Bearing ID Number	Location	Type	Manufacturer	Shaft Dimension Inches 	Floating	Fixed	Greased	Recommend Replacement	-
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:	Please briefly comment on why the above bearing should be replaced								

Update

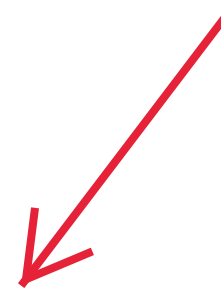
← Previous Step

Cancel

Next Tab →

Fan sheave stamping (Full stamping):	<input type="text" value="2VP45"/>
Fan sheave stamping dimension Inches:	<input type="text" value="4.5000"/> <input type="button" value="i"/>
Half of the fan sheave dimension from outer edge of pulley to just the face of the fan shaft Inches:	<input type="text" value="1.4000"/>
Fan Shaft Diameter Inches:	<input type="text" value="0.8750"/> <input type="button" value="i"/>
Fan Blade Outer Edge to Fan Blade Inner Edge Length Inches:	<input type="text" value="0.0000 (For Fan Tip Speed Calculation)"/> <input type="button" value="i"/>
Fan sheave dimension measured Inches:	3.68

AMP software will internally verify sheave measurements and show a warning if the sheave dimensions are out of tolerance.



WARNING

Please review dimension entered. Difference in dimensions exceeds built-in tolerance.
Fan Sheave Dimension Measured value should be between 4.25 and 4.75 (In) regarding the actual Fan Sheave Stamping Dimension value.

Fan sheave stamping (Full stamping):	<input type="text" value="2VP45"/>
Fan sheave stamping dimension Inches:	<input type="text" value="4.5000"/> <input type="button" value="i"/>
Half of the fan sheave dimension from outer edge of pulley to just the face of the fan shaft Inches:	<input type="text" value="1.8500"/>
Fan Shaft Diameter Inches:	<input type="text" value="0.8750"/> <input type="button" value="i"/>
Fan Blade Outer Edge to Fan Blade Inner Edge Length Inches:	<input type="text" value="0.0000 (For Fan Tip Speed Calculation)"/> <input type="button" value="i"/>
Fan sheave dimension measured Inches:	4.58

Once sheave values are corrected to within tolerance, the warning will disappear.

FAN SHEAVE TYPE AND BORE

FnMt > #1

Fan

Motor

MOTOR INFORMATION

Nameplate motor manufacturer:

Description:

Model:

Serial number:

Nameplate HP: Nameplate HP unknown

Nameplate RPM:

Nameplate frame category:

Nameplate frame:

Enter Motor Information

MOTOR INFORMATION

Nameplate motor manufacturer:

Select Motor Manufacturer

Description:

A.O. Smith

ABB

ABB motors

Model:

AEG Fabrica de Motores, S.A. / Lafert S.p.A

Arcelik SA

Aurora

Serial number:

Baldor

Baldor Electric

Baldor Reliance

Nameplate HP:

Baldor UK Ltd.

Bell & Gossett

Nameplate RPM:

BESEL S.A.

Brook Crompton

CEG S.r.l. - Motori Elettrici

Nameplate frame category:

CELMA S.A.

Century Electric

Crown Triton

Nameplate frame:

Data Missing

Dayton


Nameplate service factor:

Not listed:



Select Motor Manufacturer

Motor phase: Three phase 2 wire single phase Single phase

 WARNING FAN SYSTEM
Collect only 60 Hz Nameplate Rated Voltage and Amps

ECM (Motor)



System motor operates from a VFD/PWM device?

System operates (either/and) VAV's, FPB's, CAV's

Motor has electric discharge machining bearing protection installed?

Nameplate Rated Volts:

Nameplate Rated Amps:

Nameplate efficiency (Eff): Power Factor and Efficiency Unknown



Nameplate power factor (PF):



Motor in airstream?

Enter mode of operation and nameplate data.

Nameplate service factor: Not listed:

Motor phase: Three phase 2 wire single phase Single phase

 **WARNING FAN SYSTEM**
Collect only 60 Hz Nameplate Rated Voltage and Amps

ECM (Motor)

System motor operates from a VFD/PWM device?

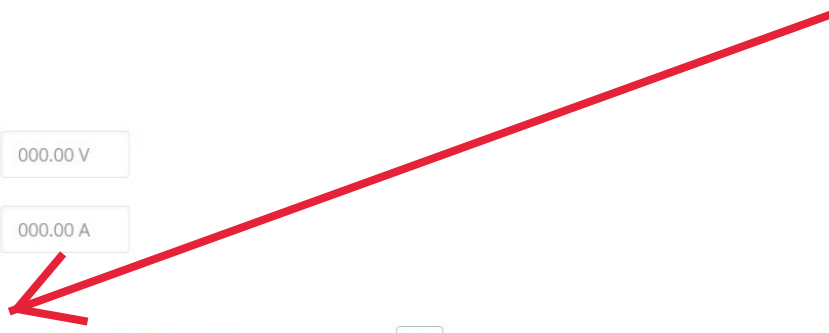
Motor has electric discharge machining bearing protection installed?

Nameplate Rated Volts:

Nameplate Rated Amps:

Nameplate efficiency (Eff): Power Factor and Efficiency Unknown

If Power Factor and Efficiency are Unknown, check this box and it will show a default value that will be used in motor calculations.



SHEAVE

Motor sheave manufacturer:

Motor sheave stamping (full stamping):

Motor sheave stamping dimension Inches: [i](#)

Half of the motor sheave dimension from outer edge of pulley to just the face of the motorshaft Inches:

Motor shaft diameter Inches: [i](#)

Motor sheave dimension measured Inches: 6.30

Enter Sheave Information

MOTOR SHEAVE TYPE AND BORE

Motor sheave: Fixed Adjustable

Motor sheave bushing installed:

Enter Motor Information Continued

BELT

Quantity of fan/motor belt(s) required:

Belt type:

Belt size: In

Center of motor shaft to center of fan shaft distance: In

Belt size:

In

Center of motor shaft to center of fan
shaft distance:

In

Motor base/frame adj in:

In

Motor base/frame adj out:

In

Enter Information

Update

← Previous Tab

Cancel

Next Step →

BELT

Quantity of fan/motor belt(s) required:

Belt type:

Belt size: in

Center of motor shaft to center of fan shaft distance: in

Motor base/frame adj in: in

Motor base/frame adj out: in

Update

Enter Belt Information

ENGINEERED EQUIPMENT TEST REPORT | AHU 1

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost



Filter

Coil

Add Filter +

#	Filter Type	Quantity	Length	Width	Thickness
---	-------------	----------	--------	-------	-----------

← Previous Step Cancel Next Step →

Add Filter Information

Add Filter ✕

Filter type: Select Filter type.

Length

Width

Thickness

Quantity

Pre

Post

Final

Roll

Bag

Box

HEPA

Cell

Pleated

Cartridge

Throw Away

Electrostatic

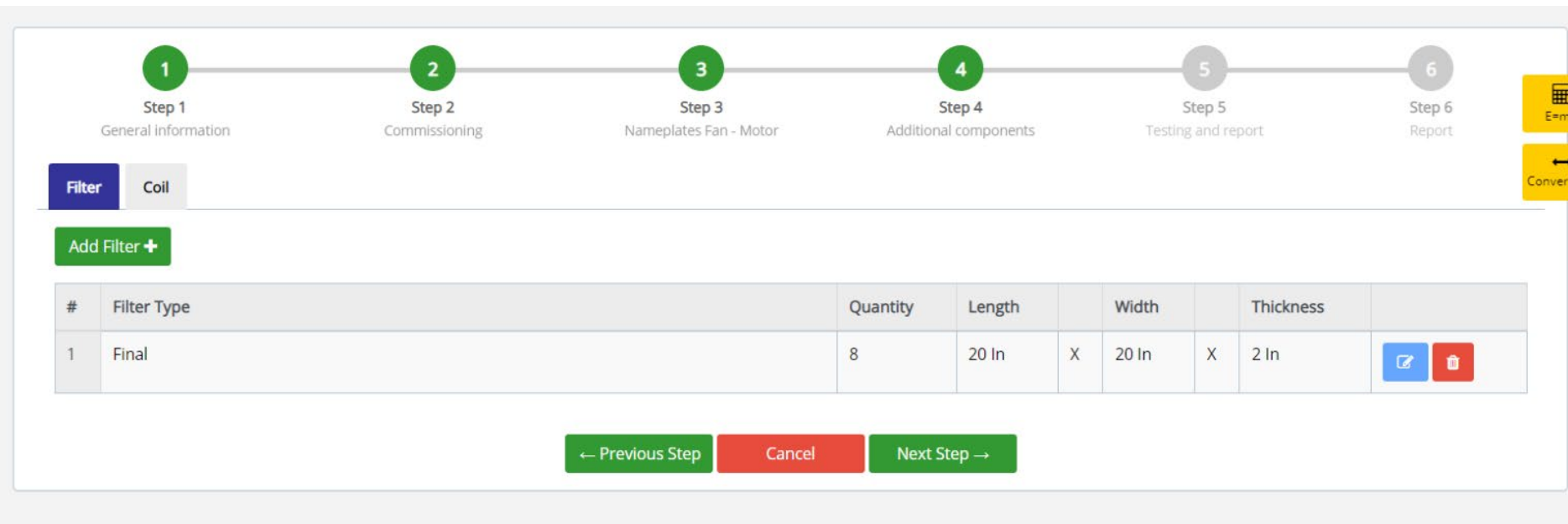
Carbon

Charcoal



Water

Other

Enter filter type from drop down and then continue with the remaining filter information.



The screenshot displays the AMP Audit Master PRO software interface. At the top, a horizontal progress bar shows six steps: Step 1 (General Information), Step 2 (Commissioning), Step 3 (Nameplates Fan - Motor), Step 4 (Additional components), Step 5 (Testing and report), and Step 6 (Report). Step 4 is currently selected. Below the progress bar, there are two tabs: 'Filter' (active) and 'Coil'. A green 'Add Filter +' button is located below the tabs. The main area contains a table with filter information:

#	Filter Type	Quantity	Length		Width		Thickness	
1	Final	8	20 In	X	20 In	X	2 In	 

At the bottom of the interface, there are three buttons: '← Previous Step', 'Cancel', and 'Next Step →'. On the right side, there are two yellow utility buttons: 'E=mc²' and 'Conversio'.

This is how filter information will be shown.

Multiple sets of filters can be added to match the systems design.

ENGINEERED EQUIPMENT TEST REPORT |



Filter

Coil

Add Coil +

#	Coil Type	Length	Width	Depth	Quantity	Fins Per In	
---	-----------	--------	-------	-------	----------	-------------	--

← Previous Step Cancel Next Step →

Click to add coil information

Multiple sets of coils can be added to match the systems design.

Add Coil

Coil type:

Length:

Width:

Fins per In

Depth Quantity:



Select Coil type.



Select "Coil Type" before completing the remaining coil information.

Add Coil



Coil type:

Select Type



Select Coil type.

Length:

Pre Heat

Width:

Heating

Fins per In

Cooling

Fog elimination

Depth Quantity:

Dehumidifier

Humidifier

Other

vs Depth



Add



Cancel

This is the drop down for selecting "Coil Type."





Filter **Coil**

Add Coil +

#	Coil Type	Length	Width	Depth	Quantity	Fins Per In	
1	Heating	40 In	144 In	4		8	 

← Previous Step **Cancel** Next Step →

 E=mc²
 Conversion

Coils Entered
Note: You can add as many coils as needed.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

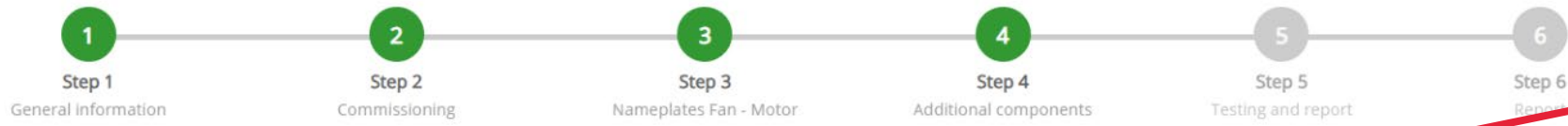
"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

ENGINEERED EQUIPMENT TEST REPORT | AHU 1

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost



E=mc²

Conversion

TEST

START TEST

← Previous Step Cancel

"Start Test"



⚠ WARNING ✕

Ensure everybody is clear of any potential system moving parts, ie motors, fans, pulleys, belts, etc.

⚠ Danger: Arc Flash And Shock Hazard - Appropriate PPE Required. ✕

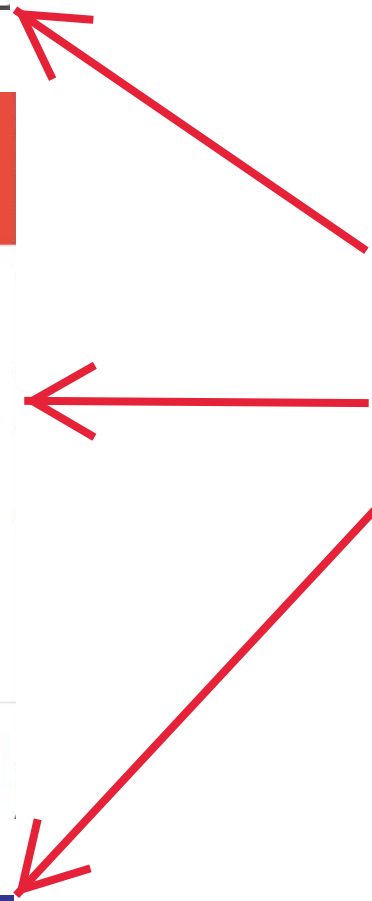
- Do not operate controls or open covers without appropriate Personal Protection Equipment (PPE). Failure to comply may result in Injury or Death.
- Refer to NFPA 70E for minimum PPE Requirements.
- Warning NFPA code requirements may change, always check for current or updated code requirements
- Request a qualified and licensed electrician to collect voltage and Current/Amperage data if not ARC Flash Trained

Warning: Above is understood and will be adhered to.

Is the fan turning in the correct rotation/direction?

These are three of the most common safety warnings that will appear throughout AMPs software.

You will be required to acknowledge each warning individually in order to proceed.



Step 1
General information

Step 2
Commissioning

Step 3
Nameplates Fan - Motor

Step 4
Additional components

Step 5
Testing and report

Step 6
Report

ACTUALS

FnMt > #1

Fan Tag Identifier: AHU 1

Motor Actual RPM: 0.00

Motor sheave dimension measured: 6.30 In

Motor sheave: Fixed

Technicians calculated motor sheave operating pitch diameter (In): 0.00 i

WARNING: Rotating equipment, injury or death may occur. Only certified field technicians should perform RPM/Speed testing

Fan Actual RPM: 0.00

Fan sheave dimension measured: 4.58 In

Technicians calculated fan sheave operating pitch diameter (In): 0.00 i

WARNING: Rotating equipment, injury or death may occur. Only certified field technicians should perform RPM/Speed testing

VFD Operating Hertz 0.00

VFD Operating % Speed 0.00



If VFD has a display screen - Collect Operating Voltage and Current/Amperage directly from this display if available.

If the screen only displays a single averaged Voltage and Current/Amperage, enter its value in each data input box.

If using a standard Volt/Amp meter not rated to read VFD or PWM voltage output, the meter won't work when recording VFD / PWM "Output Voltage". This meter will work when collecting Amperage(s). Collecting actual VFD /PWM "Output Voltage" can be done with the meters designed and available to do this task.

Enter Motor Actuals

Note: Only a certified technician can enter actual data.

Select Voltage that best represents Actual read: Voltage Not Listed

Nameplate Volts: 208V 230V 460V

Nameplate Amps: 22.12A 20A 10A

WARNING

1. Single Phase and 3 Phase Voltages are recorded from Phase to Phase, not Phase to Ground.
2. Reading Actual Volts requires a handheld voltmeter rated for VFDs. A typical RMS Voltmeter will not provide accurate readings.
3. Actual Voltage and Amperage associated with the VFD must be recorded on the leaving side of the VFD to the Motor.

Volts read from VFD Screen Volts read with a handheld voltmeter

VFD/PWM Only displays 1 Voltage and 1 Amperage

	L1 -L2	L1 -L3	L2 -L3
Motor Actual Volts:	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
Motor Actual Amps:	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>

System Outside Air Read By:

System SP set-point based on worst case flowing Terminal Box, which is a: VAV FPB CAV

Worst case Terminal Box Identifier / BAS Address:

Terminal Box damper position open (BAS / Visual pneumatic) when operating at design system SP set-point: % Open i

Final System SP set-point:

Update

Enter Actual Data Continued

SYSTEM SPACE PRESSURIZATION DATA

Add Space Pressurization +

VFD Operating % Speed

i If VFD has a display screen - Collect Operating Voltage and Current/Amperage directly from this display if available. If the screen only displays a single averaged Voltage and Current/Amperage, enter its value in each data input box. If using a standard Volt/Amp meter not rated to read VFD or PWM voltage output, the meter won't work when recording VFD / PWM "Output Voltage". This meter will work when collecting Amperage(s). Collecting actual VFD /PWM "Output Voltage" can be done with the meters designed and available to do this task.

i **RECOMMENDATION:**
Use VFD/PWM display data to collect actual Volts and Amps

Select Voltage that best represents Actual read: Voltage Not Listed
 Nameplate Volts: 208V 230V 460V
 Nameplate Amps: 22.12A 20A 10A

← Select the actual operating motor Volts and Amps.

WARNING

1. Single Phase and 3 Phase Voltages are recorded from Phase to Phase, not Phase to Ground.
2. Reading Actual Volts requires a handheld voltmeter rated for VFDs. A typical RMS Voltmeter will not provide accurate readings.
3. Actual Voltage and Amperage associated with the VFD must be recorded on the leaving side of the VFD to the Motor.

Volts read from VFD Screen Volts read with a handheld voltmeter
 VFD/PWM Only displays 1 Voltage and 1 Amperage

Volts read from VFD Screen Volts read with a handheld voltmeter

VFD/PWM Only displays 1 Voltage and 1 Amperage

L1 -L2 L1 -L3 L2 -L3

Motor Actual Volts:

Motor Actual Amps:

System Outside Air Read By: pp

System SP set-point based on worst case flowing Terminal Box, which is a: VAV FPB CAV

Worst case Terminal Box Identifier / BAS Address:

Terminal Box damper position open (BAS / Visual pneumatic) when operating at design system SP set-point: % Open



Final System SP set-point:

Enter Actual Data Continued

SYSTEM SPACE PRESSURIZATION DATA

Add Space Pressurization +

Space Pressurization (In/WC)	Space Pressurization to	System Pressurization Comment
		-



← Previous Step Cancel Next Step →

No Volts/Amps reference set selected




You must select a Voltage that best represents Actual Voltage being read.

Accept

This warning will appear if you have not selected actual volts and amps.

Fan Tag Identifier:

Motor Actual RPM:

 **WARNING**
Please review RPMs and Pitch Diameters entered. Data is inconsistent regarding actual Fan/Motor Pitch Diameter and Fan RPM. Range Warning is +/-25.0 RPM.

