

AccuDuct

ACCA Manual-D Duct Design Software



Inside This Manual

- How to Input Data for Duct Design Calculations.
- View Design Summaries and Print Reports.
- Using AccuDuct on a Tablet PC.
- Import AccuLoad Room Airflow Requirements

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Overview

Thank you for purchasing our AccuDuct software program! If you have comments for this manual or the software program please fax, email or call us, we appreciate your input.

We would recommend that all users purchase a copy of the ACCA Residential Duct System Manual “D” Edition 3 from ACCA. You can order this from their website at www.acca.org. It is an excellent reference manual that explains duct design methods for residential systems.

This manual is intended to show the end user how to properly use this software. It assumes that the user has general knowledge of construction practices and a basic knowledge of residential loads and duct design. We have attempted to show each screen and show how data is entered into the fields. We designed the interface to be used with a tablet PC. You will notice that very little typing is required.

Look for *Hints*:

Throughout this workbook, you will find boxes like this with additional information or hints that are informative and helpful.

System Requirements:

Windows® 98 or higher, NT, or XP operating system. (ME not recommended)
Pentium® 100 or higher processor.
64 megabytes of RAM.
CD-ROM or DVD drive.
High color monitor.
30 MB hard drive space available.

Recommended hardware for best performance:

Pentium® 300 or higher processor.
128 megabytes of memory or more.
1 GB or more of storage (hard drive).
Portable printer.
External mouse

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Unlocking your Program

Once the software is successfully installed, the Registration screen will pop-up.

Click on the **Run Demo** button. You can then navigate through the program in demo mode.

After you have completed the demo and want to purchase the product, you can order the program online at www.adteksoft.com or you can call us at 815-452-2345.

Once you pay for the program and provide the **Registration number** in the **RED** box, an unlock Validation number will be provided (through email or over the phone) to be typed in the **Green** box.

Registration Screen

ADTEK SOFTWARE

AccuDuct
Version 17.0.0
Copyright
Adtek Software

Registration # 1700-1003-5878-5078

Validation #

Exit Validate Run Demo

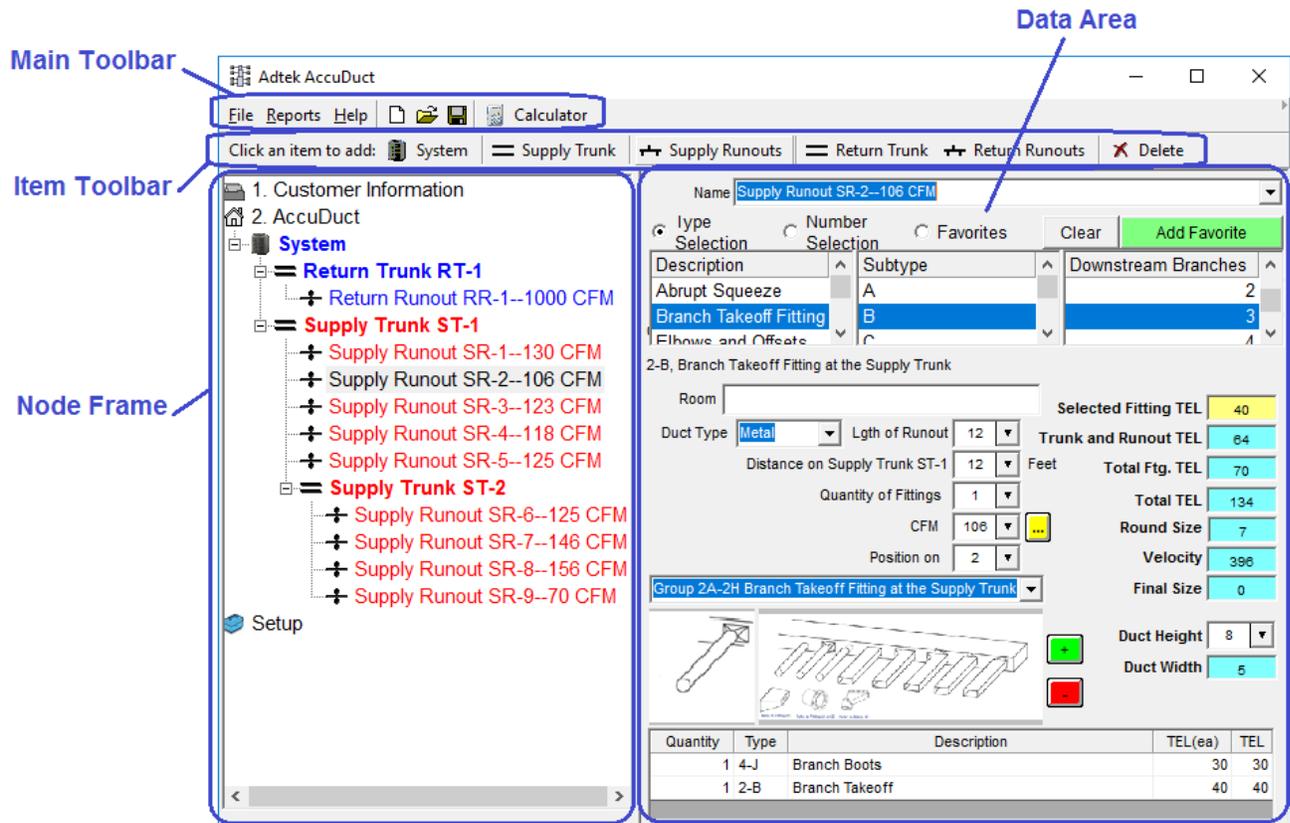
Email Code Request Online Code Request

For Software Technical Support: support@adteksoft.com

Finally, click the **Validate button** to unlock the full program capabilities.

Section I. Input Basics

Screen Layout



The areas above are explained in detail in the following pages, however the basic flow is as follows:

The **Main Toolbar** will allow some of the standard Window's features such as save, update, etc. Our AccuCheck feature as well as a popup calculator and a keyboard for the tablet PC are also accessible.

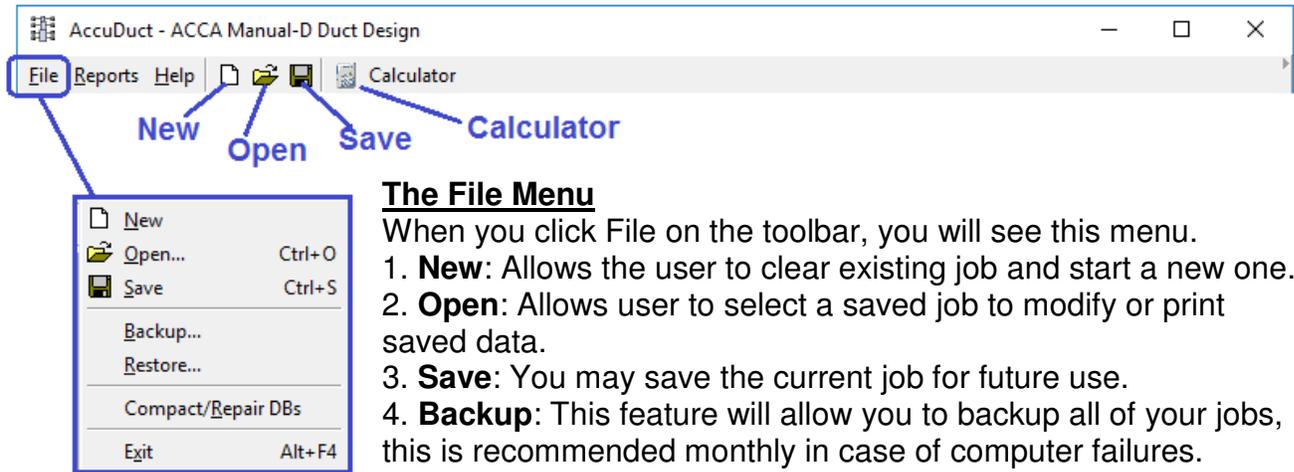
The **Item Toolbar** allows windows, doors, zones, additional systems, etc to be added to the project.

The **Node Frame** will let the user view the systems, zones, rooms, windows, etc that have been added to the project. Clicking on the node (room, window, etc) will allow the user to view the data settings in the data frame as well as the load calculations in the Current Item area.

The **Data Area** will allow the user to select the appropriate item values, such as window type, insulation, duct location, etc.

Section I. Input Basics

The “Menu” Toolbar

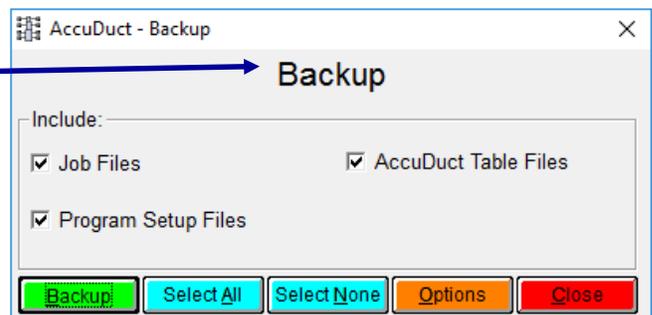


The File Menu

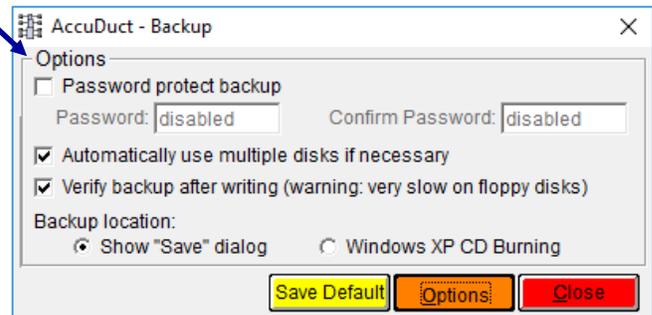
When you click File on the toolbar, you will see this menu.

1. **New**: Allows the user to clear existing job and start a new one.
2. **Open**: Allows user to select a saved job to modify or print saved data.
3. **Save**: You may save the current job for future use.
4. **Backup**: This feature will allow you to backup all of your jobs, this is recommended monthly in case of computer failures.
5. **Restore**: Allows the user to restore data from a previously backed up source.
6. **Compact/Repair DB's**: This feature provides data maintenance for all databases. If a file becomes corrupted, this feature may repair the database.

Selecting **Backup** will open the backup option box. You may select the data files that you wish to backup.



Clicking on **Options** will allow you to select backup options. You may password protect the backup file if needed. You can also select multiple backup disks or write directly to a CD-R Rom if using Windows XP.



Selecting **Restore** from the file menu will allow you to restore files from a previous backup. Locate the backup file, then select the desired files, click on restore.

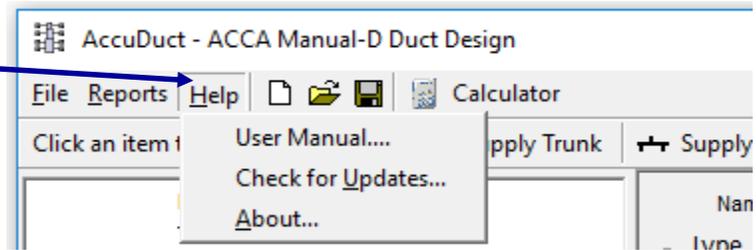


Section I. Input Basics

The “Menu” Toolbar

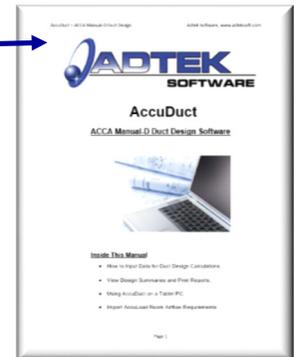
The Help Menu:

When you click Help on the toolbar, you will see this menu.



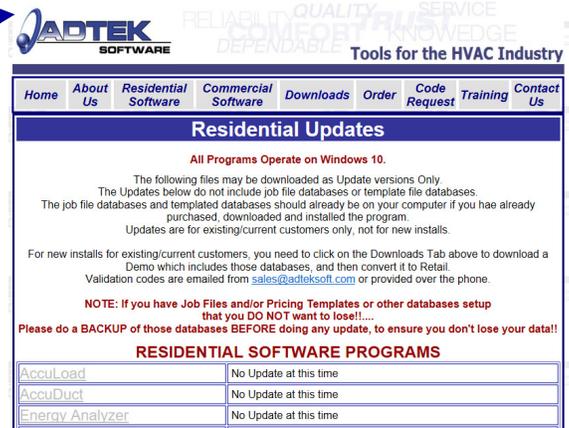
1. User Manual:

Opens the User Manual PDF File.



2. Check for Updates:

Opens the Update Webpage.



3. About:

View software version and system information.

