



Help Software User Guide

Streamline and simplify the tasks associated with sizing, selecting, and working with humidification systems.

Thank you for choosing Nortec.

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








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Icon Quick Reference Guide

Action Button	Action
	3D Models: Directs to Nortec's AutoDesk Seek site, where Revit models, manuals and dwg files can be downloaded.
	Add: creates a new project
	Archive: Sends selected projects to an archive folder.
	Copy: Creates a copy of any selected projects.
	Customer Address: Shortcut to edit address as well as local agent
	Delete: Deletes any selected projects.
	Edit: Edits a selected project. You can also edit a project by clicking directly on the name.
	Export CSV: Exports the zone list as a CSV file for use in spreadsheet programs.
	Export PDF: Exports the zone list as a PDF file for printing or sharing.
	Flag: Places or removes a flag beside any selected projects.
	More Info: Directs to Nortec's humidity.com website, providing more information about the product.
	Product Document Exporter: Creates a custom document based on selections for file format and included sections.
	Project Information: Shortcut to edit informations such as project name and dates
	Share: Sends a copy of a selected project to another Nortec Help user.
	Weather Data: Edit local weather conditions or choose to use Nortec Weather Data

The Nortec Help Software

Welcome

Welcome to the Nortec Help software. Help is designed to streamline and simplify the tasks associated with sizing, selecting, and working with humidification systems. Help combines an intuitive wizard based approach, a powerful calculation system, schedule and specification generation, and access to your local representatives in one convenient package serving all of your humidification needs.

Getting Started

In order to properly use Help, please ensure that an up to date browser is being used. Help currently supports the following browsers:

- Firefox 4.0 and higher
- Internet Explorer 9 and higher
- Google Chrome (all versions)
- Apple Safari (all versions)
- Opera (all versions)

If unsure of what browser you are currently using, please visit www.whatbrowser.org to view your browser version.

Help has been optimized for use on a desktop or laptop computer. Help will function on many mobile devices such as phones and tablets, however the layout has not yet been optimized for these devices and not all functions may work. Basic Help functionality on browsers such as Safari (iOS), Chrome (Android), and Internet Explorer (Windows Phone) has been demonstrated to work. Due to the high variability between devices and browser versions the Help experience may vary on mobile devices.

Registration

Nortec Help can be used as a “Guest” without registration, however functionality is limited. To enable features such as the ability to save projects, please take the time to register for a free account. The registrations steps are outlined below:

1. Begin by entering <http://www.nortechelp.com/> into the address bar in your web browser.
2. After your browser has loaded the home screen, select the **Register** link as shown.

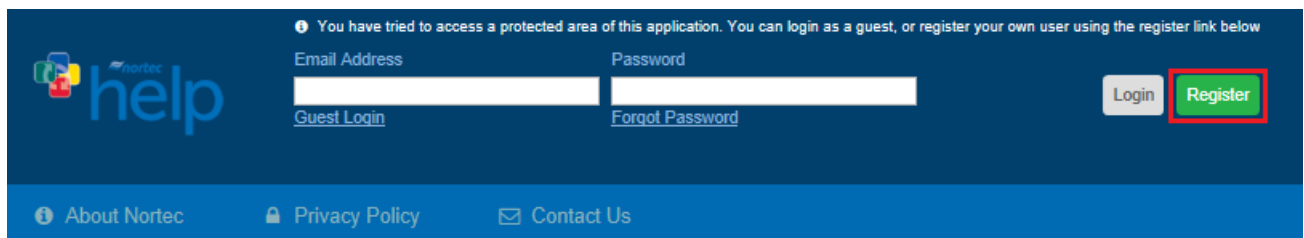


Figure 1: Registration

3. Complete the form by filling in the required information (* denotes a required information field). If you are a Nortec Agent or Employee be certain to check the box that says **Nortec Agent/Staff**. This checkbox will notify Nortec that the account requires review.
4. Select the **SAVE** button at the bottom-left of the browser window once the form has been completed.
5. You will receive a confirmation message on screen, as well as an email with a link. To activate your account, follow the link in the email. This process is used to validate your email address. *Note: Some email clients or security settings may require you to copy and paste the link.*
6. Once the email validation process has been successfully completed, another confirmation message will be sent stating that registration is now complete.

Congratulations, you are now registered and can log into the software!

Getting Started

Editing Your Account Information

The first time you log in to Help, you will be prompted to select your local agent. Selecting your local agent allows you to quickly and easily submit requests for quotations and work with your agent.

Note: Nortec Agents should select themselves as their local agent. Doing so helps associate your account with your specific agency and allows you to receive quotation requests from engineers and users.

You can change or view your local agent at any time by selecting **Edit Profile** at the top-right of the browser window, shown in Figure 2: Edit Profile and Agent Info, and selecting the **Edit** button to the right of the **Agent Info** header and reselecting your area.

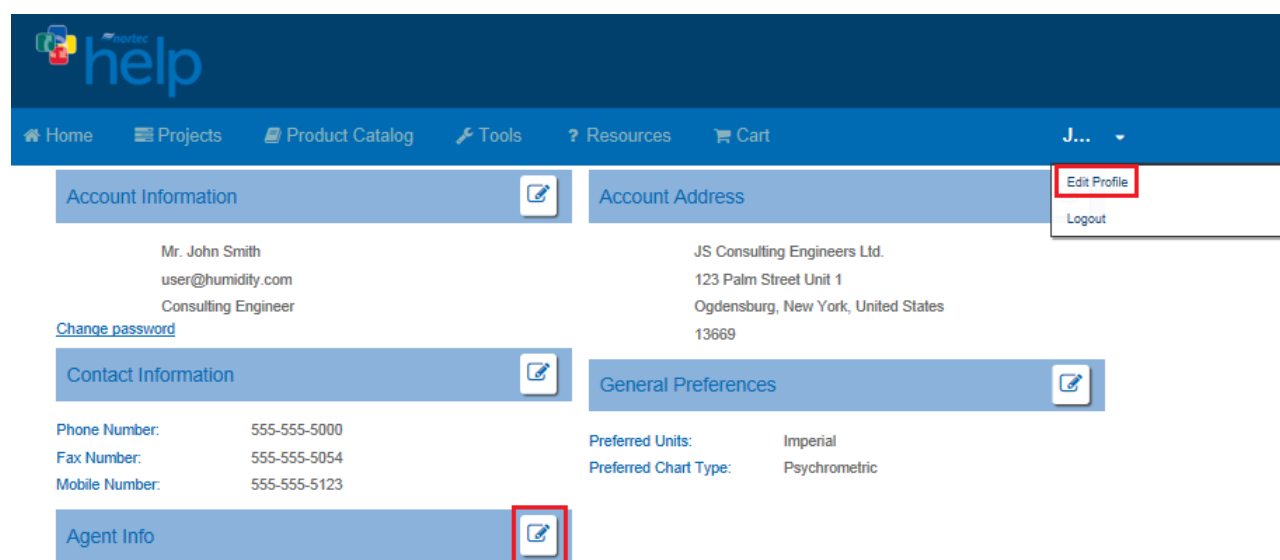


Figure 2: Edit Profile and Agent Info

While in the Edit Profile section, you can also select your preferred units of measure by clicking on the **Edit** button to the right of the **General Preferences** section. You can also change your units on a per-project basis when creating a project or editing an existing one. Additionally, any information entered during the registration process can be changed through the Edit Profile section.

To change your name and contact information, select the **Edit** button to the right of **Account Information** and to the right of **Contact Information**, respectively.

To change your email address, which is also your username, select **Edit the Account Information**. A dialogue box will appear; select the link at the bottom of the box that says **Change Username**. Once the required information is entered, you will be required to log back on using the updated information.

To change the account password, select **Change Password** in the Account Information field and then proceed to enter in the required information.

Your Projects

Humidifier calculations and equipment selections are stored in files called **Projects**. Projects are saved within the application and are accessed through the **Projects** menu shown below. Here you can create new projects, edit existing projects, share projects, and maintain your project list.

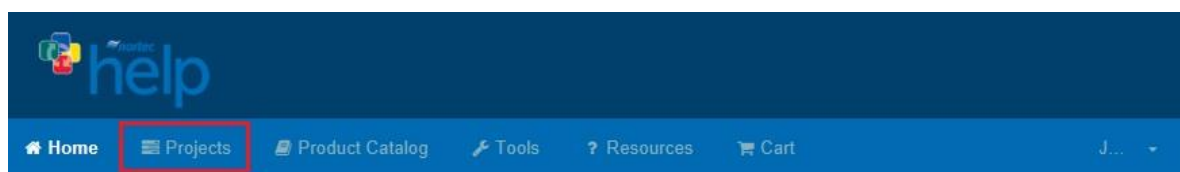









Figure 3: Projects Menu

There are two types of projects available within the software:

1. **Load Sizing Projects** provide an intuitive wizard-based approach towards selecting humidifiers. Moving from step to step, the software helps you to calculate a load and then select appropriate humidifiers, distributors, and controls to serve this load. This project is the most common way to work in the software and is used when you would like to calculate a load, determine humidifier performance in a certain scenario, or would like to make sure that the selected products will work together properly.
2. **Browser Projects** allow you to select equipment directly from the catalogue and create your own bill of materials. This type of project is most commonly used when you are looking for specific items.

Selecting **List all Load Sizing Projects** or **List all Browser Projects** from the Projects menu will take you to the lists for each respective type of project. The following options are shown in Table 1: Project Functions

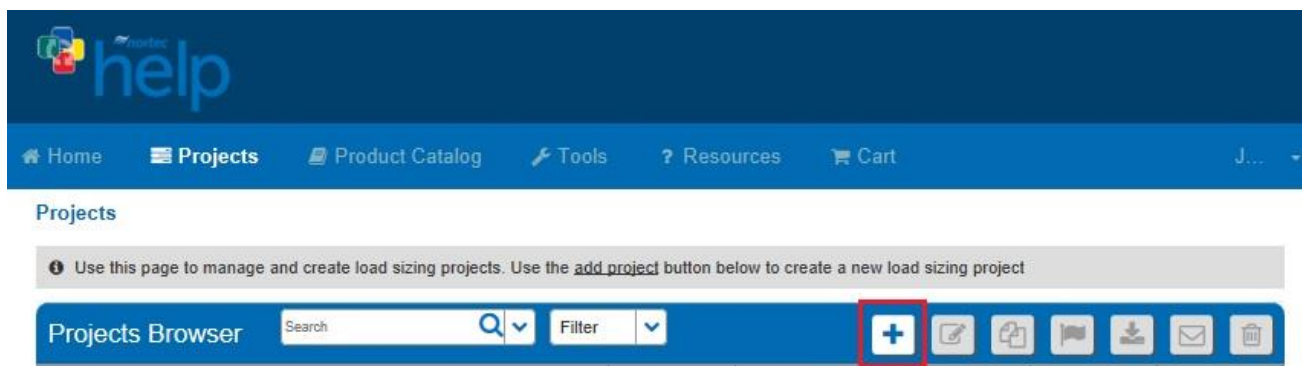
Table 1: Project Functions

Action Button	Action
	Add: creates a new project
	Edit: Edits a selected project. You can also edit a project by clicking directly on the name.
	Copy: Creates a copy of any selected projects.
	Delete: Deletes any selected projects.
	Flag: Places or removes a flag beside any selected projects.
	Archive: Sends selected projects to an archive folder.
	Share: Sends a copy of a selected project to another Nortec Help user.

Creating a New Project

Select the **Add** icon highlighted in Figure 4: Creating a New Project to create a project. This will bring up a dialog box where you can enter a project name as well as other relevant information. In this dialog box, you can also set your preferred unit of measurement and chart type. The specific contents of the dialog box vary depending on whether you are creating a browser project or a load sizing project.

Select the **Save** button when you have finished entering the required information to create the new project.

**Figure 4: Creating a New Project**

About Weather Data

Help contains a database of weather design data to help you determine accurate humidification design conditions for your region. If you would like to take advantage of this data check the **Use Weather Data** box and choose your country and region from the drop-down lists. Weather data can always be changed or overridden later within a project.

Projects

Load Sizing Projects

Project Home

To create a Load Sizing project, hover your mouse over the **Projects** menu in the main navigation bar and select **List all Load Sizing Projects** from the menu and select the **Add** button. Once you have created a new project you will be taken to the project home page shown below. The project home page has several useful sections.