Warnings will appear if entered data is not within tolerances.

Motor sheave dimension measured: 6.30 In

Motor sheave: Fixed

Technicians calculated motor sheave operating pitch diameter (In):

Fan Actual RPM:

Fan sheave dimension measured: 4.58 In

Technicians calculated fan sheave operating pitch diameter (In):

To calculate Motor Pitch Diameter go to E=mc^2 Formulas Use Motor Pitch Diameter



WARNING: Rotating equipment, injury or death may occur. Only certified field technicians should perform RPM/Speed testing



WARNING: Rotating equipment, injury or death may occur. Only certified field technicians should perform RPM/Speed testing

Motor Actual Amps:

System Outside Air Read By:

System SP set-point based on worst case flowing
Terminal Box, which is a:

Worst case Terminal Box Identifier / BAS Address:

Terminal Box damper position open (BAS / Visual
pneumatic) when operating at design system SP set-
point:

Final System SP set-point:

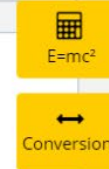
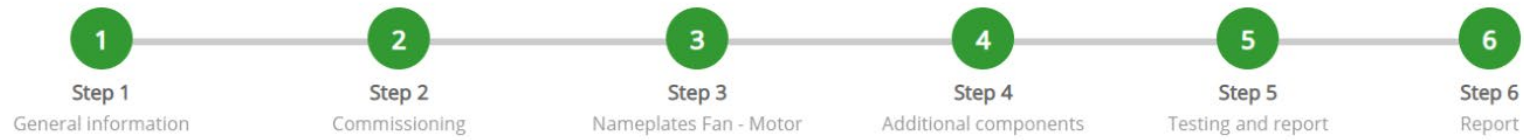
- Select System Outside Air Read By
- Reading actual outside airflow at source (Data sheet provided)
- Temperature method
- CO2 Method
- Mathematically: Supply - Return = Outside Air
- Not Part of project Scope
- Outside air intake found innoperable
- Outside air intake required - Wasn't installed
- Not Applicable for this system
- Other





Select method used to determine outside air.



ENGINEERED EQUIPMENT TEST REPORT | AHU 1




Complete Report/Study


Switch Back to Studies /Sub-Studies

← Previous Step Cancel

Complete Report/Study

Complete Study X

1

Validate Building Picture

2

Confirmation

VALIDATE BUILDING PICTURE

Attention: Make your project look more professional by downloading a picture of the **Building or Space** you're testing which will be presented as part of the final report cover.

[GO TO UPLOAD A PICTURE](#)

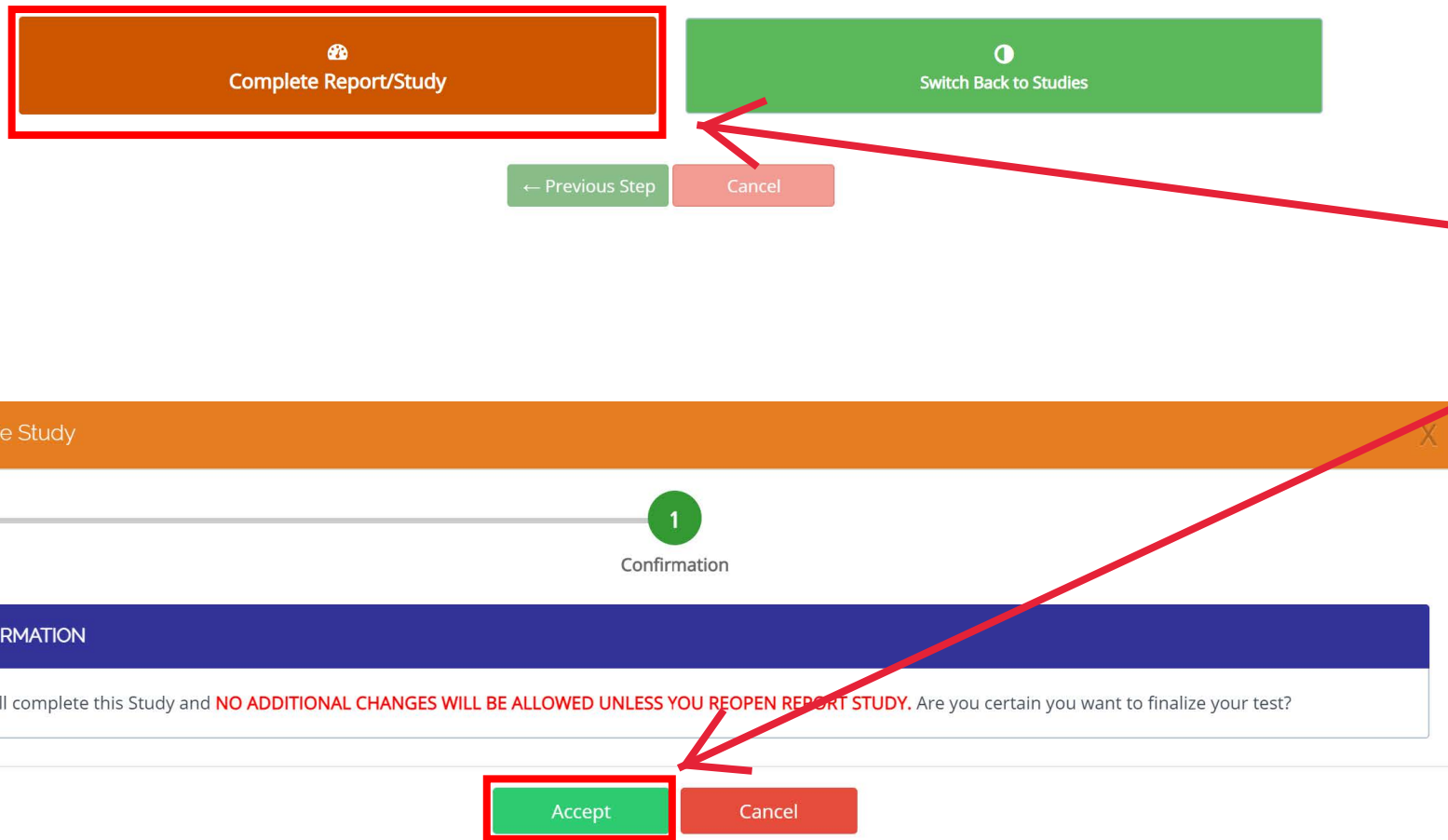
Cancel

Next Step →



Upload a picture of the building you are working on which will be displayed as the front page of the final report.

Tip: Enter the address into a search engine and copy the photo shown which best represents the building.



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training


Engineered Fan Array Report


This tutorial will act as a guide to create and input all data required for the selected air study.

Search


Select All Reports

Grid View

ENGINEERED FAN REPORT (FANR) 

 AHU 1
Last modified date: 03/16/2023 4:07 PM

Status: **Complete**

Select 

ENGINEERED FAN ARRAY REPORT (FANA) 

 PROJ-FANA-14971
Last modified date: 03/16/2023 4:08 PM

Status: **New**

Select 

ELECTRIC COIL AHU MIXED AIR REPORT (COEA) 

 PROJ-COEA-14972
Last modified date: 03/16/2023 4:08 PM

Status: **New**


Select 


ELECTRIC COIL TERMINAL DEVICE REPORT (COET) 


 PROJ-COET-14973
Last modified date: 03/16/2023 4:08 PM


Status: **New**

Select 

STATIC PRESSURE REPORT (STAT) 

 PROJ-STAT-14974

PITOT TRAVERSE REPORT (PITO) 

 PROJ-PITO-14975

When a report is finished it will show the "Status" as complete.

Select the type of report

X

AIR REPORT TEMPLATES

FANR Engineered Fan Report	FANA Engineered Fan Array Report
COEA Electric Coil AHU Mixed Air Report	COET Electric Coil Terminal Device Report
STAT Static Pressure Report	PITO Pitot Traverse Report
PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR	VELG

Click "Engineered Fan Array Report"

For Additional Report Sheets Scroll Down

Close

ENGINEERED EQUIPMENT TEST REPORT |



Progress bar: 1 Step 1 General Information, 2 Step 2 Commissioning, 3 Step 3 Nameplates Fan - Motor, 4 Step 4 Additional components, 5 Step 5 Testing and report, 6 Step 6 Report

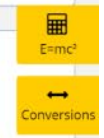
Project Name:

System:

Equipment location:

Area served:

Buttons: Cancel, Next Step →



Enter System Information



General Data Commissioning - 1 Commissioning - 2

SYSTEM DESIGN

Check box if actual CFM's are known at this point:

Select Type Of Headsheet:	Supply	Return	Exhaust
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actual Grilles, Registers & Diffusers CFM:	<input type="text" value="0.000"/>	<input type="text" value="0.000"/>	<input type="text" value="0.000"/> <input type="checkbox"/> Manual entry
Actual System CFM:	<input type="text" value="0.000"/>	<input type="text" value="0.000"/>	<input type="text" value="0.000"/> <input type="checkbox"/> Manual entry
Actual Outside Air Ventilation Rate CFM:	<input type="text" value="0.0"/>		<input type="checkbox"/> Manual entry

Grilles, Registers & Diffusers CFM Design:	<input type="text" value="2,000.0"/>	<input type="checkbox"/> All CFM Not Available	<input type="checkbox"/> Not Available
System CFM Design:	<input type="text" value="2,000.0"/>	<input type="checkbox"/> Not Available	<input type="checkbox"/> Not Available
Outside Air Ventilation Rate CFM Design:	<input type="text" value="500.0"/>	<input type="checkbox"/> Not Available	<input type="checkbox"/> Not Available
Return Airflow CFM Design:	<input type="text" value="2,000.0"/>	<input type="checkbox"/> Not Available	<input type="checkbox"/> Not Available
System Exhaust Airflow CFM Design:	<input type="text" value="300.0"/>	<input type="checkbox"/> Not Available	<input type="checkbox"/> Not Available

Check box if this fan system is constant volume:

← Previous Step Cancel Next Step →

Enter Design Information

-  Studies
-  Private Notes
-  Comments
-  Deficiencies
-  Items of Unit
-  LOW Orders
-  Testing Unit Cost

1

Step 1
General information

2

Step 2
Commissioning

3

Step 3
Nameplates, Fan, Motor

4

Step 4
Additional components

5

Step 5
Testing and report

6

Step 6
Reports

- General Data
- Commissioning - 1
- Commissioning - 2

Water Coil Carryover

Drain Pan Clogged

Microbial Growth Suspected

Dirty Coils

End of coil missing a blank-off to prevent airflow bypass

Coil Fin damage found, comb fins or repair recommended

Wet Insulation

Missing/Damaged insulation

Obvious Duct Leakage

Canvas connection Needs Repair

Door Seals Leak

Restricted Airflow

All Not Applicable

All Not Accessible

Visual Outside Air Damper Position 000 %

Not Applicable

Not Accessible

Visual Ret/Air Damper Position 000 %

Not Applicable

Not Accessible

Visual Mix/Air Damper Position 000 %

Not Applicable

Not Accessible

Visual Relief/Exh Damper Position 000 %

Not Applicable

Not Accessible

← Previous Step Cancel Next Step →

Exit

Conversions

Enter
Commissioning-1
Information



Emergency
Conversion

General Data Commissioning - 1 Commissioning - 2

- Dirty Filters
- No Issues Apparent
 - Dirty Filters At Time Of Report Generation
 - Dirty Filters But Some/All Removed At Time Of Report Generation
 - Dirty Filters But Corrected At Time Of Report Generation
- Outside Air Bird Screen/Louver Dirty
- No Issues Apparent
 - Dirty Screen / Louver At Time Of Report Generation
 - Dirty Screen / Louver But Corrected At Time Of Report Generation
- Fan Cabinet internal Cleanliness
- Clean, no issues
 - Fairly clean, recommend scheduling a cleaning soon
 - Dirty, recommend immediate cleaning
- Filters Installation
- No Issues Apparent
 - End of installed filter(s) missing a blank-off(s) to prevent airflow filter bypass
 - Filters butted seams not taped to prevent airflow filter bypass
 - Filter thickness improper as compared to the filter track/slide rail dimension

Enter Commissioning-2 Information

FAN ARRAY

Enter Number Of Fans (X)

Enter Number Of Fans (Y)

Fed/Controlled by a Single VFD

← Previous Step Cancel Next Step →

Step 1
General information

Step 2
Commissioning

Step 3
Nameplates Fan - Motor

Step 4
Additional components

Step 5
Testing and report

Step 6
Report

R:1 > #1

R:1 > #2

Fan Motor

DESCRIPTION

Fan manufacturer:

Individual Fan Array Tag Identifier:

Model number:

Serial number:

Fan type:

FAN/MOTOR DRIVE TYPE

Direct drive fan system:

Fan sheave manufacturer:

Fan sheave stamping (Full stamping):

Fan sheave stamping dimension Inches: ⓘ

Half of the fan sheave dimension from outer edge of pulley to just the face of the fan shaft Inches:

Fan Shaft Diameter Inches: ⓘ

Fan Blade Outer Edge to Fan Blade Inner Edge Length Inches: ⓘ

Fan sheave dimension measured Inches:

FAN SHEAVE TYPE AND BORE

Fixed bore fan sheave:

Fan bushing stamping:

Enter Fan Data

Enter Fan Commissioning Data

COMMISSIONING CONTINUED

Dirty Fan Blades:

Fan Blades loose:

Fan Blades Missing:

Motor / Fan pulley Alignment

- No Issues Apparent
- Miss-Aligned At Time Of Report Generation
- Miss-Aligned But Corrected At Time Of Report Generation

Belt(s) Looseness:

- No Issues Apparent
- Loose At Time Of Report Generation
- Loose But Corrected At Time Of Report Generation

Belt Tension

- No Issues Apparent
- Overtightened At Time Of Report Generation
- Overtightened But Corrected At Time Of Report Generation

Motor Frame Alignment

- No Issues Apparent
- Motor Pulley is Slightly Out Of Plane (Cocked) With Regards To Fan Pulley, Which Is Still The Condition
- Motor Pulley is Slightly Out Of Plane (Cocked) With Regards To Fan Pulley, But Corrected At Time Of Report Generation

Bolt(s) Securing Motor Frame

- No Issues Apparent
- Bolt(s) Found Loose At Time Of Report Generation
- Bolt(s) found Loose But Corrected At Time Of Report Generation

Mechanical Equipment Heat

- No Issues Apparent
- Motor Appears Excessively Hot
- Motor Bearing(s) Appears Excessively Hot
- Fan Bearing(s) Appears Excessively Hot
- Motor Bearing(s) Abnormal Noise Present
- Fan Bearing(s) Abnormal Noise Present

Mechanical Equipment Vibration

- No Issues Apparent
- Motor Vibration May Be Present
- Fan Vibration May Be Present
- Fan Vibration Appears Excessive

Mechanical Equipment Integrity

- No Issues Apparent
- Fan Guard Found Off At Time Of Report Generation
- Fan Guard Found Off But Corrected At Time Of Report Generation

Create a bearing report?

Update

← Previous Step

Cancel

Next Tab →

Create a bearing report?

BEARING DATA

Add Bearing +

Bearing ID Number	Location	Type	Manufacturer	Shaft Dimension Inches	Floating	Fixed	Greased	Recommend Replacement	-
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:	Please briefly comment on why the above bearing should be replaced								

Update

← Previous Step Cancel Next Tab →

If the fan has bearings, you can create a bearing report and add data.



S#1

R:1 > #2

Fan Motor

MOTOR INFORMATION

Nameplate motor manufacturer:

Description:

Model:

Serial number:

Nameplate HP: Nameplate HP unknown

Nameplate RPM:

Nameplate frame category:

Nameplate frame:

Nameplate service factor: Not listed

Motor phase: Three phase 2 wire single phase Single phase

Copy to Array

WARNING FANARRAY
Collect only 60 Hz Nameplate Rated Voltage and Amps.

ECM (Motor)

System motor operates from a VFD/PWM device?

Motor has electric discharge machining bearing protection installed?

Nameplate Rated Volts:

Enter Motor Nameplate Data

Nameplate Rated Volts:

Nameplate Rated Amps:

Nameplate efficiency (EFF): Power Factor and Efficiency Unknown

Nameplate power factor (PF):

Motor in airstream?

SHAEVE

Motor sheave manufacturer:

Motor sheave stamping (full stamping):

Motor sheave stamping dimension inches:

Half of the motor sheave dimension from outer edge of pulley to just the face of the motorshaft inches:

Motor shaft diameter inches:

Motor sheave dimension measured inches:

MOTOR SHEAVE TYPE AND BORE

Motor sheave: Fixed Adjustable

Motor sheave bushing installed:

BELT

Quantity of fan/motor belt(s) required:

Belt type:

Belt size: in

Center of motor shaft to center of fan shaft distance: in

Motor base/frame adj in: in

Motor base/frame adj out: in

Enter Motor Nameplate Data Continued

If the fan array has multiple identical motors you can copy the information to the remaining motors by clicking the "Copy to Array" icon.

Important



This action will populate the current Fan data to all the remaining Fans in the Array.

Are you sure you want to continue?

Confirm that you want to copy all information to the remaining motor sheets.

Yes

No

MOTOR INFORMATION

Nameplate motor manufacturer: ABB
Description: Fan Array Motor
Model: 123
Serial number: 123
Nameplate HP: HP 10 | kW 7.457 Nameplate HP unknown
Nameplate RPM: 1,765.00
Nameplate frame category: NEMA Frames
Nameplate frame: 213T
Nameplate service factor: 1.15 Not listed:
Motor phase: Three phase 2 wire single phase Single phase

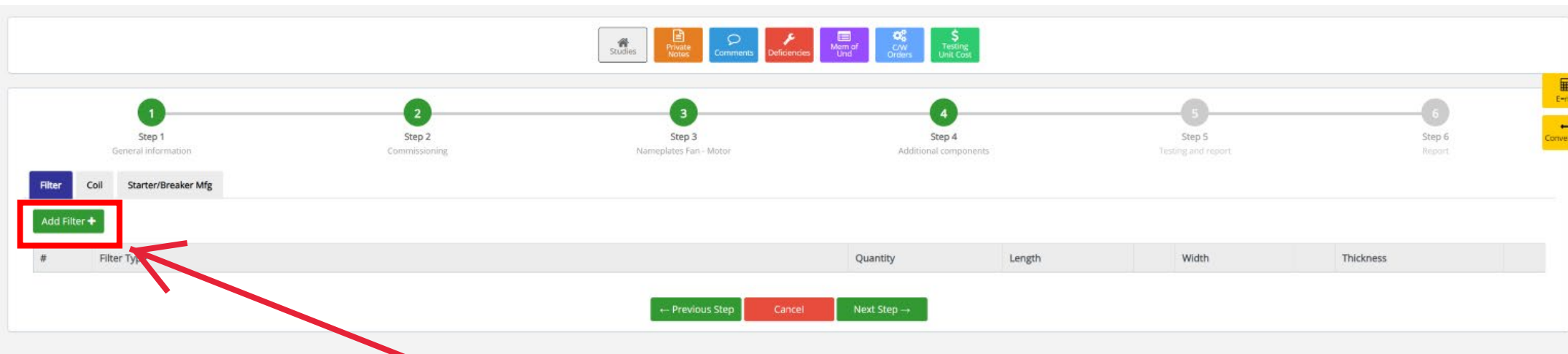


WARNING FANARRAY
Collect only 60 Hz Nameplate Rated Voltage and Amps

ECM (Motor)
System motor operates from a VFD/PWM device?
Motor has electric discharge machining bearing protection installed?
Nameplate Rated Volts: 208.00 230.00 460.00
Nameplate Rated Amps: 40.00 40.00 20.00
Add Remove
Nameplate efficiency (Eff): 0.93_ Power Factor and Efficiency Unknown
Nameplate power factor (PF): 0.503
Motor in airstream?