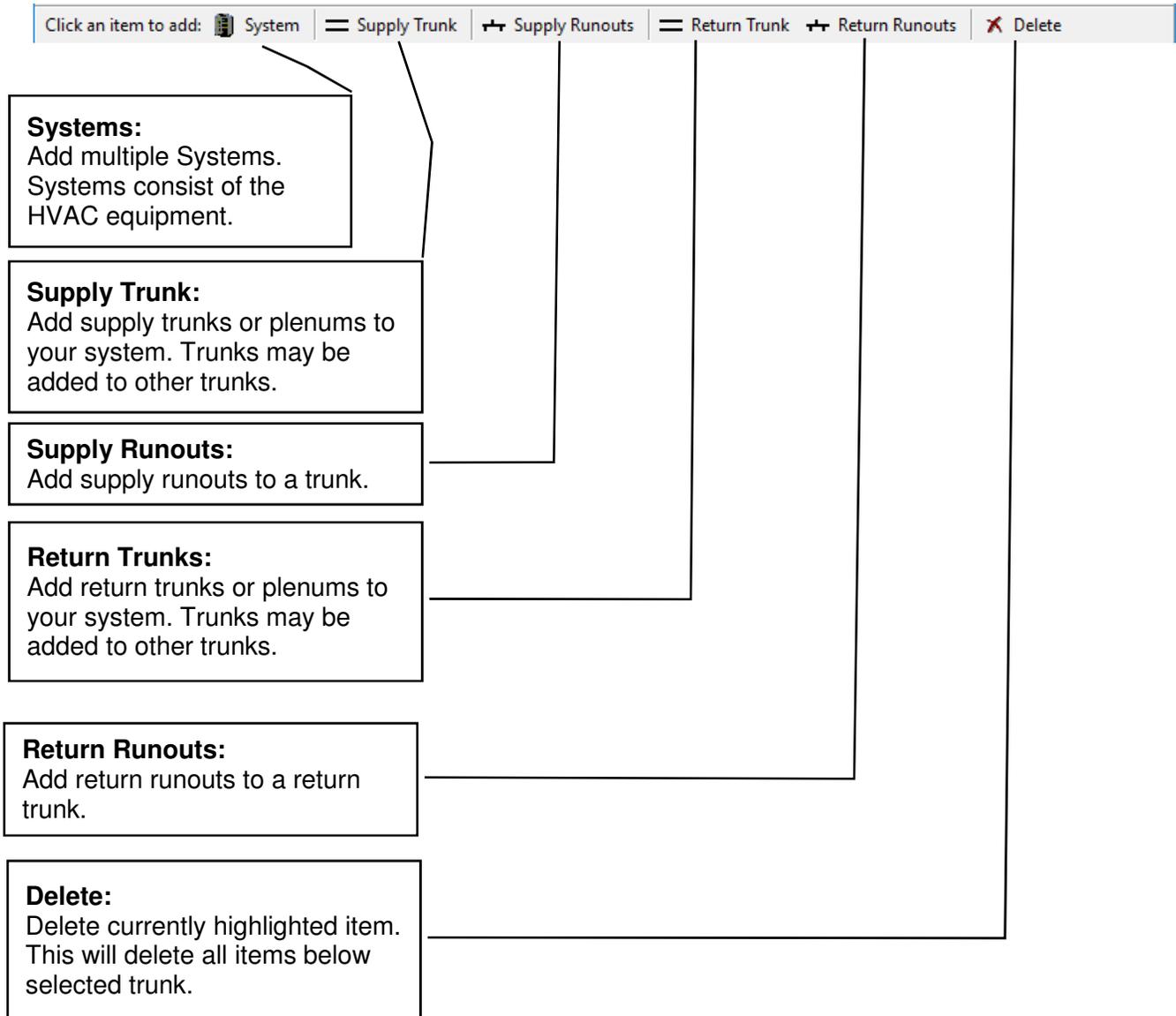


Hint: You may view your computer's system information, such as memory, etc., by clicking on "System Info"

Section I. Input Basics

The “Item” Toolbar

The “Item Toolbar” will allow you to add multiple systems, zones, windows, doors, etc. Just click on the desired items to add to the project. Items can be deleted by highlighting, then clicking on the “Delete” item or by right clicking on the desired item, then select “Delete”.

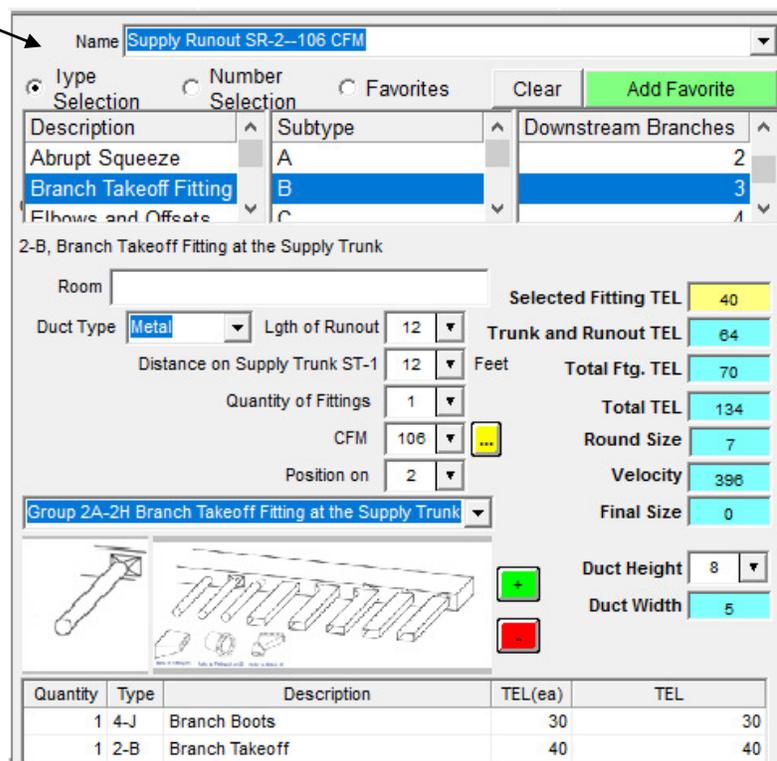
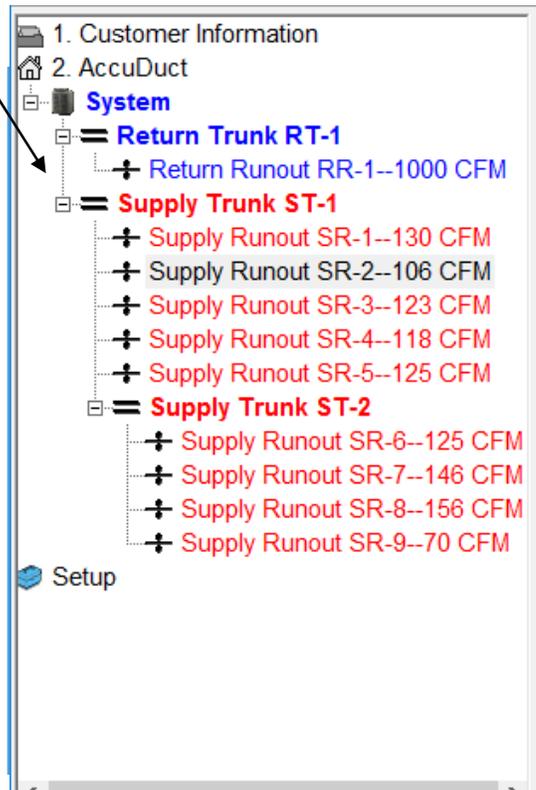


Section I. Input Basics

The “Node Frame” & “Data Frame”

The Node Frame will allow you to view the items that have been added to the project. You may click on the item in this frame to view the data in the “Data Frame”. The Node frame can contain many systems if desired.

The Data Frame will allow you to view the data that has been selected for the item in the Node Frame. You may change the data, such as length of runout, fittings, etc. The data is saved to the working project as it is entered. You will need to save the job when exiting the program.

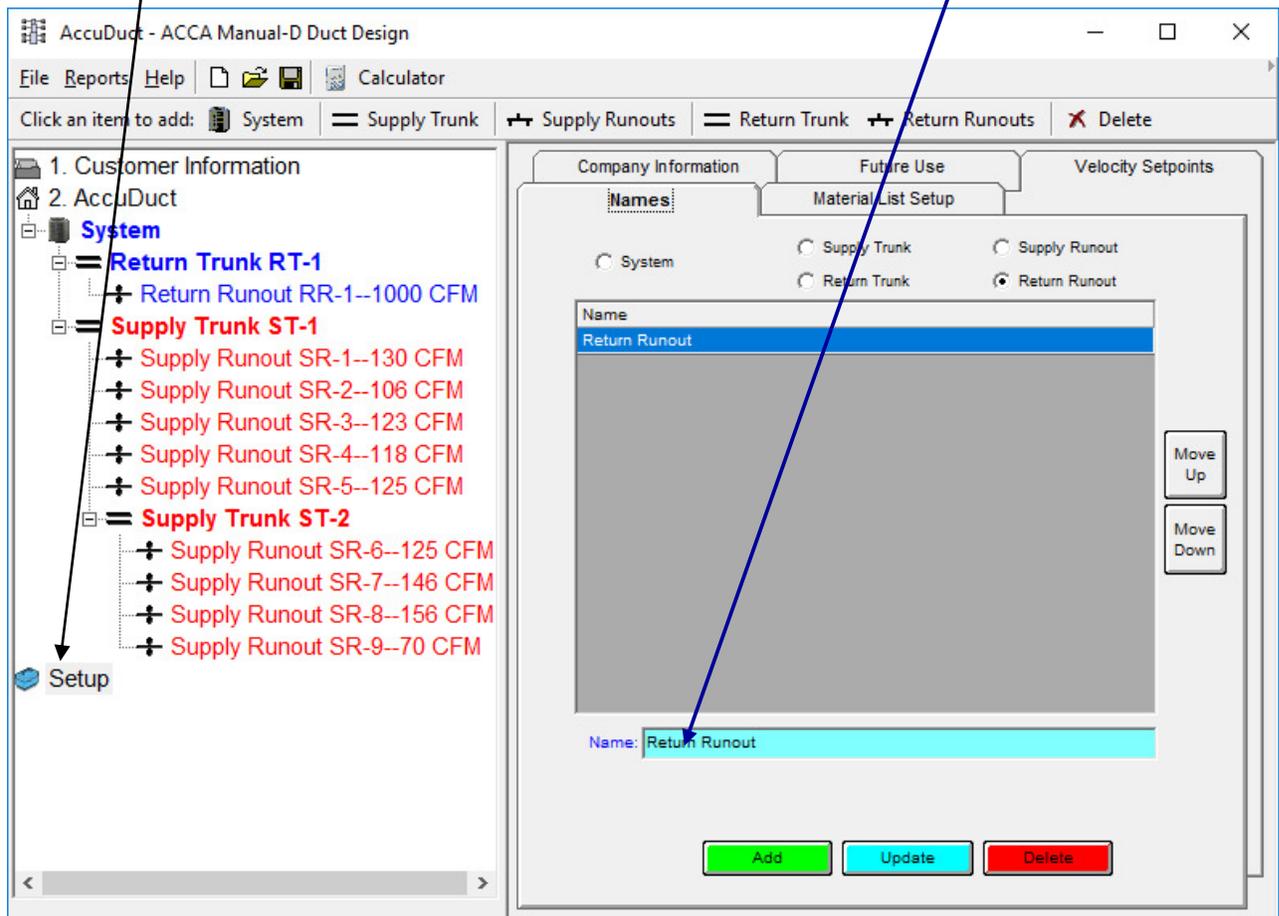


Section II. Setup Your Software The “Setup Screen”

Access your software setup by clicking on the “Setup” item in the node screen. You may have to scroll down by clicking on the scroll bars on the side if you have added items to your project. Company information, default names, etc. can be set as default on this screen.

The following pages will explain the setup procedures. You may change the settings at any time. After using the software, you may decide to change the velocity settings.

Hint: Customizing names will save on typing in the home!



Section II. Setup Your Software The “Setup Screen”

Your Company information can be changed on this screen.

1. Type information
2. Click on the “Apply” button to save.

Tablet Drag Mode:

Checking the “Tablet Drag Mode” option will let you drag and drop with just the mouse or stylus on a tablet PC. If your using a Tablet PC, you will find this feature very convenient.

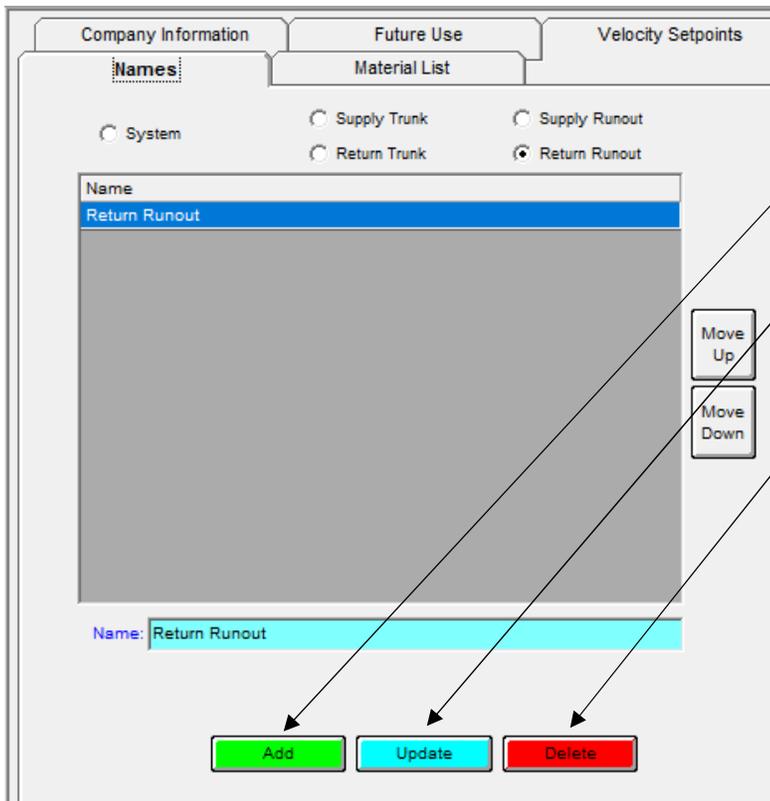
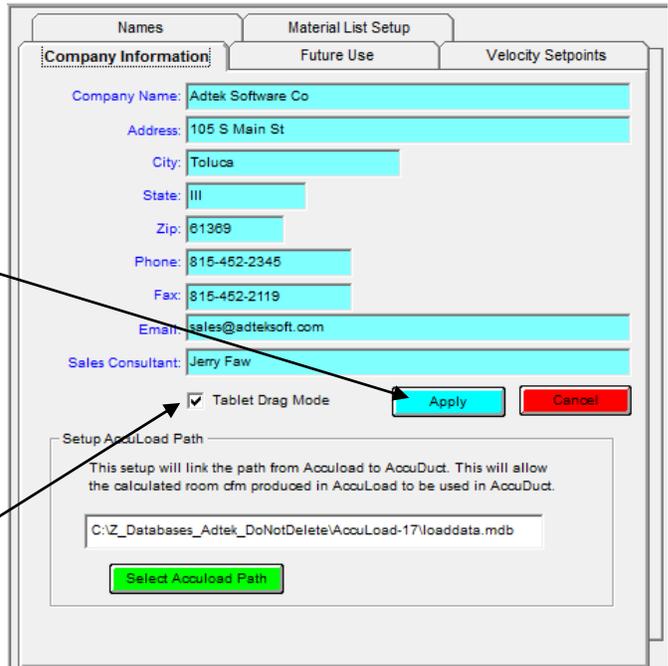
Using a Mouse:

1. Hold down on the left mouse button while selecting the item to move or copy.
2. Move the cursor to the location that you want to move or copy.
3. Release the mouse button, then select “Copy” or “Move” from the drop down menu

Using a Stylus (Tablet PC):

1. Drag the item to copy or move with the stylus.
2. Lift up the stylus, then select “Copy” or “Move” from the drop down menu

If the “**Table Drag Mode**” is not checked, you may move the item by just dragging it or copy the item by holding the “Ctrl” key down while dragging.



Names can be updated, deleted or added as desired.