The screenshot shows the 'Project Home' page for 'Example 1'. At the top is a navigation bar with 'Home', 'Projects', 'Product Catalog', 'Tools', 'Resources', and 'Cart'. Below this is a header for 'Projects / Example 1' with a message: 'Provide your project details, outside air design parameters, then add a zone using the button in the zone list to begin load sizing and humidifier selection.' The main content area is titled 'Project Information' and has tabs for 'Configuration', 'Notes', 'Project History', and 'Document Center'. The 'Configuration' tab is active, showing three sections: 'Project Information' (Name: Example 1, Project Number: 12345, Customer: Nortec, Created: 2015/07/31, Required Date: 2015/12/09), 'Customer Address' (JS Consulting Engineers Ltd., 123 Palm Street Unit 1, Ogdensburg, New York, United States 13669), and 'Weather Data' (Ottawa Macdonald-Cartier Int'l, Ontario, Canada; Altitude: 374.02 ft; Dry Bulb Temp: -11.00 °F; Relative Humidity: 48.02 %; Design Tolerance: 99.60 %). Below these is a 'Zones' section with a 'Bill Of Materials' table. The table has columns: Name, Humidifier, Space Temp, Space RH, Air Volume, Temp bH, %Outside Air, and Load. The table is currently empty, with a message 'There are no records to display.' at the bottom right.

Figure 5: Project Home Page

Configuration Tab

The **Project Information** section displays the project's assigned name and optional project number, the date the project was initially created, the optional requested completion date, as well as the units of measure. These can be changed later by clicking the edit button Project Information icon.

You may also edit **Customer Address** and **Contact** information on this page by clicking the Customer Address icon.

The **Weather Data** section displays the general outside conditions for the project. These can be either manually entered or retrieved from Help's internal weather database. Weather Data

applies to all zones within a project, but can be overridden on a zone by zone basis if necessary. The location and subsequent weather information can be edited by clicking the Weather Data icon.

Notes Tab

Allows you to make notes on the project. Text in this field is kept private and will not be transferred when the project is copied or shared.

Project History Tab

Provides a timeline of the project and is updated automatically as you work.

Zones Tab

Serves to display each of the Zones associated with the project as well as give a brief data summary of that Zone. Zones are explained in more detail in the next section.

Bill of Materials Tab

Allows you to view your complete project bill of materials. This section contains shortcuts for editing items.

Zones

A humidification project consists of one or more **Zones**. Zones are similar to sections within a building in that they contain a humidification system serving a single ventilation system or conditioned space. Each project must contain at least one Zone, and can have an unlimited amount of Zones. If your project has multiple ventilation systems requiring humidification, you should create a Zone for each ventilation system.

Note: A single Zone can contain multiple humidifiers; however they must serve a common steam distribution system and must be of the same technology.







The Zone list is shown in Figure 6: Zone List and functions are described in Table 2: Zone List Functions.

Zones		Bill Of Materials							
Name ↑		Humidifier	Space Temp	Space RH	Air Volume	Temp bH	%Outside Air	Load	
1	<input type="checkbox"/> Zone(1)	Electrode Steam	72	35	4374	55	25	27.18	
2	<input type="checkbox"/> Zone(2)	Gas Fired	72	35	6000	55	25	37.29	

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Figure 6: Zone List

Table 2: Zone List Functions



Icon	Function
	Add: Create a new Zone within the project.
	Edit: Edits a selected Zone. You can also edit a Zone by clicking directly on the name.
	Copy: Makes a copy of any selected Zones.
	Export CSV: Exports the Zone list as a CSV file for use in spreadsheet programs.
	Export PDF: Exports the Zone list as a PDF file for printing or sharing.
	Delete: Deletes any selected Zones.

Load Sizing

When you create a new Zone you are taken to the **Load Sizing** tab respective to that Zone. Load Sizing is the first step in calculating a Zone and selecting products. Functions for load sizing are:

Table 3: Load Sizing Functions

Section	Option	Function
1	Load Size Method	Calculated (Default): Enter parameters to calculate a humidification load.
		Manual: Use a predetermined load to select your humidifier. Absorption distance calculations will be disabled in this mode since key variables are not entered.
2	Name	Enter in the desired name for the Zone
	System Type	In Duct Humidification (Default): This box is checked and Help adds humidity to an air handler or duct. In Space Humidification: Check this box if you want to distribute humidity directly into a space.
	Calculation Method	Isothermal (Default): The program will calculate conditions based on a steam humidifier. Adiabatic Humidification: The program will calculate conditions taking into account evaporative cooling. In the case of Adiabatic humidification you enter a target discharge temperature and the program calculates the required entering air temperature. Adiabatic Cooling: The program will calculate conditions taking into account evaporative cooling. In the case of Adiabatic cooling you input an entering air condition and the program calculates the discharge temperature and humidity.

3 Duct Details	Duct Type	Gives the option between a rectangular or round duct.	
	Duct Orientation	Select whether the humidifier will be placed in a horizontally or vertically aligned duct.	
	Duct Width/Height	Enter in your duct's or air handler's interior width and height dimensions.	
4 Air Flow	Outside Air	Enter the quantity of outside air being circulated through the system as a percentage of the total volume. For example, enter 100% for a make-up air system or a lower percentage for a return air system.	
	Air Volume	Enter the volume flow rate of the ventilation system.	
5 Moisture Gains and Losses	Moisture Gains	If your project includes space moisture gains, such as from a process or from people, you can enter a rate (in lbs or kg per hour). This serves to decrease the overall moisture that the humidifier needs to produce to maintain the space design condition.	
	Vapour Losses	If your project includes space moisture losses, such as from an absorbent process or leakage, you can enter a rate (in lbs or kg per hour). This serves to increase the overall moisture that the humidifier needs to produce in order to maintain the space design condition.	
6 Outside	Weather Data		Selecting this icon will tell Help to use Weather Data from the database for outside design conditions
			Selecting this icon will override Weather Data conditions and allow you to manually enter in local temperature and humidity levels. This will only apply to the selected zone.
7 Inside	Temp. Entering Humidifier	Enter the temperature of air that will be entering the humidifier / steam distributor. Default: 55° F (13° C)	
	Space Design Temp	Enter in the desired temperature of the conditioned space. Default: 72° F (22° C)	
	Space Design Humidity	Enter in the desired humidity level in the conditioned space. Default: 35%	
8 Natural Exchange	Natural Exchange Temp.	When natural exchange is enabled, you can set the temperature of air exchanging with the space through natural exchange. Help will default to the outdoor temperature set through the weather data.	
	Natural Exchange Humidity	When natural exchange is enabled, you can set the humidity level of air exchanging with the space through natural exchange. Help will default to the outdoor humidity set through the weather data.	
	Natural Exchange Volume	If your project includes natural exchange loads, enter in the volumetric quantity of natural exchange air mixing with the air in the conditioned space.	
9 Economizer	Economizer	Help includes a temperature based economizer function. Checking this box will allow you to set a target mixed air temperature. Help will then adjust the quantity of outside air compared to return air for each month of the year and return the worst case load and the month it occurs in. The economizer function requires that weather data be used.	

Example of the Load Sizing Tab can be seen in the following figure with sections numbers. Load Calculations can be seen on the right hand side of the page. This data table is actively being calculated based on the data entered in each field. This table will update every time you click on a new field.

The screenshot displays the 'Load Sizing' software interface. At the top, a blue header bar contains the title 'Load Sizing', a 'Zones' dropdown menu set to 'Zone(1)', and three icons: a gear, a plus sign, and a home button. Below the header is a horizontal progress bar with six tabs: 'Load Sizing' (active, green circle), 'Humidifiers', 'Distributors', 'Controls', 'Accessories', and 'Summary' (grey circles).

The main content area is divided into nine sections, each with a red label on the left:

- Section 1:** 'Load Size Method' dropdown menu set to 'Calculated'.
- Section 2:** 'Name' text field with 'Zone(1)', 'System Type' buttons (square and circle), and 'Calculation Method' buttons (cloud, play, and pause).
- Section 3:** 'Duct Details' section with 'Duct Type' buttons (square and circle), 'Duct Orientation' buttons (vertical and horizontal), 'Duct Width (in.)' text field with '0', and 'Duct Height (in.)' text field with '0'.
- Section 4:** 'Air Flow' section with 'Outside Air (%)' text field with '25' and 'Air Volume (CFM)' text field with '0'.
- Section 5:** 'Moisture Gains and Losses' section with 'Moisture Gains (lb/hr)' text field with '0' and 'Vapour Losses (lb/hr)' text field with '0'.
- Section 6:** 'Outside' section with a gear icon and a pencil icon. It contains 'Altitude (f)' (374.02), 'Outside Temp (°F)' (-11), and 'Outside Humidity (%)' (48.02).
- Section 7:** 'Inside' section with 'Temp. Entering Humidifier (°F)' (55), 'Space Design Temp (°F)' (72), and 'Space Design Humidity (%)' (35).
- Section 8:** 'Use Natural Exchange:' checkbox is checked. It contains 'Natural Exchange Temp (°F)' (-11), 'Natural Exchange Humidity (%)' (48.02), and 'Natural Exchange Volume (CFM)' (0).
- Section 9:** 'Use Economizer:' checkbox is checked. It contains 'Outside Temp (°F)' (25), 'Outside Humidity (%)' (71), 'Outside Air (%)' (36.34), 'Desired Mixed Air Temp' (55), and 'Economizer Month' (MARCH).

On the right side of the interface is a 'Load Calculations' panel with a blue header and a white body. It contains the following data:

- Humidification Load (H): 0.00 lbs/hr
- Total Humidification Load (Htot): 0.00 lbs/hr
- Absorption Distance: 0 ft
- Duct Velocity: 0 ft./min

Figure 7: Load Sizing Tab

Below the load sizing data fields are three tabs that provide addition information about the zone.

The **Schematic** diagram, shown in Figure 8: Schematic Diagram, provides a visual representation of the corresponding data entered in the fields above. Depending on the options selected above, some fields with visible borders around them can be edited directly from the schematic, while others are from calculated values. Clicking the **PDF** icon will generate a datasheet containing the schematic.

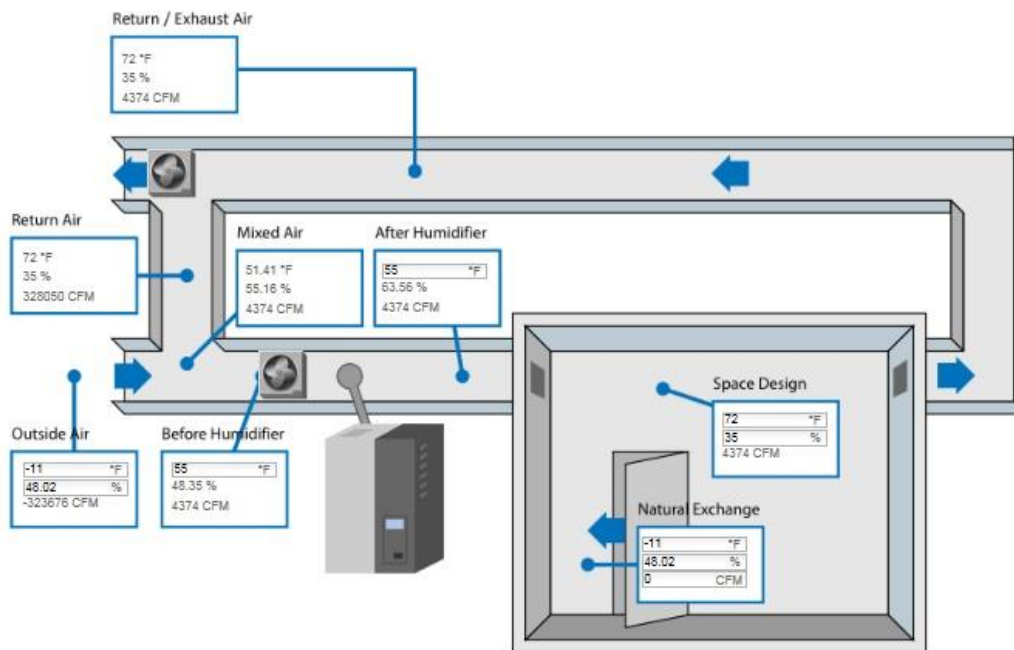


Figure 8: Schematic Diagram

The **Chart** tab, shown in Figure 9: Psychrometric / Mollier Chart, displays either a Psychrometric or Mollier H-x chart, depending on the project's chart settings. The chart can be exported to PDF by selecting the PDF icon