If the Fan Array has multiple identical motors, you can copy the information to the remaining motors with the "Copy to Array" icon.



Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost

1 Step 1 General information

2 Step 2 Commissioning

3 Step 3 Nameplates Fan - Motor

4 Step 4 Additional components

5 Step 5 Testing and report

6 Step 6 Report

Filter Coll Starter/Breaker Mfg

Add Filter +

#	Filter Type	Quantity	Length	Width	Thickness
---	-------------	----------	--------	-------	-----------

← Previous Step Cancel Next Step →

Click to add Filter information



ENGINEERED EQUIPMENT TEST REPORT | AHU 1

Studies Private Notes Comments Deficiencies Mem of Lind CW Orders Testing Unit Cost

Step 1 General information Step 2 Commissioning Step 3 Nameplates Fan - Motor Step 4 Additional components Step 5 Testing and report Step 6 Report

Filter Coll Starter/Breaker Mfg

Add Coil +

#	Type	Length	Width	Depth	Quantity	Fins Per In	
1	Cooling	48 In	24 In		4	8	 

Previous Step Cancel Next Step

Click to add Coil information

Add Coil

Coil type:

Length:

Width:

Fins per In

Depth Quantity:



Select Coil type.



Select "Coil Type" before completing the remaining coil information.

Add Coil



Coil type:

Select Type



Select Coil type.

Length:

Pre Heat

Width:

Heating

Fins per In

Cooling

Fog elimination

Depth Quantity:

Dehumidifier

Humidifier

Other

vs Depth



Add

Cancel

This is the drop down for selecting "Coil Type."

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



START TEST

Click "Start Test"

← Previous Step Cancel

⚠ WARNING ✕

Ensure everybody is clear of any potential system moving parts, ie motors, fans, pulleys, belts, etc.

⚠ Danger: Arc Flash And Shock Hazard - Appropriate PPE Required. ✕

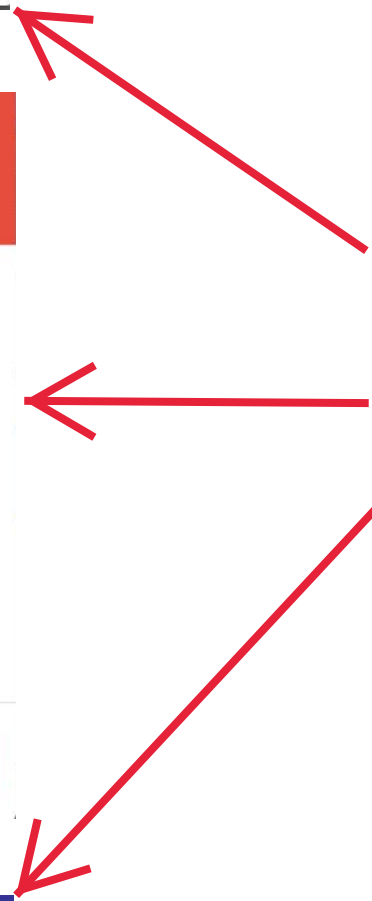
- Do not operate controls or open covers without appropriate Personal Protection Equipment (PPE). Failure to comply may result in Injury or Death.
- Refer to NFPA 70E for minimum PPE Requirements.
- Warning NFPA code requirements may change, always check for current or updated code requirements
- Request a qualified and licensed electrician to collect voltage and Current/Amperage data if not ARC Flash Trained

Warning: Above is understood and will be adhered to.

Is the fan turning in the correct rotation/direction?

These are three of the most common safety warnings that will appear throughout AMPs software.

You will be required to acknowledge each warning individually in order to proceed.



1 Step 1 General information
2 Step 2 Commissioning
3 Step 3 Nameplates Fan - Motor
4 Step 4 Additional components
5 Step 5 Testing and report
6 Step 6 Report

Actuals
R:1 > #1
R:1 > #2

Individual Fan Array Tag Identifier:

Motor Actual RPM:

Select Voltage that best represents Actual read:
 208V
 230V
 480V
 Voltage Not Listed

Nameplate Volts: 208V 230V 480V
 Nameplate Amps: 40A 40A 20A

WARNING
 1. Single Phase and 3 Phase Voltages are recorded from Phase to Phase, not Phase to Ground.

VFD/PWM Only displays 1 Voltage and 1 Amperage

Motor Actual Volts:
 L1 -L2
 L1 -L3
 L2 -L3

Motor Actual Amps:

System Outside Air Read By:

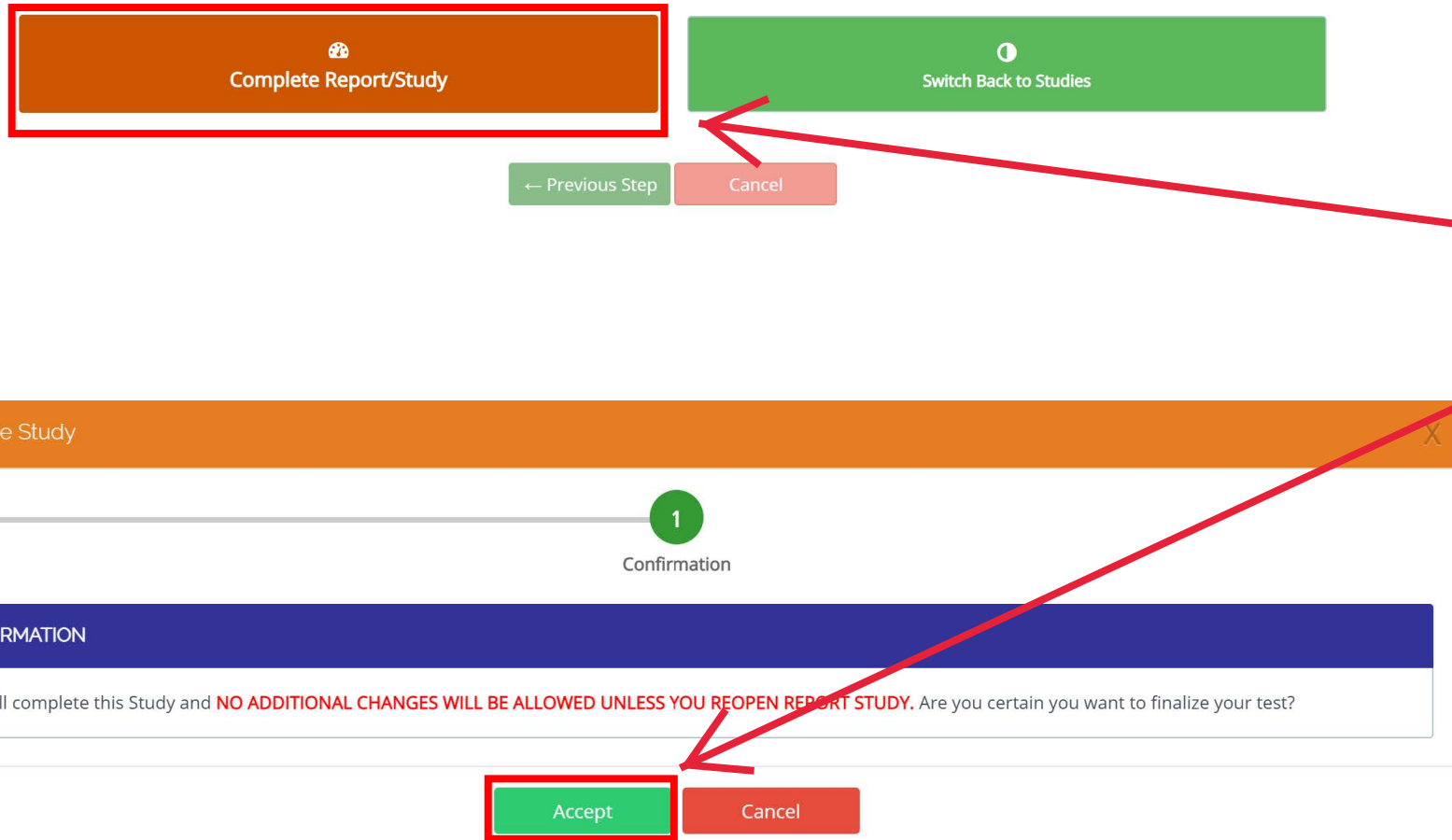
SYSTEM SPACE PRESSURIZATION DATA

Space Pressurization (In/WC)	Space Pressurization to	System Pressurization Comment

Enter Actual Motor Data

The screenshot displays the 'ACTUALS' section of the AMP Audit Master PRO software. A red-bordered dialog box titled 'Important' is centered on the screen, containing the text: 'It's understood that continuing forward without filling in the required data will result in an incomplete final Study. Do you wish to still continue forward?' with 'Yes' and 'No' buttons. Below the dialog, a red arrow points to a warning message: 'WARNING: Actual Amps exceed referenced nameplate Amp rating in lines 1, 2 & 3'. The background interface includes a 'WARNING' banner at the top left, a 'VFD/PWM Only displays 1 Voltage and 1 Amperage' checkbox, and input fields for 'Motor Actual Volts' and 'Motor Actual Amps'.

Warnings will auto-populate if critical information is left blank.



After all data has been entered, the last steps will be to:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Electric Coil AHU Mixed Air Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

FANR
Engineered Fan Report

FANA
Engineered Fan Array Report

COEA
Electric Coil AHU Mixed Air Report

COET
Electric Coil Terminal Device Report

STAT
Static Pressure Report

PITO
Pitot Traverse Report

PITF
Pitot Fan Report

OUTM
Outlet Master Report

VAVR
VAV Test Report

CAVR
CAV Test Report

FPBR

VELG

Click "Electric Coil AHU Mixed Air Report"

For Additional Report Sheets Scroll Down

Close

ELECTRIC COIL AHU MIXED AIR REPORT

Studies Private Notes Comments Deficiencies Menu of Use CAV Controls Testing Link Cost

Step 1 System configuration Step 2 Coil data configuration Step 3 Data capture and report Step 4 Report

Project Name: Test Project

System: AHU 1

Room/Area Served: 9th Floor

Description:

Automatically Fill Next Row & Item:

Note: It is recommended the airflow flowing through the coil(s) listed below be balanced with known flows available prior to recording heat transfer data.

Airflow(s) that effect the coils was balanced with "known flows/values" prior to performing detailed Coil Heat Transfer Performance Recordings:

Cancel

Yes
Yes, but over 1 year ago
No
Unknown
Not Part Of This Contract
Was told Yes by others

Enter System Information

Select which answer best reflects the airflow balancing statement shown.

ELECTRIC COIL AHU MIXED AIR REPORT

Studies Private Notes Comments Deficiencies Mem of Und CW Orders Testing Unit Cost

1

Step 1

System configuration

2

Step 2

Coil data configuration

3

Step 3

Data capture and report

4

Step 4

Report

E=mc²
Conversion

Electric Heat Transfer Performance Data

Add All

Add DESIGN Coil BTU/H Sensible

Add ACTUAL Coil BTU/H Sensible

Airflow Heat Transfer Performance Data

Add All

Add DESIGN Airflow - ΔT °F DB Column (Sensible)

Add ACTUAL Airflow - ΔT °F DB Column (Sensible)

Add DESIGN Airflow - Coil Δ SP In/WC Column

Add ACTUAL Airflow - Coil Δ SP In/WC Column

Add DESIGN Airflow - % RH, WB, DP Column

Add ACTUAL Airflow - % RH, WB, DP Column

Add DESIGN Coil Airflow

Add ACTUAL Coil Airflow

When collecting Airflow Transfer Data use: Relative Humidity Wet bulb F Dew Point

← Previous Step Cancel Next Step →

Select Coil Configuration

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



#	Rated Hz	Rated Phase	Actual Phase	Rated Volt	Rated Amp	Steps	Stages	Rated kW	Actual kW
1	60	3 Phase	3 Phase	480.00	20.00	0	2	12.00	
Totals								12.00	13.35

Actual System Total Combined Electric BTU/H 45,562,819

Item 1

Device Mfg: generic

Device Model: 123

Design Total Electric Coil BTU/H

(Plans/Print) Design Coil BTU/H Total: 120,000,000

Actual Total Electric Coil BTU/H: 45,562,812

% of Design: 37.97%

Electric Resistance Heating Devices

Indicate the number of Electric Resistance Heating Devices: 3

Actual Airflow - ΔT F DB

Up Stream Coil Air Temperature Dry Bulb °F	55.000
ΔT °F DB	70.00
Down Stream Coil Air Temperature Dry Bulb °F	134.000

Design Airflow - RH %

(Plans/Print) Design Coil Air: 120,000

Design Airflow - Coil Δ SP In/WC

(Plans/Print) Design Coil Δ SP In/WC: 1,400

(Plans/Print) Design Airflow CFM: 1,000,000

Actual Airflow CFM: 987,000

% Design: 98.70%

Bank 1

Bank Not Operational/Not Used At Time of testing

Bank Identifier: Circuit #, Specific Code for this Bank

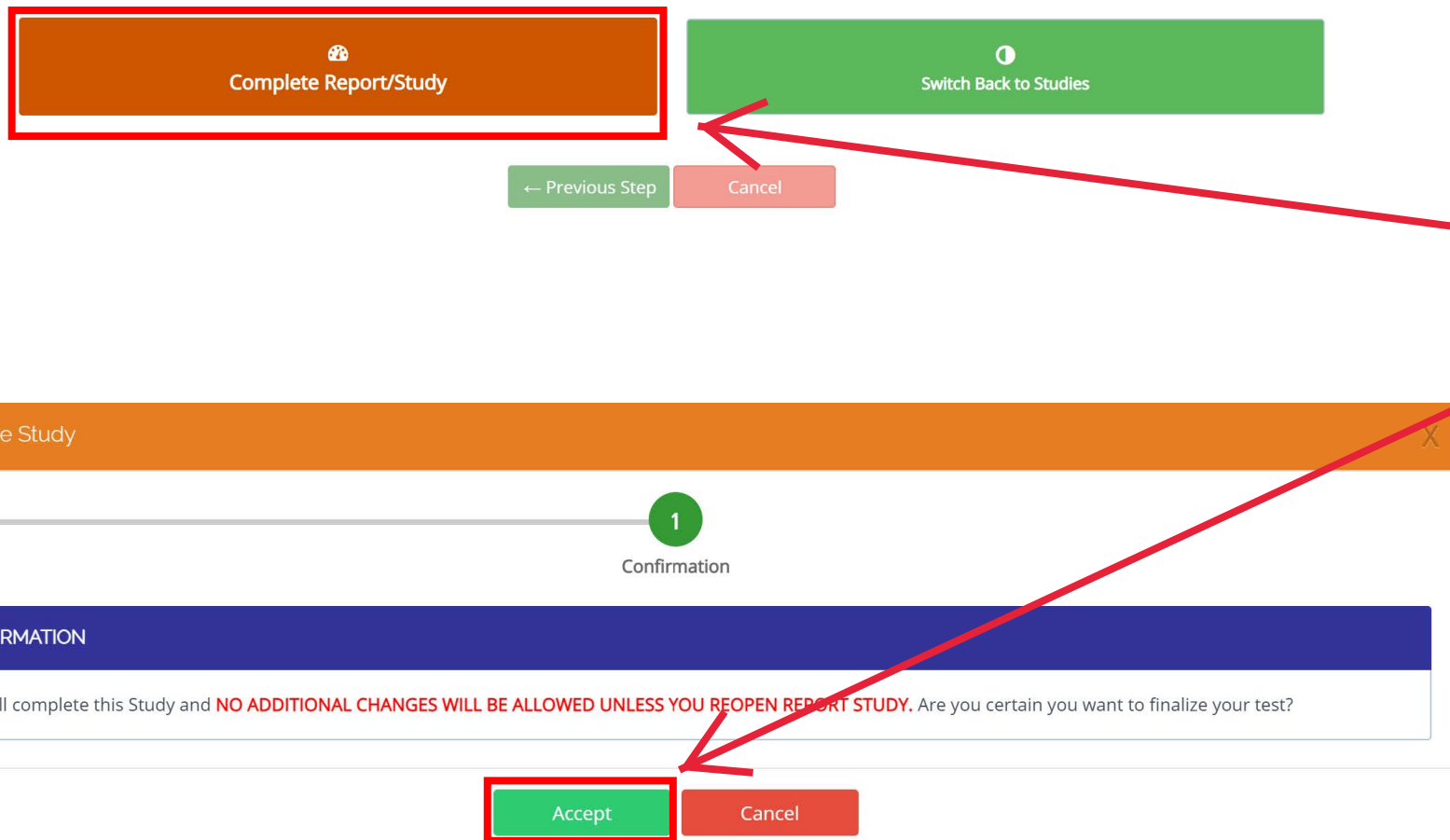
	Volts	Amps	
Line 1:	480.000	15.000	<input type="checkbox"/> Not Operational
Line 2:	456.000	17.200	<input type="checkbox"/> Not Operational
Line 3:	438.000	18.300	<input type="checkbox"/> Not Operational

Update Bank

Update Cancel

← Previous Step Next Step →

Enter Actual Coil Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Electric Coil Terminal Device Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

AIR REPORT TEMPLATES

FANR



Engineered Fan Report

FANA



Engineered Fan Array Report

COEA



Electric Coil AHU Mixed Air Report

COET



Electric Coil Terminal Device Report

STAT



Static Pressure Report

PITO



Pitot Traverse Report

PITF



Pitot Fan Report

OUTM



Outlet Master Report

VAVR



VAV Test Report

CAVR



CAV Test Report

FPBR

VELG



Click "Electric Coil Terminal Device Report"

For Additional Report Sheets Scroll Down

Close

ELECTRIC COIL TERMINAL DEVICE REPORT



1

Step 1

System configuration

2

Step 2

Coil data configuration

3

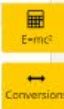
Step 3

Data capture and report

4

Step 4

Report



Project Name Test Project

System

Description

Add All Coil Airflows to VAV/CAV/FPB System Total

Add All Coil Airflows to VAV/CAV/FPB Outlet Total

Add Total BTU/H to System Total

Automatically Fill Next Row & Item

Note: It is recommended the airflow flowing through the coil(s) listed below be balanced with known flows available prior to recording heat transfer data.