To Add:

1. Type name in box
2. Click on “Update”

To Update:

1. Click on desired name to update.
2. Type name in box
3. Click on “Update”

To Delete:

1. Click on desired name to delete.
2. Click on “Delete”

Change Order in list:

1. Click on desired name.
2. Click on the “Move Up” or “Move Down” button.

Section II. Setup Your Software The “Setup Screen”

Select AccuLoad Path:
Select the AccuLoad path to link jobs created in AccuLoad to AccuDuct. This will allow you to link room airflow (cfm) with ducts.

You must have a licensed copy of AccuLoad to use this feature.

The screenshot shows the 'Setup Screen' with several tabs: Names, Material List, Company Information, Future Use, and Velocity Setpoints. The 'Company Information' tab is active, displaying fields for Company Name (Adtek Software Co), Address (105 S Main St), City (Toluca), State (Ill), Zip (61369), Phone (815-452-2345), Fax (815-452-2119), Email (sales@adteksoft.com), and Sales Consultant (Jerry Faw). There is a checkbox for 'Tablet Drag Mode' and 'Apply' and 'Cancel' buttons. Below this is the 'Setup AccuLoad Path' section, which includes a text box with the path 'C:\Program Files (x86)\Adtek\MJ8\loaddata.mdb' and a green button labeled 'Select AccuLoad Path'.

Velocity Setpoints:
Velocity Setpoints along with the cfm are used to calculate the duct size. Calculations will increase duct size to maintain a velocity selected in the “Maximum Velocity Setpoint”. Velocities should be selected for Supply and return ducts.

The screenshot shows the 'Velocity Setpoints' section, which is divided into 'Supply Side' and 'Return Side'. Each side has sub-sections for 'Trunk Ducts' and 'Branch Ducts'. The 'Supply Side' has dropdowns for Target Velocity (800), Min. Velocity (700), and Max. Velocity (900), and a Default CFM per Runout (100). The 'Return Side' has dropdowns for Target Velocity (600), Min. Velocity (600), and Max. Velocity (700). A note at the bottom says 'Recommended Velocity for Noise Control'.

Component	Supply Side (Fpm)				Return Side (Fpm)			
	Conservative		Maximum		Conservative		Maximum	
	Rigid	Flex	Rigid	Flex	Rigid	Flex	Rigid	Flex
Trunk Ducts	700	700	900	900	600	600	700	700
Branch Ducts	600	700	900	900	500	600	700	700
Supply Outlet Face Velocity	Size for Throw		700					
Return Grille Face Velocity					500			
Filter Grille Face Velocity					300			

Please refer to ACCA Manual D for explanations and recommendations for design criteria.

Section II. Setup Your Software The “Setup Screen”

Defaults - System

Hint:
Check the “Auto-Set Peak Load” check box in the Default-Others tab to automatically set these option buttons

System Calculation Perimeters:
Select the Heating supply air temperature of the system. If you would like the CFM calculations sized based on the Sensible Heat Ratio (SHR), check this box, if not input the Cooling supply air temperature.

Blower Heat:
Select the appropriate default setting for this option.

Load calculation time:
This will set the default for July or October sensible heat gain calculations.

System Type:
Constant Volume will calculate the project using the Average Load Procedure.
Variable Air Volume will calculate room and zones using the Peak Load Procedure.

Section II. Setup Your Software The “Setup Screen”

City Data Screen:

This screen will allow you to view cities in the database. You cannot modify the cities that are included in the default database. You may however, slightly change the city name or enter a city not in the database, then type in the correct data and enter the information in the database.

Hint:

Enter your city in the database if it is not listed in the default database. If you want to SAVE design data you enter, you MUST Re-Name the City to one not in the MJ8 Database. Check on-line to verify the data.

Duct Sizing

AccuLoad allows you to set duct sizing default parameters as shown. Design/Sizing factors can easily be specified here for both Supply and Return duct runs.

Section II. Setup Your Software

“The Customer Information Screen”

Hint:
Enter the customer information while in your office, then click “Save”. Your job can then be opened in the customer’s home with no typing needed!

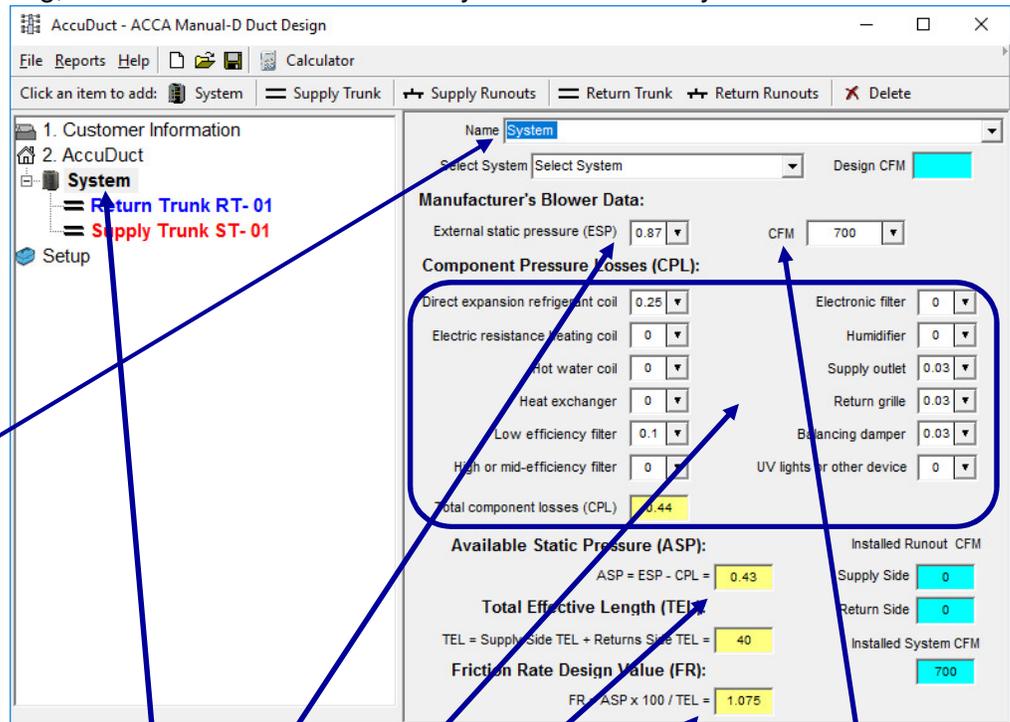
Clicking on “Customer Information” in the “Node” frame will display the customer information screen and allow data input. The “**Import**” button will import the customer information entered into the Electronic Consultant™ program.

You may save notes about the project by clicking on the “**Note**” button. Type your information in the note box that is displayed after clicking on the “Notes” button. Click on the “Job Settings Design Conditions” button to return to the above screen.

Section II. Setup Your Software “Adding a System”

A system consists of the heating and/or air conditioning equipment that will be used in the project. Multiple systems can be added to the project. In other words, you may have a system for the 1st floor and a system for the 2nd floor of the home. You may add or delete system as desired. Please remember that if you delete a system, you will delete everything contained within that system. You may however copy or drag, trunks and runouts from one system to another system.

Hint:
 Additional systems can be added at anytime during the project. You can drag & drop the rooms from one system to another. Change the system names from the drop down menu or type a desired name.



Clicking on “System” in the “Node” frame will display the system screen and allow data input. If you have imported a job from AccuLoad, you will need to select the system that you are designing.

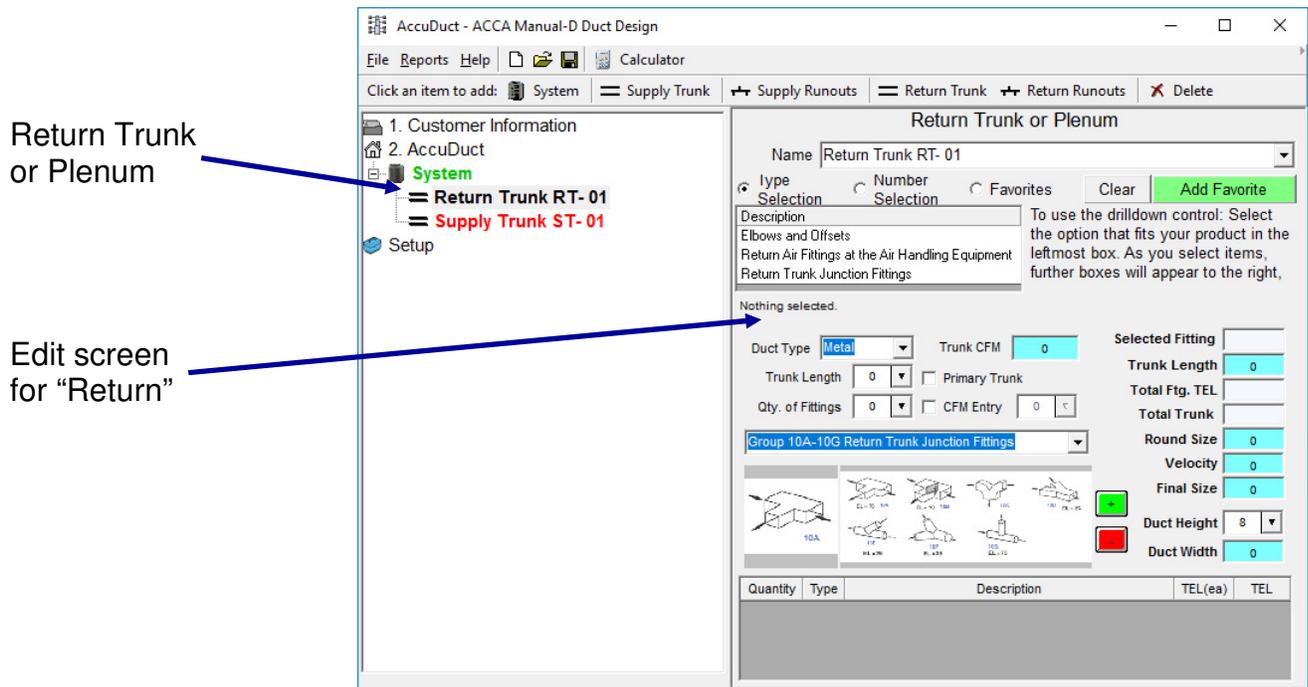
Enter the External Static Pressure (ESP) that your fan will deliver and Enter the required CFM. This data will be available from your equipment performance data.

Input any component losses that your system will have

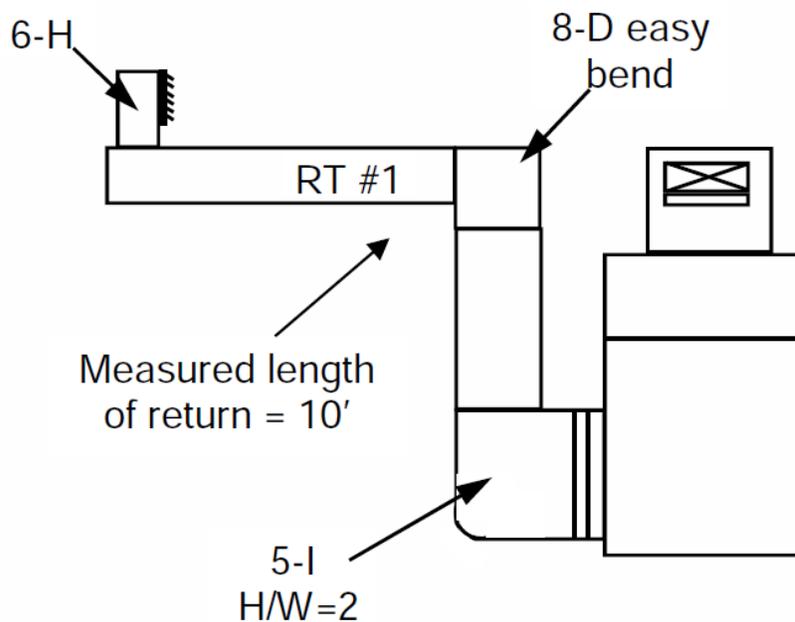
The Available Static Pressure (ASP) will be calculated from these inputs.

The software will calculate the “Friction Rate Design Value” as runouts are entered.

Section III. Return Air “Adding a Return Trunk or Plenum”



After adding a new system or starting a project, the screen will default to a “Return Trunk” and a “Supply Trunk”. Trunks can be added as needed by clicking on the appropriate button in the “Menu Bar”. Anytime there is a change in trunk size a new trunk will need to be added under the connected trunk. A return Runout will need to be added to allow a Return Grill in a system. Let’s follow an example of entering a return trunk with a single return grill. We will use the following drawing for our example.



Section III. Return Air

“Adding a Return Trunk or Plenum cont.”