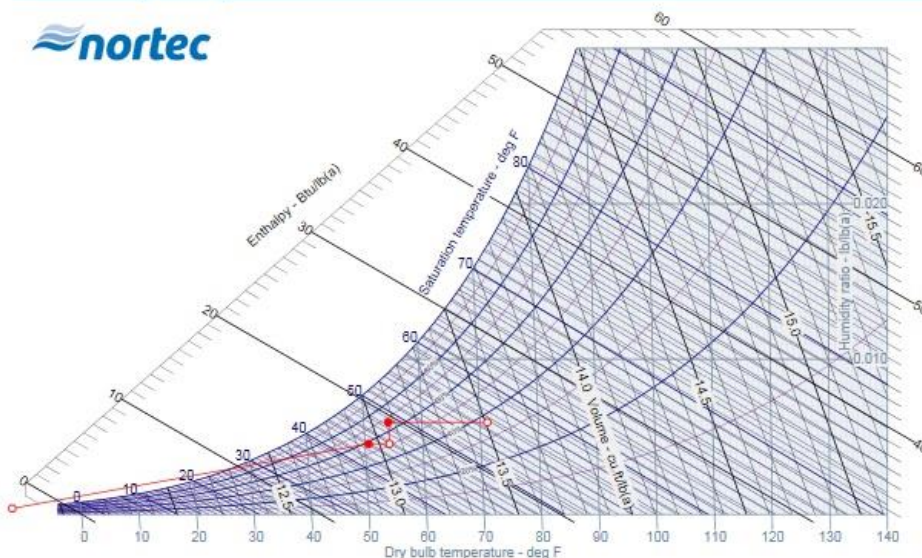


Figure 9: Psychrometric / Mollier Chart

The **Parameters** tab, shown in Figure 10: Parameters Tab, displays the calculated parameter values for each state point in the system. Values with visible text boxes may be edited directly from this table, while other values are calculated. This table can be exported to either PDF format or CSV format for use in a spreadsheet program by clicking the respective export icon

SchematicChartParameters

Air Volume	DB (°F)	WB (°F)	RH (%)	W (lbmH2O/lbmair)	Ws (lbmH2O/lbmair)	Pw (Psia)	Tdp (°F)	Vsd (ft³/lbmda)	h (BTU/lbda)	m (lbm/hr)
Outside Air	-11.00	-11.95	48.02	0.00021125	0.00044008	0.00	-23.59	11.4691	-2.42	4783.85
Space Design	72.00	55.78	35.00	0.00589307	0.01713894	0.14	42.93	13.7149	23.72	19135.39
Exhaust	72.00	55.78	35.00	0.00589307	0.01713894	0.14	42.93	13.7149	23.72	19135.39
Return Air	72.00	55.78	35.00	0.00589307	0.01713894	0.14	42.93	13.7149	23.72	14351.54
Mixed Air	51.41	43.99	55.16	0.00447262	0.00815620	0.10	35.87	13.1539	17.19	19135.39
Natural Exchange	-11.00	-11.95	48.02	0.00021125	0.00044008	0.00	-23.59	11.4691	-2.42	0.00
Infiltration	-11.00	-11.95	48.02	0.00021125	0.00044008	0.00	-23.59	11.4691	-2.42	0.00
Before Humidifier	55.00	45.73	48.35	0.00447262	0.00932201	0.10	35.87	13.2463	18.05	19135.39
After Humidifier	55.00	48.62	63.56	0.00589307	0.00932201	0.14	42.93	13.2763	19.60	19135.39

DB

Dry Bulb Temperature

WB

Wet Bulb Temperature

RH

Relative Humidity

W

Absolute Humidity

Ws

Absolute Humidity at Saturation

Pw

Vapor Pressure

Tdp

Dew Point Temperature

Vsd

Specific Volume

h

Enthalpy

m

Mass Flow of Air

Figure 10: Parameters Tab

Humidifiers

After the load has been calculated or entered, the next step is to select a humidifier to meet the load. Select the **Next** button or the **Humidifiers** tab to do this. On the humidifiers page, shown

in

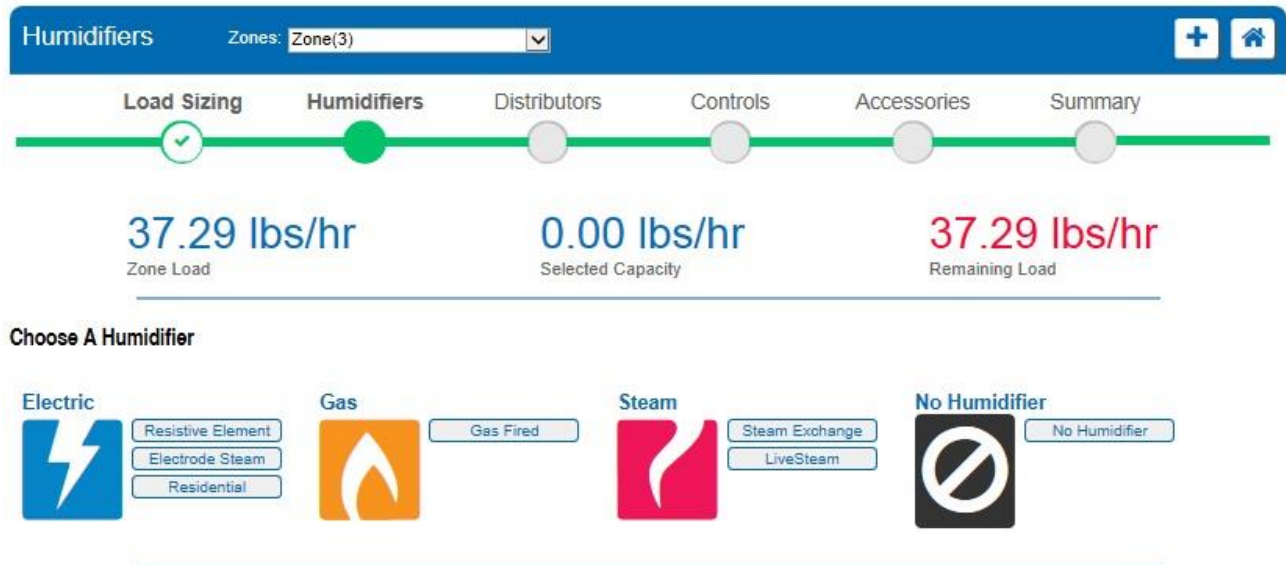


Figure 11: Humidifier Selection, you are presented with a filtered list of products that are suitable for your load. This list will vary depending on your selections during the Load Sizing step. If you are unsure of the functions of a certain technology, select the name of the technology in question to see a detailed description. Additionally, at the top right hand side of the text box is a **More Info** icon. Selecting this will open a new browser tab or window, taking you to the Nortec product's web page where you will have access to more detailed information. Help will remain open in your original tab or window allowing you to return to it at any time. The two icons beside More Info will allow you to see **3D models** of the product as well as **Export** product documentation.

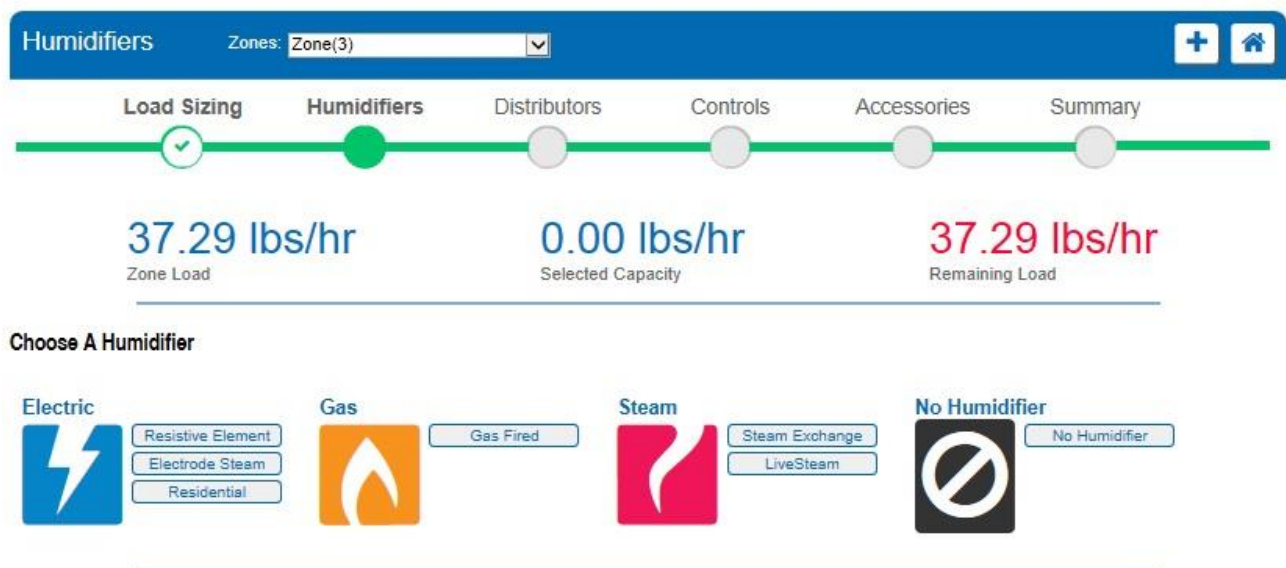



Figure 11: Humidifier Selection

In order to select a given technology, click on its name. This will expand the product as shown in Figure 12: Humidifier Configuration. Here, you will be able to configure your chosen product in terms of control type, capacity and power circuit. Below the product configuration, you will be

able to see more details about the product including a description as well as other specifications and diagrams.

Below the text box are possible additional configurations, accessories and special options that can be added to the product. The **Show Details** icon will allow you to see more information about each option. In the case of multiple humidifiers serving a common Zone, each humidifier can have its own set of options. At the very bottom of the page will be a bill of materials indicating the selected parts and humidifiers. Here you can edit your and delete humidifiers or option selections at any time.

The interface displays the configuration for 'Humidifier 1'. It includes a product image, control type, capacity, and power circuit settings. A 'Solution' summary box lists the selected model, nominal humidification, electrical power consumption, and total weight. Navigation tabs at the bottom allow switching between Detail, Description, Specification, Schematic, and Wiring views.

Humidifier 1	
Configure Product	
	<p>Control Type: Indoor</p> <p>Capacity (lbs/hr): 45</p> <p>Power Circuit: 220-240/3/60</p>
Solution	
1 x RS 045/220-240/3	
Nominal humidification: 45 lbs/h	
Electrical power consumption: 16.3 kW	
Total weight: 145 lbs	

Detail | **Description** | Specification | Schematic | Wiring

Figure 12: Humidifier Configuration

The same is true for the adiabatic humidification technologies. Adiabatic cooling or humidification must be selected at the Load Sizing step. Options for adiabatic products will then be listed during the humidifier selection. Selecting a technology will again allow you to choose configurations and options.

Additional humidifiers can be included within a zone for reasons such as redundancy or very large loads. Click the **Add** button to include additional units. Secondary units must be of the same technology family as the first humidifier, but can have different capacities and options.

Once humidifier selection is completed, select the **Next** button to move on to the next phase in the design. A check mark will appear below the Humidifiers tab at the top of the page to indicate that a selection has been made. The Humidifier tab can be selected at any time to return and edit your selection.


Distributors

Once all of the humidifiers and desired options have been added to the Zone, the next step is to select a distribution system. As with the humidifier list, Help will only display the distributors that are compatible with your humidifier, load, and duct dimensions.

Distributors
Zones: Zone(3)
+

Load Sizing
Humidifiers
Distributors
Controls
Accessories
Summary


Choose A Distributor

Short Absorption Manifolds


SAMe
mini SAMe

Single Tube Duct Distributors


ASD
BSD
CSD

No Distributor


No Distributor


Figure 13: Distributor Selection

SAM-e

Click the **SAM-e** product icon to select this distribution technology. As with the humidifier selections, a configuration window will expand. You will be able to configure your product here as well as select other configuration options.

The SAM-e configuration window can be seen below in Figure 14: SAM-e Selection. The various options are explained in Table 4: SAM-e Configuration.