Airflow(s) that effect the coils was balanced with "known flows/values" prior to performing detailed Coil Heat Transfer Performance Recordings:

Select Airflow Response ▾

Cancel

Enter System Information

ELECTRIC COIL TERMINAL DEVICE REPORT

- Studios
- Private Notes
- Comments
- Deficiencies
- Menu of Use
- CW Orders
- Testing Unit Cost

1

Step 1

System configuration

2

Step 2

Coil data configuration

3

Step 3

Data capture and report

4

Step 4

Report

Erms²
Conversion

Electric Heat Transfer Performance Data

Add All

Add **DESIGN** Coil BTU/H Sensible

Add **ACTUAL** Coil BTU/H Sensible

Airflow Heat Transfer Performance Data

Add All

Add **DESIGN** Airflow - ΔT °F DB Column (Sensible)

Add **ACTUAL** Airflow - ΔT °F DB Column (Sensible)

Add **DESIGN** Airflow - Coil & SP In/WC Column

Add **ACTUAL** Airflow - Coil & SP In/WC Column

Add **DESIGN** Airflow - % RH, WB, DP Column

Add **ACTUAL** Airflow - % RH, WB, DP Column

Add **DESIGN** Coil Airflow

Add **ACTUAL** Coil Airflow

- ← Previous Step
- Cancel
- Next Step →

Enter Coil Configuration

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



Stacked Coil Configuration

E=mc²
Conversion

#	Room or Area Served	Rated Hz	Rated Phase	Actual Phase	Rated Volt	Rated Amp	Steps	Stages	Rated kW	Actual kW
1	5th Floor	60	3 Phase	3 Phase	460.00	12.00	2	3	10.00	
2	5th Floor	60	3 Phase		460.00	12.00	1	1	10.00	
Totals									20.00	0.00

1 2 + -

Item: 1

Device Mfg:

Device Model:

Design Total Electric Coil BTU/H

(Plans/Print) Design Coil BTU/H Total:

Actual Total Electric Coil BTU/H

Actual Total Coil BTU/H:

% of Design:

Electric Resistance Heating Device(s)

Indicate the number of Electric Resistance Heating Devices:

Design Airflow - ΔT °F DB

(Plans/Print) Design Coil Air Temperature ΔT °F DB:

Actual Airflow - ΔT °F DB

Up Stream Coil Air Temperature Dry Bulb °F:

ΔT °F DB:

Down Stream Coil Air Temperature Dry Bulb °F:

(Plans/Print) Design Airflow CFM:

Actual Airflow CFM:

% Design:

Enter Actual Coil Data

Coil's Electric Resistance Heating Devices ✕

You are about to decrease the number of Electric Resistance Heating Devices in this Coil.
You will lose the data permanently.
Are you certain you want to continue?

Yes

No

Confirm to continue

1

2

Item: 2

Device Mfg	Generic
Device Model	123
Design Total Electric Coil BTU/H	
(Plans/Print) Design Coil BTU/H Total	18,000.000
Actual Total Electric Coil BTU/H	
Actual Total Coil BTU/H	7,864.65
% of Design	43.69%
Design Airflow Coil BTU/h Total	
(Plans/Print) Design Total Coil BTU/H	18,000.000
Electric Resistance Heating Device(s)	
Indicate the number of Electric Resistance Heating Devices:	<input type="range" value="1"/>

Design Airflow - ΔT °F DB	
(Plans/Print) Design Coil Air Temperature ΔT °F DB	140.000
Actual Airflow - ΔT °F DB	
Up Stream Coil Air Temperature Dry Bulb °F	55.000
ΔT °F DB	85.000
Down Stream Coil Air Temperature Dry Bulb °F	140.000
(Plans/Print) Design Airflow CFM	
(Plans/Print) Design Airflow CFM	500.000
Actual Airflow CFM	
Actual Airflow CFM	510.000
% Design	
% Design	102.00%

1

Bank 1

Bank Not Operational/Not Used At Time of testing

Bank Identifier:

Line 1: Volts Amps

Enter Actual Coil Data

Complete Report/Study

Switch Back to Studies

← Previous Step

Cancel

After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Complete Study

1

Confirmation

CONFIRMATION

This will complete this Study and **NO ADDITIONAL CHANGES WILL BE ALLOWED UNLESS YOU REOPEN REPORT STUDY.** Are you certain you want to finalize your test?

Accept

Cancel

Audit Master Pro Training

Static Pressure Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

FANR
Engineered Fan Report

FANA
Engineered Fan Array Report

COEA
Electric Coil AHU Mixed Air Report

COET
Electric Coil Terminal Device Report

STAT
Static Pressure Report

PITR
Pitot Traverse Report

PITF
Pitot Fan Report

OUTM
Outlet Master Report

VAVR
VAV Test Report

CAVR
CAV Test Report

FPBR

VELG

Click "Static Pressure Report"

For Additional Report Sheets Scroll Down

Close

STATIC

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost

1

Step 1

Test information

2

Step 2

Components

3

Step 3

Report

E=mc²
Conversions

Project Name: Test Project

System: AHU 1

Equipment location: 1st Floor

Area served: 1st Floor

Update

Cancel

Next Step →

Enter System Information

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

STATIC

Studies Private Notes Comments Deficiencies Mem of Und CW Orders Testing Unit Cost



E=mc²
Conversion

+ Add Components

Id	Point	Component	**Fan Inlet & Discharge Dimensions**	Pressure Designation	Pressure In/WC	Total S.P. Drop	TP	FTP	FSP	**Actual Fan System CFM Total**	Delete
----	-------	-----------	--------------------------------------	----------------------	----------------	-----------------	----	-----	-----	---------------------------------	--------

Update Cancel
← Previous Step Next Step →

Click "Add Components" to select the Category, Sub-Category and Components for the Static Pressure Test.

Dimensions**

Select component

Category:

Fans

Sub category:

Outside Air Intake/Return Air

Dampers

Filters

Heat Transfer Device

Component:

Fans

Specialty & Common Items

Duct Fittings

Miscellaneous

Accept

Select Category for
Static Pressure Test.

Dimensions**

Select component ✕

Category: Fans ▼

Sub category: Single ▼

Component: ▼

- Inlet
- Discharge
- Fan Inlet (Rectangular)
- Fan Inlet (Round)
- Fan Discharge (Rectangular)
- Fan Discharge (Round)
- Supply
- Return
- Exhaust
- Supply Array
- Return Array
- Exhaust Array
- Other

Accept

CT COMPONENT		0.000	
CT COMPONENT		0.000	0.000
CT COMPONENT		0.000	

Select the Component where Static Pressure is being taken.

Select component

Category: Fans

Sub category: Single

Component: Discharge

Component Drop can't be performed due to Zero Tolerance Spacing Between

Component Drop can't be performed due to Concerns of Drilling and Potential Component Damage

Accept

Click the box that best reflects why Static Pressures cannot be taken. A description box will auto-populate.

STATIC

1
Step 1
Test Information

2
Step 2
Components

3
Step 3
Report

+ Add Components

Id	Point	Component	**Fan Inlet & Discharge Dimensions**	Pressure Designation	Pressure In/WC	Total S.P. Drop	TP	FTP	FSP	**Actual Fan System CFM Total**	Delete
A	Upstream	FILTERS SINGLE FINAL		○+ ○-	0.000	0.000					
A	Downstream	FILTERS SINGLE FINAL		○+ ○-	0.000						
B	Upstream	HEAT TRANSFER DEVICE SINGLE HOT WATER		○+ ○-	0.000	0.000					
B	Downstream	HEAT TRANSFER DEVICE SINGLE HOT WATER		○+ ○-	0.000						
C	Upstream	HEAT TRANSFER DEVICE SINGLE CHILLED WATER		○+ ○-	0.000	0.000					
C	Downstream	HEAT TRANSFER DEVICE SINGLE CHILLED WATER		○+ ○-	0.000						
D	Upstream	FANS SINGLE INLET		○+ ○-	0.000	0.000					
D	Downstream	FANS SINGLE DISCHARGE		○+ ○-	0.000						

← Delete Component

← Manually Refresh Calculations

Update Cancel

← Previous Step Next Step →

Enter Actual Static Pressures














 Print
 Conversion

+ Add Components

id	Point	Component	**Fan Inlet & Discharge Dimensions**	Pressure Designation	Pressure In/WC	Total S.P. Drop	TP	FTP	FSP	**Actual Fan System CFM Total**	Delete
A	Upstream	FILTERS SINGLE FINAL		○+ ●-	0.850	0.160					
A	Downstream	FILTERS SINGLE FINAL		○+ ●-	1.010						
B	Upstream	HEAT TRANSFER DEVICE SINGLE HOT WATER		○+ ●-	1.010	0.340					
B	Downstream	HEAT TRANSFER DEVICE SINGLE HOT WATER		○+ ●-	1.350						
C	Upstream	HEAT TRANSFER DEVICE SINGLE CHILLED WATER		○+ ●-	1.350	0.320					
C	Downstream	HEAT TRANSFER DEVICE SINGLE CHILLED WATER		○+ ●-	1.670						
D	Upstream	FANS SINGLE INLET		○+ ●-	1.670	3.690					
D	Downstream	FANS SINGLE DISCHARGE		●+ ○-	2.020						

Update Cancel
← Previous Step Next Step →

All readings will automatically calculate total pressure drop.

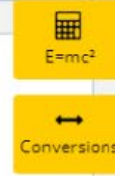
STATIC




1
Step 1
Test information

2
Step 2
Components

3
Step 3
Report




Complete Sub-study


Switch to Main Study

← Previous Step Cancel

Complete Report/Study

Complete Study X



VALIDATE BUILDING PICTURE

Attention: Make your project look more professional by downloading a picture of the **Building or Space** you're testing which will be presented as part of the final report cover.

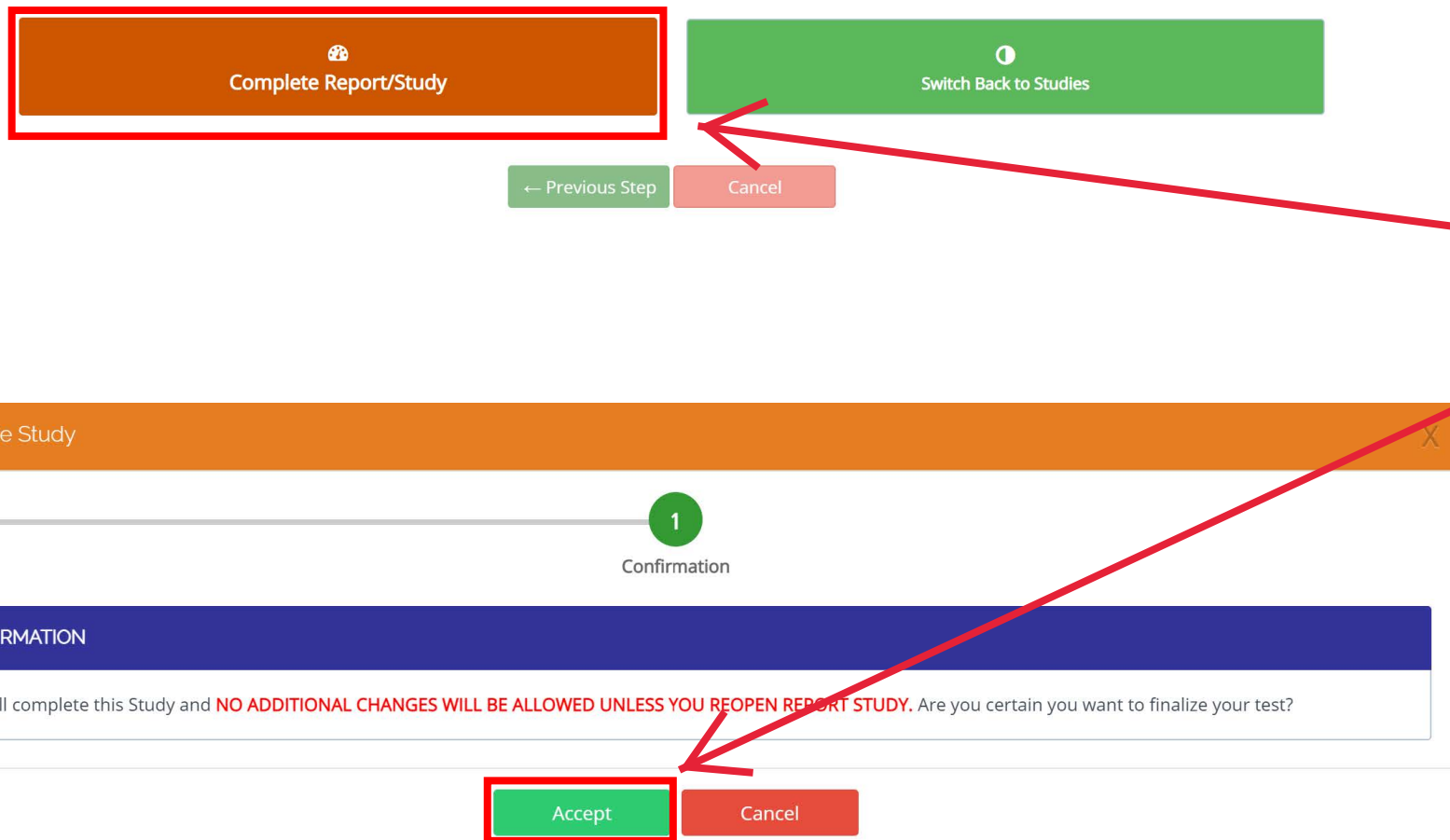
[GO TO UPLOAD A PICTURE](#)

[Cancel](#) [Next Step →](#)



Upload a picture of the building you are working on which will be displayed as the front page of the final report.

Tip: Enter the address into a search engine and copy the photo shown which best represents the building.



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Pitot Traverse Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

FANR



Engineered Fan Report

FANA



Engineered Fan Array Report

COEA



Electric Coil AHU Mixed Air Report

COET



Electric Coil Terminal Device Report

STAT



Static Pressure Report

PITO



Pitot Traverse Report

PITF



Pitot Fan Report

OUTM



Outlet Master Report

VAVR



VAV Test Report

CAVR



CAV Test Report

FPBR

VELG



Click "Pitot Traverse Report"

For Additional Report Sheets Scroll Down

Close

1
Step 1
Pitot configuration

2
Step 2
Pitot configuration

3
Step 3
Create report



Project Name

System

Description

Supply Return Exhaust Outside Air

Part of System total Part of Outlet total

Condition of Test

System operated from a VFD?

Type of Duct Rectangular Round Oval

Method for Measurements AABC Log Tchebycheff Equal Area/TABB NEBB AMCA

OD Duct Dimension Hole Side In OD Duct Dimension Points Side In SQ/FT Internal Insulation In

Desired Pitot hole "distance/location" from disturbance (ie. bend, expansion, contraction)

Desired Down Stream Diameters Desired Up Stream Diameters Total "Ideal Straight" Duct Length In

Max. Straight Duct Available In % of Ideal Pitot Traverse Point Location Dn-Stream In Or Up-Stream In

Total Heat Temperature Correction Required Barometric Correction Required

Required CFM

Enter System Data

Supply

Return

Exhaust

Outside Air

Part of System total

Part of Outlet total

Condition of Test

Select Condition of Test ▾

System operated from a VFD?

NOC (Normal Operating Condition)

100 % Outside Air

Type of Duct

100 % Return Air

Round

Oval

Method for Measurements

100 % Exhaust Air

barcheff

Equal Area/TABB

NEBB

AMCA

Minimum Outside Air

Mixed Air

Other

Dimensional

In

SQ/FT

Internal Insulation

In

OD Duct Dimension Hole Side

Dimensional

Desired Pitot hole "distance/location" from disturbance (ie. bend, expansion, contraction)

Desired Down Stream Diameter

8

Desired Up Stream Diameters

3

Total "Ideal Straight" Duct Length

In

Select Condition of Test

System operated from a VFD?



Hz



%



Other

HZ

43

71.67%

Type of Duct Rectangular

Round

Oval

Method for Measurements AABC

Log Tchebycheff

Equal Area/TABB

NEBB

AMCA

OD Duct Dimension Hole Side ↔

24

In

OD Duct Dimension Points Side ↓

24

In

3.674

SQ/FT

Internal Insulation

.5

In



E=mc²

Desired Pitot hole "distance/location" from disturbance (ie. bend, expansion, contraction)



Conversion

Desired Down Stream Diameters

8

Desired Up Stream Diameters

3

Total "Ideal Straight" Duct Length

285.48

In

Max. Straight Duct Available

176

In

61.65

% of Ideal

Pitot Traverse Point Location

Dn-Stream

In

Or

Up-Stream

In

128.00

48.00

Total Heat



Temperature Correction Required



Barometric Correction Required



Required CFM

Update

Cancel

Next Step →

Enter Data

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

- Studies
- Private Notes
- Comments
- Deficiencies**
- Mem of Und
- C/W Orders
- Testing Unit Cost

1

Step 1

Pitot Configuration

2

Step 2

Pitot Test

3

Step 3

Create Report



Enter Data

Project Name

Test Project

System

Description

Condition of Test

Select Condition of Test ▾

Is system operated from a VFD?