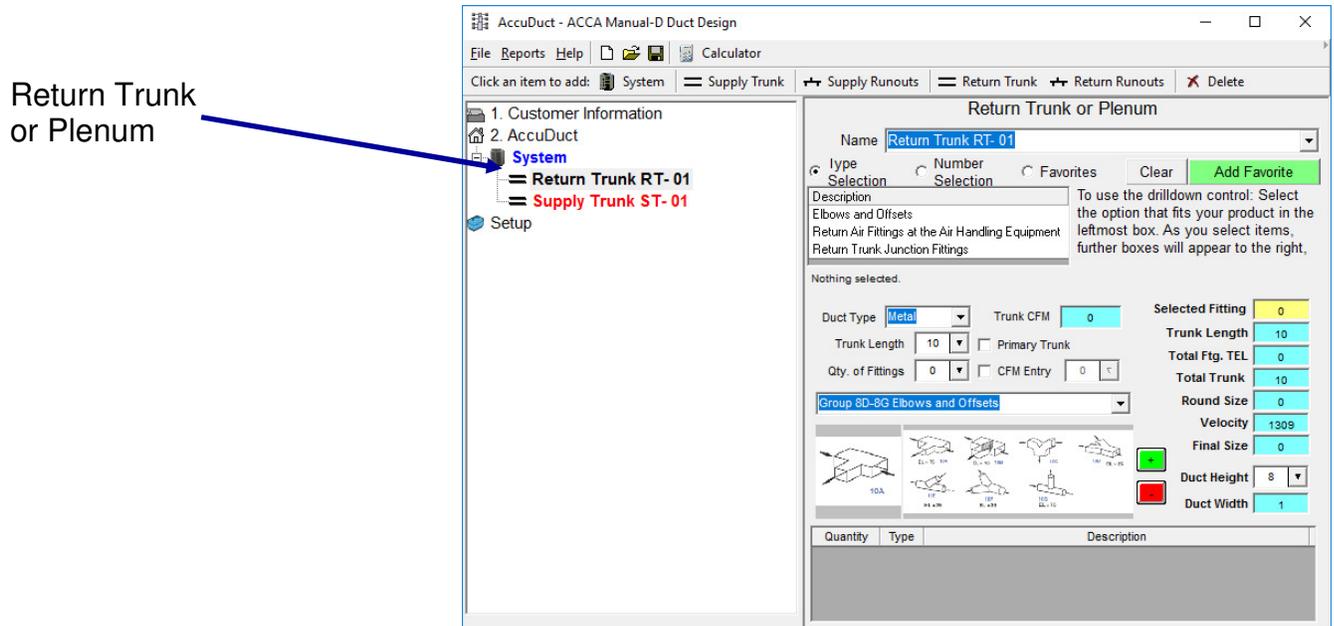
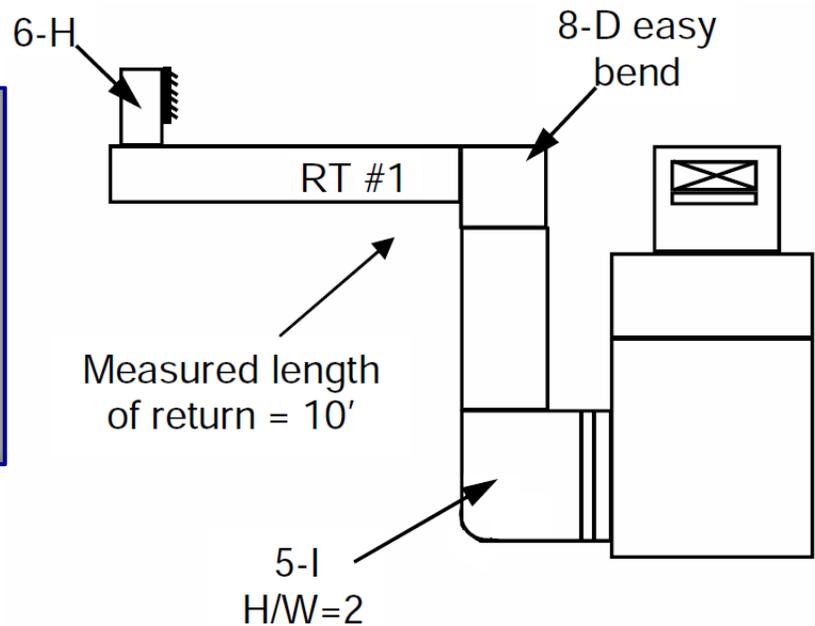


Figure R-1

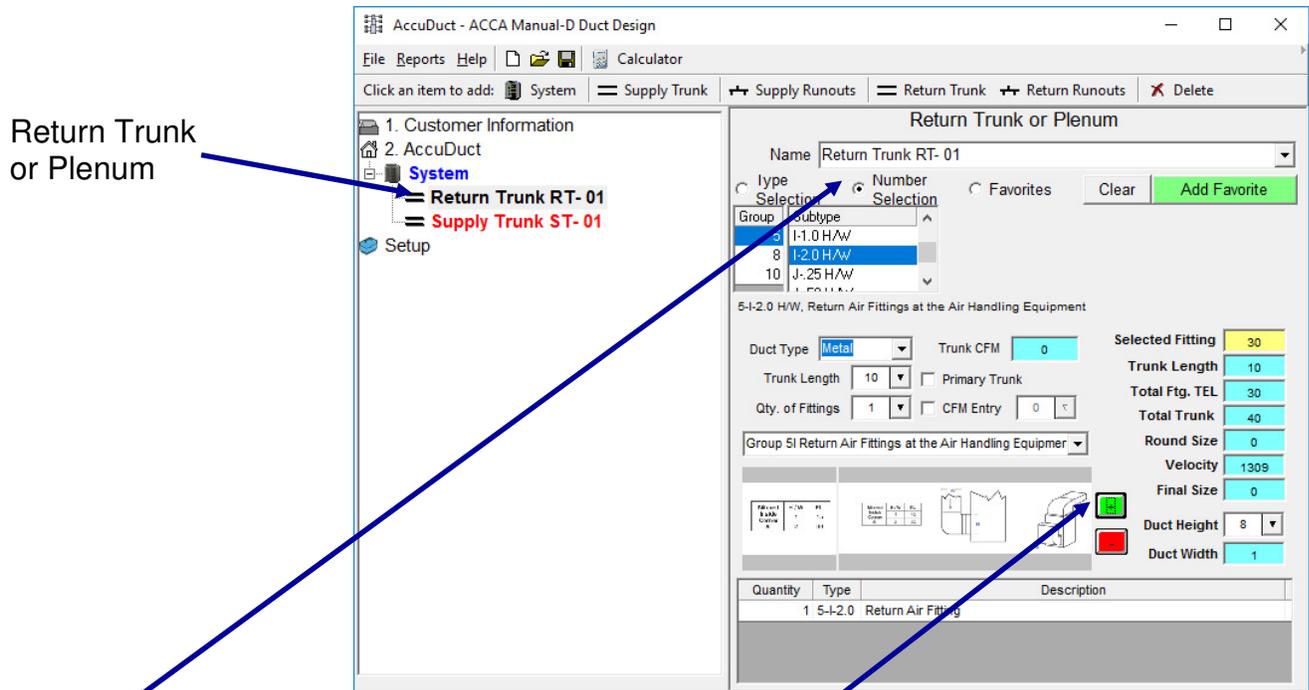
1. Make sure that we have the return trunk highlighted as in Figure R-1. We will use metal duct for this example.
2. Let's enter the length of the total trunk (10') in the box next to the "Trunk Length"
3. We need to include the two fittings located in return trunk (8-D & 5-I). The fitting "6H" is actually located in the runout. This will be added when we add the runout to the trunk.

Hint:
 If a fitting resistance is only seen by the current runout, it should be included in the runout and not the trunk. 6-H would be included in the runout, even though in this instance there appears to be little or no runout length.

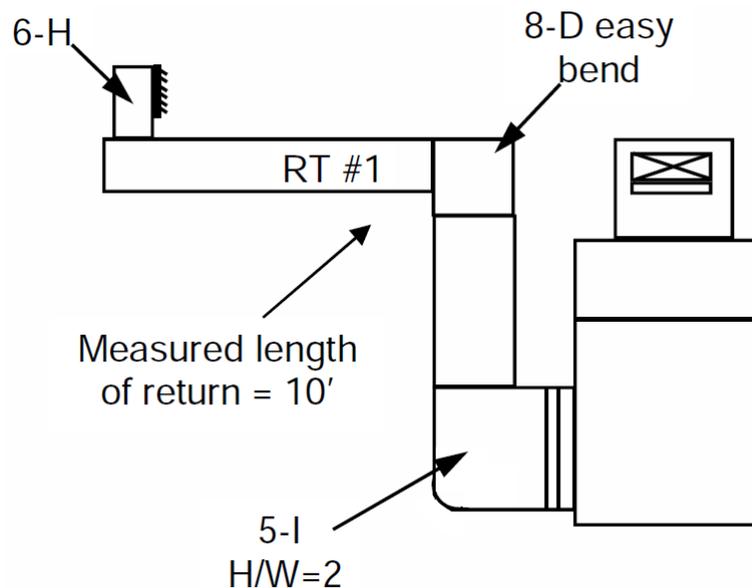


Section III. Return Air

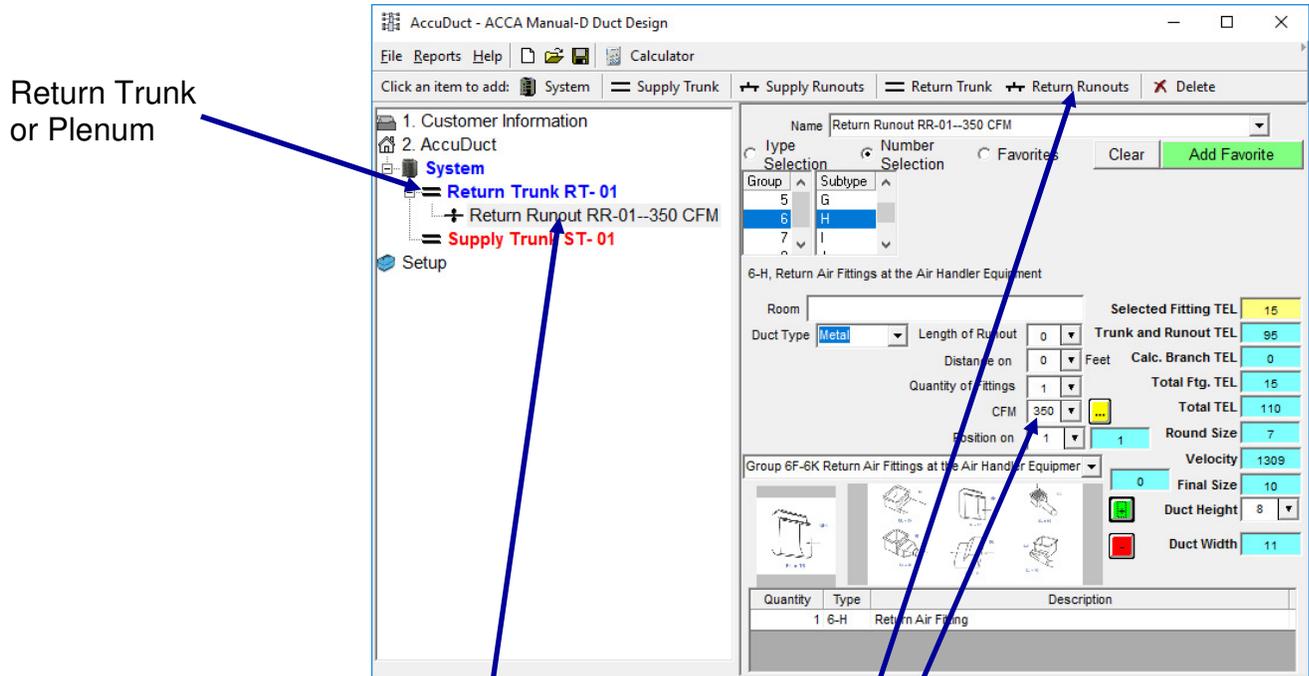
“Adding a Return Trunk or Plenum cont.”



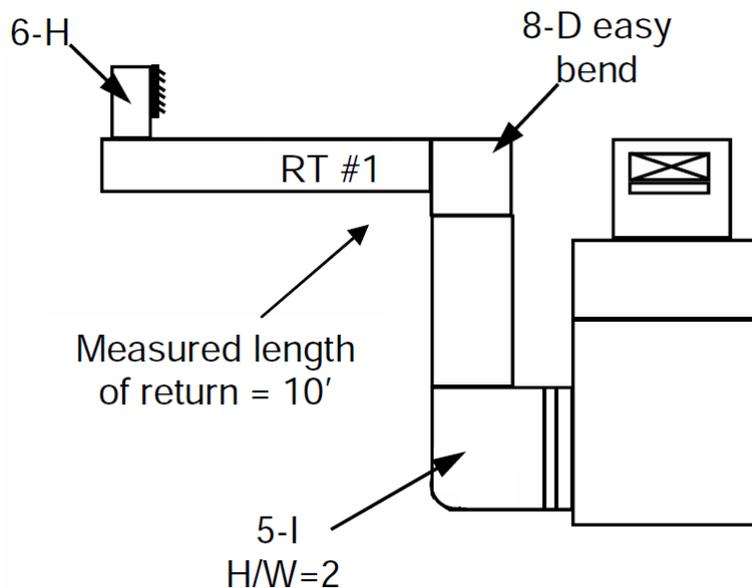
1. Click on the “Number Selection” to select fitting by the “Manual D” fitting number.
2. Select “5” then “1-2.0 H/W” Please refer to ACCA Manual D for explanation of fittings.
3. After the desired fitting is selected, click on  to add it to the trunk.
4. Notice that the fittings is now added to the grid
5. Complete the same procedure for the 8-D easy bend.
6. A fitting can be deleted by selecting the desired fitting in the grid, then click on 



Section III. Return Air “Adding a Return Runout”

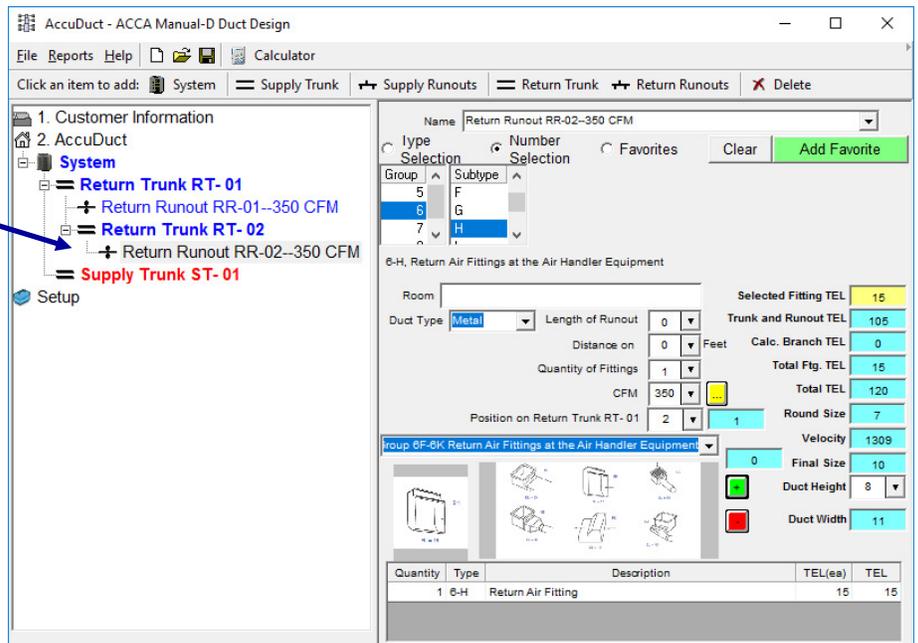


1. With the Return Trunk R-1 highlighted, click on the “Return Runout” item in the Menu Bar.
2. Notice that the Runout was added below the Return Trunk in the Node Screen.
3. Add the fitting “6-H” by clicking on the Number Selection, then select the appropriate fitting, add by clicking on the green button.
4. Since this fitting appears to be right on top of the trunk, we will not add any length to it.
5. Enter the CFM that will flow through this grill in the “CFM” box.
6. Click on  to add the Runout.