Configure Product



Select distributor based on:
Zone Load

Tube Material:
304 Stainless Steel

Support Frame:
Galvanized Steel


Support Stand:
None

Insulation: ☐

Inlet Adapter:
Automatically Select

Inlet Adapter Length:
5

	Tube Spacing	Tube Quantity	Absorption
<input checked="" type="radio"/>	3 in.	9	0.27 ft
<input type="radio"/>	6 in.	5	0.38 ft
<input type="radio"/>	9 in.	3	0.52 ft
<input type="radio"/>	12 in.	3	0.52 ft


Solution

Duct Width:
40 in

Duct Height:
40 in

Duct Orientation:
Horizontal

Absorption:
0.27 ft

Distance to Bend:
0.27 ft

Distance to Submicron:
0.81 ft

Distance to Humidity Sensor:
1.35 ft

Total weight:
48.04 lbs

Figure 14: SAM-e Selection

Table 4: SAM-e Configuration

Option	Description
Select Distributor Based On	<p>Zone Load (Default): The distributor capacity will be selected based on your load.</p> <p>Humidifier Capacity: The distributor capacity will be selected based on the total capacity of humidifiers in the zone.</p> <p>Note: To avoid oversizing distributors, use zone load when working with zones that have redundant humidifiers.</p>
Tube Material	<p>304 Stainless Steel (Default): A high grade stainless steel with excellent corrosion resistance and durability.</p> <p>409 Stainless Steel: A lower cost stainless steel with excellent durability. May discolor slightly over time.</p>
Support Frame	<p>Support frames provide additional support for the SAM-e and allow it to be easily connected to a duct ceiling. Support frames are optional for horizontal ducts (installers can attach the top bracket to the walls), but are required for vertical applications.</p> <p>Support frames are available in both galvanized and stainless steels.</p>
Support Stand	<p>In some applications, the SAM-e needs to be raised above the duct floor in order to accommodate trapping or to cross an obstacle. Support stands, available in 12 inch or 20 inch heights, allow for installation in this case. Selecting a support stand will reduce the tube height to fit the distributor in the duct.</p>
Insulation	<p>Insulating the distributor header and tubes reduces condensate losses and airstream heat gain while improving energy efficiency. Check this box to include insulation.</p>
Inlet Adapter	<p>Inlet adapters are available in a variety of configurations to match the humidifier supplying them. By default Help will automatically match the inlet adapter to the humidifier. You can override this selection by manually choosing an adapter from the list.</p>
Inlet Adaptor Length	<p>The SAM-e's inlet adaptor is available in 3 possible lengths (5, 10, 12ft.)</p>
Tube Spacing	<p>SAM-e's are available with 4 tube spacing's. Wider tube spacing's have fewer tubes increasing absorption distance, but reducing cost and condensate losses. As a rule of thumb, always select the widest spacing that will meet your absorption requirements.</p>

Mini SAM-e

If **Mini SAM-e** distribution is selected, a popup window will appear. Here, you will see a list of specifications for the Mini SAM-e as well as changeable configurations similar to the regular SAM-e. Once you have made your selection, select **Save** to see the bill of materials for your distributor selection as well as dynamic drawings for the selected Mini SAM-e.

Choose Distributor

mini-SAMe Distributor

Minimum Number of Tubes:	4
Maximum Number of Tubes:	7
Absorption Distance:	0.31 - 0.43 ft.

Tube Spacing:	3	Absorption Distance:	0.31 ft.
Tube Spacing:	6	Absorption Distance:	0.43 ft.

Select distributor based on:

Zone Load

Tube Spacing:

3

Insulation:

☐

Inlet Adapter:

Automatically Select

SAVE

CANCEL

Figure 15: Mini SAM-e Selection Window

Single Tube Duct Distributors

If **Single Tube Duct** distribution is selected, a popup window will appear. Here, you will see a list of specifications for the steam distributor. You may enter the number of distributors required for the Zone. Once you have made your selection, select **Save** to see the bill of materials for your distributor selection.

A check mark will appear below the Distributors tab on the top of the page to indicate that a selection has been made. The Distributor tab can be selected at any time to return and edit your selection.

Choose Distributor [X]

Steam Distributor

Minimum Number of Tubes:	2
Maximum Number of Tubes:	4
Absorption Distance:	0.67 - 1.01 ft.

Number of Tubes:	2	Absorption Distance:	1.01 ft.
Number of Tubes:	3	Absorption Distance:	0.79 ft.
Number of Tubes:	4	Absorption Distance:	0.67 ft.

Select distributor based on: Zone Load [v]

* Quantity:

SAVE CANCEL

Figure 16: Single Tube Duct Distribution Selection Window

Controls

After selection of the humidifier and distributor has been completed, the next step in the design phase is to select **Controls**. Selecting the **Next** button or the **Controls** tab will bring you to a selection page for your humidifier controls. There are two options on this page as shown in Figure 17: Controls Selection:

1. **Controls by Nortec:** Configure the humidifier using Nortec humidistats and sensors as primary signal source
2. **Controls by Others:** Accept controls from a third-party control source

The default for controls selection is set to **Assisted Selection** to help configure the controls for the selected Zone. However, the configuration process can also be performed manually by selecting the **Manual Selection** option. If you are choosing not to make a controls selection at this time, select the **None** option. These options can also be seen in Figure 17: Controls Selection

Controls

Zones: Zone(1)

+

Home

Load Sizing

Humidifiers

Distributors

Controls

Accessories


Summary

4.1 Choose Selection Type

Please select Manual or Assisted selection to configure controls for this zone.

☐ Manual Selection
 ☒ Assisted Selection
 ☐ None

4.2 Choose Controls


☒ Controls by Nortec



☐ Controls by Others

Figure 17: Controls Selection

Controls By Nortec

This option is selected by default and should be chosen if you require a Nortec humidistat or sensor to provide your primary control signal. Once selected, you will see options to configure these controls.

4.2 Choose Controls


☒ Controls by Nortec


☐ Controls by Others

Please select the controls you require based on the signal type and channel.

Signal Type:

Demand

Channels:

Dual

Nortec Dual Channel Demand

Channel 1 Location:	Wall
Outdoor Temperature Sensor:	None
Channel 2 Location:	Wall
Include Air Proving Switch:	<input type="checkbox"/>
Include On/Off High Limit Switch:	<input type="checkbox"/>
Building Automation System Gateway: More Info...	BACnet IP, Modbus

GENERATE

Figure 18: Controls by Nortec Configuration

The Controls by Nortec dialog is described in Table 5: Controls by Nortec. Note that not all humidifiers will support all options. This dialog box will vary depending on humidifier type selected. Once selection is complete, hit generate to update the bill of materials for your controls selection.

Table 5: Controls by Nortec



Option	Description
Signal Type	<p>Demand: The humidifier will receive a modulating signal telling it to operate at a certain percentage. The space set point is adjusted directly on the humidistat.</p> <p>Transducer: The humidifier will receive a signal indicated the sensed relative humidity in a space. Using its own internal PI control loop, the humidifier will determine the necessary rate of steam production. The space set point is adjusted through the humidifier.</p> <p>On/Off: The humidifier will receive a signal instructing it to either operate at full capacity or idle. The space set point is adjusted directly on the humidistat.</p>
Channels	<p>Single: The humidifier will receive a single control signal.</p> <p>Dual: The humidifier will receive two control signals. This is commonly used for modulating high limit applications. If you are using dual control signals to control two separate conditioned spaces the humidifier will produce steam until either control signal (not both) is satisfied.</p>
Channel 1 Location	<p>Wall (Default): The Nortec provided humidistat or sensor will be installed on a wall.</p> <p>Duct: The Nortec provided humidistat or sensor will be installed in a duct.</p>
Outdoor Temperature Sensor	<p>The outdoor temperature sensor is used to reduce the humidity set point to compensate for fluctuations in outdoor temperature and prevent condensation on windows. It is compatible only with Nortec Demand Controls.</p> <p>None (Default): Do not include an outdoor temperature sensor.</p> <p>Outdoor Mounted: Include an outdoor temperature sensor suitable for installation outdoors.</p> <p>Duct Mounted: Include an outdoor temperature sensor suitable for installation in a duct.</p>
Channel 2 Location	<p>Wall (Default): The Nortec provided humidistat or sensor will be installed on a wall.</p> <p>Duct: The Nortec provided humidistat or sensor will be installed in a duct.</p>

Include Air Proving Switch	Check the box to include an air proving switch. The air proving switch is a duct mounted safety device that prevents humidifier operation unless airflow is detected in the duct.
Include On/Off High Limit Switch	Check the box to include a high limit switch. The on/off high limit is a duct mounted safety device that disables humidifier operation if the humidity level in the duct exceeds a threshold. The high limit threshold is adjustable and is normally set around 85% RH.
Building Automation Gateway	If you would like to monitor or control your humidifier through a building automation system, select the protocol from the drop menu to include a BAS gateway card. A single BAS gateway card can serve up to 8 humidifiers (1 master + 7 slaves). The slave package is common for all protocols.

Controls By Others

Select this option if your primary control signal will come from a building automation system, existing control system, or if sensors and humidistats will be provided by a third party. If you select this option, there will still be the option to include air proving switches, high limits, and other common controls provided by Nortec. You may configure your control signal type and number of channels as well as any accessories afterwards, as seen below.

4.2 Choose Controls


☐ Controls by Nortec
 
☒ Controls by Others

ⓘ Please select the controls you require based on the signal type and channel.

Signal Type:
 Channels:

Other Dual Channel Demand

Signal Type:	<input type="text" value="0-10 VDC"/>
Include Air Proving Switch:	<input type="checkbox"/>
Include On/Off High Limit Switch:	<input type="checkbox"/>
Include Modulating High Limit:	<input type="text" value="None"/>
Building Automation System Gateway: More Info...	<input type="text" value="BACnet IP, Modbus"/>

GENERATE

Figure 19: Controls by Others Dialogue

The Controls by Others dialog is described in Table 6: Controls by Others. Note that not all humidifiers will support all options. This dialog box will vary depending on the humidifier type selected. Once selection is complete, hit generate to update the bill of materials for your controls selection.

Table 6: Controls by Others

Option	Description
Signal Type	<p>Demand: The humidifier will receive a modulating signal telling it to operate at a certain percentage. The space set point is adjusted directly at the signal source.</p> <p>Transducer: The humidifier will receive a signal indicating the sensed relative humidity in a space. Using its own internal PI control loop, the humidifier will determine the necessary rate of steam production. The space set point is adjusted through the humidifier.</p> <p>On/Off: The humidifier will receive a signal instructing it to either operate at full capacity or idle. The space set point is adjusted directly at the single source.</p>
Channels	<p>Single: The humidifier will receive a single control signal.</p> <p>Dual: The humidifier will receive two control signals. This is commonly used for modulating high limit applications. If you are using dual control signals to control two separate conditioned spaces the humidifier will produce steam until either control signal (not both) is satisfied.</p>
Signal Type	Select the control signal that matches the signal you will be providing to the humidifier.
Include Air Proving Switch	Check the box to include an air proving switch. The air proving switch is a duct mounted safety device that prevents humidifier operation unless airflow is detected in the duct.
Include On/Off High Limit Switch	Check the box to include a high limit switch. The on/off high limit is a duct mounted safety device that disables humidifier operation if the humidity level in the duct exceeds a certain threshold. The high limit threshold is adjustable and is normally set around 85% RH.
Building Automation Gateway	<p>If you would like to monitor or control your humidifier through a building automation system, select the protocol from the drop menu to include a BAS gateway card.</p> <p>A single BAS gateway card can serve up to 8 humidifiers (1 master + 7 slaves). The slave package is common for all protocols.</p>

Accessories

Once controls have been chosen for the Zone, selecting the **Next** button will take you to an **Accessories** page. Here you may choose common options that may be added to the selected Zone such as sump pumps, additional check valves, water filters, etc. Adding an accessory will create a bill of materials for this section at the bottom of the page.

The screenshot shows the 'Accessories' tab selected in the progress bar. The main content area is titled '5. Choose Accessories' and includes a message: 'Please select any common options you would like for this zone. You may edit the quantity where applicable.' Below this, there is a list of accessories. The first item is 'Double Check Valve for Water Inlet line' with part number '1458807' and a quantity of '1'. The second item is 'Drain Water Cooler, Electric' with part number '1710070' and a quantity of '1'. Each item has a plus icon on the left and a three-dot menu icon on the right.

Figure 20: Accessories Selection

You may select the Accessories tab shown in Figure 20: Accessories Selection to navigate to this page at any time and adjust your selection.

Summary

Once all Zone selections have been made, proceed to the **Summary** tab. The Summary tab displays a complete listing of components that make up the humidification system.

At this point, all of the equipment in the selected Zone has been listed. You can return to the project homepage to add additional Zones, export information, and request a quote from your local agent. Return to the project home page by selecting the **Done** button after the bill of materials.

Figure 21: Summary Dialogue, on the following page, shows an example of a summary for one selected Zone; in this case, Zone (1). Check marks under the different section tabs indicate that selections have been made for all the previous steps of the design process.

Summary

Zones: Zone(1)

+

🏠

Load Sizing

Humidifiers

Distributors

Controls

Accessories

Summary

Below is the list of materials for this zone. You can add another zone or go back to the project home page to view your bill of materials and generate documents.

Complete Parts and Humidifiers List

	Part #	Description	Quantity
⚡	2573399	NH-EL 030/208/3	1
	2520263	Sensor, Temperature, O/D, Duct	1
	1510142	Humidistat, Control, 0-10V, Dig. Wall	1
	2553720	Steam Distributor ASD 24in	2
	1329506	Water Filter Cartridge 5 micron (x2)	1

← BACK

✓ DONE

Figure 21: Summary Dialogue

Exporting Submittals and Other Information

Once you have finished adding Zones, you can export submittals, schedules, specifications, and other useful information. This is done on the project home page under the **Document Center** tab. Clicking the **Project Exports** icon, shown below, will activate a tab listing various useful outputs from the software. An example of a project's Export Center can be seen in Figure 23: Export Center.

