

SQL Reporting Software

For TrueWeigh, TrueWeigh Blenders, TrueBlend EXT, and TrueBlend SB-2



Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date:

Manual Number: UGB028-1214

Serial Number(s):

Model Number(s):

It's also a good idea to record the Station Identifier and the Unlock Pass-code of each operator station that will be connected to the SQL Server. In the event that this information must be re-entered, the information will be available.

Station Identifier	Unlock Pass-Code

Finally, write down the username and password for the Windows user account you will be accessing the SQL server with - the creation of this profile will be covered in the Installation section of this user guide.

Username	Password

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Introduction

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Purpose of the User Guide

This User Guide describes the Conair SQL Reporting Software and explains step-by-step how to connect the equipment to an SQL server to start saving data, and how to get reports on the data you've saved..

Before installing this product, please take a few moments to read the User Guide and review the diagrams and safety information in the instruction packet. You also should review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

How the Guide is Organized

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.



Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.



Numbers indicate tasks or steps to be performed by the user.



A diamond indicates the equipment's response to an action performed by the user.



An open box marks items in a checklist.



A circle marks items in a list.



Indicates a tip. A tip is used to provide you with a suggestion that will help you with the maintenance and the operation of this equipment.



Indicates a note. A note is used to provide additional information about the steps you are following throughout the manual.

Your Responsibility as a User

You must be familiar with all safety procedures concerning installation, operation, and maintenance of this equipment. Responsible safety procedures include:

- Thorough view of this User Guide, paying particular attention to hazard warnings, appendices, and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage sources, intended use and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this User Guide.

ATTENTION: Read This So No One Gets Hurt

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on the machines that will be using this SQL reporting option by following the procedures outlined below and in the unit's specific User Guide.



WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.



Conair equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.

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What is SQL Reporting?

Conair SQL Reporting Software pulls information on processes, alarms, and recipes and saves them to an external server. Users can access this information conveniently to run reports and get more information on how their line is functioning.

SQL Reporting options are available for the TrueWeigh, the TrueWeigh Continuous Blender, the TrueBlend EXT and all TrueBlend units with SB-2 control.

Typical Applications

The data stored by Conair systems can be reviewed by SQL reports. These reports come pre-defined by Conair, and can use parameters you select. For example, you can get a report on the number of times a specific recipe has been run through a blender, or the number of alarms that required a shutdown within a certain span of time. The SQL data saved by Conair's machinery can be accessed by standard SQL software, so you also have the ability to program alternative reports to fill additional needs that may arise.

Limitations

- The data stored by Conair products is limited to specific types of information, such as material usage, recipe usage, and inventory remaining.
- Although the SQL tables will automatically generate and define themselves for the most part, in order to monitor specific materials in your inventory, users will have to manually edit the SQL Materials table with information such as names and density of the materials being used.

Contact Conair Customer Service
1 800 458 1960.
From outside of the United States,
call: +1 814 437 6861

Contact Conair for specific recommendations for your product and the PC you will be using for the SQL server.

How the SQL Reports Work

SQL is a programming language designed for keeping data in a way that is easy to organize and access. Conair blenders use SQL to keep a lot of related information and to clarify the ways the information is related, such as information on materials in hoppers, recipes used, and alarms that stop the process. Conair blenders automatically save this data to SQL servers they're configured to communicate with, so the data will be saved even in the event of an unexpected shutdown.

By configuring the SQL tables, you can keep data such as what resins are being used, when they're used, where they're used and how much is being used.

The reason we use it is because SQL also allows you to make **queries**, to retrieve information based on parameters you set. For example, you could search for all of the times a particular resin was used, or all of the times a shutdown alarm took place.

Part of Conair's SQL Reports package is a reporting solution that takes advantage of the built in reporting services of Microsoft SQL Server. This solution allows for generation of reports directly from SQL server while using a standard browser. The reporting solution is easily installed with the tools provided by Microsoft SQL Server. This document will cover the installation process and provide an example of how to generate a report. Using the provided tools, it is also easy to generate custom reports specific to the user's needs. Conair is only responsible for the reports provided as part of the standard package.

Specifications: Reporting Software

TB Reporting Software	
Computer	800 MHz Processor PC recommended with a minimum of 4 GB free hard disk space. Mouse required.
Operating system	Microsoft® Windows ® 7
Video	SVGA
Printer	Required for hard copy reports
Interface Serial Connection	RS-232 serial connection Serial cable using DB9 connectors
Interface Ethernet connection	Category 5 Ethernet cable

SPECIFICATION NOTES
Specifications may change without notice. Check with a Conair representative for the most current information.


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Preparing for Installation

Conair's SQL server interface supports the following database management systems:

- Microsoft SQL Server 2005
- Microsoft SQL Server 2008
- Microsoft SQL Server 2012
- Microsoft SQL Server 2000 Express Edition
- Microsoft SQL Server 2005 Express Edition
- Microsoft SQL Server 2008 Express Edition
- Microsoft SQL Server 2012 Express Edition
- Sybase Adaptive Server Enterprise 15

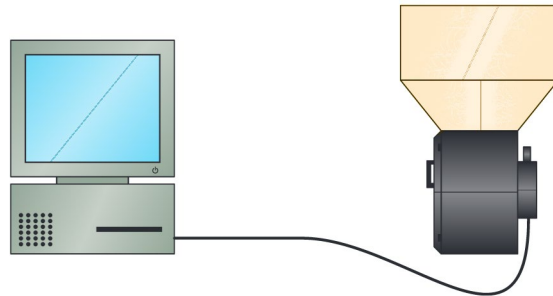
 **NOTE:** The reporting services of Microsoft SQL Server are used by Conair's SQL Reports package. The reporting services feature of the server must be installed.

 **NOTE:** Knowledge of Microsoft SQL Server is not a requirement for implementation of Conair's SQL Reports. However, it is recommended that a basic understanding of SQL server be obtained for reasons of installation, maintenance, and serviceability. Further knowledge will also be helpful for the generation of customer reports and further data processing.

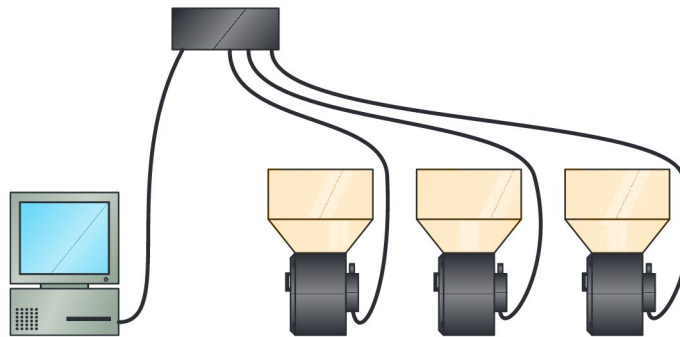
 **NOTE:** This guide discusses setting up and using the Microsoft SQL Server 2012 R2 on Microsoft Windows 7. Similar requirements exist for all supported server types.

Preparing for Installation (continued)

In order for this software to work correctly, you will need to connect your Conair equipment with the SQL server. If you intend to log data from multiple machines, you will have to connect them to an Ethernet switch or splitter and connect the splitter to the server.