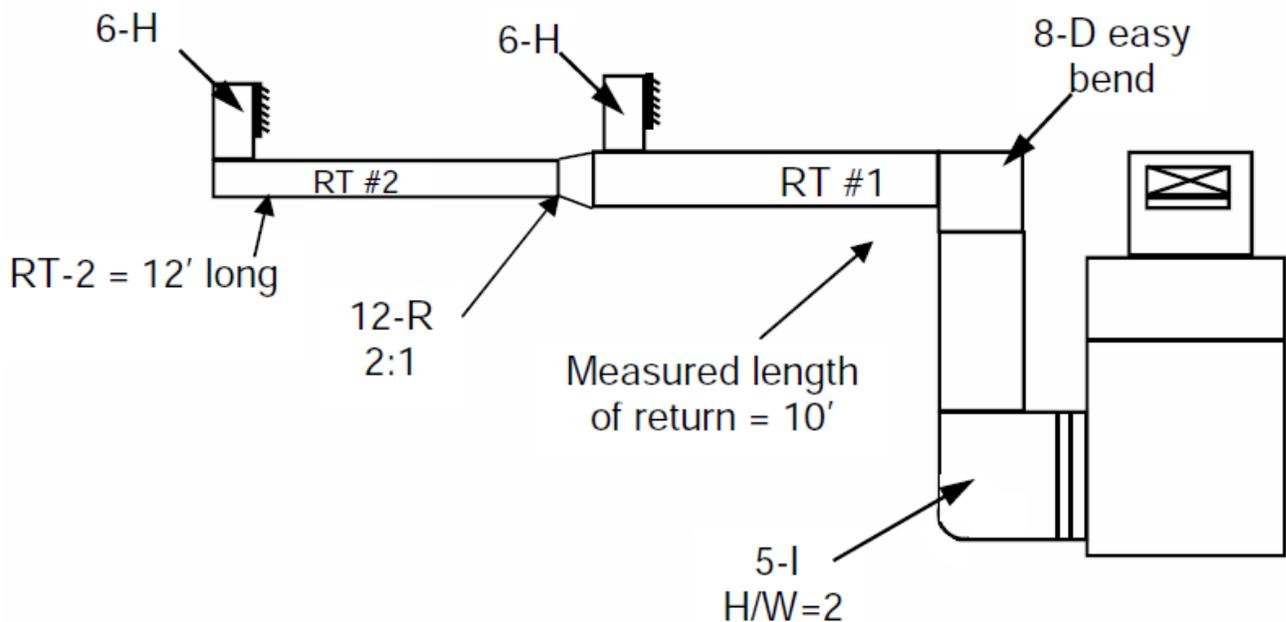


Section III. Return Air “Adding a Second Runout”

Add the second Return Runout to RR-2. Be sure to highlight RT-2 to add to the appropriate trunk.



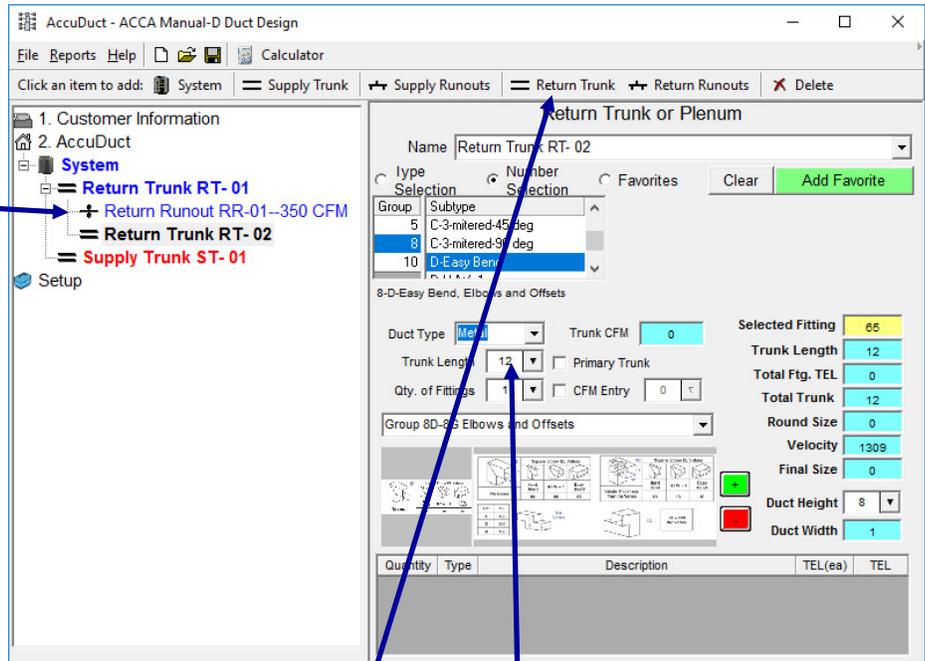
1. Highlight RT-2, then click on “Return Runout” in the Menu Bar. This will add RR-2 blow RT-2 indicating that it is connected to RT-2.
2. Add the 6-H fitting as well as the CFM that will flow through this grill.
3. Notice that the Velocity of the run will be indicated along with the Final round duct size. Your velocity setting that you selected in the setup file will determine the velocity before increasing the round duct size.
4. You may also change the Duct Height to calculate a new Duct Width if desired. This size will be indicated on the printout



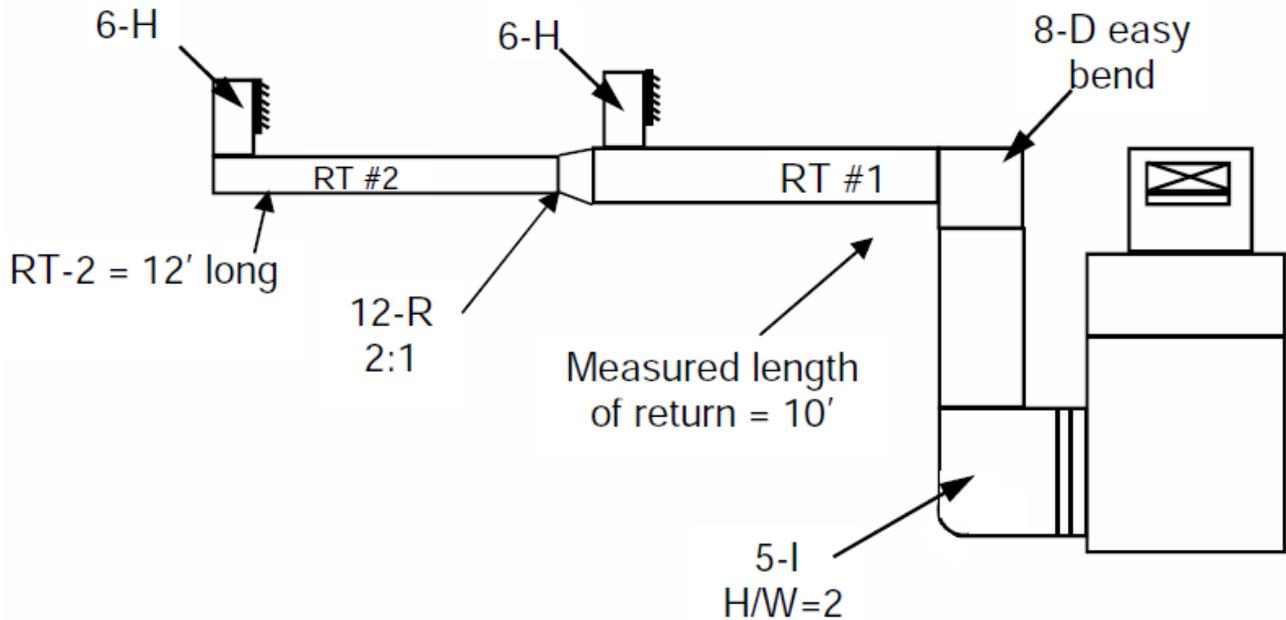
Section III. Return Air

“Adding a Second Return Trunk with a Transition”

Second Return Trunk (RT-2) added below RT-1. Notice that the line points up to RT-1, indicating that it RT-1 connected. Be sure to have RT-1 highlighted when adding RT-2.



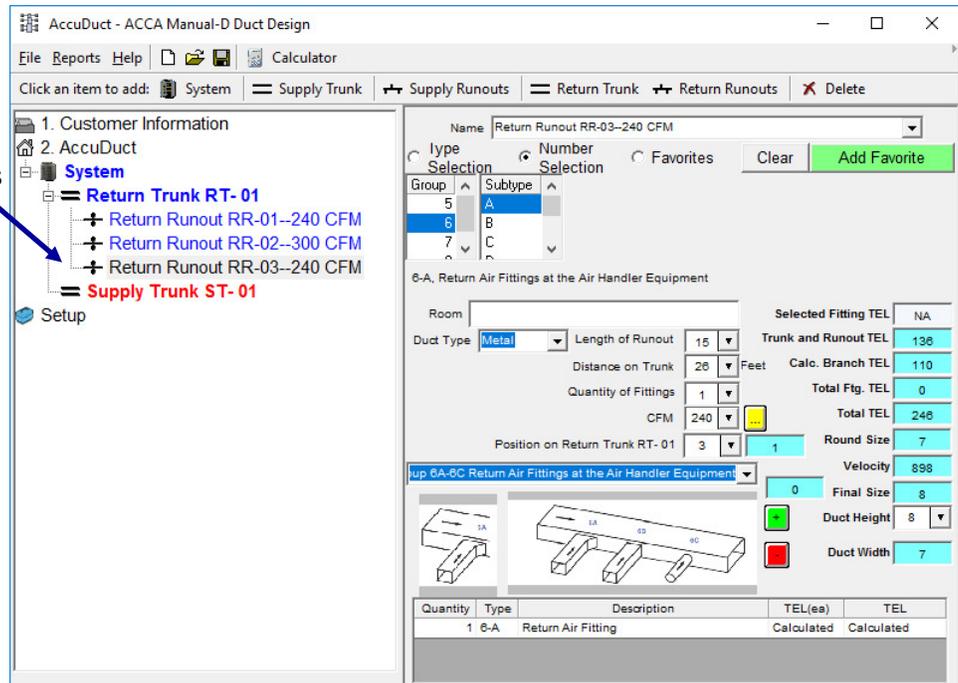
1. Highlight RT-1, then click on “Return Trunk” in the Menu Bar. This will add RT-2 below RT-1 indicating that it is connected to RT-1.
2. Enter the length of the second trunk, which is 12’ in this example.
3. Add the transition 12-R with a 2:1 slope as shown in the drawing below.



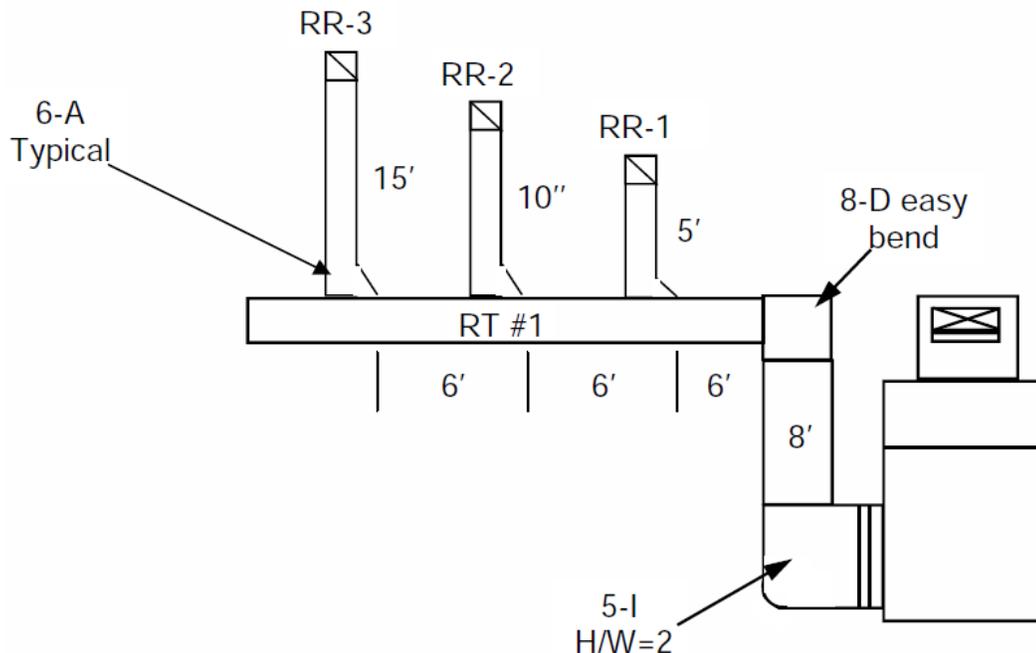
Section III. Return Air

“Adding Multiple Branch Returns at the Return Trunk”

Add the runouts the same as in the previous lessons, however always start at the Air Handler and move toward the end of the trunk. In other words, Return Runout #1 should be the nearest to the air handler and RR-3 should be the last.