Projects / Example 1

Provide your project details, outside air design parameters, then add a zone using the button in the zone list to begin load sizing and humidifier selection.

Project Information

Configuration

Notes

Project History

Document Center

Document Center

\$

Request Quote

📄

Project Exports

Figure 22: Project Exports

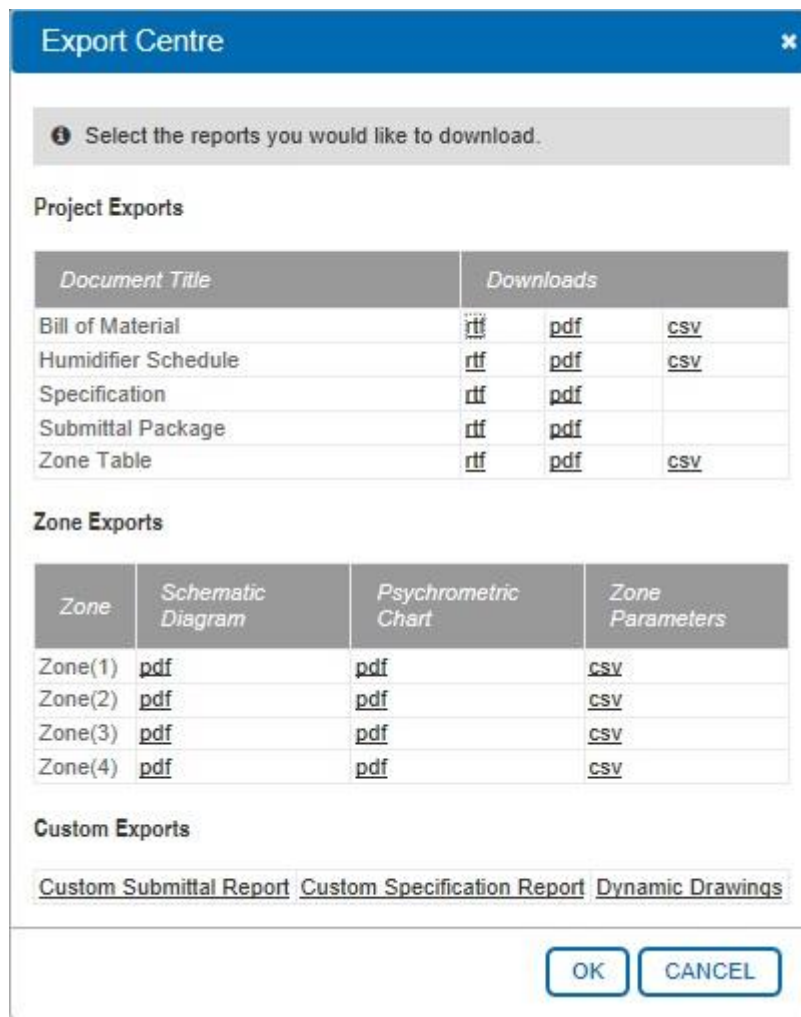


Figure 23: Export Center

Outputs are available in multiple formats:

.rtf (Rich Text Format) is a document format suitable for editing in word processor such as Microsoft Word.

.csv (Comma Separated Values) is a document format suitable for editing in a spreadsheet program such as Microsoft Excel.

.pdf (Portable Document Format) is a read-only format viewed in Adobe Acrobat or Acrobat Reader (www.adobe.com).

To download a document, simply select the format you would like. Note that certain documents, such as the Submittal, can take several seconds to generate before the download begins. Available documents are described in Table 7: Export Center Options.

Table 7: Export Center Options

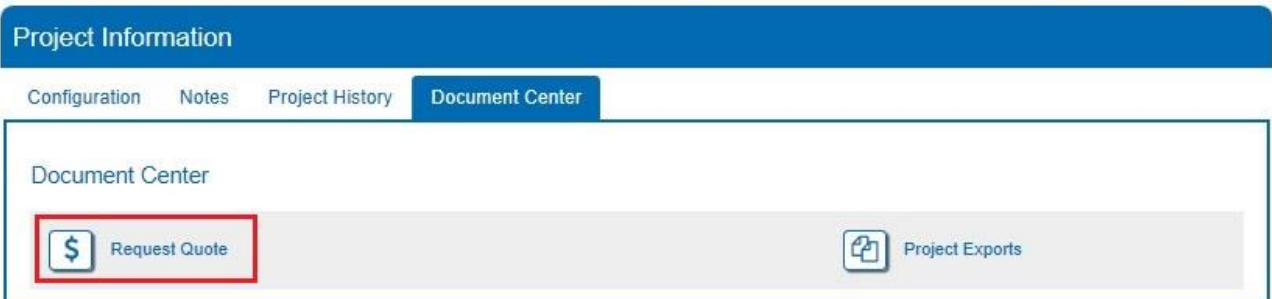
Option	Description
Bill of Material	Export a bill of material list with part number, quantity, and description.
Humidifier Schedule	Export an engineering schedule listing performance information and humidifier capacities for inclusion in a mechanical schedule or specification.
Specification	Export reference specification text for the products included on the project. For inclusion in a project specification.
Submittal Package	Export submittal information and performance data for the humidifiers included on a project.
Zone Table	Export a detailed summary of the psychrometric parameters and the load for each zone.
Schematic Diagram	Export the visual representation of the ventilation system and key parameters as shown on the Load Sizing tab.
Psychrometric Chart	Export a psychrometric/Mollier chart for a given zone as shown on the Load Sizing tab.
Zone Parameters	Export the table of parameters as shown on the Load Sizing tab.
Custom Submittal Report	Export a Submittal package containing information from only zones that you select.
Custom Specification Report	Export a Specification containing information from only zones that you select.

Requesting a Quote

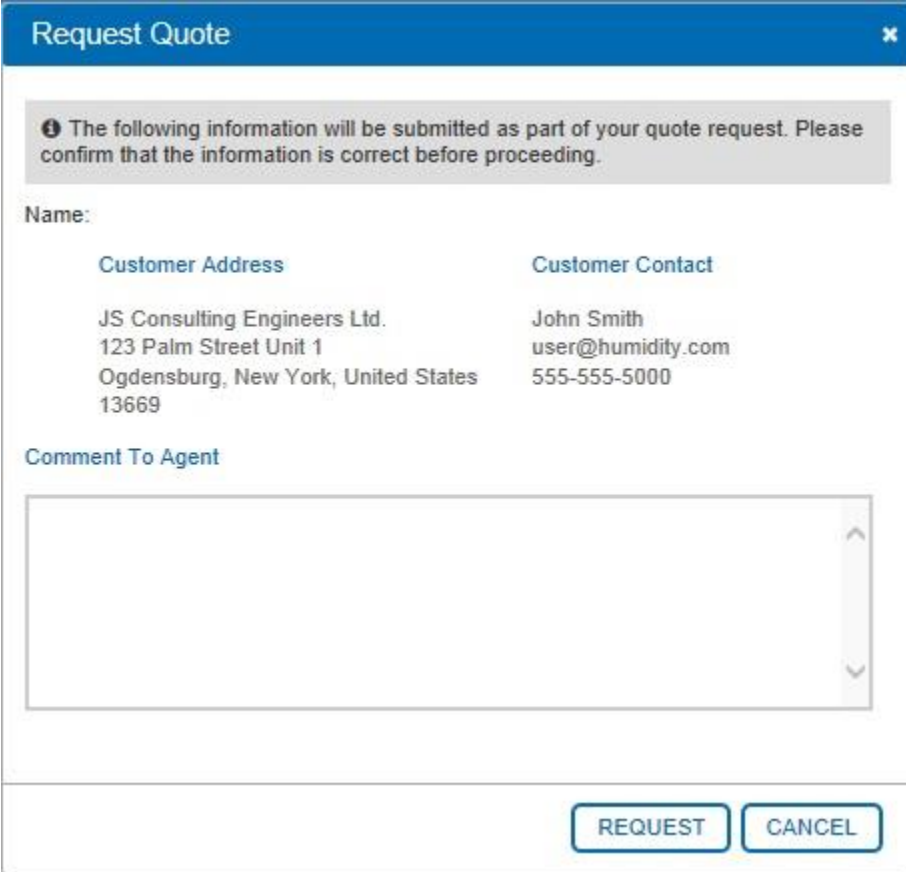
Once you are satisfied with the equipment you have selected, you can request pricing from your local representative by clicking the **Request Quote** icon, shown below, which can also be found under the **Document Center** tab. If you have not yet selected an agent, please follow the steps for customer address in the section Editing Your Account Information.

Projects / Example 1

Provide your project details, outside air design parameters, then add a zone using the button in the zone list to begin load sizing and humidifier selection.

**Figure 24: Requesting a Quotation**

Clicking this button will cause the popup shown in Figure 25: Request Quote Dialog to appear.



The image shows a 'Request Quote' dialog box with a blue header bar containing the title and a close button. Below the header is a grey informational box with an icon and text. The main area contains a 'Name:' label, followed by two columns of text: 'Customer Address' and 'Customer Contact'. Below these is a 'Comment To Agent' label and a large text area. At the bottom right are 'REQUEST' and 'CANCEL' buttons.

Request Quote	
<p>i The following information will be submitted as part of your quote request. Please confirm that the information is correct before proceeding.</p>	
Name:	
Customer Address	Customer Contact
JS Consulting Engineers Ltd. 123 Palm Street Unit 1 Ogdensburg, New York, United States 13669	John Smith user@humidity.com 555-555-5000
Comment To Agent	
<div></div>	
<div>REQUEST CANCEL</div>	

Figure 25: Request Quote Dialog

Take some time to validate that your address and contact information is correct. If you require any changes follow the steps in section Editing Your Account Information. Additionally, you may include some comments to the agent. When you have completed the form, click the **Request** button to submit your request for a quote. Requesting a quotation will send a copy of your project and selections to your chosen Nortec Agent. They will contact you shortly regarding pricing and any additional details.

Note: Your project and selections will not be affected by any changes the agent makes to the copy of the project that they receive. Again, any notes you have entered on the Project Home Page will remain private and will not be transmitted to the agent.

Browser Projects

Creating a Browser Project

The browser project allows you to create projects by adding products directly from the **Product Catalog** system without performing calculations. To create a browser project, hover your mouse over the **Projects** menu in the main navigation bar and select **List all Browser Projects** from the menu as shown in Figure 26: Browser Projects.

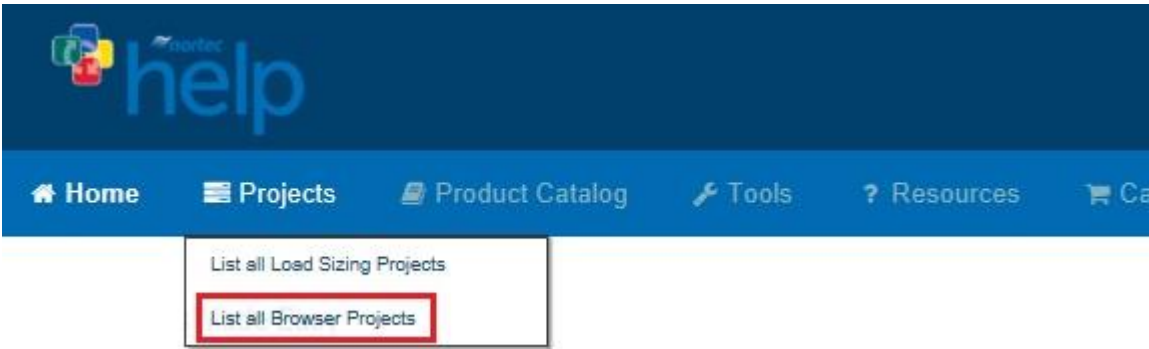


Figure 26: Browser Projects

The project functions (create, copy, share, etc.) function identically to the Load Sizing Project and are described in Table 1: Project Functions.

To create a new browser project, click the **Add** button as seen in Figure 27: Add Browser Project and complete the information on the dialog to create your new project. Clicking save will bring you to the project home page as shown in Figure 28: Browser Project Homepage which has a similar layout to the Load Sizing Projects home page with many of the same functions.