Connecting a single blender



Connecting multiple blenders




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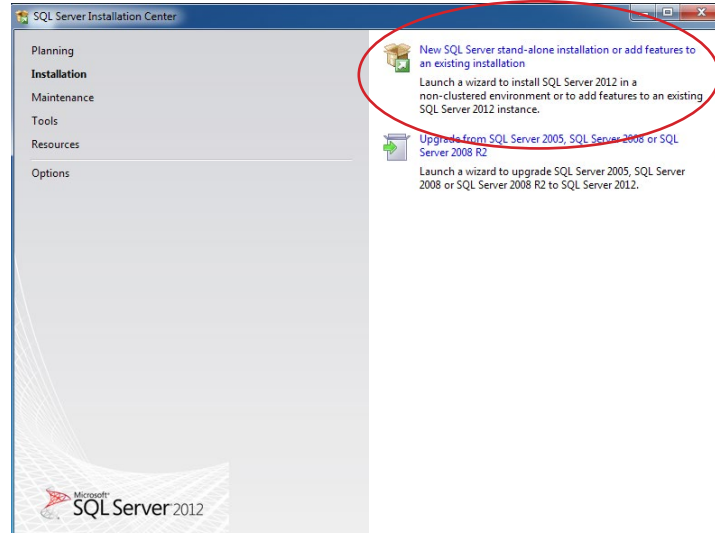
Installing the SQL Server Software

If the SQL Server Software is already installed, skip ahead to [Establishing the TCP/IP Connection](#) later in the Installation section of this user guide.

 This section outlines the process to install Microsoft SQL Server Express 2012 edition on Windows 7. If installing on Windows 7, either the 2008 or 2012 edition of the server may be installed. With Windows 7, the appropriate version should be run for either the 32 bit (x86) or 64 bit (x64) version of the operating system.

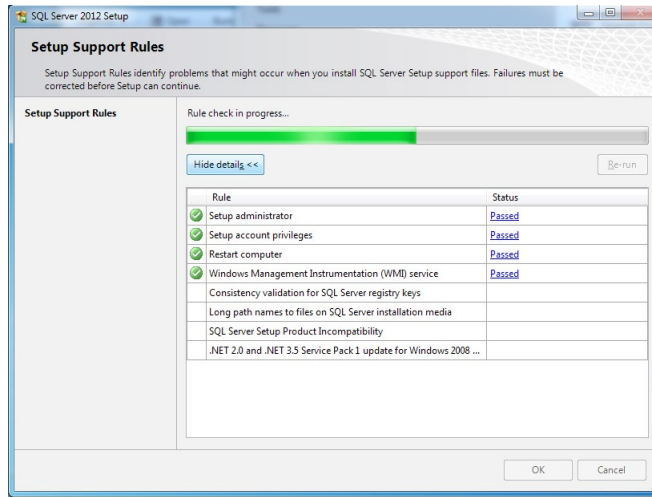
Before beginning the installation process, verify that the current Windows user has administrative rights.

- 1 Make sure the computer is on, all necessary hardware (monitor, mouse, keyboard) is plugged in, and a user with admin privileges is logged in.**
- 2 Using Windows browser, navigate to the install package for the Microsoft SQL Server Express.** The install package for the 2012 x64 edition is in the directory: `\\Install for Windows 7/SQL Server R2 2012 (32 and 64 bit)/SQLEXPADV_X64_ENU.exe`.
- 3 Run the SQL Server installation package.**
- 4 Click on “Installation”** once the SQL Installation center opens.
- 5 Click “New SQL Server stand-alone installation or add features to an existing installation”.**



SQL Server Install – Initial Window

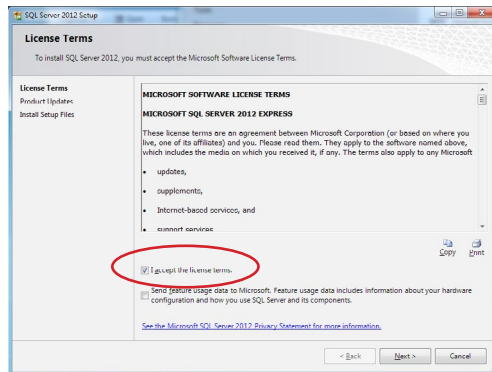
Installing the SQL Server Software (continued)



SQL Server Install - Support Roles

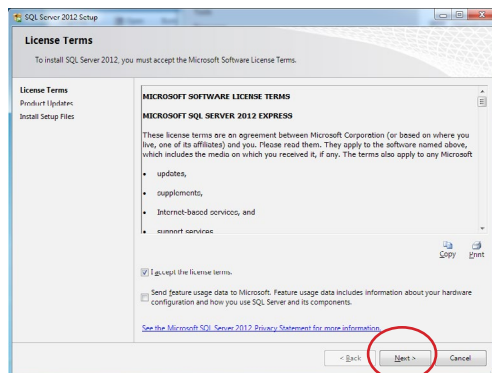
NOTE: Before the next step, the installer will check the system to verify support roles. If everything verifies with this screen, no user interaction is needed. The installation process will automatically proceed to the next step. If there is a problem, your PC's administrator will need to provide credentials to install new software.

6 Click “I accept the license terms”.



SQL Server Install - License Terms

7 Click “Next”.



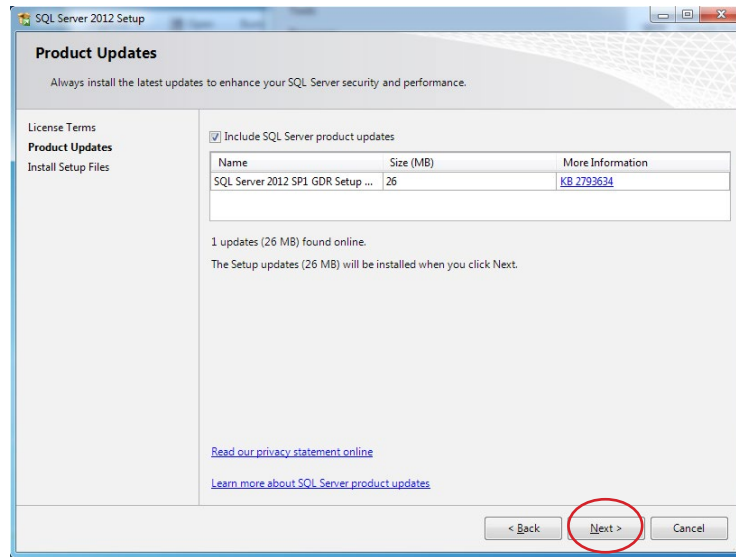
SQL Server Install - License Terms

NOTE: The screen will now change to show you the downloading of the product updates, and the progress of the setup file installation. This may take some time depending on the download speed of your internet connection.

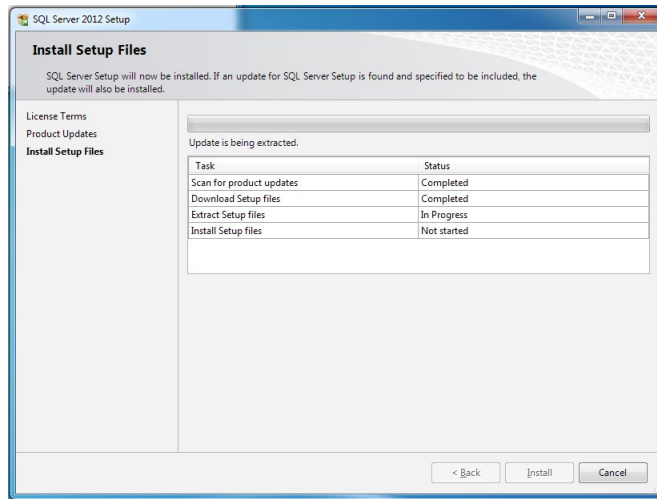
(Continued)

Installing the SQL Server Software (continued)

- 8 Press “Next” to accept whatever updates are available after the system has finished checking for software updates. If the PC does not have a connection to the internet, this step may be automatically skipped.