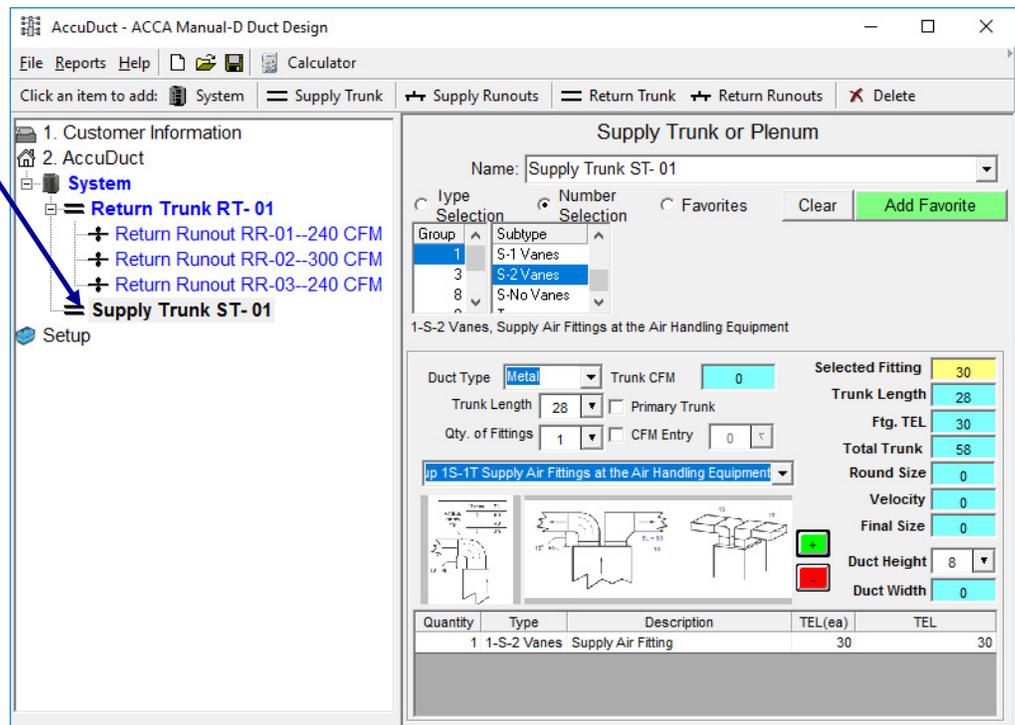


1. Add the Return Runouts as shown in the drawing below. Start with RR-1 close to the Air Handler,
2. then add RR-2, then RR-3. The software will number the runouts automatically.
3. Add the appropriate lengths, fittings and CFM.
4. Be sure to include the “Distance on Trunk” for each runout.
5. Example.... RR-1 would be located 14’ from, RR-2 would be 20’, RR-3 would be 26’

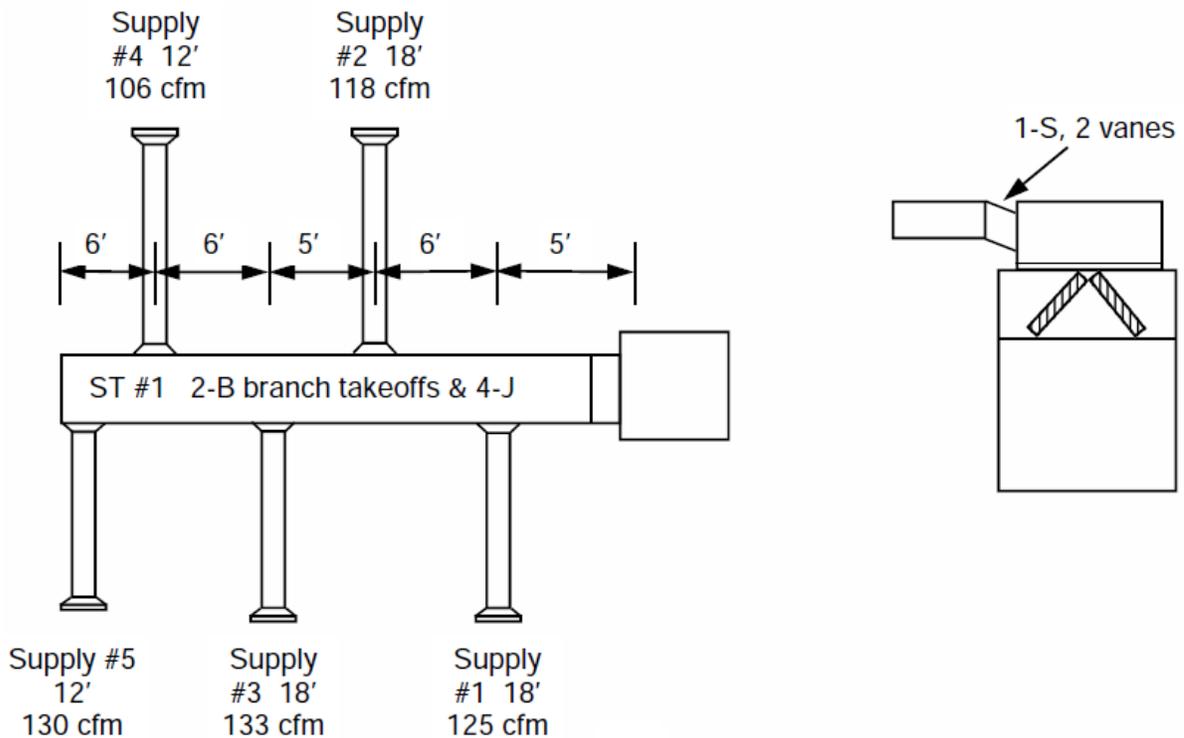


Section IV. Supply Air “Adding a Supply Trunk”

Click on the “Supply Trunk” in the node screen. The edit screen for the ST-1 trunk will appear on the right side of the screen.

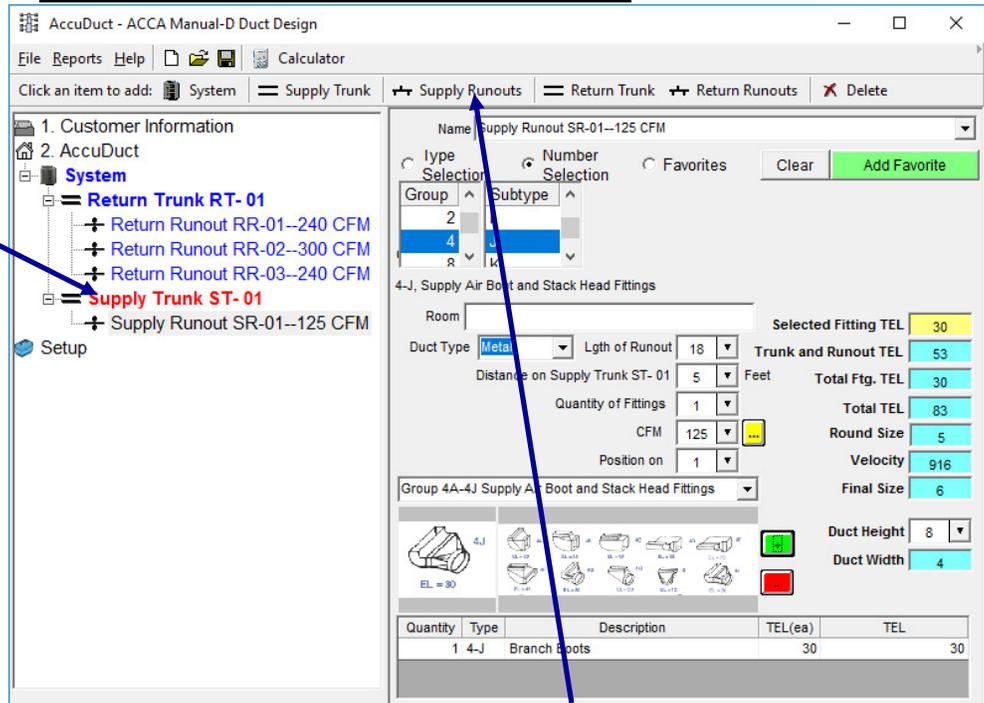


1. After selecting the ST-1 trunk in the Node Screen, type in the trunk length (28').
2. Next add the 1-S fitting with 2 vanes.

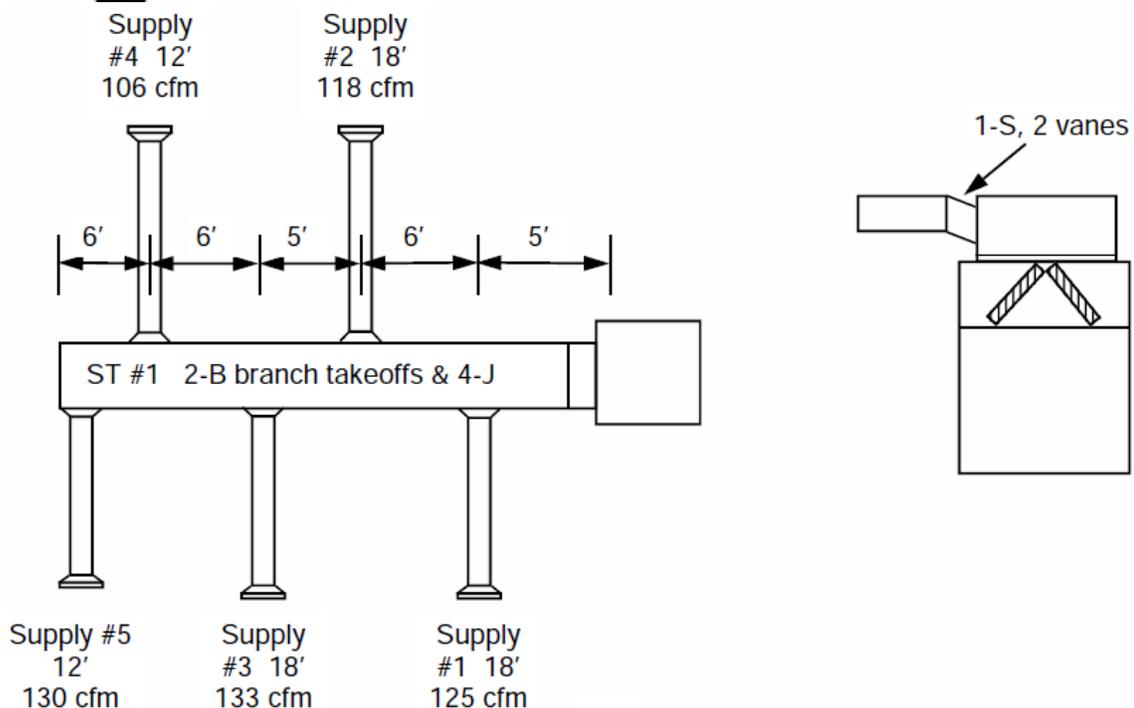


Section IV. Supply Air “Adding Supply Runouts”

Be sure to have the Supply Trunk selected to add runouts for this trunk

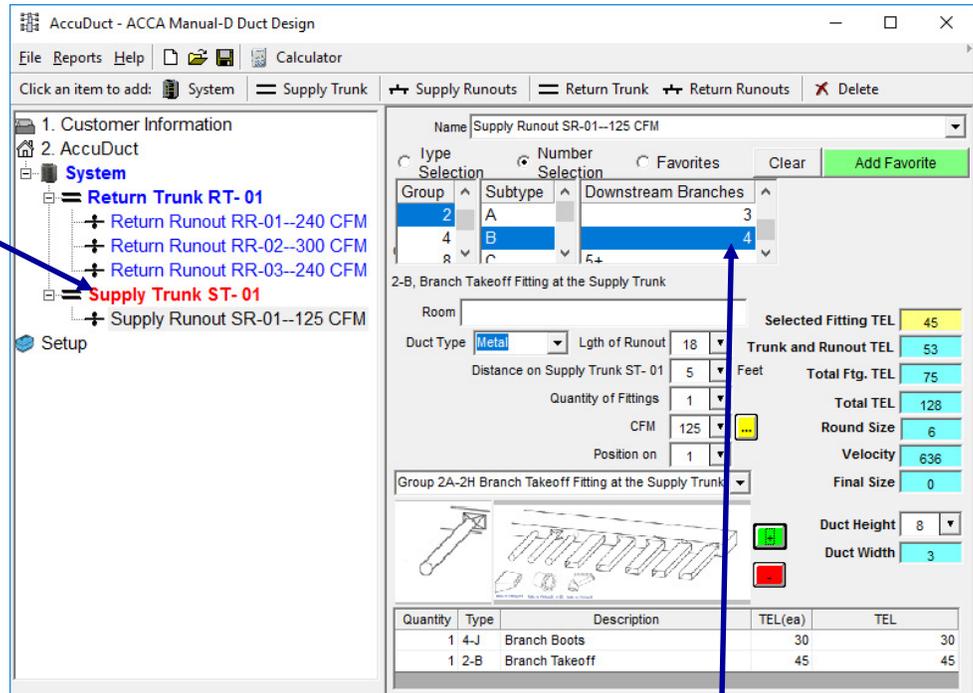


1. After selecting the ST-1 trunk in the Node Screen, click on “Supply Runout in the Menu Bar.
2. Select the 4-J boot for this run
3. Enter the length of SR-1 (18’)
4. SR-1 is located 5’ on the Trunk, enter this length
5. Enter the CFM value (125)
6. Click on  to add the Runout.



Section IV. Supply Air “Adding Supply Runouts cont.”

Be sure to have the Supply Trunk selected to add runouts for this trunk

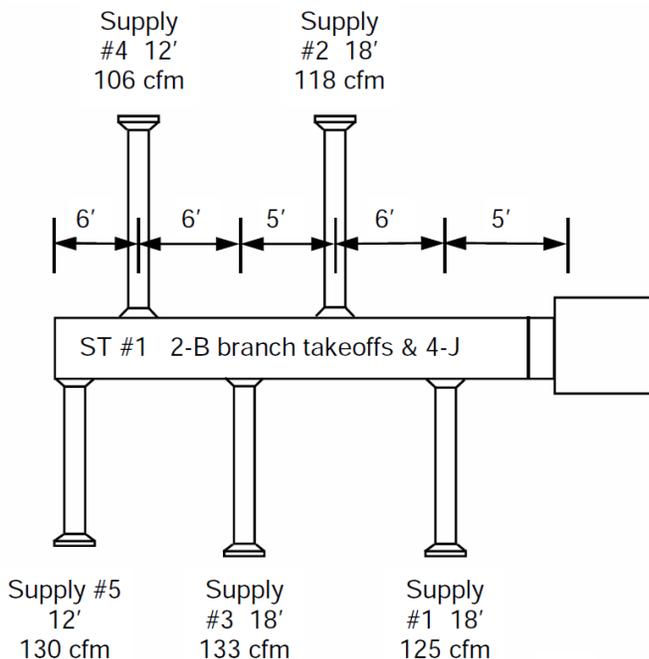


1. Select the 2-B takeoff, please note that you will have to select the fitting with 4 downstream runs to the end of the duct.

When selecting branch takeoffs for the supply run, you may need to select the number of downstream runs to include the correct equivalent length. Downstream will point to toward the end of the trunk. You will count the number of runs to the end of the trunk or to the next transition.

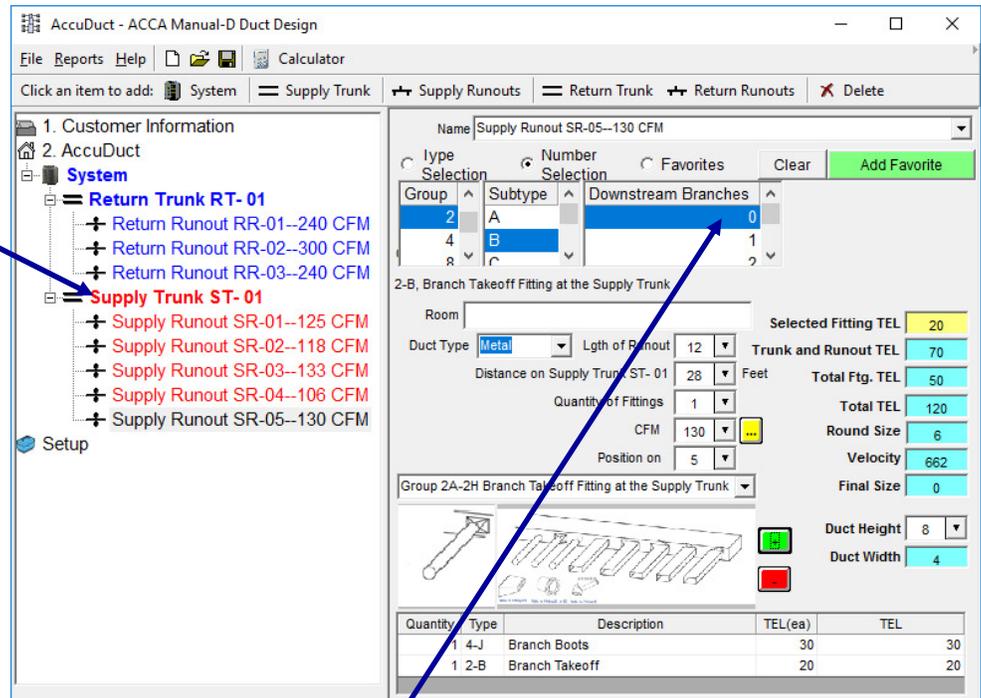
Example:

- SR-1 would have 4 downstream runs
- SR-2 would have 3 downstream runs
(the run directly across is counted)
- SR-3 would have 3 downstream runs
(the run directly across is counted)
- SR-4 would have 1 downstream runs
- SR-5 would have 0 downstream runs



Section IV. Supply Air “Adding Supply Runouts cont.”