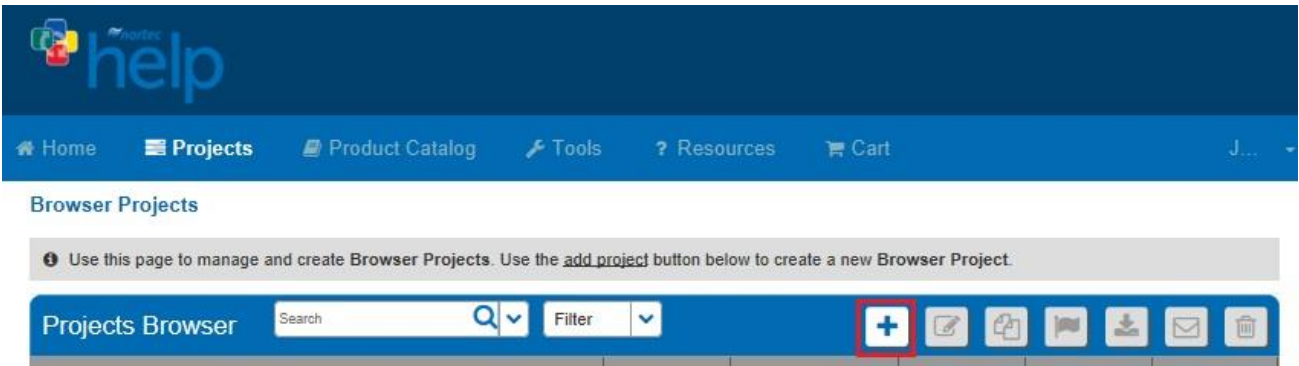


Figure 27: Add Browser Project

Provide your project details, outside air design parameters, then add a zone using the button in the zone list to begin load sizing and humidifier selection.

Project Information

Configuration
Notes
Project History
Document Center

Project Information

Name: Example 1
Project Number:
Customer:
Created: 2015/08/04
Required Date:

Customer Address

JS Consulting Engineers Ltd.
123 Palm Street Unit 1
Ogdensburg, New York, United States
13669

Customer Contact

John Smith
user@humidity.com
555-555-5000

There are currently no Bill of Materials for this project.

Figure 28: Browser Project Homepage

The **Project Information** section shows the project's assigned name and optional project number for filing purposes, the date the project was initially created and the optional required completion date, as well as the units of measure. These can be changed later by clicking the **Edit** button to the right of **Project Information**.

The **Notes** section allows you to enter in your notes for the project. Anything written in this field will only be viewable by you and will not be transferred when the project is copied or shared.

The **Project History** field is there to give a timeline of the project and will be updated automatically as the project progresses.

The **Bill of Materials** section at the bottom serves to display the shopping cart for this particular project.

To begin adding items to your Bill of Materials, click the **Add** button as shown in Figure 29: Add Products. This button will take you to the **Product Catalog** system.



Figure 29: Add Products

Finding Products

In the **Product Catalog**, you will find all of the products available in the Nortec Help software. You can learn more about each technology as well as view performance data, diagrams and drawings. Begin by clicking any technology that you would like to view. For more help exploring and using the Product Catalog system, please refer to the section

Navigating the Product Catalog.

Once you locate a product that you would like to add to your project, select the **Add to Cart** button. Continue browsing until you have filled the cart with the items you would like to add to your project.

The Shopping Cart

To access the shopping cart, select the **Cart** menu at the far right on the navigation bar shown in Figure 30: Product Catalog. You will now be taken to the shopping cart. The shopping cart is a staging area where you may review product quantities prior to adding it to your project.

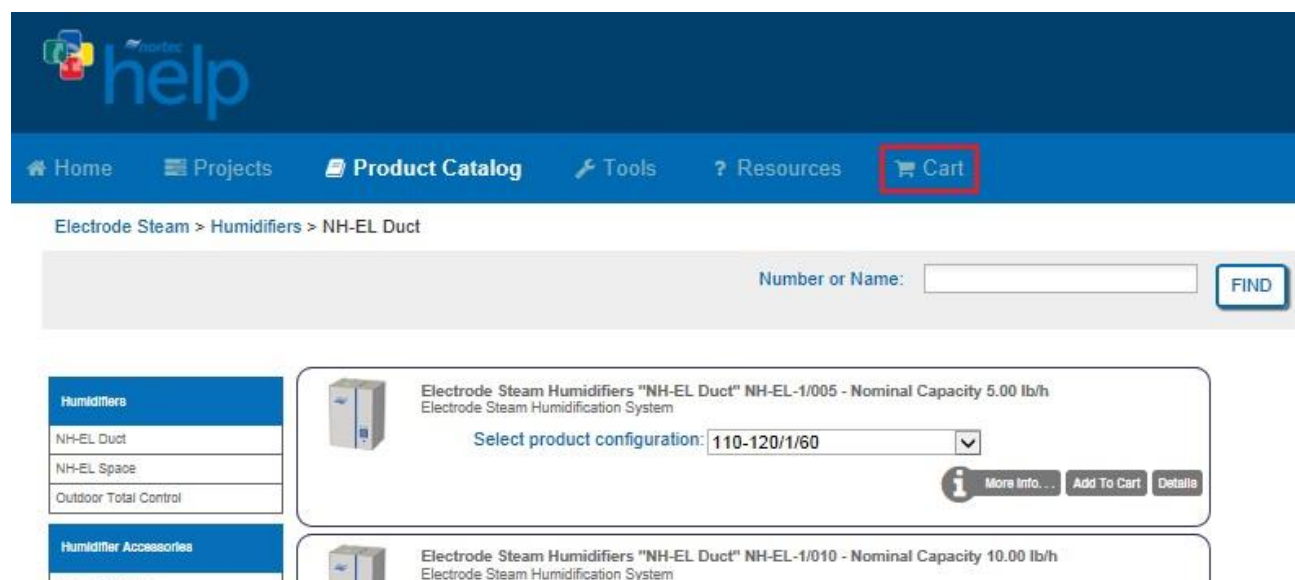


Figure 30: Product Catalog

From the shopping cart you can add products to either an existing Load Sizing or Browser project, create a new project, edit quantities, or remove items from the cart. Items in the shopping cart are retained indefinitely until they are either added to a project or emptied from the cart. Shopping cart functions are shown in Figure 31: Shopping Cart and described in Table 8: Shopping Cart Functions on the following page.



Figure 31: Shopping Cart

Table 8: Shopping Cart Functions

Number	Description
1 and 2	If you would like to add items in the cart to an existing Load Sizing Project, select the name of that project from the list (1) and click “Add Cart to Load Sizing Project” (2). You will be taken directly to the project after clicking “Add Cart to Load Sizing Project”. Items added into Load Sizing projects appear in a zone called Spare Parts , but can be assigned to any zone.
3 and 4	If you would like to add items in the cart to an existing Browser Project, select the name of that project from the list (3) and click “Add Cart to Browser Project” (4). You will be taken directly to the project after clicking “Add Cart to Browser Project”.
5	The quantity of each item can be changed from within the cart by changing this number. After the change click elsewhere on the page for it to take effect.
6	If you no longer want an item in the cart, then click the x to delete it from the cart

Note: You can create a new Load Sizing or Browser project from the shopping cart by selecting **Create New Load Sizing Project...** or **Create New Browser Project...** from the lists.

You may add items in the shopping cart to any project, including existing projects and load sizing projects. Items added to load sizing projects will appear in a new Zone called **Spare Parts**, which can be renamed from the **Bill of Materials** tab on the project home page.

Alternatively, you can populate product in the shopping cart and use it as the basis for a brand new project. To do this, simply select **Create New Project...** from the project drop down menu. This will invoke the new project dialogue boxes and subsequently bring you to the project home page of a new project.

Note: Unless you add items in the cart to a project or delete them, items in the shopping cart are retained even if you log out of the software. It is good practice to keep the cart empty to avoid accidentally including items from a previous session on projects.

Working with Browser Projects

As with load sizing projects, there is a **Document Center** on the project home page where you are able to access project exports as well as request a quote for your project. The **Export Center** is shown in Figure 32: Browser Project Export Center and described in Table 9: Browser Project Export Center Functions.

Export Centre

Select the reports you would like to download.

Project Exports

Document Title	Downloads		
Bill of Material	rtf	pdf	csv
Specification	rtf	pdf	
Submittal Package	rtf	pdf	

Custom Exports

[Custom Submittal Report](#)
[Custom Specification Report](#)

OK

CANCEL

Figure 32: Browser Project Export Center

Table 9: Browser Project Export Center Functions

Option	Description
Bill of Material	Export a bill of material list with part number, quantity, and description.
Specification	Export reference specification text for the products included on the project. For inclusion in a project specification.
Submittal Package	Export submittal information and performance data for the humidifiers included on a project.
Custom Submittal Report	Export a Submittal package containing information from only zones that you select.
Custom Specification Report	Export a Specification containing information from only zones that you select.

The procedure to request a quote for Browser projects functions identically to that of the Load Sizing project; please refer to the section

Requesting a Quote.

Navigating the Product Catalog

The **Product Catalog** is a catalog system that provides information about all of the items contained in the Help software. It is a very useful reference tool that can be used to view performance information, specification text, installation information, and drawings related to a product.

Navigate to the Product Catalog by selecting the **Product Catalog** tab at the top of the screen in the navigation bar. This will take you to the Product Catalog landing page. Alternatively, hovering your mouse over the Product Catalog will cause a shortcut menu, shown in Figure 33: Product Catalog Shortcut Menu, to appear.



Figure 33: Product Catalog Shortcut Menu

This menu lists the top level product categories; selecting one will show the products available within its category. For example, selecting **Gas Fired** from the list will take you to the Gas Fired product line, including humidifiers, additional options, and compatible accessories.

Exploring Products

After selecting a top level category you will be taken to the product listing shown in Figure 34: Product Listing. The navigation bar on the left allows you to select different product types, accessories, distributors, and controls within the category. Humidifiers are sorted by capacity, while accessories are sorted alphabetically. Some humidifiers are available in different voltages; you can adjust the desired voltage from the **Select product configuration** list. Once your desired voltage has been set, you have three options:

1. **Add to Cart** will add the product to the shopping cart for inclusion in either a Load Sizing or Browser Project as described in the section The Shopping Cart.
2. **Details** will direct you to provide further detail about the selected product.
3. **More Info...** will direct you to the humidity.com website for more information about the product.

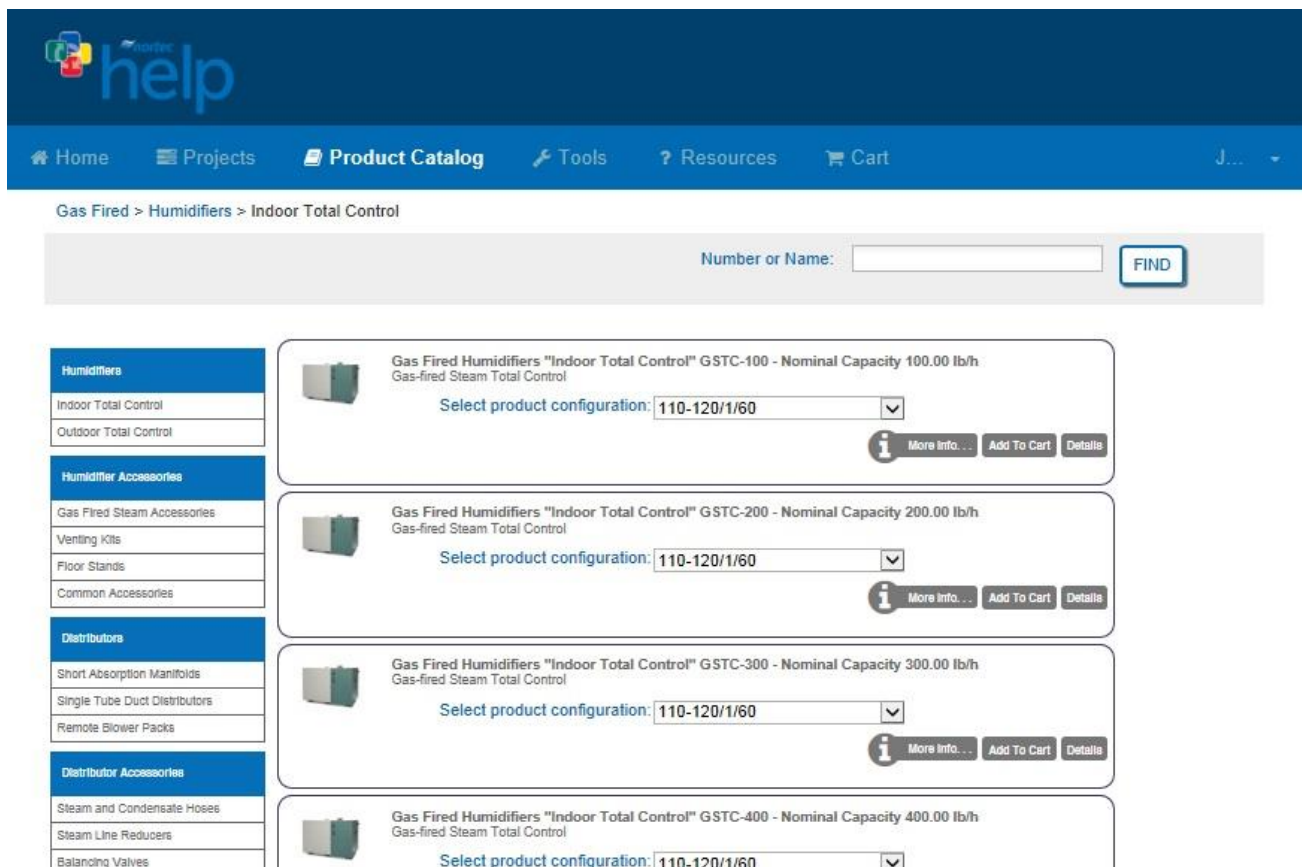


Figure 34: Product Listing

When adding an item to your cart, a dialogue box will appear asking if you would either wish to continue shopping or view your shopping cart. By selecting **Continue Shopping**, the dialogue box will disappear allowing you to continue adding items to the cart. Selecting **Go to the Shopping Cart** will redirect you to your active shopping cart, described in the section The Shopping Cart.