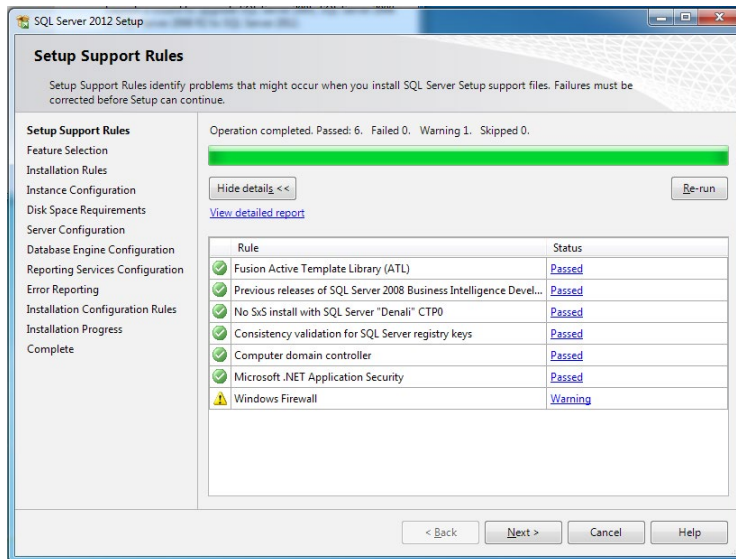


SQL Server Install - Product Updates



SQL Server Install - Setup Files

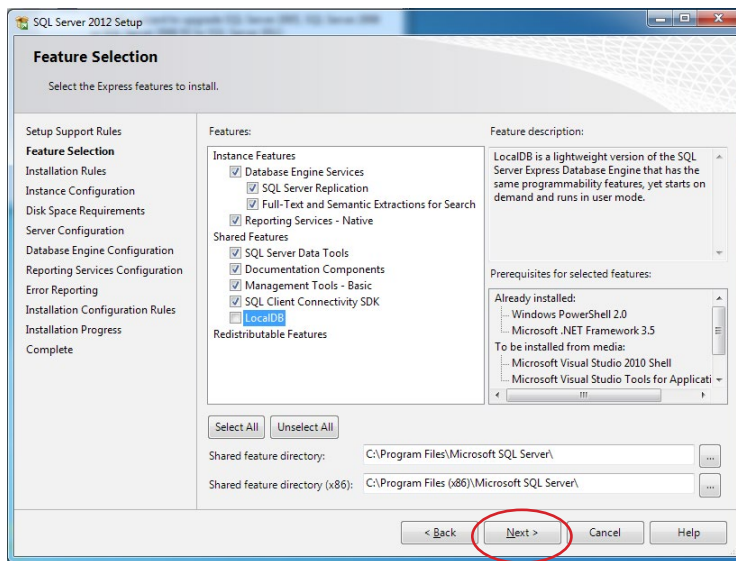
Installing the SQL Server Software (continued)



NOTE: Before you reach step 9, the installer will check the system to verify more support roles. If everything verifies with this screen, no user interaction is needed. The installation process will automatically proceed to the next step. If there is a problem, your PC's administrator will need to provide credentials to install new software.

SQL Server Install – Setup Support Rules

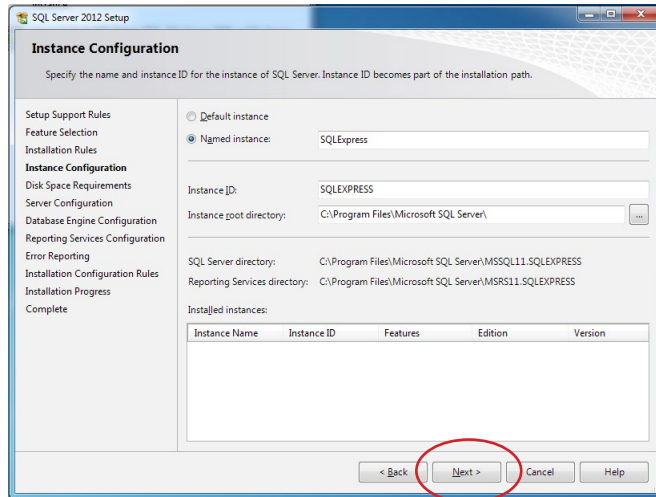
- 9 Click “Next” to accept the default settings on the Feature Selection screen and proceed with the installation.



SQL Server Install - Feature Selection

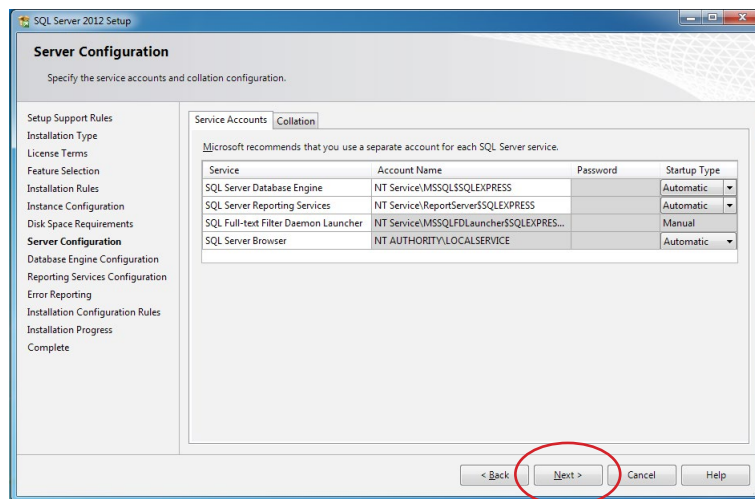
Installing the SQL Server Software (continued)

10 Press “Next” to accept the default settings for the Instance Configuration screen and continue with the installation.



SQL Server Install – Instance Configuration


11 Press “Next” to accept the default settings on the Server Configuration screen.



SQL Server Install - Server Configuration

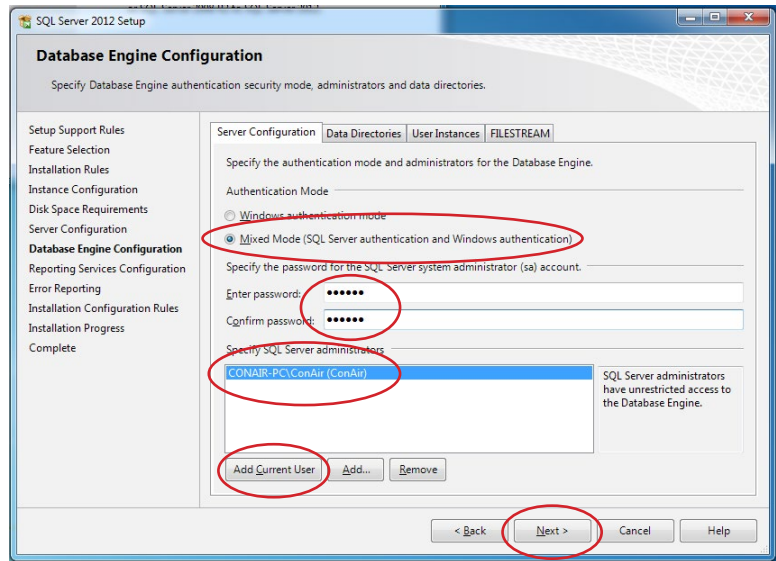
Installing the SQL Server Software (continued)

- 12 Click on the white bubble next to “Mixed Mode” in the “Database Engine Configuration” screen to change the Authentication,
- 13 Enter “Admin1” into the “Enter Password:” and “Confirm Password:” boxes. This is case sensitive and will be the password for the SQL server.