Type of Duct

Rectangular

Round

Oval

Method for Measurements

AABC

Log Tchebycheff

Equal Area/TABB

NEBB

AMCA

OD Duct Dimension Hole Side In OD Duct Dimension Points Side In SQ/FT Internal Insulation In

Desired Pitot hole "distance/location" from disturbance (ie. bend, expansion, contraction)

Desired Down Stream Diameters Desired Up Stream Diameters Total "Ideal Straight" Duct Length

Max. Straight Duct Available In % of Ideal Pitot Traverse Point Location In Or Up-Stream In

Temperature Correction Required Barometric Correction Required

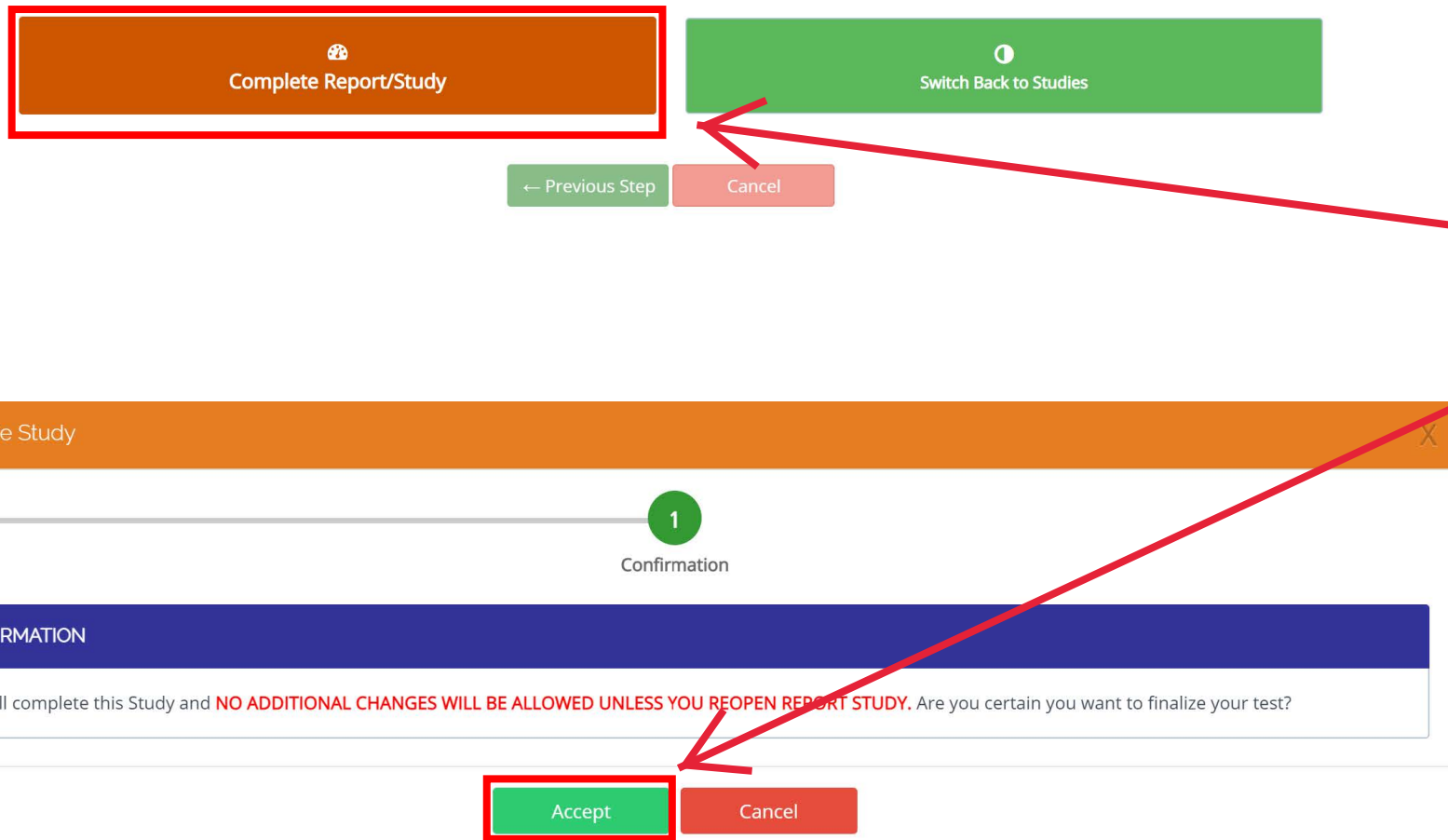
Required CFM

Point Side \ Hole Side	2.20	7.12	12.00	16.88	21.80
2.202	Ft/min	Ft/min	Ft/min	Ft/min	Ft/min
7.124	Ft/min	Ft/min	Ft/min	Ft/min	Ft/min
12	Ft/min	Ft/min	Ft/min	Ft/min	Ft/min
16.876	Ft/min	Ft/min	Ft/min	Ft/min	Ft/min
21.798	Ft/min	Ft/min	Ft/min	Ft/min	Ft/min

Avg Velocity Actual ACFM % of Design Sensible BTU/H

Airflow Temperature For Energy Calculation DB* Required

Enter Pitot Readings



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Pitot Fan Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

FANR



Engineered Fan Report

FANA



Engineered Fan Array Report

COEA



Electric Coil AHU Mixed Air Report

COET



Electric Coil Terminal Device Report

STAT



Static Pressure Report

PITO



Pitot Traverse Report

PITF



Pitot Fan Report

OUTM



Outlet Master Report

VAVR



VAV Test Report

CAVR



CAV Test Report

FPBR

VELG

Click "Pitot Fan Report"

For Additional Report Sheets Scroll Down

Close

1

Step 1
Pitot configuration

2

Step 2
Pitot configuration

3

Step 3
Create report

Project Name

System

Description

Condition of Test

System operated from a VFD?

Type of Duct Rectangular Round Oval

Method for Measurements AABC Log Tchebycheff Equal Area/TABB NEBB AMCA

OD Duct Dimension Hole Side -- In In SQ/FT Internal Insulation In

 E=mc²

 Conversion

Desired Pitot hole "distance/location" from disturbance (ie. bend, expansion, contraction)

Desired Down Stream Diameters Desired Up Stream Diameters Total "Ideal Straight" Duct Length In

Max. Straight Duct Available In % of Ideal Pitot Traverse Point Location In Or In

Total Heat Temperature Correction Required Barometric Correction Required

Required CFM

Enter System Data

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

1
Step 1
Pilot configuration

2
Step 2
Pilot configuration

3
Step 3
Create report

Project Name

System

Description

Condition of Test

Normal Operating Condition Visual Actual
 % O/A % R/A % M/A % Exhaust

Is system operated from a VFD?

Type of Duct Rectangular Round Oval

Method for Measurements AABC Log Tchebycheff Equal Area/TABB NEBB AMCA

OD Duct Dimension Hole Side in in SQ/FT Internal Insulation in

Desired Pilot hole "distance/location" from disturbance (i.e. bend, expansion, contraction)

Desired Down Stream Diameters Desired Up Stream Diameters Total "Ideal Straight" Duct Length

Max. Straight Duct Available in % of Ideal Pitot Traverse Point Location in Or in

Temperature Correction Required

Barometric Correction Required

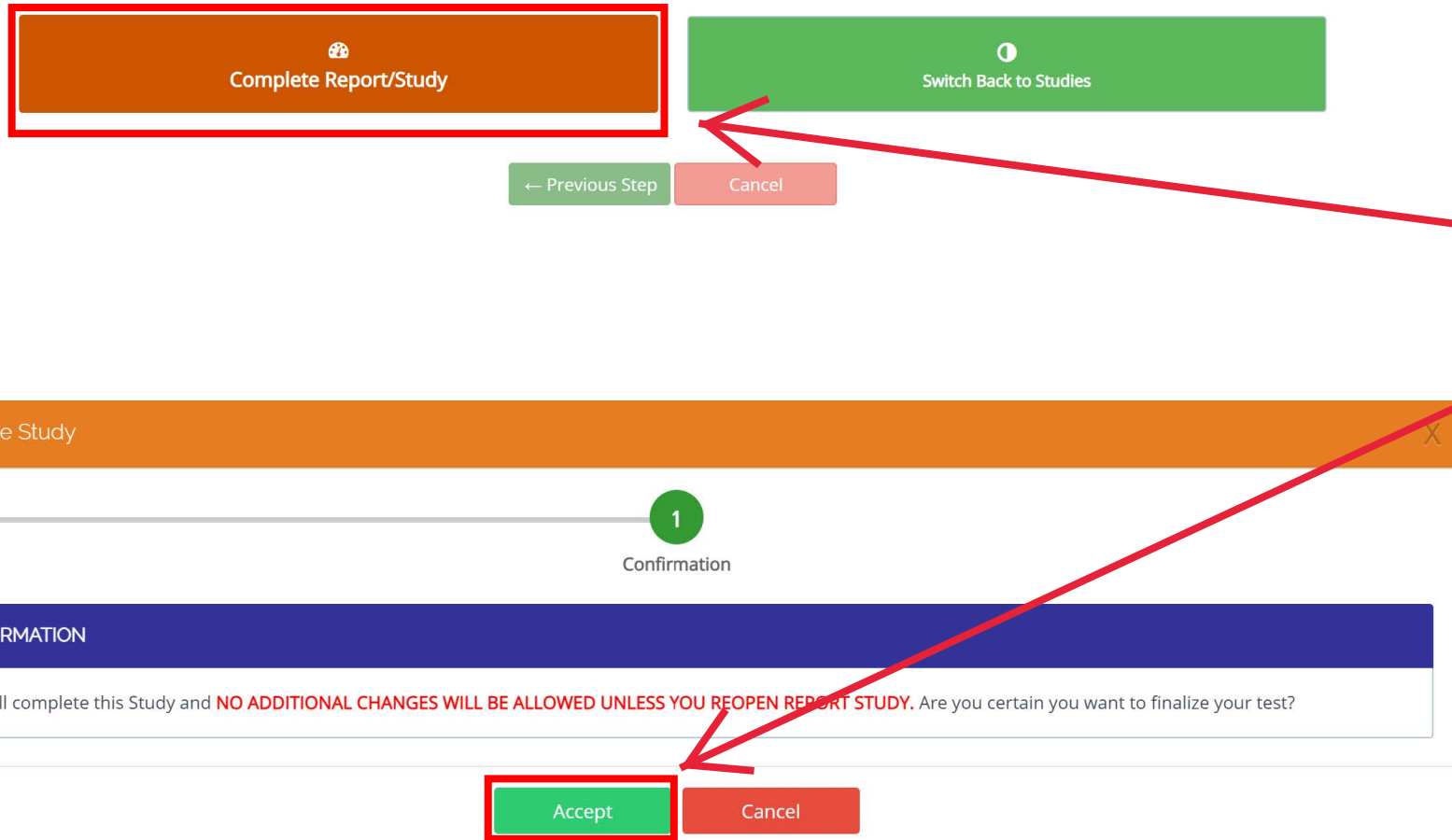
Required CFM

Point Side \ Hole Side	3.00	9.00	15.00	21.00	27.00	33.00
3.00	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min
9.00	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min
15.00	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min
21.00	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min	Pt/min

Avg Velocity Actual ACFM % of Design Sensible BTU/H

Airflow Temperature For Energy Calculation DB ⁺ Required

Enter Pitot Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Outlet Master Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

FANR
Engineered Fan Report

FANA
Engineered Fan Array Report

COEA
Electric Coil AHU Mixed Air Report

COET
Electric Coil Terminal Device Report

STAT
Static Pressure Report

PITO
Pitot Traverse Report

PITF
Pitot Fan Report

OUTM
Outlet Master Report

VAVR
VAV Test Report

CAVR
CAV Test Report

FPBR

VELG

Click "Outlet Master Report"



For Additional Report Sheets Scroll Down

Close

DIFFUSER, REGISTER & GRILLE TEST REPORT

Studies
Private Notes
Comments
Deficiencies
Mem of Und
C/W Orders
Testing Unit Cost

1

Step 1

Outlet information

2

Step 2

Outlet readings

3

Step 3

Report

Project Name

System

Description

Supply
 Return
 Exhaust
 Outside Air

Part of System total
 Part of Outlet total

Fill Next Item
 Temperature Sensible Dry Bulb
 Total Heat
 Diffuser/Grille Neck Size

Minimum Outlet CFM Recorded
 Diffuser / Grille Model

Ewmc!

Conversions

AK F

Enter Outlet Information

#	Room or Area Served	Diff / Grille Rect.	Diff / Grille Round	Grille Length / Diameter	Diff / Grille Width	Balance Damper Missing	AK Factor / SQ/FT	Meter / Device	Required CFM	Not Listed		
1		<input checked="" type="radio"/>	<input type="radio"/>	In	In	<input type="radio"/>	1.000	Hood	1.000	<input type="radio"/>	<input type="button" value="Delete"/>	<input type="button" value="Refresh"/>

Warning: Make sure the AK Factor is correct for all Meter/Devices being used

Add Outlet information shown on prints. If no prints are available, click "Not Listed."

Minimum Outlet CFM Recorded Diffuser / Grille Model

#	Room or Area Served	Diff / Grille Rect.	Diff / Grille Round	Grille Length / Diameter	Diff / Grille Width	Neck Round	Neck Rect.	Neck Length	Neck Width	Balance Damper Missing	AK Factor / SQ/FT	Meter / Device	Required CFM	Not Listed	
1	1st Floor North	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1,000	Hood ▾	250,000	<input type="radio"/>	<input type="button" value="Delete"/> <input type="button" value="Duplicate"/>
2	1st Floor South	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1,000	Hood ▾	250,000	<input type="radio"/>	<input type="button" value="Delete"/> <input type="button" value="Duplicate"/>
3	1st Floor East	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1,000	Hood ▾	250,000	<input type="radio"/>	<input type="button" value="Delete"/> <input type="button" value="Duplicate"/>
4	1st Floor West	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1,000	Hood ▾	250,000	<input type="radio"/>	<input type="button" value="Delete"/> <input type="button" value="Duplicate"/>
												1,000.00			<input type="button" value="+"/>

Warning: Make sure the AK Factor is correct for all Meter/Devices being used

Meter/Device: Choose the equipment being used for this test.

Note: When creating an Outlet, you can select "delete" to remove any outlets or "duplicate" to copy outlets.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

Important ✕

This action will modify your current Item's data. Are you certain you want continue?

Accept

Cancel

Click "Accept"

E=mc²

↔ Conversion

AK F

+

#	Room or Area Served	Diff / Grille Rect.	Diff / Grille Round	Grille Length / Diameter	Diff / Grille Width	Neck Round	Neck Rect.	Neck Length	Neck Width	Balance Damper Missing	AK Factor / SQ/FT	Meter / Device	Required CFM	Not Listed		
1	1st Floor North	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1.000	Hood ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	
2	1st Floor South	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1.000	Hood ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	
3	1st Floor East	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	1.000	Hood ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	
4	1st Floor West	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	8	<input type="radio"/>	0.460	Velgrid ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	
												1,000.00				

Warning: Make sure the AK Factor is correct for all Meter/Devices being used

Cancel Next Step →

Enter Required Outlet Information

DIFFUSER, REGISTER & GRILLE TEST REPORT

Studies
Private Notes
Comments
Deficiencies
Mem of Und
C/W Orders
Testing Unit Cost



E=mc²
Conversions
AK F

Project Name

System

Description

Barometric Pressure

Use Site Specific Default
 "Actual" Barometric Pressure In/Hg

Missing / Extra	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Number #	1	2	3	4
Room or Area Served	1st Floor North	1st Floor South	1st Floor East	1st Floor West

Enter Information

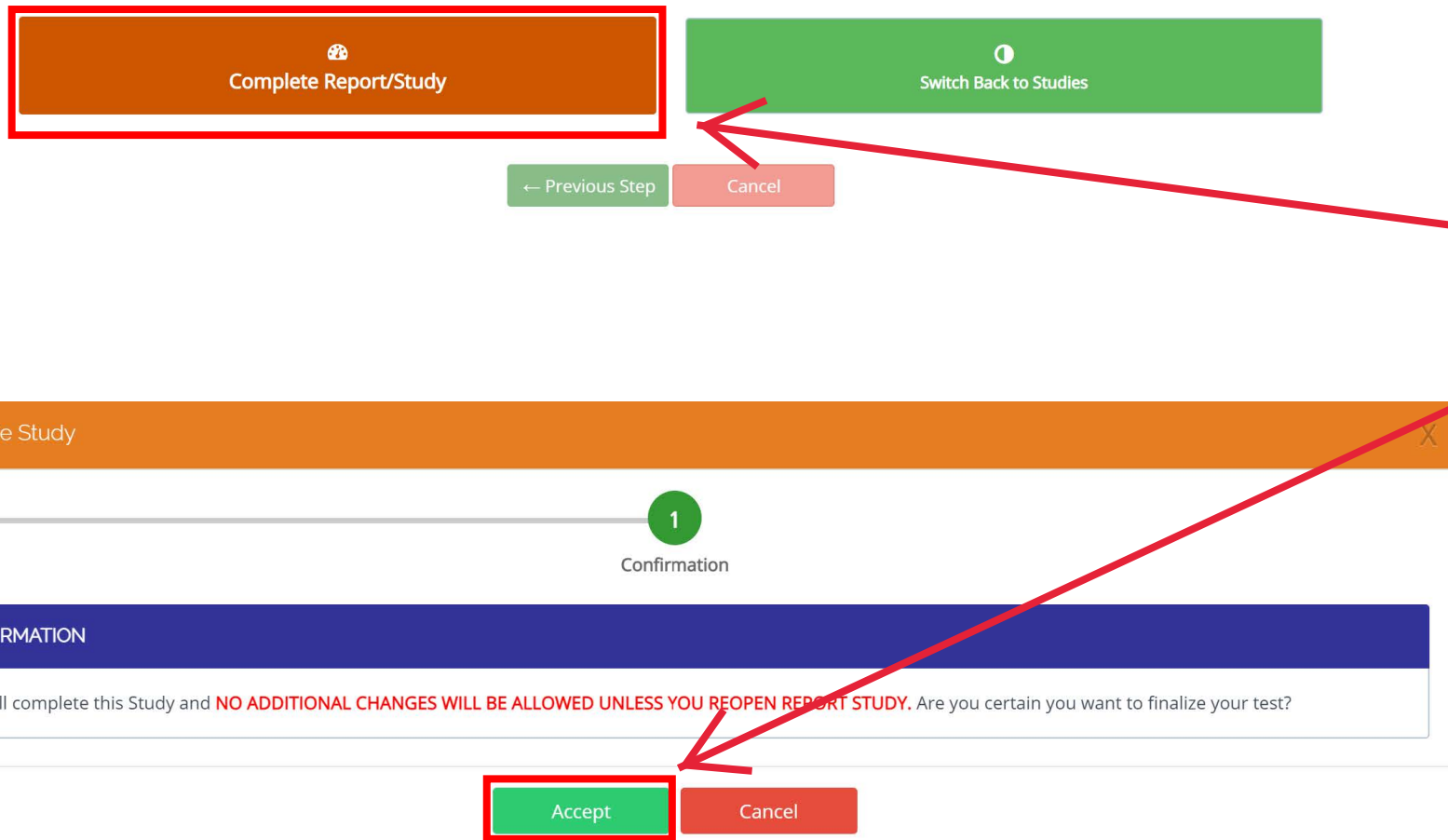
Enter actual outlet readings and information

	Notes	Comments	Deficiencies	Und	Orders	Unit Cost
Minimum CFM Required						
Minimum CFM Recorded						
Actual Minimum Velocity						
Final Corrected Airflow ACFM	241.00	265.00			255.00	246.56
% of Design	96.40%	106.00%			102.00%	98.62%
Min/Max Flows Allowable CFM	225.0 / 275.0	225.0 / 275.0			225.0 / 275.0	225.0 / 275.0
Key Outlet	<input checked="" type="radio"/>	<input type="radio"/>			<input type="radio"/>	<input type="radio"/>
Number #	1	2			3	4
Room or Area Served	1st Floor North	1st Floor South			1st Floor East	1st Floor West



Total Final Corrected Actual Airflow ACFM	1,007.56
Total Required CFM	1000
Percentage	100.76%
Key Outlet / Most Restrictive and Wide Open	1

Note: A key outlet must be selected for every system.



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

VAV Test Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



AIR REPORT TEMPLATES

- | | |
|--|--|
| FANR
Engineered Fan Report | FANA
Engineered Fan Array Report |
| COEA
Electric Coil AHU Mixed Air Report | COET
Electric Coil Terminal Device Report |
| STAT
Static Pressure Report | PITO
Pitot Traverse Report |
| PITF
Pitot Fan Report | OUTM
Outlet Master Report |
| VAVR
VAV Test Report | CAVR
CAV Test Report |
| FPBR | VELG |

Click "VAV Test Report"

For Additional Report Sheets Scroll Down

Close

VAV TEST REPORT

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost

1
Step 1
Controls

2
Step 2
Control configuration

3
Step 3
Outlet readings & Parameters

4
Step 4
Report

E=mc²
Conversions

Control Type: Select Control Type.