Information contained in **Details** includes complete specifications, a product description, installation information, wiring diagrams and unit schematics, as well as a list of compatible accessories specific to that unit. All of the information for that specific product can also be exported for offline viewing or editing as either a .RTF or a .PDF file by clicking on the **Export** button shown in Figure 35: Product Catalog Document Export.

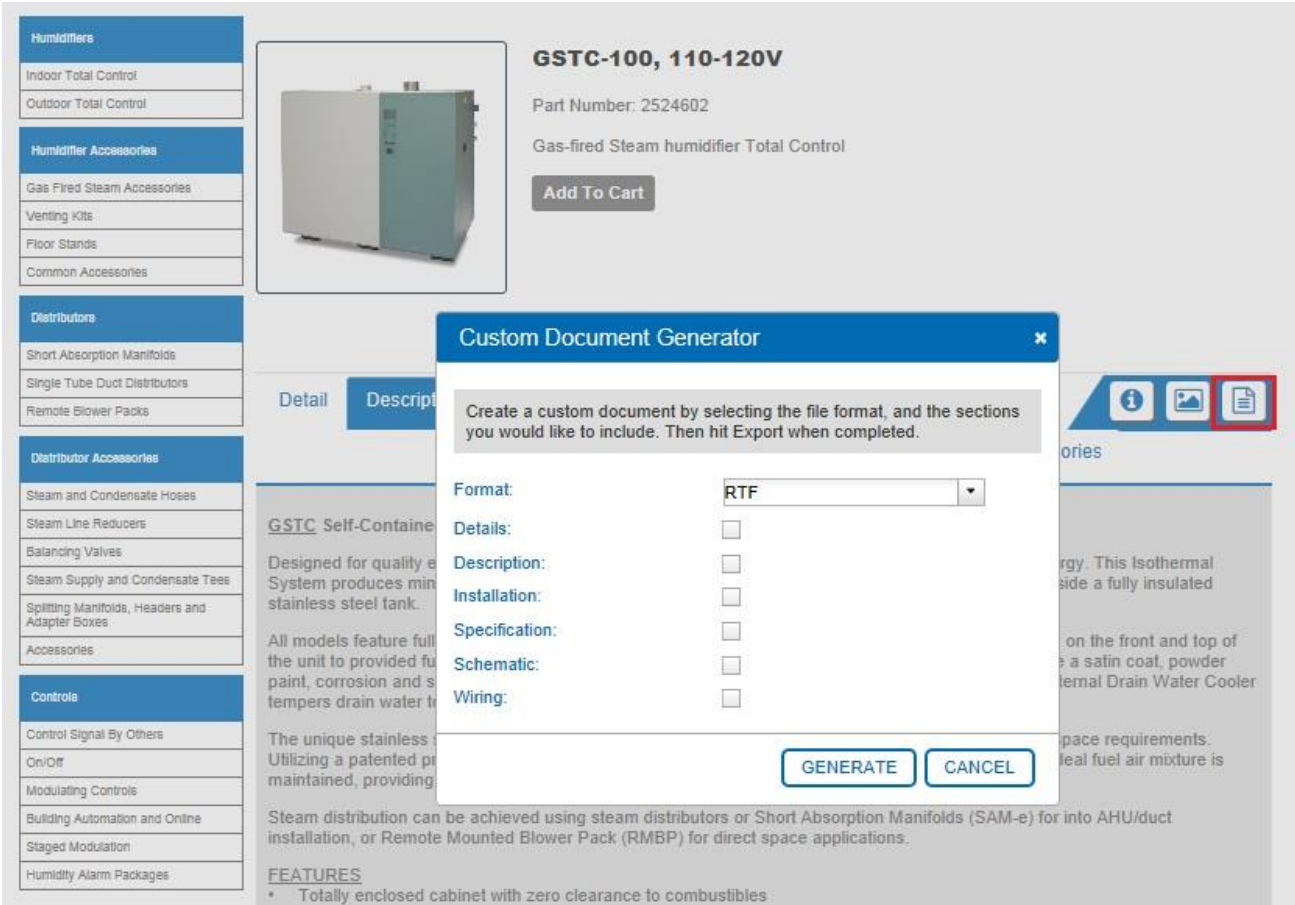




Figure 35: Product Catalog Document Export

The export icon will activate a dialogue box asking for the preferred format for the export, as well as what items you would like to include in the export.

Note: Not all products will have all output items available. Drawing and detailed information varies by product type.

Below are descriptions for the two other available icons in the Details section:

	Information Icon: Redirects to the Nortec product's webpage.
	3D Models: Redirects to Nortec's AutoDesk Seek site, where Revit models, manuals and dwg files can be downloaded.

Searching for Parts

In addition to finding items by navigating through categories, there is the option to search by an item's name or part number. The search field is found at the top right of the Product Catalog as shown in Figure 36: Search Field. Search by either part number or product name and the **Find** button to return search results.

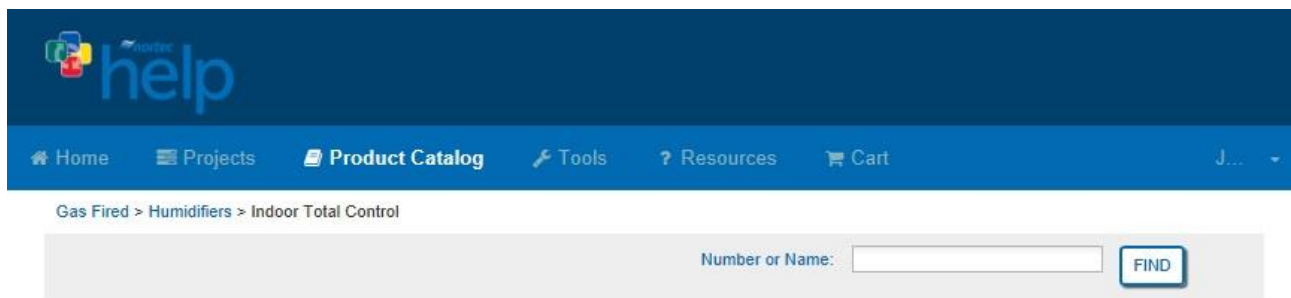


Figure 36: Search Field

Products That Require Configuration

Certain products, such as short absorption manifolds (SAM-e) and evaporative media systems, are made up of a collection of individual parts. To help ensure that you select the correct combination of parts, Help features a **Build** tool that will quickly and easily configure the product based on your requirements.

For example, to order a SAM-e short absorption manifold, hover over the **Product Catalog** tab and then select the **Distributors** option. On the left pane under Distributors, select **Short Absorption Manifolds**. On the right pane, there should be two options – one for Short Absorption Manifolds and another for Mini Short Absorption Manifolds. Select the **Build** button under Short Absorption Manifolds as shown in Figure 37: Product Catalog Build Function.

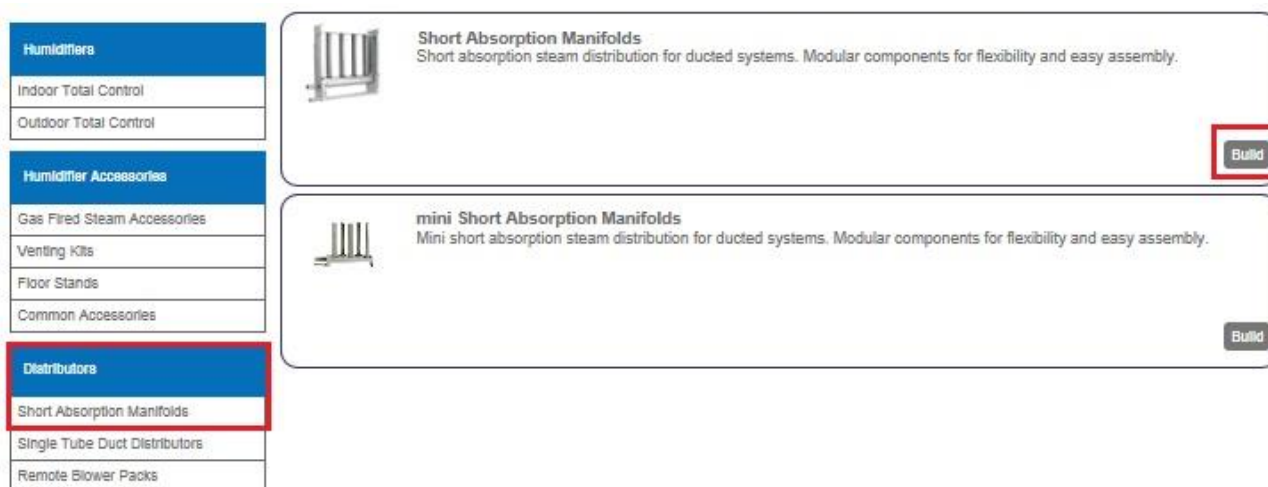
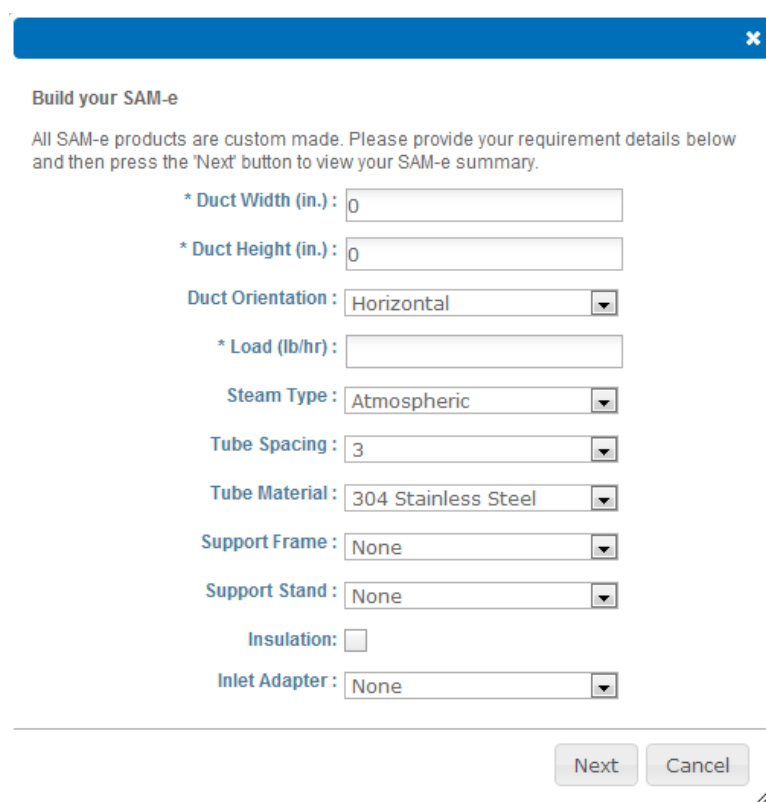


Figure 37: Product Catalog Build Function

Selecting **Build** will activate a dialogue box that requires additional information. The required information varies by product, an example of the SAM-e Build function is shown in Figure 38: Product Catalog Build Dialogue Box.



Build your SAM-e

All SAM-e products are custom made. Please provide your requirement details below and then press the 'Next' button to view your SAM-e summary.