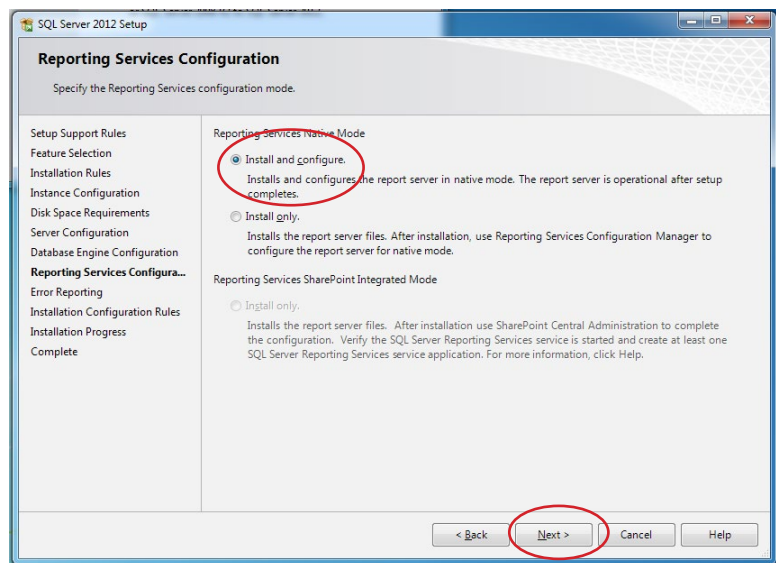
 **NOTE:** Passwords will be displayed using placeholder characters, not the actual numbers and letters.

- 14 Click on and highlight the user account you’re logged in as, or another administrator account on the PC which you want to be able to access the SQL server.
- 15 Click the “Add Current User” button to give SQL server access to the selected Windows user account.
- 16 Click “Next” to move on to the Reporting Services Configuration window.

- 17 Click “Install and Configure” on the Reporting Services Configuration window. The white bubble next to it should fill in to show your selection. This will install the full Microsoft Reporting Services features used to generate reports.
- 18 Click “Next” to move on to the Error Reporting screen.



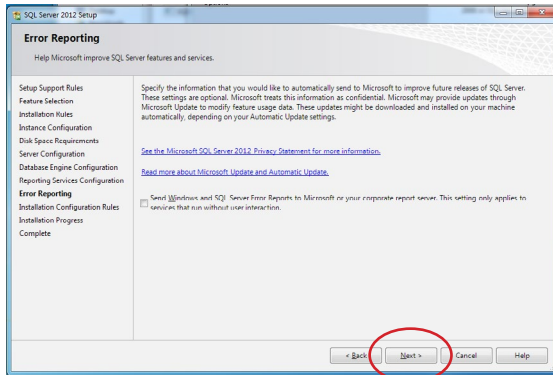
SQL Server Install – Database Engine Configuration



SQL Server Install - Reporting Services

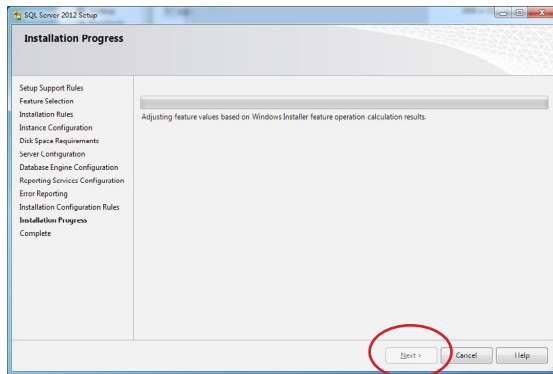
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Installing the SQL Server Software (continued)



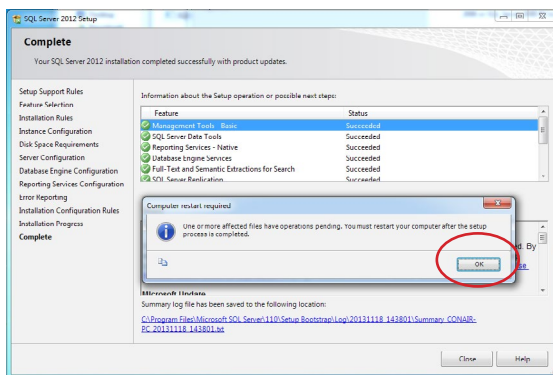
SQL Server Install - Error Reporting

19 Click “Next” on the Error Reporting screen.



SQL Server Install - Installation Progress

20 Press “Next” after the status bar fills up on the Installation Progress screen. The status bar will indicate the progress of the installation. This may take some time to complete.



SQL Server Install - Complete

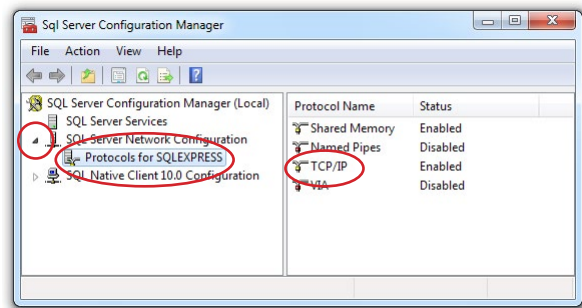
21 Press “OK” on the popup that appears telling you to restart the PC.

22 Restart the PC to finish the installation of the SQL Server.

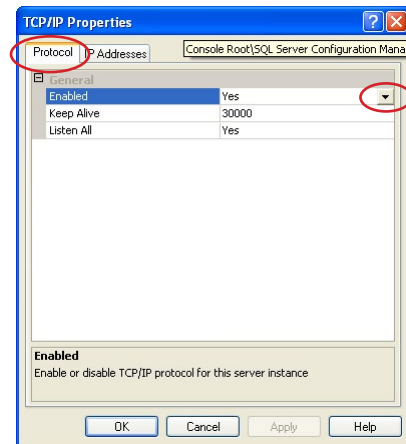
Establishing the TCP/IP Connection

The Conair equipment communicates with the SQL server via a TCP/IP connection. The server must be configured to enable the TCP/IP protocol connection. This will start the process of enabling the TCP/IP protocol.


- 1 Click the “Start” button on your PC.
- 2 Select “All Programs”.
- 3 Open the “Microsoft SQL Server 2012” folder.
- 4 Open the “Configuration Tools” folder.
- 5 Click and open the “SQL Server Configuration Manager” program. The window that opens should look like the one on the right.
- 6 In the Configuration Manager window that opens, click on the arrow to the left of “SQL Server Network Configuration” to open the grouping.
- 7 Click on “Protocols for SQLEXPRESS” or “SQLEXPRESS” in the menu that opens.
- 8 Double-click “TCP/IP” on the screen that will open on the right of the window.
- 9 Select the “Protocol” tab on the TCP/IP Properties window. The window should look like the screenshot below and to the right.
- 10 Click on the drop-down menu next to “Enabled” (the gray box with the downward-facing arrow to the right of the word “Enabled”).
- 11 In the drop-down menu, click “Yes”.



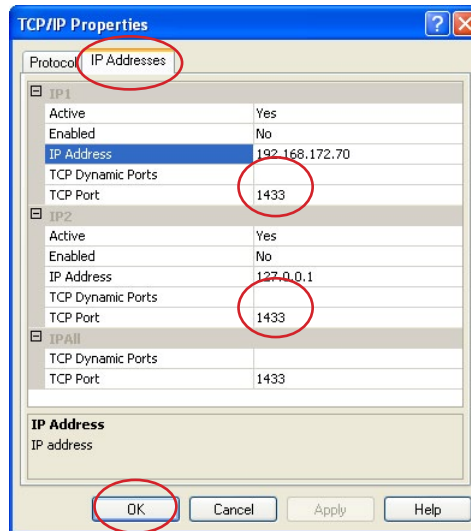
SQL Server Setup – Configuration Manager



SQL Server Setup TCP/IP Protocol

 **NOTE:** After step 11, the setting for “Listen All” on the TCP/IP Properties screen should automatically change to “Yes”.

Establishing the TCP/IP Connection (continued)



SQL Server Setup – IP Addresses

12 Click the “IP Address” tab at the top of the TCP/IP Properties window. This will present a display similar to that shown above. Here the configuration for each IP address can be set.

13 Click on and fill in the configuration options for IP1 and IP2 as follows:

TCP Dynamic Ports should be **disabled or kept blank** in every IP setting.

TCP Port should be set to **1433** in every IP setting.

For further information on the configuration of the protocol, refer to the SQL Server Help file included .