Cancel Next Step →



Select Control Type

Box Identifier:

Box Address:

Manufacturer: Manufacturer Not Available

Model Number: Model Number Not Available

Serial Number: Serial Number Not Available

Type of Inlet Duct Round Rectangular

Design Box Inlet Diameter:

Actual Box Inlet Diameter:

SQ/FT:

Box Mfg. Listed/Label CFM Size/Range:



Enter VAV Data

#	Room or Area Served	Diff / Grille Rect	Diff / Grille Round	Length	Width	AK Factor	Meter / Device	Required CFM	Not Listed		
1		<input checked="" type="radio"/>	<input type="radio"/>	In	In	1	Hood ▾	1.000	<input type="radio"/>	<input type="button" value="🗑"/>	<input type="button" value="🔄"/>



Warning: Make sure the AK Factor is correct for all Meter/Devices being used

VAV TEST REPORT

Studies Private Notes Comments Deficiencies Mem of Und CAV Orders Testing Unit Cost



E=mc²
Conversions
AK F

Project Name Test Project

System


Description

Supply Return Exhaust Outside Air

Part of System total Part of Outlet total

Fill Next Item Temperature Sensible Dry Bulb Total Heat Diffuser/Grille Neck Size

Minimum Outlet CFM Recorded Diffuser / Grille Model

1 

Coil Type Linked to this Device: None

Box Identifier:

Box Address:

Note: When creating a VAV, you can select "delete" to remove any VAVs or "duplicate" to copy VAVs.

Minimum Outlet CFM Recorded

Studies Private Notes Comments Deficiencies Mem or Und C/W Orders Testing Unit Cost

VAV 2.1

Coil Type Linked to this Device: None

Box Identifier: VAV 2.1

Box Address: VAV 2.1

Manufacturer: Box Manufacturer Not Available

Model Number: 1234 Model Number Not Available

Serial Number: 4321 Serial Number Not Available

Type of Inlet Duct Round Rectangular

Design Box Inlet Diameter: 16

Actual Box Inlet Diameter: 16

SQ/FT: 1,396

Box Mfg. Listed/Label CFM Size/Range: Go to Mfg's literature

Emo
Conversions
AK

Initial VAV data is locked and protected when entering actual field data.

#	Room or Area Served	Diff / Grille Rect	Diff / Grille Round	Length	Width	AK Factor	Meter / Device	Required CFM	Not Listed		
1	2nd Floor North	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	2nd Floor South	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	250.000	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>

Box Mfg. Listed/Label CFM Size/Range:

[Go to Mfg's literature](#)

#	Room or Area Served	Diff / Grille Rect	Diff / Grille Round	Length	Width	AK Factor	Meter / Device	Required CFM	Not Listed		
1	2nd Floor North	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	1.000	<input type="radio"/>		
2	2nd Floor South	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	1.000	<input type="radio"/>		
3	2nd Floor East	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	1.000	<input type="radio"/>		
4	2nd Floor West	<input checked="" type="radio"/>	<input type="radio"/>	24	24	1	Hood ▾	1.000	<input type="radio"/>		
								4.00			

CALCULATED CFM RANGE
 Approximate Industry Calculated CFM Range for this VAV based on its 8.00 In inlet neck size: [471.24] CFM Minimum and [785.40] CFM Maximum



Warning: Make sure the AK Factor is correct for all Meter/Devices being used

The stated neck size will automatically calculate a velocity range that the VAV can provide in terms of ideal CFM.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

Identifying Optimum Fan System Operating Static Pressure (or) Set Point when finished balancing any VAV, CAV or FPB System:

AK F

Parameters

Parameter

Custom Parameters

Name

Cancel

← Previous Step Next Step →

Default selected parameters to all boxes associated to this fan system

You are able to save the parameters on a VAV as the default.

This will be the default standard for all subsequent VAVs.

Parameters and Custom Parameters can be added based on project design requirements.

Total Final Corrected Actual Airflow ACFM 991.00

Total Required CFM 1,000.00

Total ACFM Percentage 99%

Balancing a VAV, CAV or FPB System with a Designed Diversity:



Identifying Optimum Fan System Operating Static Pressure (SP) Set-Point when finished balancing any VAV, CAV or FPB System:



The next page will explain the information icon.



Parameters

Parameter

Default selected parameters to all boxes associated to this fan system

Custom Parameters

Name

Value



Balancing VAV/CAV/FPB Diversity



Balancing a system with designed "Diversity" needs to be balanced at maximum safe ductwork system Static Pressure (SP).

Don't exceed the safe ductwork structural SP which may cause the ductwork to fail and destroy itself.

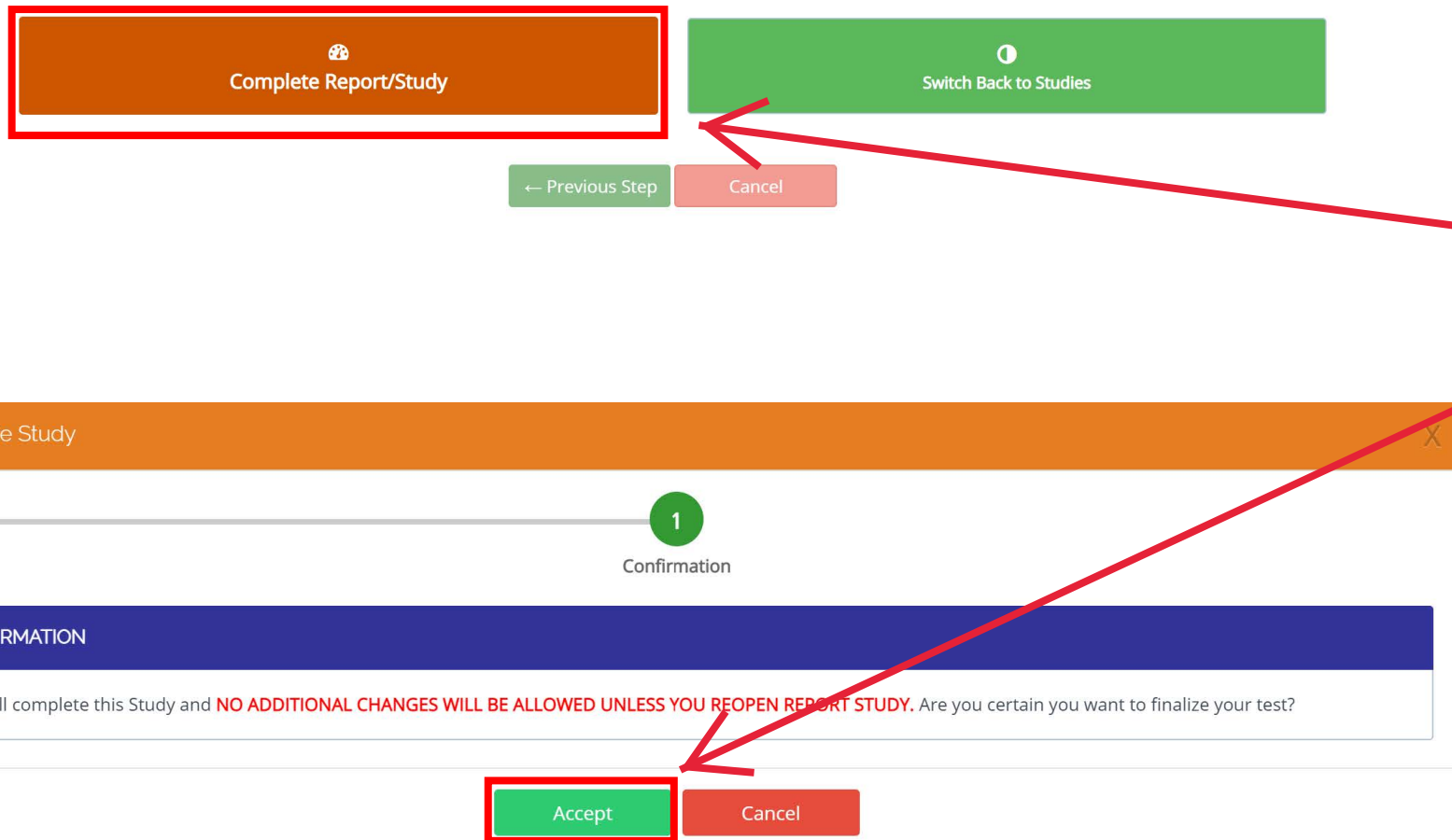
Close other system medium pressure boxes that are equal to or exceed the design system cfm diversity.

Follow this procedure as other terminal boxes need to be balanced in a similar way that show signs of embedded diversity.

Note: CAV Systems shouldn't be designed with any "System Diversity".

Ok

Informational assistance icon



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

CAV Test Report

This tutorial will act as a guide to create and input all data required for the selected air study.

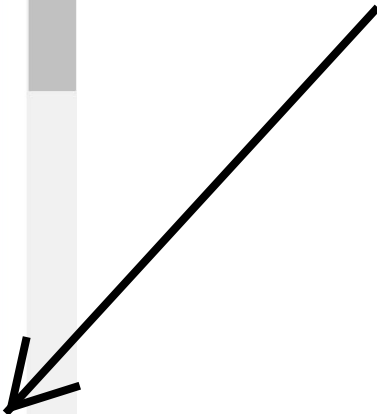
Select the type of report



AIR REPORT TEMPLATES

- | | |
|--|--|
| FANR
Engineered Fan Report | FANA
Engineered Fan Array Report |
| COEA
Electric Coil AHU Mixed Air Report | COET
Electric Coil Terminal Device Report |
| STAT
Static Pressure Report | PITO
Pitot Traverse Report |
| PITF
Pitot Fan Report | OUTM
Outlet Master Report |
| VAVR
VAV Test Report | CAVR
CAV Test Report |
| FPBR | VELG |

Click "CAV Test Report"



For Additional Report Sheets Scroll Down

Close

CAV TEST REPORT



1

Step 1
Controls

2

Step 2
Control configuration

3

Step 3
Outlet readings & Parameters

4

Step 4
Report



Control Type: Select Control Type.

Cancel

Next Step →



Select Control Type



Project Name: Test Project

System: AHU 1

Description:

Fill Next Item
 Temperature Sensible Dry Bulb
 Total Heat
 Diffuser/Grille Neck Size
 Minimum Outlet CFM Recorded
 Diffuser / Grille Model

Generic 123

Coil Type Linked to this Device: Hydronic

Hydronic Coil Type Linked to this Device: Hydronic Hot Water

Box Identifier: Generic 123

Box Address: Generic 123

Manufacturer: 123 Manufacturer Not Available

Model Number: 321 Model Number Not Available

Serial Number: 123 Serial Number Not Available

Type of Inlet Duct: Round Rectangular

Design Box Inlet Diameter: 12

Actual Box Inlet Diameter: 14

SQ/FT: 1.099

Box Mfg. Listed/Label CFM Size/Range: 10 to Mfg's literature

#	Room or Area Served	Diff / Grille Rect	Diff / Grille Round	Length	Width	Neck Round	Neck Rect.	Neck Length	Neck Width	AK Factor	Meter / Device	Required CFM	Not Listed
1	8th Floor	<input checked="" type="radio"/>	<input type="radio"/>	24	24	<input checked="" type="radio"/>	<input type="radio"/>	Diameter:	10	1	Hood	2,000.000	<input type="radio"/>
												2,000.00	

CALCULATED CFM RANGE
 Approximate industry Calculated CFM Range for this VAV based on its 14.00 in inlet neck size: [1,443.17] CFM Minimum and [2,405.28] CFM Maximum

Warning: Make sure the AK Factor is correct for all Meter/Devices being used

Enter CAV Information

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

CAV TEST REPORT

- Studies
- Phase Notes
- Comments
- Deficiencies
- Menu of Use
- CFM Outputs
- Testing Unit Cost



- Enter
- Conversions
- AK F

Project Name: Test Project

System: AHU 1

Description:

Barometric Pressure

Use Site Specific Default:

Actual Barometric Pressure (in Hg) Pb:

Generic 123

Missing / Extra	<input type="radio"/>
Number #	1
Room or Area Served	8th Floor
Diffuser / Grille Type	Rectangle
Diffuser / Grille Dimension(s)	24, 24
Neck Type	Round
Neck Dimension(s)	10
AK Factor	1.00
Meter/Device	Hood ▾
Correct for Barometric	<input type="radio"/>
Correct for Temperature	<input type="radio"/>
Diffuser Temperature DB °F	<input type="text"/>
Required Velocity FPM	
Actual Velocity FPM	0
Required CFM	2,000.00

Enter Actual Data

Required CFM	2,000.00
CFM Read	<input type="text"/>
Minimum CFM Recorded	<input type="text"/>
Actual Minimum Velocity	
Final Corrected Airflow ACFM	
% of Design	
Min/Max CFM	1,800.0 / 2,200.0
Key Outlet	<input type="radio"/>
Number #	1
Room or Area Served	8th Floor

Total Final Corrected Actual Airflow ACFM	0.00
Total Final Minimum ACFM Recorded	0.00
Total Required CFM	2,000.00
Total Required Minimum CFM	<input type="text"/>
Total ACFM Percentage	0
Total Minimum ACFM Percentage	0

Balancing a VAV, CAV or FPB System with a Designed Diversity:

Identifying Optimum Fan System Operating Static Pressure (SP) Set-Point when finished balancing any VAV, CAV or FPB System:

Parameters

Parameter	Select Item	Default selected parameters to all boxes associated to this fan system	Add
Design GPM	<input type="text"/>		

Custom Parameters

Name	<input type="text"/>	Value	<input type="text"/>	+
------	----------------------	-------	----------------------	---

Update Cancel

← Previous Step Next Step →

Print
Conversions
AK F

Enter Actual Data Continued

You are able to save the parameters on a CAV as the default.

This will be the default standard for all subsequent CAVs.

Balancing a VAV, CAV or FPB System with a Designed Diversity: i

Identifying Optimum Fan System Operating Static Pressure (SP) Set-Point when finished balancing any VAV, CAV or FPB System: i

Parameters

Parameter	Select Item	
Design GPM	AK Factor	<input type="text"/>
	AK/K-Flow Factor	<input type="text"/>
Box Inlet Static Pressure	Box Discharge Static Pressure	<input type="text"/>
	Box Discharge Temperatures	<input type="text"/>
	Box Inlet Static Pressure	<input type="text"/>
	Box Inlet Temperatures	<input type="text"/>
	Control Static	<input type="text"/>

Default selected parameters to all boxes associated to this fan system Add

Custom Parameters

Name	Value
<input type="text"/>	<input type="text"/>

Update Cancel

← Previous Step Next Step →

Select Parameters from the drop down menu.

Warning



Low Pressure Terminal/Duct Velocity is considered excessive for the following Neck Sizing, discuss with the design engineer if this is undersized for this installation.

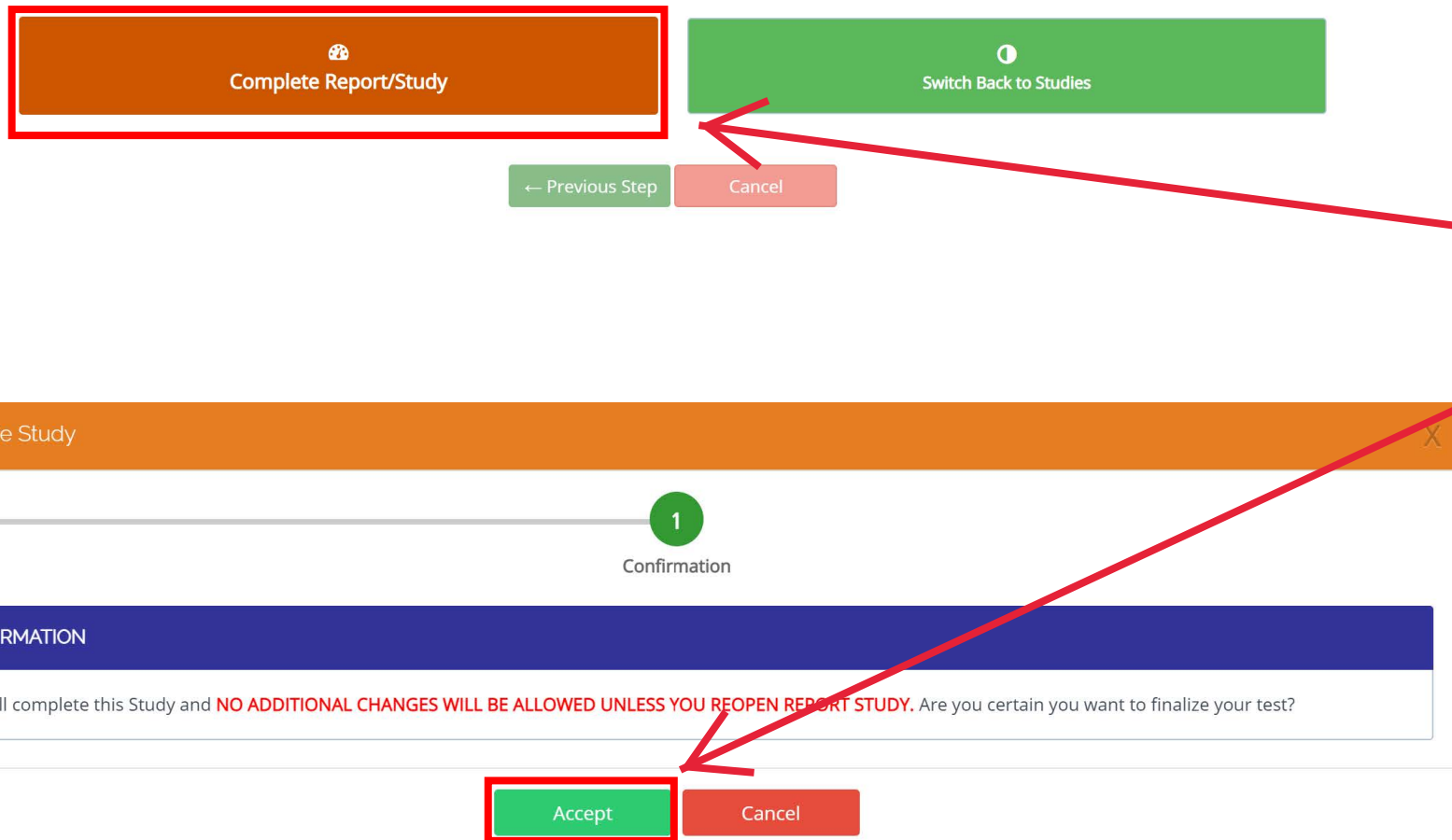
Box Identifier	Room Area Served	Actual SqFt	Actual Velocity
Generic 123	8th Floor	0.5454154	4,028.12

Are you certain you want to move forward?

Cancel

Continue

A warning will appear if the calculated velocity exceeds industry standards for the neck size that is stated to be installed.



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation





Audit Master Pro Training

FPB Test Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

 PITF Pitot Fan Report	 OUTM Outlet Master Report
 VAVR VAV Test Report	 CAVR CAV Test Report
 FPBR FPB Test Report	 VELG Velgrid Report
 MATR General Matrix Report	 RVAR Rotating Vane Anem Report
 FOIL Air Foil Report	 HOTW Hot Wire Anemometer Report
WATER REPORT TEMPLATES	
 PUMP	 COIL

Click "FPB Test Report"

For Additional Report Sheets Scroll Down

Close

FPB TEST REPORT



1

Step 1
Controls

2

Step 2
Control configuration

3

Step 3
Outlet readings & Parameters

4

Step 4
Report



Control Type: Select Control Type.