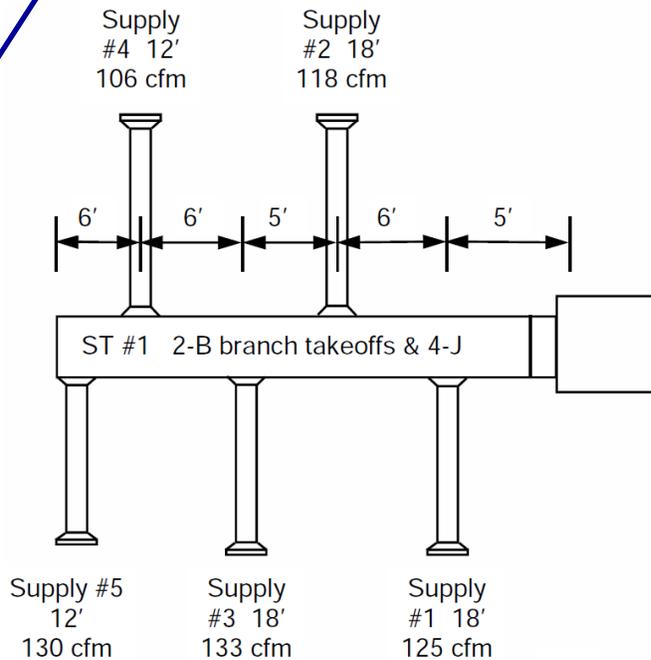
Be sure to have the Supply Trunk selected to add runouts for this trunk



1. Continue the same for the remaining SR-2 thru SR-5, noting the distance and downstream run changes appropriately.

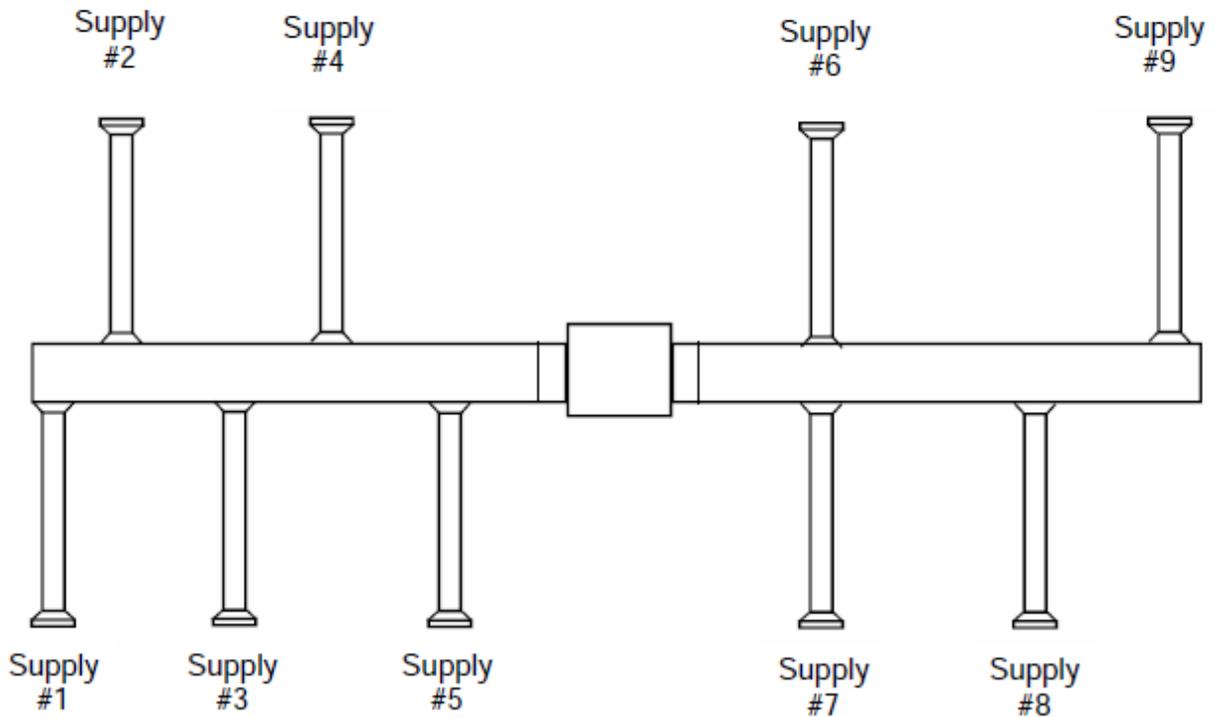
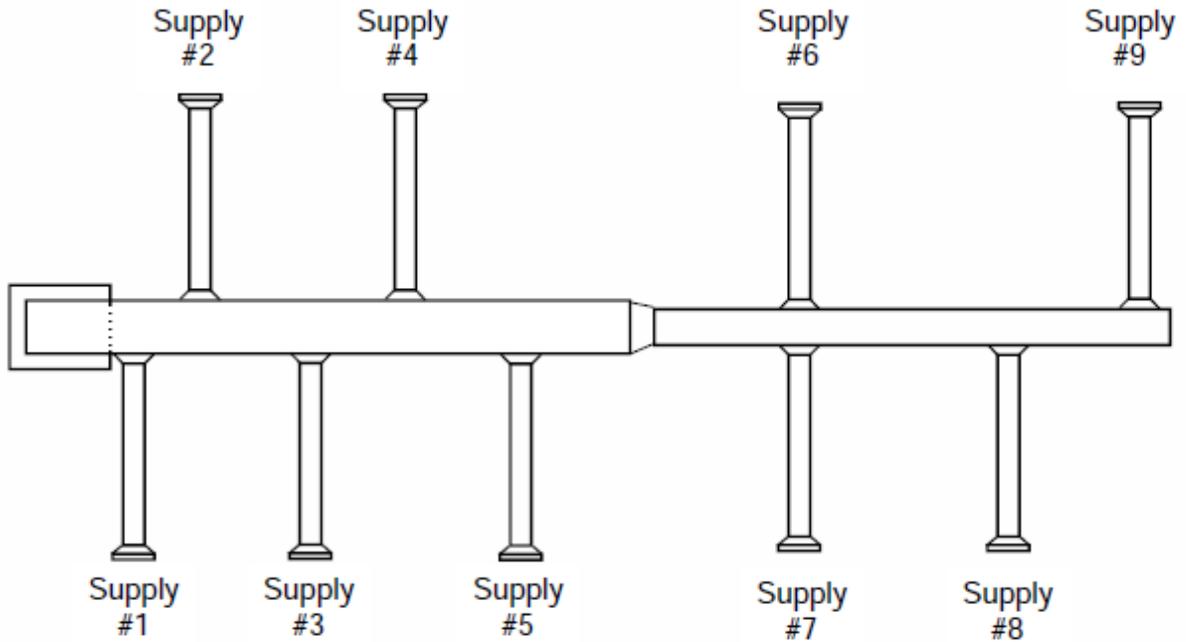
Example:

- SR-2 would have 3 downstream runs (the run directly across is counted)
- SR-3 would have 3 downstream runs (the run directly across is counted)
- SR-4 would have 1 downstream runs
- SR-5 would have 0 downstream runs



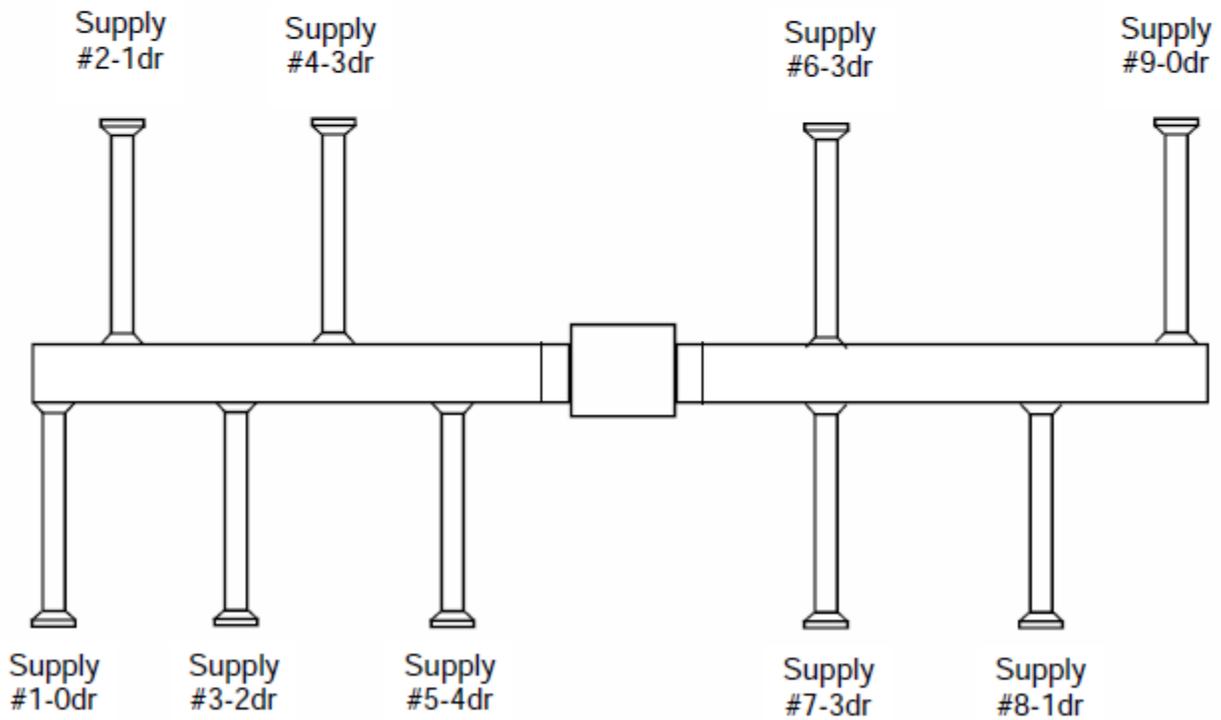
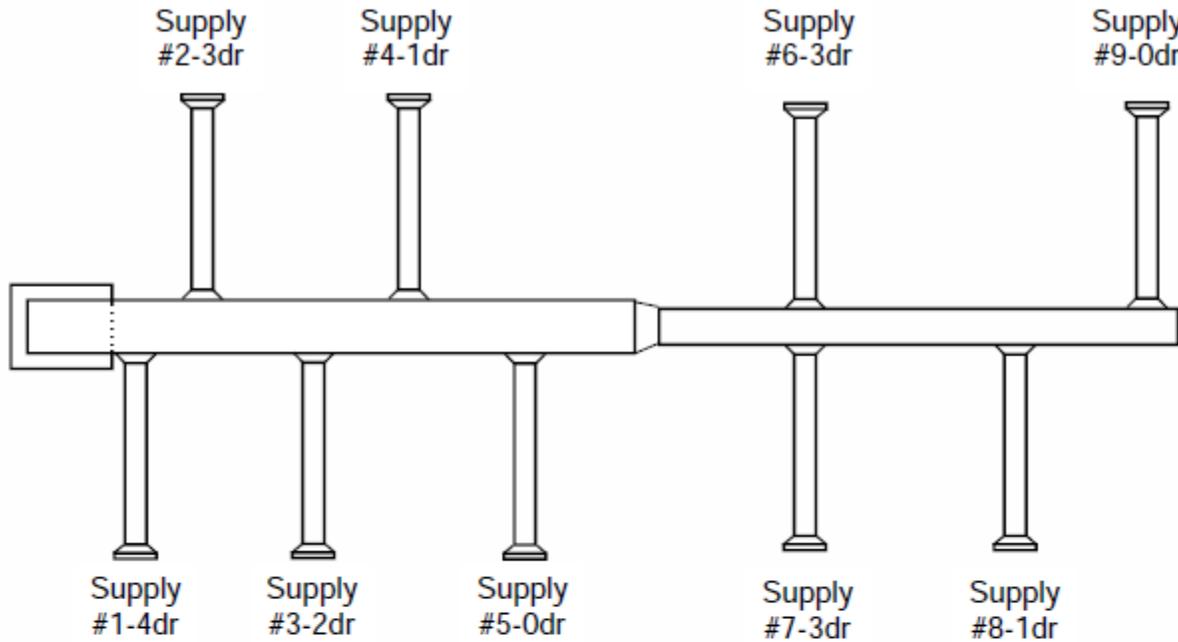
Section IV. Supply Air **“Suggestions on Adding Supply Runouts”**

Below are a couple examples of numbering the Supply Runouts. Remember the software will automatically number the next runout:



Section IV. Supply Air **“Downstream Runs”**

Let’s look at the number of downstream runs for each system. The number behind the runout number will indicate the downstream runs. Example ...Supply #2-3dr would have 3 downstream runs



Section V. Importing “Importing a Job from AccuLoad”

You may import an existing or current job from AccuLoad. Refer to the Setup instructions in Section II to set the path to AccuLoad data files.

1. Click on the “Import” button in the Customer Information screen

Hint:
Drag and drop rooms into the desired zone. Turn on the “Tablet Drag Mode” in the setup screen for one button dragging.

The screenshot shows the AccuDuct software interface. On the left is a tree view of the project structure, including 'Customer Information', 'AccuDuct', 'System', 'Return Trunk RT-01', and 'Supply Trunk ST-01'. On the right is the 'Customer Information' screen, which has an 'Import' button. A blue arrow points from the 'Import' button to a 'Select' dialog box. The 'Select' dialog has a search bar and a table with the following data:

Customer	Job	Consultant
Class Examples	ex2	
Jacobs Residence	EX10	Jack Jones
Practice Exercise 9	EX9	
Two Story Colonial-One Syst	Colonial	
Two Story Colonial-One Syst	Colonial 2-1	
Two Story Colonial-Two Syst	Colonial 2	

Below the table are 'Select' and 'Close' buttons.