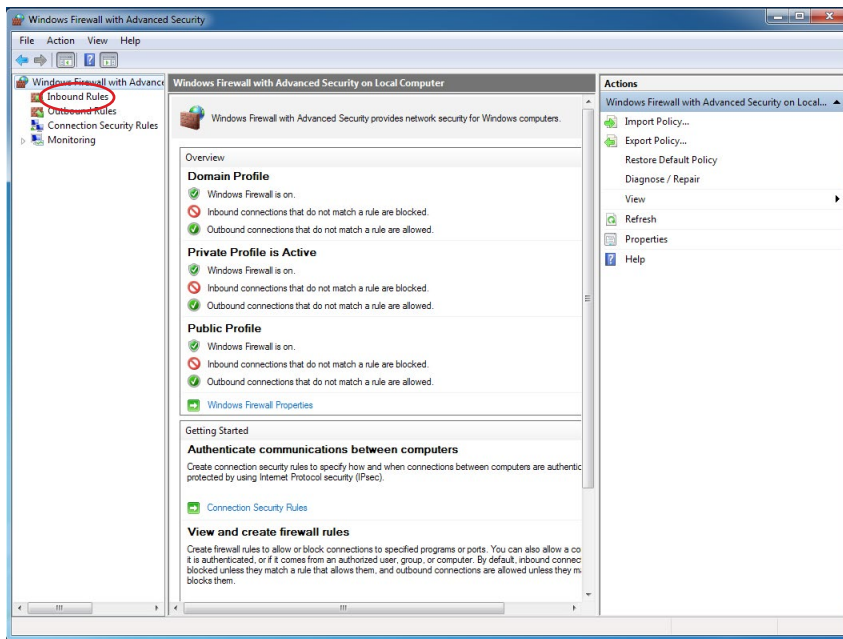
14 Press “OK” to close the properties window and save your changes.

15 Reboot the PC so that the changes made to the server can take effect.

Configuring the Firewall

The Microsoft Firewall must be configured to allow communications to the server from remote devices. The SQL Server TCP/IP settings discussed in the previous section disable dynamic port access. By default, the Windows Firewall closes port 1433 which must be re-opened to allow access. To do this, a new “Inbound rule” must be created.

- 1 Click the “Start” button on your PC.
- 2 Type “WF.msc” into the “Search Programs and Files” box.
- 3 Double-click “WF.msc” when it appears in the search results box to open the Windows Firewall configuration program.
- 4 Right-click on “Inbound Rules” in the left-hand “Windows Firewall with Advanced Security” panel.

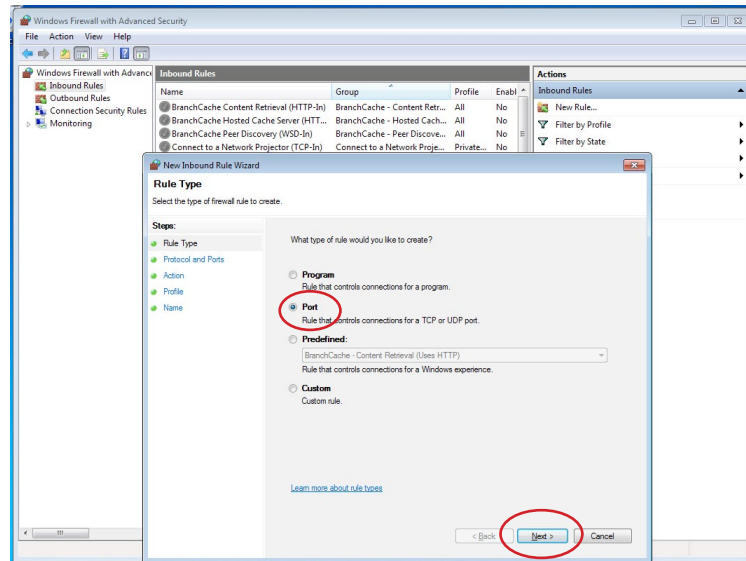


Firewall – Firewall Startup

- 5 Click “New Rule” in the right-hand “Actions” panel. This will open the “New Inbound Rule Wizard” dialog box.

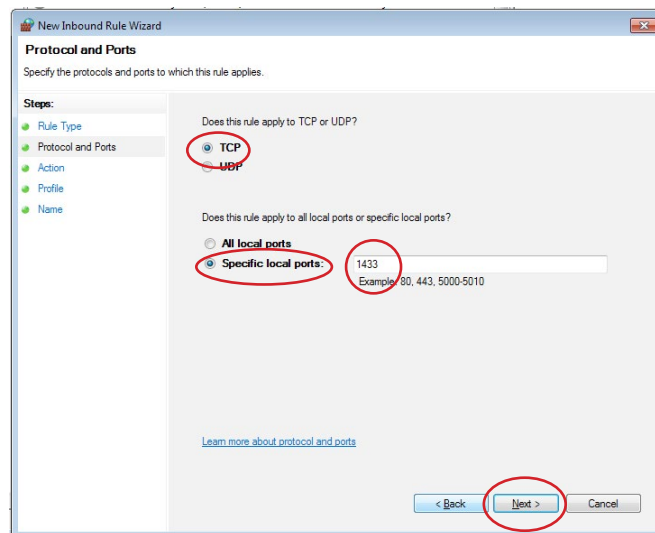
Configuring the Firewall (continued)

- Click on the “Port” option in the “New Inbound Rule Wizard” window, pictured above, to select that option.
- Click “Next” to move on to the “Protocol and Ports” tab.




Firewall – New Port Rule

- In the New Inbound Rule Wizard – Protocol and Ports dialog box, click “TCP”.
- Click “Specific local ports”.
- In the box to the right of “Specific local ports”, type 1433.
- Click “Next”.



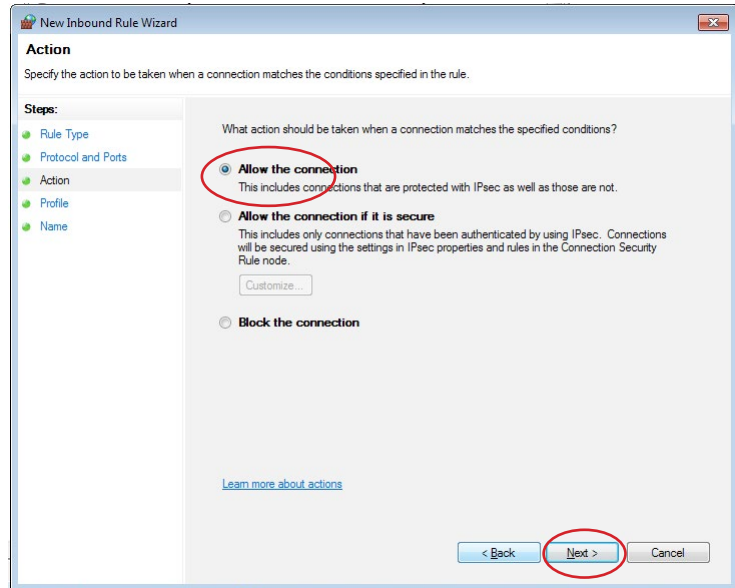
Firewall – Protocol and Ports

 **NOTE:** If you are using a special network configuration as opposed to this manual’s recommendation, and the default instance of the port - 1433 - was not used, then you should enter the new port instance value.