Cancel

Next Step →



Select Control Type



1

Step 1

Controls

2

Step 2

Control configuration

3

Step 3

Dishes readings & Parameters

4

Step 4

Report

Project Name

System

Description

Fill Next Item

Temperature Sensible Dry Bulb

Total Heat

Diffuser/Grille Neck Size

Minimum Outlet CFM Recorded

Diffuser / Grille Model

Coil Type Linked to this Device: ▼

Box Identifier:

Box Address:

Manufacturer: Manufacturer Not Available

Model Number: Model Number Not Available

Serial Number: Serial Number Not Available

Type of Inlet Duct Round Rectangular

Design Box Inlet Diameter:

Actual Box Inlet Diameter:

SQ/FT:

Box Mfg. Listed/Label CFM Size/Range:

#	Room or Area Served	Diff / Grille Rect	Diff / Grille Round	Length	Width	AK Factor	Meter / Device	Required CFM	Not Listed		
1		<input checked="" type="radio"/>	<input type="radio"/>	in	in	1	Hood ▾	1,000	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>



Warning: Make sure the AK Factor is correct for all Meter/Devices being used

[← Previous Step](#) [Cancel](#) [Next Step →](#)

Enter FPB Information

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



Project Name: Test Project

System: AHU 1

Description: [Redacted]

Barometric Pressure

Use Site Specific Default:

Actual Barometric Pressure (in Hg) Pb:

Generic

Missing / Extra	<input type="radio"/>
Number #	1
Room or Area Served	10th Floor
Diffuser / Grille Type	Rectangle
Diffuser / Grille Dimension(s)	24, 24
AK Factor	1.00
Meter/Device	Hood ▾
Correct for Barometric	<input type="radio"/>
Correct for Temperature	<input type="radio"/>
Diffuser Temperature DB °F	<input type="text"/>
Required Velocity FPM	
Actual Velocity FPM	0
Required CFM	2,000.00
CFM Read	<input type="text"/>
Minimum CFM Recorded	<input type="text"/>
Actual Minimum Velocity	
Final Corrected Airflow ACFM	
% of Design	
Min/Max CFM	1,800.0 / 2,200.0
Key Outlet	<input type="radio"/>
Number #	1
Room or Area Served	10th Floor

Enter Actual Data

Required Velocity FPM	
Actual Velocity FPM	0
Required CFM	2,000.00
CFM Read	
Minimum CFM Recorded	
Actual Minimum Velocity	
Final Corrected Airflow ACFM	
% of Design	
Min/Max CFM	1,800.0 / 2,200.0
Key Outlet	<input type="radio"/>
Number #	1
Room or Area Served	10th Floor

Total Final Corrected Actual Airflow ACFM	0.00
Total Final Minimum ACFM Recorded	0.00
Total Required CFM	2,000.00
Total Required Minimum CFM	
Total ACFM Percentage	0
Total Minimum ACFM Percentage	0

Balancing a VAV, CAV or FPB System with a Designed Diversity:

Identifying Optimum Fan System Operating Static Pressure (SP) Set-Point when finished balancing any VAV, CAV or FPB System:

Parameters

Parameter: Default selected parameters to all boxes associated to this fan system

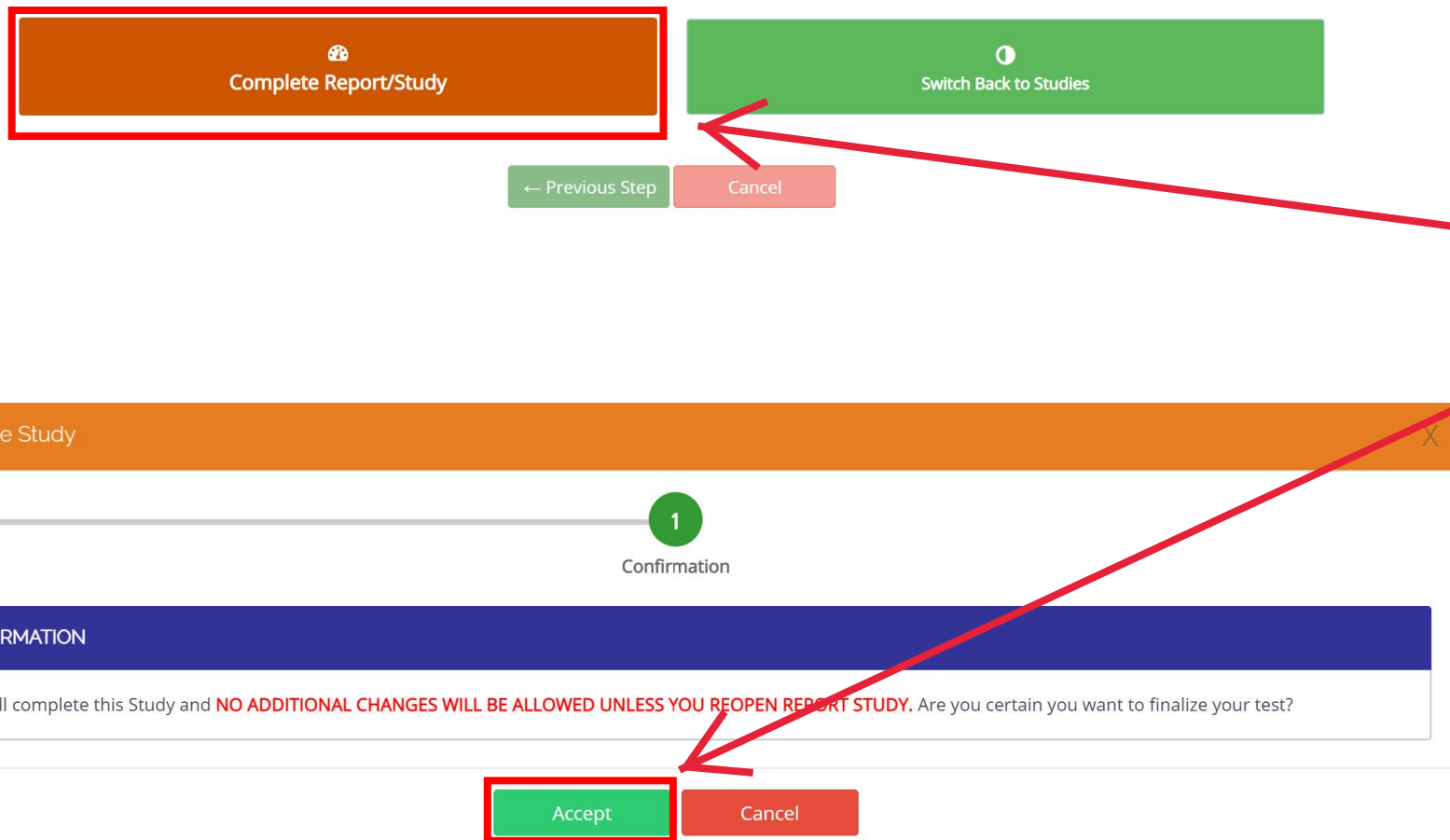
Parallel Flow FPB / Series Flow FPB Parallel Flow FPB Series Flow FPB

Design kW's:

Custom Parameters

Name: Value:

Enter Actual Data Continued



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Velgrid Test Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR FPB Test Report	VELG Velgrid Report
MATR General Matrix Report	RVAR Rotating Vane Anem Report
FOIL Air Foil Report	HOTW Hot Wire Anemometer Report

WATER REPORT TEMPLATES

PUMP	COIL
-------------	-------------



Click "Velgrid Report"

For Additional Report Sheets Scroll Down

Close

Enter Velgrid Information

Description

Type of Terminal Device being tested Rectangular Round

Rectangular Dimension In By In SQ/FT

Number of readings X axis ↔ By Y axis ↓ Custom Matrix

Condition of Test

Normal Operating Condition Visual Damper Position Actual Damper Position

% O/A % R/A %

Total Heat Correct For Temperature Compensation

The number of readings needed will automatically populate.

If a different number of readings is needed, you may select "Custom Matrix" and enter the number of "X" and "Y" axis readings required.

Enter Velgrid readings and additional data

Supply Return Exhaust Outside Air

Part of System total Part of Outlet total

Type of Terminal Device being tested Rectangular Round

Rectangular Dimension 24 In By 24 In 4.00 SQ/FT

Condition of Test NOC (Normal Operating Condition) ▾

Normal Operating Condition Visual Actual

0 % O/A 100 % R/A 100 % M/A % Exhaust

Correct For Temperature Compensation Correct For Barometric Compensation

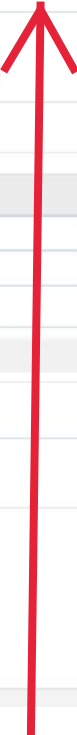
	X 1	2
Y 1	265.000	245.000
2	278.000	234.000

Total Velocity 1,022.00 Avg Velocity 255.50 True Corrected Average Velocity 452.87 Actual ACFM 452.87

Required CFM 1,000.000 AK Factor 1.00 % of Design 45.29%

Airflow Temperature For Energy Calculation 71.23 DB* Relative Humidity 64.00 Relative Humidity Wet bulb F Dew Point

Total BTU/H 58,072.12 Sensible BTU/H 34,915.63



The "AK F" icon will load a calculator to create the factor.

Standard industry Formulas

CALCULATE AK FACTOR WITH KNOWN ACTUAL CFM ▾

CALCULATE AK FACTOR VIA FREE AREA RECTANGULAR ▾

CALCULATE AK FACTOR VIA FREE AREA ROUND ▾

Design or Required Airflow (CFM)

Design or Required A

Grille, Register, Diffuser Inner Diameter (ID) Dimension Inches

Grille, Register, Diffu:

Width of Obstruction Affecting 'X' Face Dimension Inches

Width of Obstruction

Distance Between Obstructions Affecting 'X' Face Dimension

CALCULATE



The "AK F" icon will load this screen for data entry.



Click "Calculate"

AK F

Standard industry Formulas

CALCULATE AK FACTOR WITH KNOWN ACTUAL CFM ▾

Calculate AK Factor with Known Actual CFM Round and Rectangular

Design or Required Airflow (CFM)

1000

Actual Airflow (CFM) derived via Pitot Traverse, Hood, etc

1100

Actual Average Face Velocity (FPM) of the Grille, Register or Diffuser being tested

850

 CALCULATE

Required Velocity to Meet Design Flow (CFM)

772.7

AK Factor

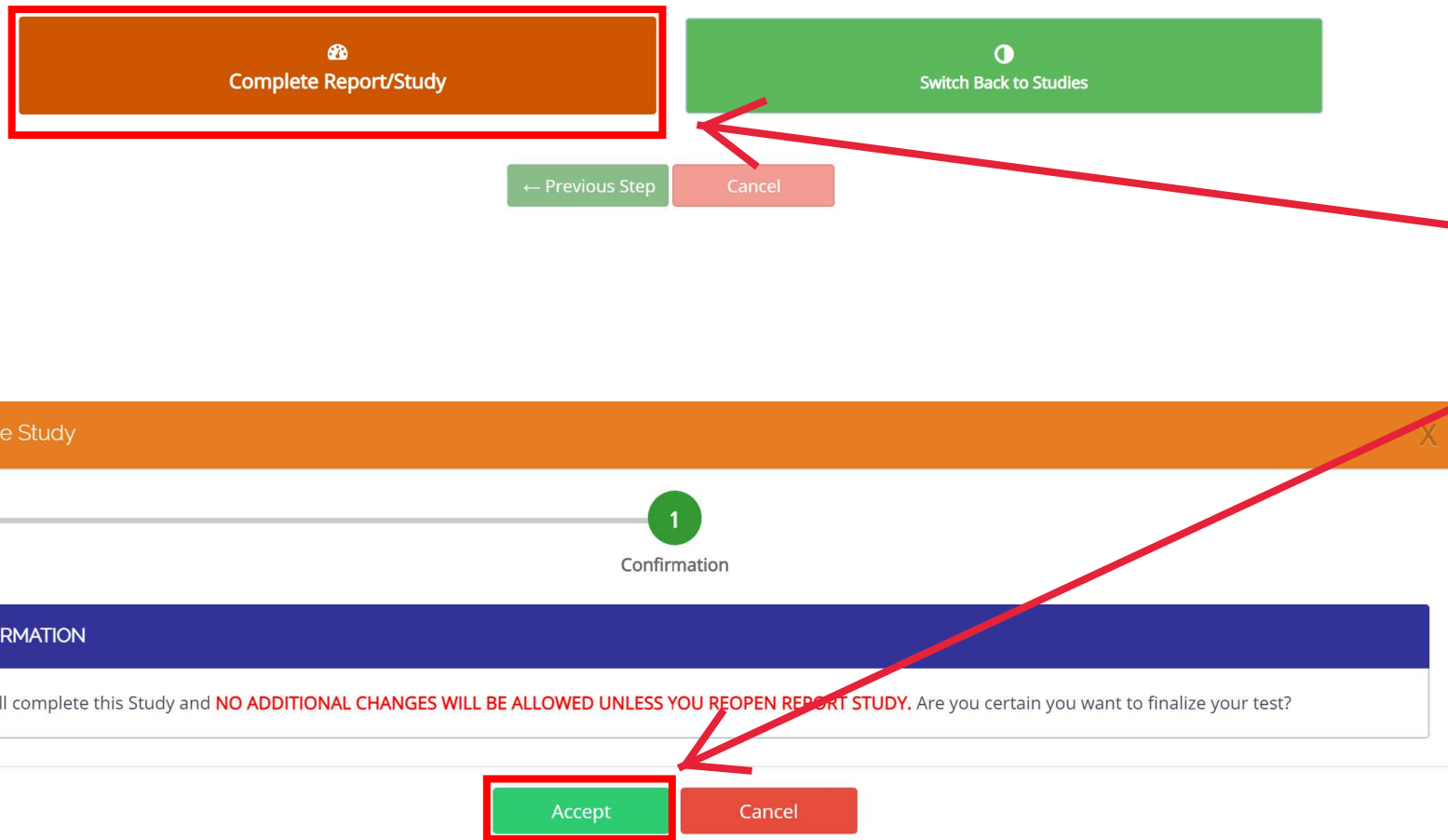
1.294

CALCULATE AK FACTOR VIA FREE AREA RECTANGULAR ▾

CALCULATE AK FACTOR VIA FREE AREA ROUND ▾

← "AK F" Solution example

← Calculated AK Factor



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

General Matrix Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR FPB Test Report	VELG Velgrid Report
MATR General Matrix Report	RVAR Rotating vane Anem Report
FOIL Air Foil Report	HOTW Hot Wire Anemometer Report

WATER REPORT TEMPLATES

PUMP	COIL
-------------	-------------

← Click "General Matrix Report"

For Additional Report Sheets Scroll Down

Close

Enter System Information

GENERAL MATRIX TEST REPORT



1
Step 1
System configuration

2
Step 2
System configuration

3
Step 3
Report



Project Name

System

Description

Type of Terminal/Duct Device being tested Rectangular Round

Rectangular Dimension In By In SQ/FT

Number of readings X axis Y axis

Condition of Test

Normal Operating Condition % O/A Visual Damper Position % R/A % M/A % Exhaust Actual Damper Position

Total Heat Correct For Temperature Compensation Correct For Barometric Compensation

You will be required to enter the desired number of readings for the "X" and "Y" axis. The velocity matrix does not automatically populate reading quantities.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.

1

Step 1
System configuration

2

Step 2
System configuration

3

Step 3
Report

Project Name

System

Description

Type of Terminal Device being tested Rectangular Round

Rectangular Dimension in By in SQ/FT

Number of readings x By

Condition of Test

Normal Operating Condition Visual Actual
 % O/A % R/A % M/A % Exhaust

Correct For Temperature Compensation

Correct For Barometric Compensation

X \ Y	1	2	3	4
1	654	654	654	654
2	654	654	654	654
3	654	654	654	654
4	654	654	654	654

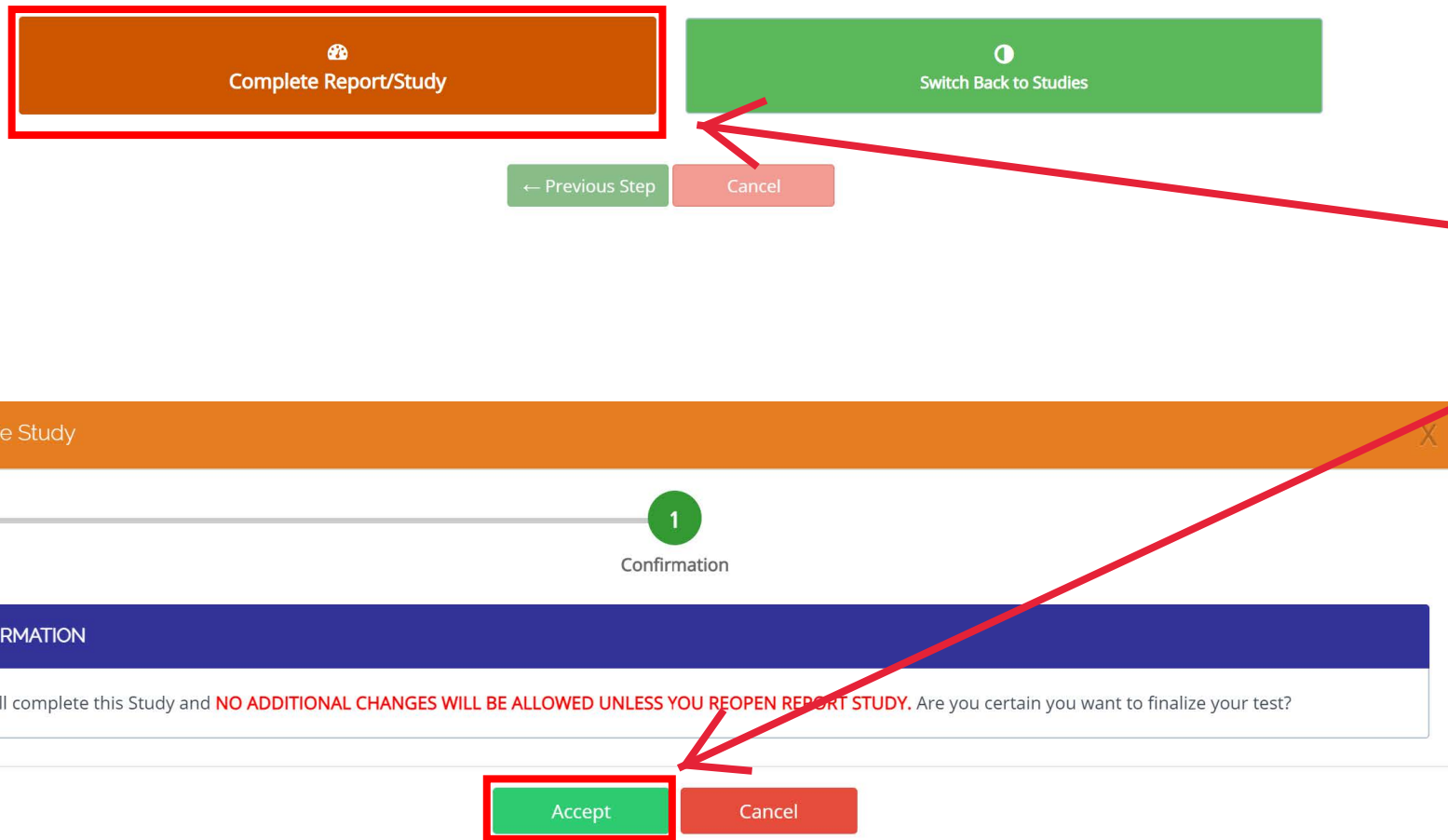
Total Velocity Avg Velocity True Corrected Average Velocity Actual ACFM

Required CFM AK Factor % of Design

Airflow Temperature For Energy Calculation DB*

Sensible BTU/H

Enter Actual Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Rotating Vane Anemometer Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report



PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR FPB Test Report	VELG Velgrid Report
MATR General Matrix Report	RVAR Rotating Vane Anem Report
FOIL Air Foil Report	HOTW Hot Wire Anemometer Report

WATER REPORT TEMPLATES

PUMP	COIL
-------------	-------------

Click "Rotating Vane Anemometer Report"

For Additional Report Sheets Scroll Down

Close

ROTATING VANE ANEMOMETER



1

Step 1

System configuration

2

Step 2

System configuration

3

Step 3

Report

Project Name

System

Description

Type of Terminal/Duct Device being tested Rectangular Round

Rectangular Dimension in By in SQ/FT

RVA Head Diameter (in)

Number of readings By
 By

Condition of Test

Total Heat

Correct For Temperature Compensation

Correct For Barometric Compensation

Enter System Information

Step 1 System configuration Step 2 System configuration Step 3 Report

Project Name: Test Project

System: AHU 1

Description: 6th Floor

Type of Terminal/Duct Device being tested: Rectangular Round

Rectangular Dimension: 4.75 In By 4.75 In 0.16 SQ/FT

RVA Head Diameter (In): 4.25

Number of readings: X axis ↔ 1 By Y axis ↕ 1

Condition of Test: NOC (Normal Operating Condition) ▼

Normal Operating Condition: % D/A % R/A % M/A 100 % Exhaust

Visual Damper Position Actual Damper Position

Total Heat Correct For Temperature Compensation Correct For Barometric Compensation

The Rotating Vane Anemometer (RVA) sheet will automatically calculate the required number of readings based on the entered opening and RVA head size.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is a critical to testing as it ensures that any readings or calibrations are repeatable.