* Duct Width (in.): 0

* Duct Height (in.): 0

Duct Orientation: Horizontal

* Load (lb/hr):

Steam Type: Atmospheric

Tube Spacing: 3

Tube Material: 304 Stainless Steel

Support Frame: None

Support Stand: None

Insulation: ☐

Inlet Adapter: None

Next Cancel

Figure 38: Product Catalog Build Dialogue Box

After the required information has been entered, select the **Next** button, Help will then assess the information and provide a list of parts required to suit your needs. If you accept this list, select **Add to Cart**.

Tools

The **Tools** menu contains handy tools for performing quick calculations without needing to create a project. The tools menu is available from the top navigation bar shown below. It contains a quick **Load Calculation** and a **Cost Analysis** tool.

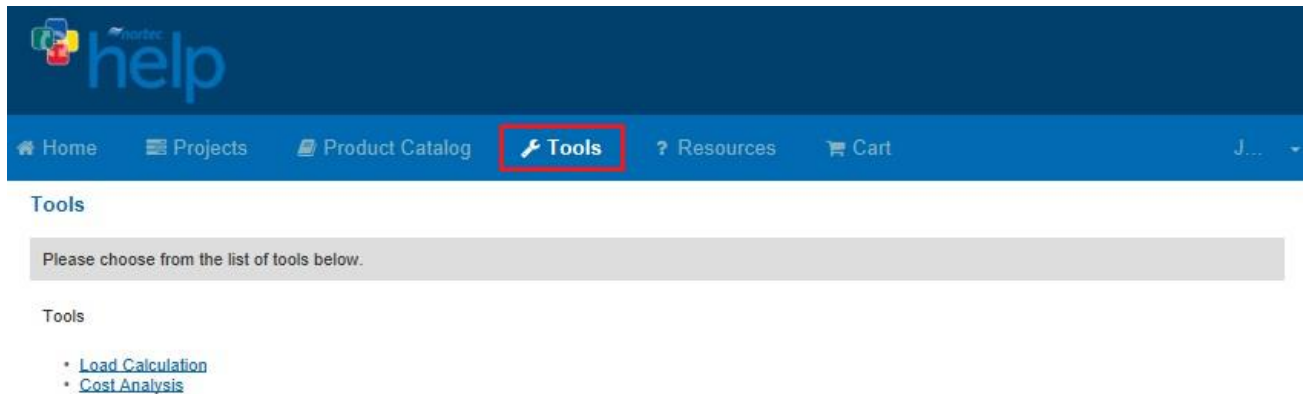


Figure 39: Tools Menu

Load Calculation Tool

The **Load Calculation** tool allows you to perform a quick load calculation without needing to create a new project. It is ideal for running “what-if” scenarios or for verifying a load. To access load calculation, either hover your mouse over the **Tools** menu to activate the drop menu or click on the menu to navigate to the Tools landing page. Select **Load Calculation** to calculate the humidification load. The load calculation tool functions identically to the Load Sizing tab described in Load Sizing but does not require that a project be created and does not allow the selection of humidifiers afterwards.

Cost Analysis

The **Cost Analysis** tool allows you to compare the lifecycle costs of various humidification technologies. Selecting cost analysis tool will display the form shown in Figure 40: Cost Analysis Form.

Humidification Data

* Humidifier Peak Load (lbs/hr):
250

* Load Correction Factor (%):
60

* Yearly Operating Hours (hours):
2200

Utility Rates

* Usage Charge (\$/kW-h):
0.12

* Monthly Demand Charge (\$/kW):
8

* Natural Gas Rate (\$/1000 ft3):
10

* Central Steam Rate (\$/1000 lbs):
10.31

* Compressed Air Rate (\$/1000 scf):
0.37

Water Rate (\$/1000 gallons):
3

Reverse Osmosis Water Rate (\$/1000 gallons):
0

Sewer Rate (\$/1000 gallons):
4.25

Cost Estimates

	Electrode Steam	Resistive Steam	LiveSteam	Steam Exchange	Natural Gas	AirFog	High Pressure	Evaporative Media
Each Humidifier	7500	0	4000	7500	10000	5200	18000	12000
Installation Costs	500	0	1000	1250	1500	500	1500	550
Additional Costs	0	0	0	0	0	0	0	0
Maintenance Costs	250	0	150	500	500	150	1000	1250
Other Yearly Costs	50	0	50	50	50	50	50	50

CALCULATE

Figure 40: Cost Analysis Form

The various fields are described in Table 10: Cost Analyzer Fields. If you are not planning on considering a certain humidifier type, you may leave values for that type set at 0.

Table 10: Cost Analyzer Fields

Field	Description
Humidifier Peak Load	Enter the calculated design load for the humidifier in lbs/hr.
Load Correction Factor	Most humidifiers do not operate at full design output for the entire year. The load correction factor corrects the peak load to an average load. Enter a value of 100% if the humidifier will operate at peak load for the entire season. If you are unsure it is often reasonable to use a factor of 65%.
Yearly Operating Hours	Enter the amount of hours you expect the humidifier to operate. A 2200 hour season is typical for most office commercial applications. Operating hours for humidity critical applications will often be higher.
Usage Charge	Enter your electricity rate in \$ per kWh.
Demand Charge	If your area has monthly demand charges, enter these costs in \$/kW per month.
Natural Gas Rate	Enter your local natural gas rate in \$ per 1000 cubic feet. Used for Natural Gas fired humidifiers.

Central Steam Rate	Enter your facility steam costs in \$ per 1000 lbs, used for Steam Exchange and LiveSteam products.
Compressed Air Rate	Enter your costs of compressed air in \$ per 1000 scf. Used for AirFog direct space fogging systems.
Water Rate	Enter your water costs in \$ per 1000 US gallons.
Reverse Osmosis Rate	Enter your reverse osmosis costs in \$ per 1000 US gallons
Sewer Rate	Enter your sewer costs in \$ per 1000 US gallons.
Each Humidifier Cost	Enter the total expected purchase price of the humidifier package including humidifiers, distributors, and controls.
Installation Costs	Enter your expected installation costs (one-time costs).
Additional Costs	If you have any additional one-time costs associated with the humidifier (commissioning, etc), enter them here.
Maintenance Costs	Enter your expected yearly maintenance costs. Generally, you should factor in at least 1 annual inspection and cleaning of the humidifier.
Other Yearly Costs	If you have any other yearly recurring costs, enter them here.

Once you have completed entering your values, select the **Calculate** button and Help will provide a comparison of values in a table form as shown in Figure 41: Cost Analysis Results. You can change values as needed and must simply select the Calculate button again to update the results.

									Calculate
		Electric Steam	Resistive Steam	Live Steam	Steam Exchange	Natural Gas	AirFog	High Pressure	Evaporative Media
Energy Usage	Electricity Usage:	112200 kWh	112200 kWh	15 kWh	330 kWh	1100 kWh	44 kWh	660 kWh	1562 kWh
	Natural Gas:					409943 cu. ft.			
	Central Steam:			412500 lbs	388235 lbs				
	Compressed Air:						2376000 scf		
Energy Costs	Electricity Usage:	\$ 13464.00	\$ 13464.00	\$ 1.85	\$ 39.60	\$ 132.00	\$ 5.28	\$ 79.20	\$ 187.44
	Electricity Demand:	\$ 4896.00	\$ 4896.00	\$ 0.67	\$ 14.40	\$ 48.00	\$ 1.92	\$ 28.80	\$ 68.16
	Natural Gas:					\$ 4099.43			
	Central Steam:			\$ 4252.88	\$ 4002.71				
	Compressed Air:						\$ 879.12		
	Other Recurring:								
	Total:	\$ 18360.00	\$ 18360.00	\$ 4255.40	\$ 4056.71	\$ 4279.43	\$ 886.32	\$ 108.00	\$ 255.60
Water Usage	Water:	49003 gal	54373 gal	49615 gal	50563 gal	50563 gal	39692 gal	56703 gal	46697 gal
	Sewer Billed:	49003 gal	54373 gal	49615 gal	50563 gal	50563 gal	39692 gal	56703 gal	46697 gal
	Sewer Actual:	9311 gal	14681 gal	9923 gal	10871 gal	10871 gal	0 gal	17011 gal	7005 gal
Water Costs	Water:	\$ 147.01	\$ 163.12	\$ 148.85	\$ 151.69	\$ 151.69	\$ 119.08	\$ 0.00	\$ 140.09
	Sewer Billed:	\$ 208.26	\$ 231.09	\$ 210.86	\$ 214.89	\$ 214.89	\$ 168.69	\$ 240.99	\$ 198.46
	Sewer Actual:	\$ 39.57	\$ 62.39	\$ 42.17	\$ 46.20	\$ 46.20	\$ 0.00	\$ 72.30	\$ 29.77
	Total Billed:	\$ 355.27	\$ 394.21	\$ 359.71	\$ 366.58	\$ 366.58	\$ 287.77	\$ 240.99	\$ 338.55
	Total Actual:	\$ 186.58	\$ 225.51	\$ 191.02	\$ 197.89	\$ 197.89	\$ 119.08	\$ 72.30	\$ 169.86
Totals	First Year:	\$ 26846.58	\$ 18585.51	\$ 9646.42	\$ 13554.60	\$ 16527.32	\$ 6905.40	\$ 20730.30	\$ 14275.46
	Subsequent Years:	\$ 18796.58	\$ 18585.51	\$ 4596.42	\$ 4754.60	\$ 4977.32	\$ 1155.40	\$ 1180.30	\$ 1675.46

Support and Troubleshooting

Troubleshooting: Web Browser Issues

To provide a fast and interactive experience Help relies on a variety of technologies found within the latest web browsers. Most problems in the software are caused by use of an incompatible web browser; in particular, older versions of Internet Explorer. Users with such a browser may experience in the following problems:

- Unreadable Text – Blue Text on a Blue Background
- Missing Schematics – Schematic Drawing Not Appearing
- Missing Images and Drawings
- Errors downloading files, exports fail to generate.
- Ignored checkbox or form entries
- Unexpected Behaviors

If you have been experiencing any of the issues identified above, we recommend that you verify your browser version and, if necessary, take steps to upgrade the browser. To determine which version you are using visit www.whatbrowser.org. This site will automatically detect your web browser and the version.

If you see that you are using “Internet Explorer 6”, “Internet Explorer 7”, or “Internet Explorer 8”, you will need to perform the steps described below. Internet Explorer 9 and 10 are fully supported and do not have any issues accessing Nortec Help.

There are two options for users with Internet Explorer 6, 7, or 8. They are:

1. Upgrade your web browser to Internet Explorer 9, 10, or 11.

<http://windows.microsoft.com/en-CA/internet-explorer/downloads/ie>

Note: Internet Explorer 9, 10, and 11 are only available to users who are using Windows Vista, Windows 7, or Windows 8. This option is not available to users who are running Windows XP.

2. Use a different web browser to access Help. Supported alternatives include:

- Mozilla FireFox (www.firefox.com)
- Google Chrome (www.google.com/chrome)
- Internet Explorer 9 or 10 (see above)
- Apple Safari (<http://www.apple.com/safari/>)

Note: IT staff may find the following link useful for deploying a Google Chrome while still retaining applications that rely on older versions of Internet Explorer to function.

<https://www.google.com/intl/en/chrome/business/browser/lbs.html>

Troubleshooting Errors

Occasionally users may encounter an “Internal Error” or similar unexpected message. These errors are most often caused by web browsers issues described in Section Troubleshooting: Web Browser Issues.

Internal Errors can also occur as a result of recent updates to the software. Modern browsers store bits of code from frequently visited websites to improve loading speeds upon subsequent visits. In some browsers, this can result in unexpected behaviors or errors after an update since the browser is using a mix of the new and old code. There are two ways to fix this issue.

1. If this issue is localized to a single page try pressure CTRL + F5 on the page. This command forces the browser to reload the page completed from the server and will update the cache with new code.
2. If the issue appears to be occurring throughout the software, it is usually best to clear your browser cache entirely. Clearing the cache will not affect your ability to view websites and will allow your browser to build a fresh cache of code. Follow the instructions included in with your browser for more information. In many browsers, pressing F1 on your keyboard will bring up the browser user guide.

Occasionally, you may encounter an error that cannot be resolved using the methods above. In this case please contact Technical Support as described in Section Support Contact.

You can also share your project with Nortec for correction of the issue. To do this, navigate to the Project list and use the share function described in Section Your Projects. Be sure to share the project with help.nortec@humidity.com. It is recommended to call Nortec’s technical support before doing this.

Support Contact

For questions and support related to Help, there are several key contacts:

- Contact your local Nortec representative. Their information can be found by following this website, www.humidity.com/ca/climate/en/find_a_rep, and selecting the area closest to you.
- Contact Nortec Technical Services at 1-866-667-8321 or ts.nortec@humidity.com.
- Contact the Help general inbox at help.nortec@humidity.com.

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