Configuring the Firewall (continued)

12 In the 'Action' dialog box, click "Allow the connection".

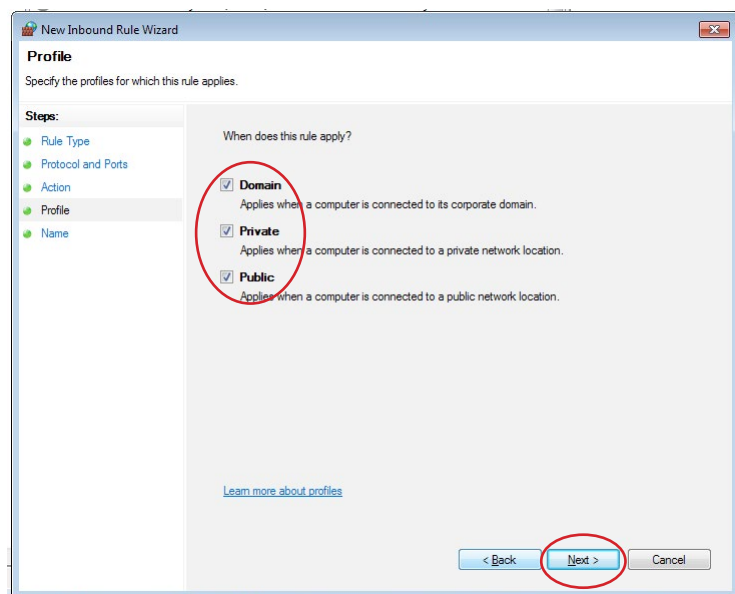
13 Click "Next".



Firewall – Action

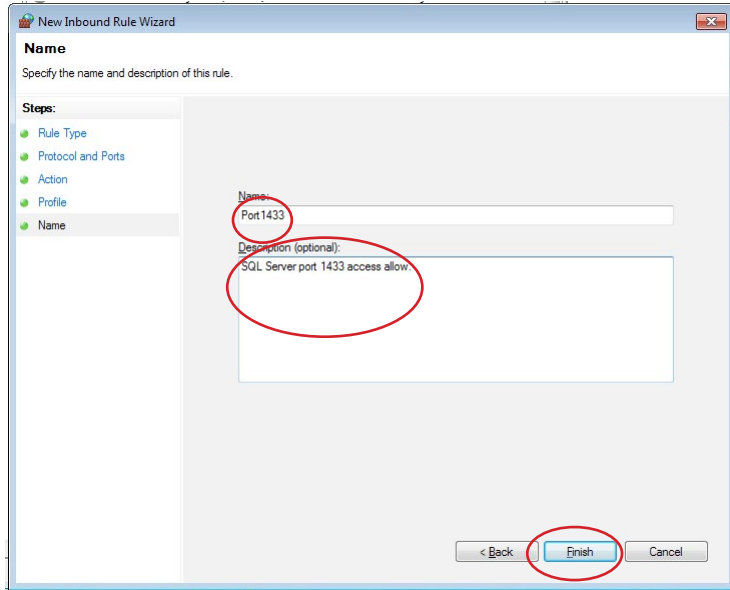
14 In the Profile dialog box, click on all three checkboxes.

15 Click "Next".



Firewall - Profile Setup

Configuring the Firewall (continued)



Firewall - Description

16 In the Name dialog box, **type a name for the new Firewall settings**. In this example, the name is “Port1433”, but whatever you name it won’t affect the setup.


17 **Type a description for the rule**. In this example, the description is “SQL Server port 1433 allow access”, but the name won’t affect the setup.

18 Click **“Finish”**.

The Microsoft Firewall should now be configured to allow the remote devices to communicate directly to SQL Server. The Firewall application can now be closed.

Logging into the SQL Server

- 1 Click the “Start” button on your PC.
- 2 Click “All Programs”.
- 3 Click “Microsoft SQL Server 2012”.
- 4 Click “SQL Server Management Studio”.
- 5 Upon launch, you will be asked to enter a Login and Password. **Click on the gray box to the right of the word “Authentication”.**
- 6 Click “SQL Server Authentication” on the menu that will drop-down.
- 7 Enter “sa” for the box labeled Login.
- 8 Enter “Admin1” in the box labeled Password.

 **NOTE:** Passwords will be displayed using placeholder characters, not the actual numbers and letters.

- 9 Click “Connect”.

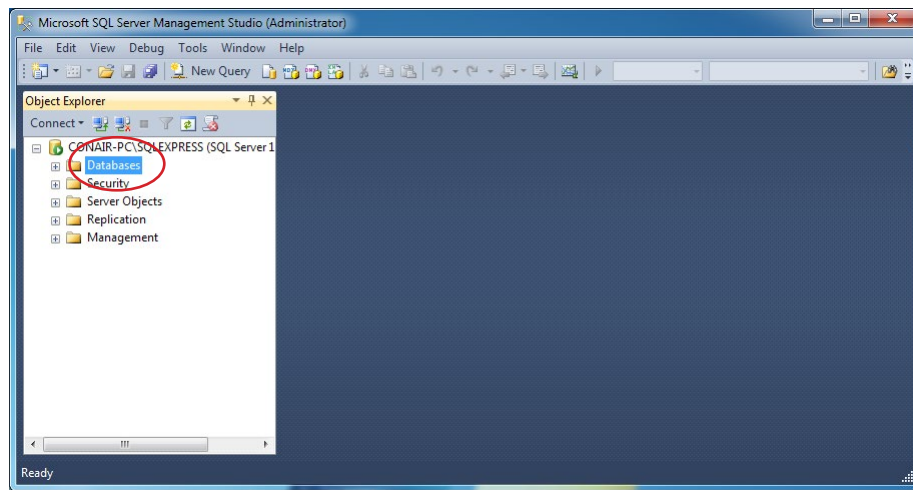


SQL Setup – Server Login

Creating a Conair SQL Database

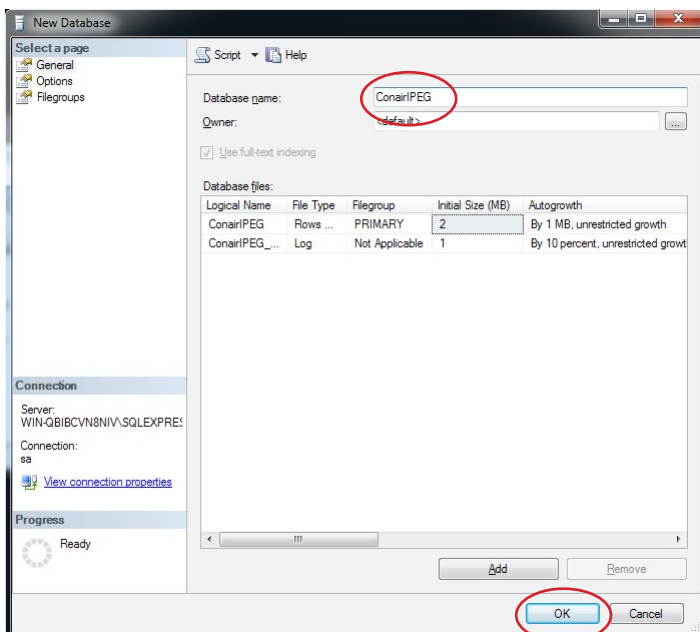
The database the Conair products use must be created in the SQL Server. Once the database has been created, the device logins can be created. When the devices establish an initial connection to the server, they will analyze the available tables in the new database and automatically create any required tables and data relationships necessary. The following steps outline the creation of the initial database.

- 1 Open the SQL server management program by following the steps in the last section, “Logging into the SQL server”.
- 2 In the Object Explorer to the left of the window that opens, **right-click on “Databases”**.



SQL Setup - SQL Server

- 3 Click “New Database...” in the menu that will appear next to your cursor. You will be presented with a new popup that will allow for the creation of the database that SQL Reports will use, as in the screenshot below.