2. The “Select” frame should be visible, if not, you will need to go to the “Setup” screen and set the path to the AccuLoad data files.
3. Click on “Use Current Job” if you wish to import the current opened job in AccuLoad or select the desired job from the grid, then click on the green “Select” button.
4. Then next step will require you to select the desired system from the imported job. See the next page for this step.

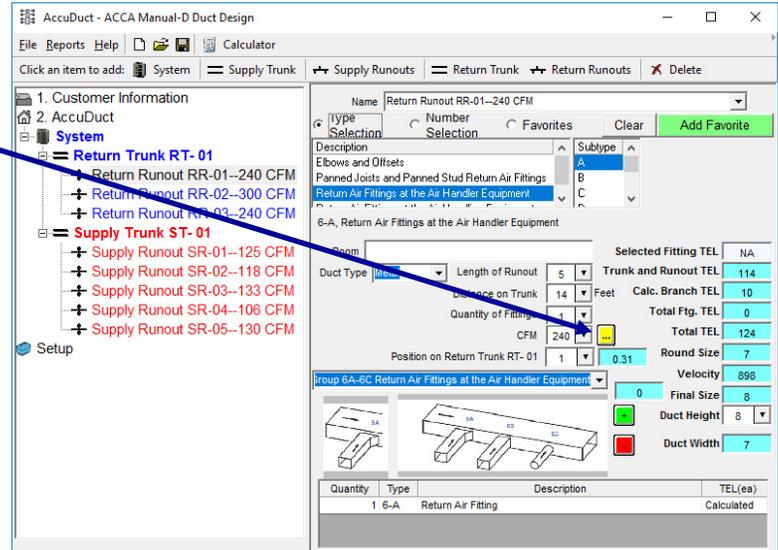
Section V. Importing “Importing a Job from AccuLoad cont.”

The screenshot displays the AccuDuct software interface for configuring a system. The left-hand pane shows a hierarchical tree view under '2. AccuDuct' with 'System' expanded. It lists a 'Return Trunk RT- 01' with three return runouts (RR-01 to RR-03) and a 'Supply Trunk ST- 01' with five supply runouts (SR-01 to SR-05). The right-hand pane is the 'System' configuration window, which includes a 'Select System' dropdown menu, a 'Design CFM' field, and various input fields for pressure losses and static pressure. The 'Total Effective Length (TEL)' is calculated as 375, and the 'Friction Rate Design Value (FR)' is 0.053.

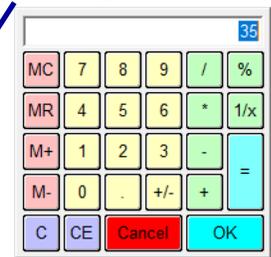
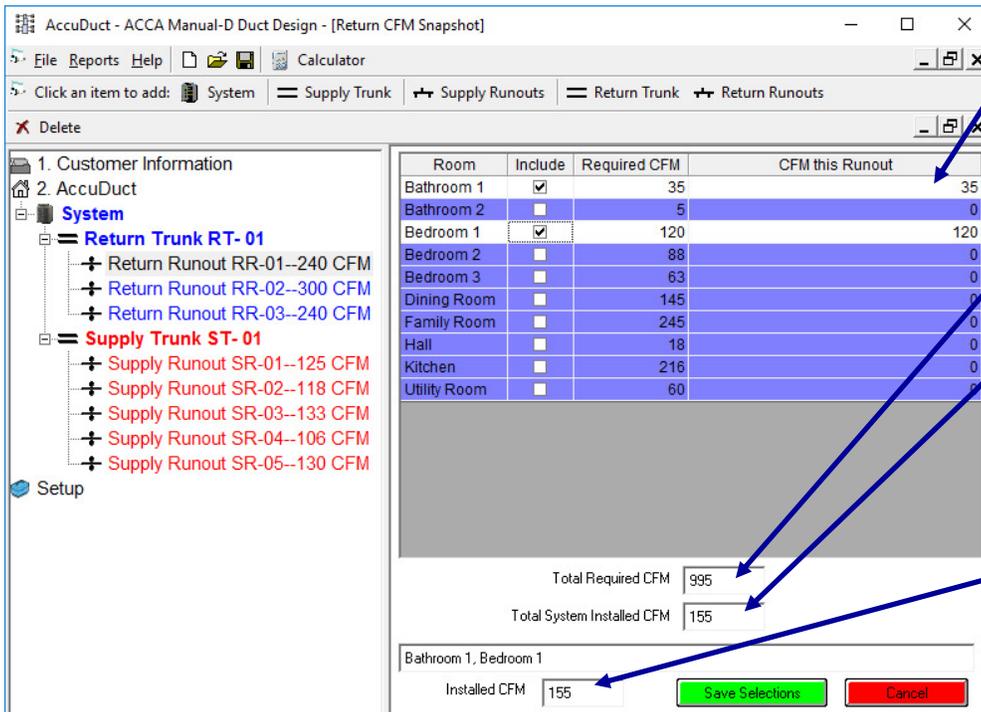
5. Click on the “Select System” dropdown field, then select the desired system.
6. This will populate the Return and Supply runout CFM fields with room information from your imported AccuLoad Job. You will need to run the AccuLoad report to calculate the CFM values based on the heat load calculations.
7. Click on one of the Return runouts and we will discuss the CFM function on the next page.

Section V. Importing “Importing a Job from AccuLoad cont. (R/A)”

1. Click on the yellow button next to the CFM field.
2. This will open the “Return CFM Snapshot” screen below.



You can edit the installed CFM for a room by clicking on this field.



Total required return CFM needed for system

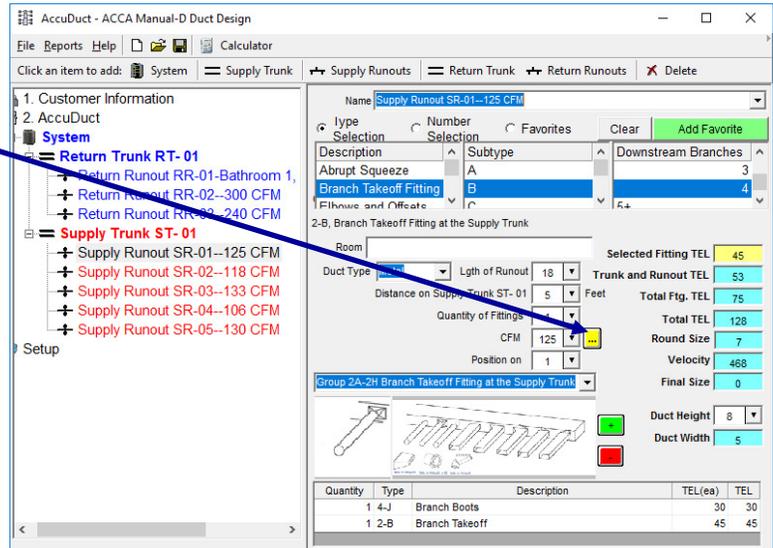
Total required CFM installed

CFM total for this run

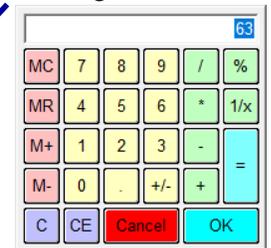
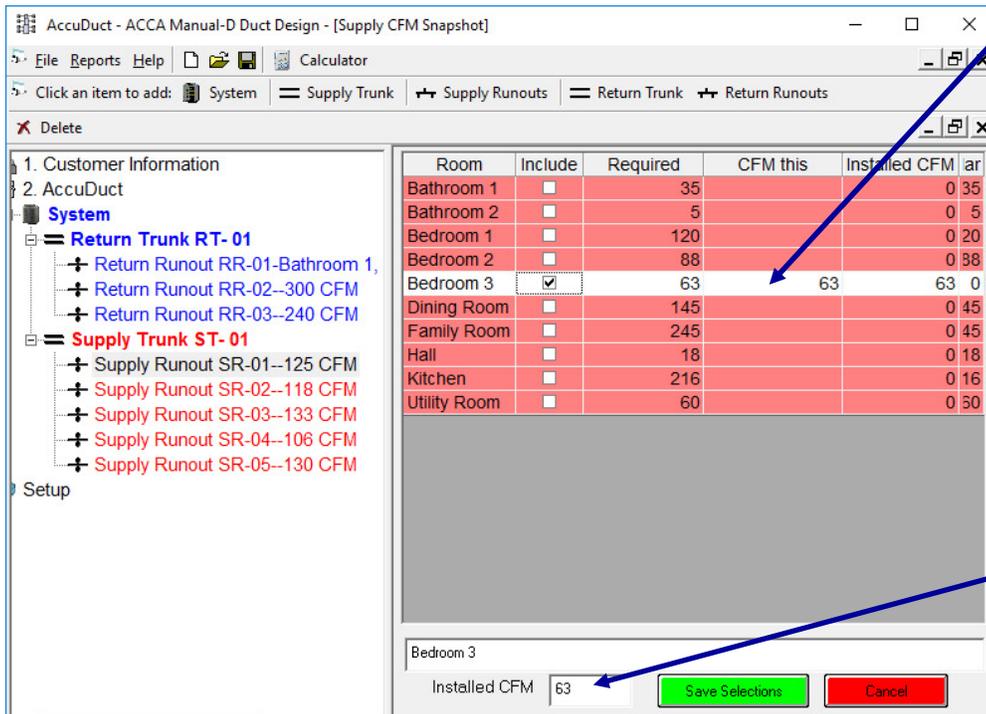
3. Click on the Include box to include this room in the active return runout. Notice that multiple rooms can be selected.
4. Click on “Save Selections” to save the CFM values and Room Names.
5. Click on “Cancel” to void changes.

Section V. Importing “Importing a Job from AccuLoad cont. (S/A)”

1. Click on the yellow button next to the CFM field.
2. This will open the “Supply CFM Snapshot” screen below.



You can edit the installed CFM for a room by clicking on this field.



CFM total for this run

3. Click on the Include box to include this room in the active return runout. Notice that only one room can be selected for the active Supply Runout
4. Click on “Save Selections” to save the CFM values and Room Names.
5. Click on “Cancel” to void changes.

Section V. Importing “Importing a Job from AccuLoad cont. (S/A)”

Room	Include	Required	CFM this	Installed CFM	ar
Bathroom 1	<input type="checkbox"/>	35		0	35
Bathroom 2	<input type="checkbox"/>	5		0	5
Bedroom 1	<input type="checkbox"/>	120		0	20
Bedroom 2	<input type="checkbox"/>	88		0	88
Bedroom 3	<input type="checkbox"/>	63	0	0	63
Dining Room	<input type="checkbox"/>	145		0	45
Family Room	<input type="checkbox"/>	245		0	45
Hall	<input type="checkbox"/>	18		0	18
Kitchen	<input checked="" type="checkbox"/>	216	100	100	16
Utility Room	<input type="checkbox"/>	60		0	60

Kitchen
Installed CFM Save Selections Cancel

Notice that when selecting a room with more than 100 required cfm, the run automatically includes 100 cfm. This default setting of 100 cfm, can be changes in the “Setup” screen. This is useful when adding runouts for rooms with a requirement for multiple runouts. When adding the next runout for this room, the value will continue to decrease by this amount.

VI. Reports

Adtek Software Co
 105 S Main St - Toluca, Ill 61369
 815-452-2345 - sales@adteksoft.com

Sales Consultant:
 Job#: EX9
 Date: 10/22/2016

Practice Exercise 9

System Design Data

Manufacturer's Blower Data:

External static pressure (ESP)	0.5	CFM	0
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Component Pressure Losses for (CPL)

Direct Expansion Refrigerant Coil	0.3	Electronic Filter	0
Electric Resistance Heating Coil	0	Humidifier	0
Hot Water Coil	0	Supply Outlet	0
Heat Exchanger	0	Return Grille	0
Low Efficiency Filter	0	Balancing Damper	0
High or Mid-Efficiency Filter	0	UV Light or other Device	0
Total Component Losses (CPL)	0.3		

Available Static Pressure (ASP)

ASP = ESP - CPL 0.2

Total Effective Length (TEL)

TEL = Supply Side TEL + Return Side TEL 390 Supply Side TEL = 129 Return Side TEL = 261

Friction Rate Design Value (FR)

FR = ASP * 100 / TEL 0.051

*Calculations are based on the ACCA Manual D procedures. All computed calculations are estimates based on inputted values. Calculations are applicable for residential systems only. System designer should have sufficient knowledge of using ACCA Manual D as well as proper installation practices.

Adtek AccuDuct Report Version 17.0.0

Page 1

Page one of the reports will include System Design Information related to component pressure losses, blower data, total effective length and friction rate calculations.

VI. Reports cont.

Adtek Software Co 105 S Main St - Toluca, III 61369 815-452-2345 - sales@adteksoft.com Sales Consultant: Job#: EX9 Date: 10/22/2016		Practice Exercise 9				
System Breakdown						
Item Name						
System	CFM	Duct Dia.	Velocity	Final Duct Dia.	Duct Height x Width	
Return Trunk RT- 01	TEL = 68	311	10	570	0	8 x 11
Return Runout RR-01-Bathroom 1, Bedroom 1-155 CFM	TEL = 139	155	8	444	0	8 x 6
Return Runout RR-02-Bathroom 2, Bedroom 2-93 CFM	TEL = 190	93	7	348	0	8 x 5
Return Runout RR-03-Bedroom 3-63 CFM	TEL = 261	63	6	321	0	8 x 4
Supply Trunk ST- 01		451	12	574	0	8 x 14
Supply Runout SR-01-Kitchen-100 CFM	TEL = 128	100	7	374	0	8 x 5
Supply Runout SR-02-Family Room-100 CFM	TEL = 129	100	7	374	0	8 x 5
Supply Runout SR-03-Bedroom 1-100 CFM	TEL = 129	100	7	374	0	8 x 5
Supply Runout SR-04-Bedroom 2-88 CFM	TEL = 124	88	6	448	0	8 x 4
Supply Runout SR-05-Bedroom 3-63 CFM	TEL = 120	63	6	321	0	8 x 4

Page two of the reports will include duct sizing with velocities. If the calculated velocity does not fall below your setpoint in the setup screen, the software will increase the duct diameter to stay below your velocity setpoint. The rectangular duct will then be calculated.