ROTATING VANE ANEMOMETER



1

Step 1
System configuration

2

Step 2
System configuration

3

Step 3
Report

Project Name:

System:

Description:

Type of Terminal Device being tested: Rectangular Round

Rectangular Dimension: In By In SQ/FT

Number of readings: By

Condition of Test:

Normal Operating Condition: Visual Actual
 % O/A % R/A % M/A % Exhaust

Correct For Temperature Compensation: Correct For Barometric Compensation:

Use Sweep method: Enter your total value for "Sweep Method" in the first cell of the matrix, cells will auto populate.

	X	1
Y	1	753

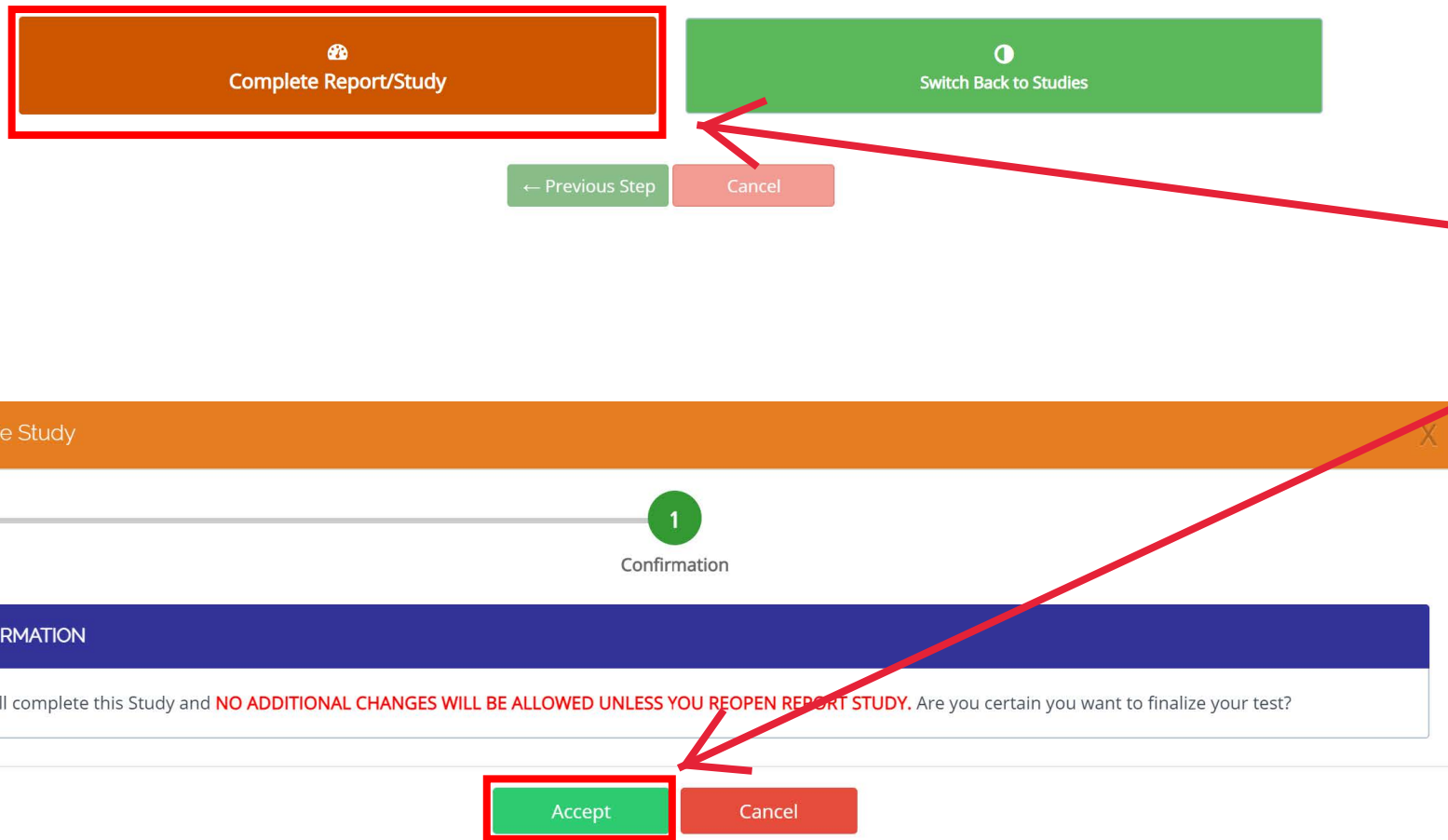
Total Velocity: Avg Velocity: True Corrected Average Velocity: Actual ACM:

Required CFM: AK Factor: % of Design:

Airflow Temperature For Energy Calculation: DB*

Sensible BTU/H:

Enter Actual Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Air Foil Test Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR FPB Test Report	VELG Velgrid Report
MATR General Matrix Report	RVAR Rotating Vane Anem Report
FOIL Air Foil Report	HOTW Hot Wire Anemometer Report
WATER REPORT TEMPLATES	
PUMP	COIL

Click "Air Foil Report"

For Additional Report Sheets Scroll Down

Close

Enter System Data

AIR FOIL

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost

Step 1 System configuration Step 2 System configuration Step 3 Report

Project Name: Test Project

System:

Description:

Type of Duct: Rectangular Round

Rectangular Dimension: Width: In By Height: In SQ/FT

Number of readings: X axis: Left to Right By Y axis: Up and Down

Condition of Test: Select Condition of Test

Total Heat: Correct For Temperature Compensation: Correct For Barometric Compensation:

Update Cancel

Next Step -->

You will be required to enter the desired number of readings for the "X" and "Y" axis. The velocity matrix does not automatically populate reading quantities.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



Project Name: Test Project

System: AHU 1

Description:

Type of Duct: Rectangular Round

Rectangular Dimension: 10 in By 10 in 1.78 SQ/FT

Number of readings: 2 x 2

Condition of Test: NOC (Normal Operating Condition)

Normal Operating Condition: Visual Actual

% O/A % R/A 100 % M/A % Exhaust

Correct For Temperature Compensation: Correct For Barometric Compensation:

	X 1	2
1	456	808
2	787	454

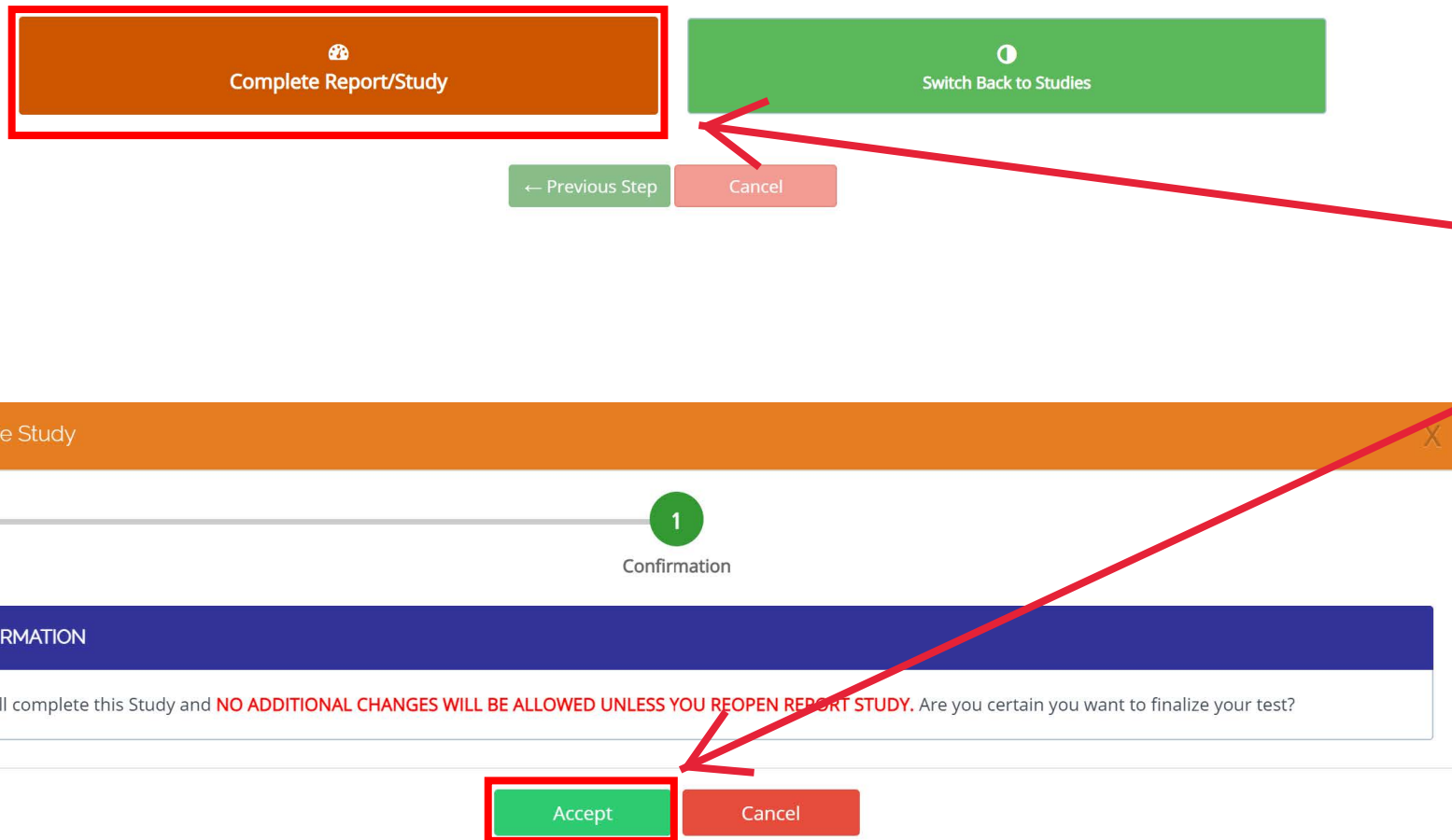
Total Velocity: 2,995.00 Avg Velocity: 648.75 True Corrected Average Velocity: 648.75 Actual ACFM: 648.75

Required CFM: 650.000 AK Factor: 1.00 % of Design: 99.81%

Airflow Temperature For Energy Calculation: 68.00 DB*

Sensible BTU/H: 47,750.08

Enter Actual Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation

Audit Master Pro Training

Hot Wire Anemometer Report

This tutorial will act as a guide to create and input all data required for the selected air study.

Select the type of report

X

PITF Pitot Fan Report	OUTM Outlet Master Report
VAVR VAV Test Report	CAVR CAV Test Report
FPBR FPB Test Report	VELG Velgrid Report
MATR General Matrix Report	RVAR Rotating Vane Anem Report
FOIL Air Foil Report	HOTW Hot Wire Anemometer Report

WATER REPORT TEMPLATES

PUMP	COIL
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Click "Hot Wire Anemometer Report"

For Additional Report Sheets Scroll Down

Close

HOT WIRE ANEMOMETER

Studies Private Notes Comments Deficiencies Mem of Und C/W Orders Testing Unit Cost

Step 1 System configuration Step 2 System configuration Step 3 Report

Project Name Test Project

System AHU 1

Description

Type of Terminal/Duct Device being tested Rectangular Round

Rectangular Dimension 12 In By 12 In 1.00 SQ/FT

Number of readings X axis ↔ 2 By Y axis ↴ 2

Condition of Test NOC (Normal Operating Condition) ▾

Normal Operating Condition % O/A % R/A % M/A % Exhaust

Visual Damper Position Actual Damper Position

Total Heat Correct For Temperature Compensation Correct For Barometric Compensation

Update Cancel

Next Step →

You will be required to enter the desired number of readings for the "X" and "Y" axis. The velocity matrix does not automatically populate reading quantities.

Response required to these questions before continuing

System at steady state for this test Yes No

System steady state will be monitored and maintained for this test Yes No

"Steady State" Defined as a system that is maintaining constant flow and/or temperature based on the testing being performed.

Throughout the AMP software you will be required to verify that the system being tested is at steady state.

Steady state is critical to testing as it ensures that any readings or calibrations are repeatable.



1

Step 1
System configuration

2

Step 2
System configuration

3

Step 3
Report

Project Name

System

Description

Type of Terminal Device being tested Rectangular Round

Rectangular Dimension in By in SQ/FT

Number of readings x y

Condition of Test

Normal Operating Condition Visual Actual
 % O/A % R/A % M/A % Exhaust

Correct For Temperature Compensation

Correct For Barometric Compensation

	X	1	2
Y	1	Pt/min	Pt/min
2	Pt/min	Pt/min	Pt/min

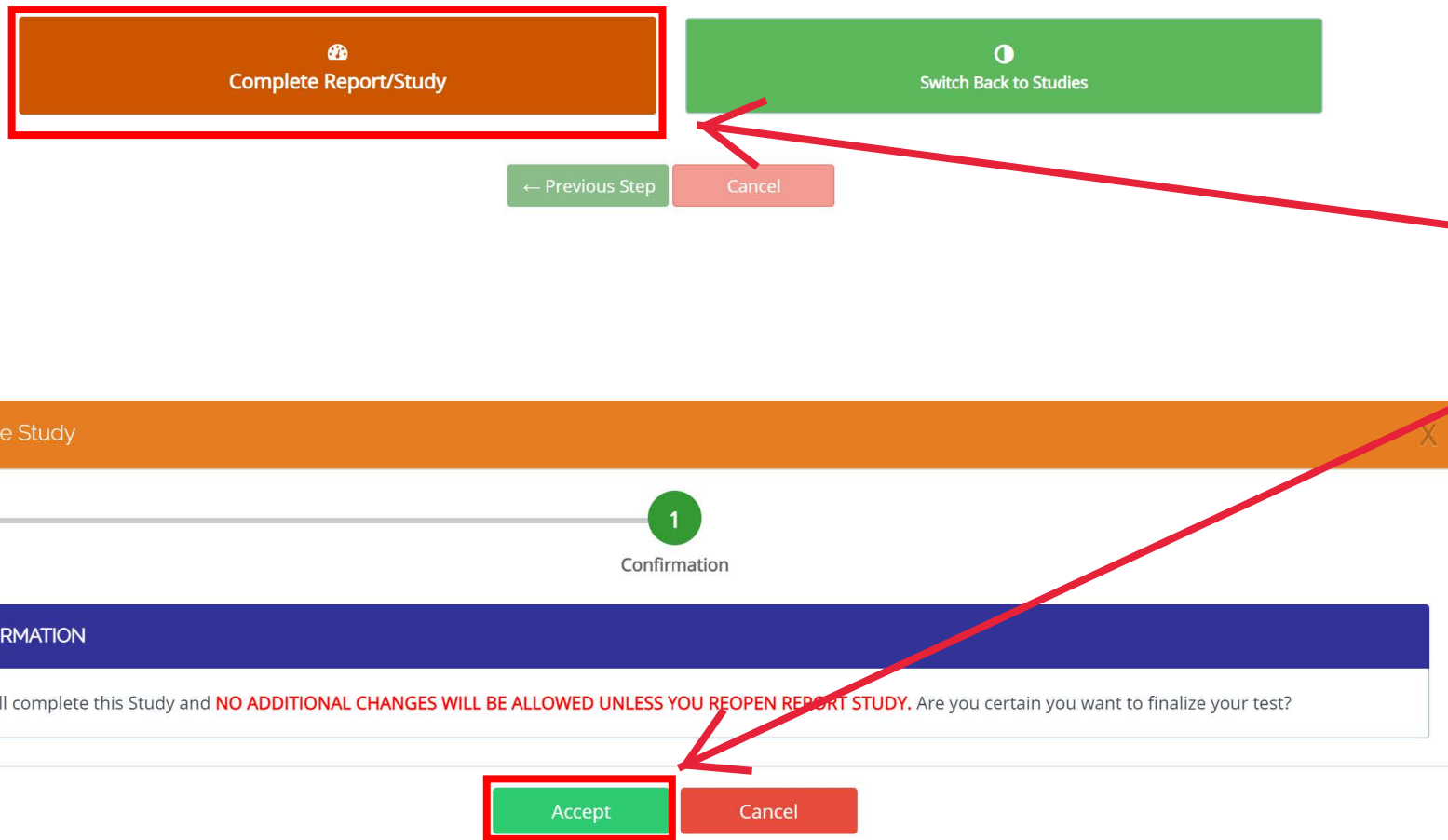
Total Velocity Avg Velocity True Corrected Average Velocity Actual ACFM

Required CFM AK Factor % of Design

Airflow Temperature for Energy Calculation DB* Required

Sensible BTU/H

Enter Actual Data



After all data has been entered, the last steps will be:

Complete Report/Study

Accept Confirmation