SQL Setup - New Database

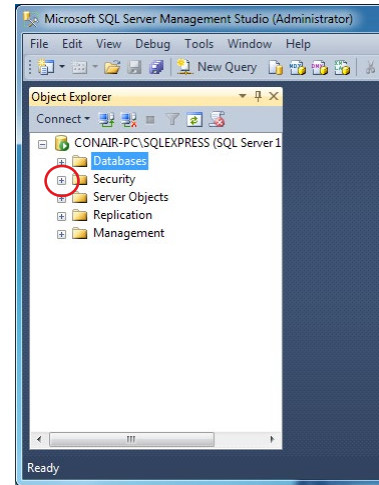
- 4 Enter “ConairIPEG” for the Database name. This is the default name used by the Conair products. It is possible to change the name; however, each connecting device must then also be changed to accept the new name. See the section on [Connecting the Touch Screen to the Server](#), later in this chapter.
- 5 Click “OK”.

The database should now be created. When the remote device logs into the database, it checks to see what tables are available. If the tables are not available, any necessary tables and data relationships will be created automatically.

Adding a User Database Login


Each device connected to the server requires a login id and passcode. This will allow devices to connect with the SQL Server. Once the devices are connected with the server with their User Login, it will be necessary to assign them as “Users” of the ConairIPEG database. The following procedure will outline the process of adding logins and database users.

- 1** Open the SQL server management program by following the steps in the earlier section, “Logging into the SQL server”.
- 2** Press the “+” symbol next to “Security” in the Object Explorer pane on the left of the window.
- 3** Right-click on “Logins” in the menu that will open up.
- 4** Select “New Login...” in the menu that will drop down from your mouse cursor to present the Login - New window, as in the center of the screenshot below.

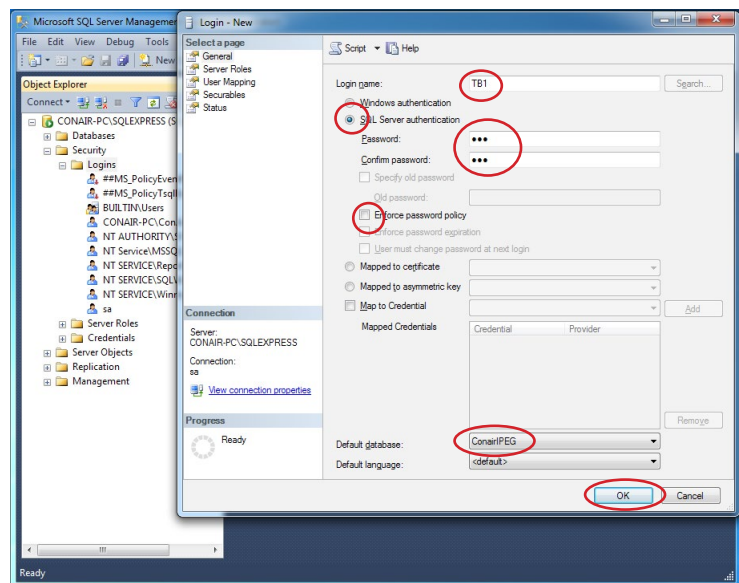


SQL Setup - SQL Server

- 5** Enter a unique title for the remote device (i.e. TB1, TB2, TB3...) in the box to the right of “Login name”.
- 6** Click “SQL Server Authentication”.
- 7** Enter a password for the remote device into the Password field.

 **Note:** The password field does not display the actual password, but instead shows placeholder characters, for security. It may also show more placeholder characters than actual characters in the password.

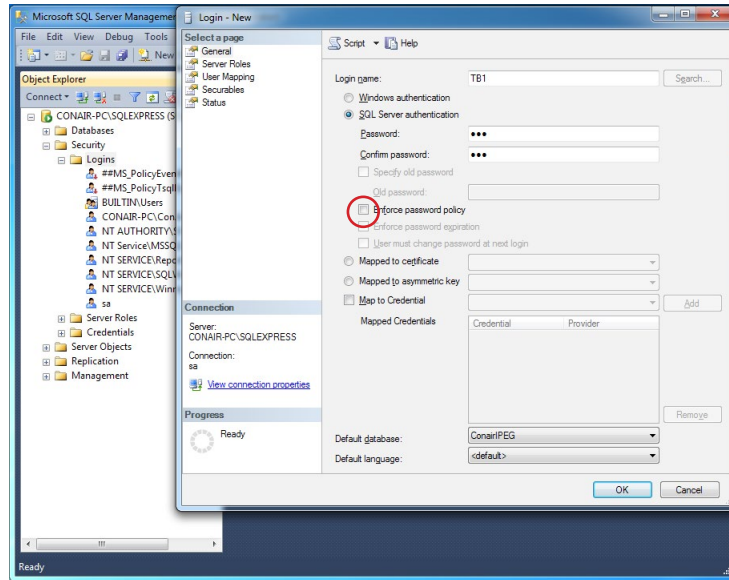
- 8** Enter the same password into the Confirm password field.



SQL Server - New Login

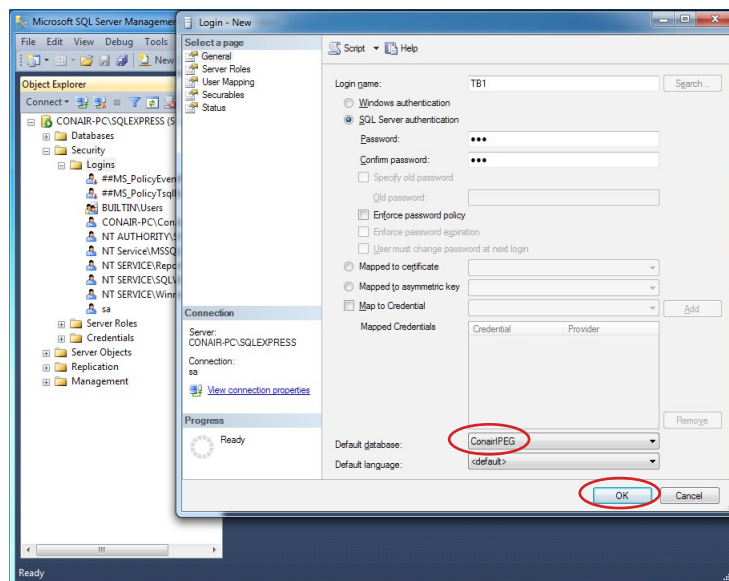
Adding a User Database Login (continued)

- Click on the box next to “Enforce password policy” so that the box is empty/blank.



SQL Server - New Login

- Click on the “Default database” drop-down menu.
- Click “ConairIPEG”.
- Click “OK” after you have confirmed all changes.



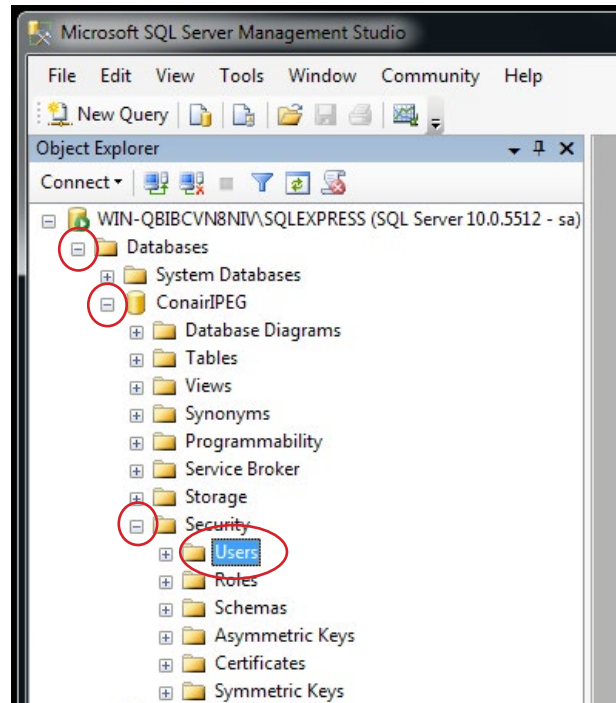
SQL Server - New Login

The device now has a ‘Login’ to the SQL Server. The next step will be to assign this ‘Login’ as a ‘User’ of the ConairIPEG database.

Giving User Database Login Privileges

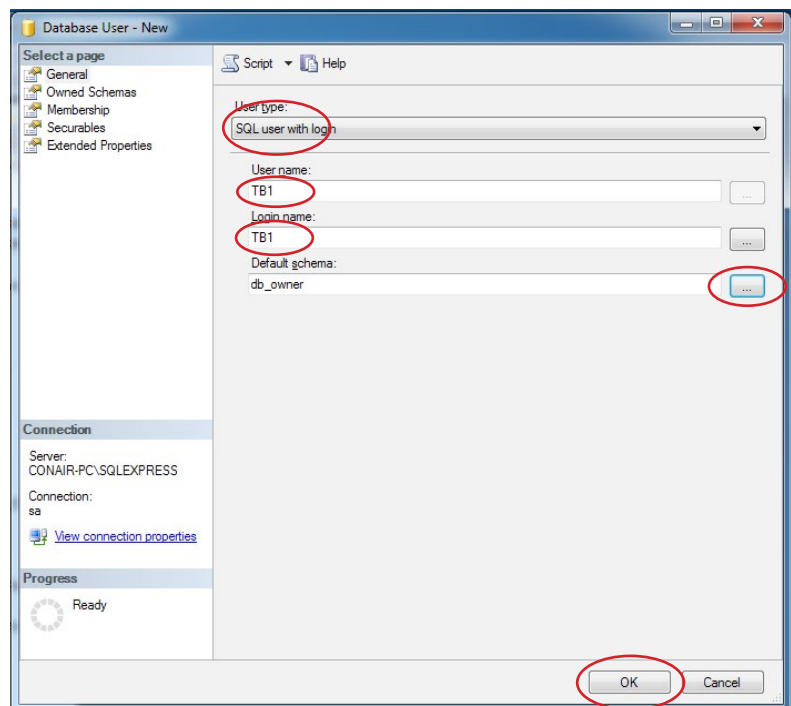
Once a user login has been created for the device, it is necessary to add this Login to the list of Users of the ConairIPEG database.

- 1** Open the SQL server management program by following the steps in the earlier section, “Logging into the SQL server”.
- 2** Click on the “+” symbol next to the word “Databases” in the “Object Explorer” window, to expand the Databases section.
- 3** Click on the “+” symbol next to the word “ConairIPEG” (or whatever you named your database) in the list that opens up in the database section, to expand the ConairIPEG section.
- 4** Double-click on “Security” in the list that opens up under ConairIPEG.
- 5** Right click on “Users” in the list that opens under Security.
- 6** Click on “New User...” in the menu that drops down from your cursor.



SQL Server - Object Explorer

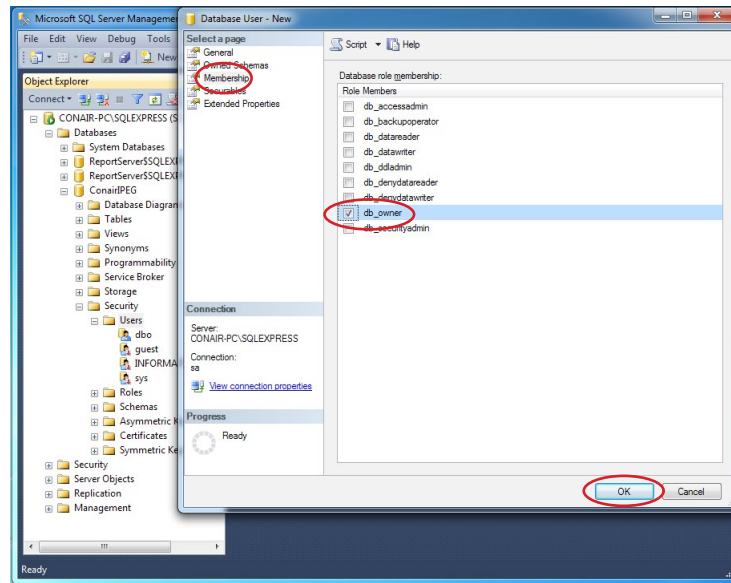
- 7** Make sure that the “User Type” field is set to “SQL user with login”. If it is not, click on the field next to User Type and click “SQL user with login” on the menu that will appear.
- 8** In the “User Name” field, type in a unique name for the device. It can be the same as the login name.
- 9** In the “Login Name” field, type in the login name you created earlier, the one that needs to be given permission to access the database.
- 10** Click on the “...” button next to “Default Schema” to open a list of schemas.
- 11** Click on “dbo” in the list that pops up.
- 12** Click “OK” to return to the Database User window.



SQL Server - Database User

Giving User Database Login Privileges (continued)

13 Click on “Membership” on the “Select a Page” panel on the left of the Database User window.



SQL Server - User Membership

14 Check that the box next to “db_owner” is checked, as above. If it isn’t, click on the box to make it so.

15 Click the “OK” button.

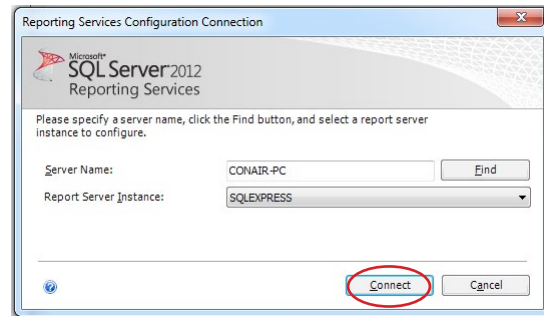
The user has now been added to the SQL Server and been given access to the ConairIPEG database. It should now be possible for the remote device to login to the database.

Checking the Server Configuration

The report server was installed when the SQL server was installed. There are already several report settings installed which will allow material usage and other data reports to be viewed. These reports will be accessible from a standard browser or from Conair's custom Windows application. The following procedure should be followed to verify that the server has been configured.

- 1 Click the "Start" button on your PC.
- 2 Select "All Programs".
- 3 Open the "Microsoft SQL Server 2012" folder.
- 4 Open the "Configuration Tools" folder.
- 5 Click and open the "Reporting Services Configuration Manager" program. The window that opens should look like the one on the right.

- 6 Click the 'Connect' button to login to the report server - see right. The default server name and instance will already be filled in and should be used to make the connection.



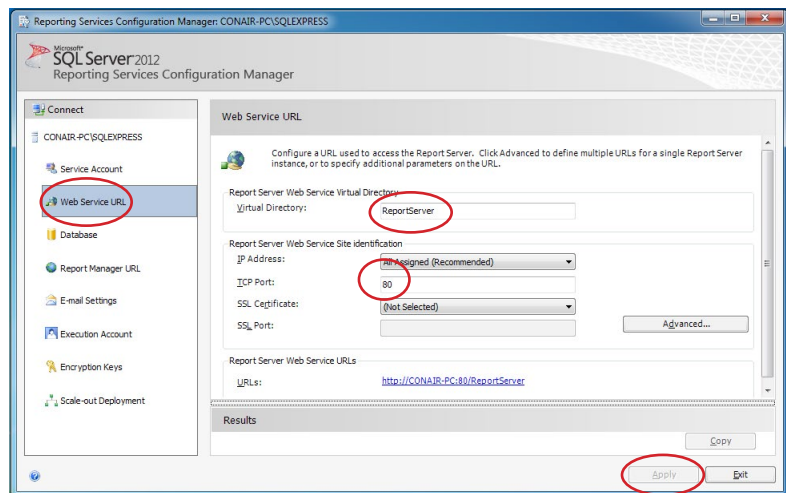
Report Server - Connect

- 7 Click on "Web Service URL" along the left hand side of the window that opens. This will open a window similar to the one pictured at right.

- 8 Type "ReportServer" into the "Virtual Directory" field. This names the directory to which the reports will be saved.

- 9 Type "80" into the "TCP Port" field.

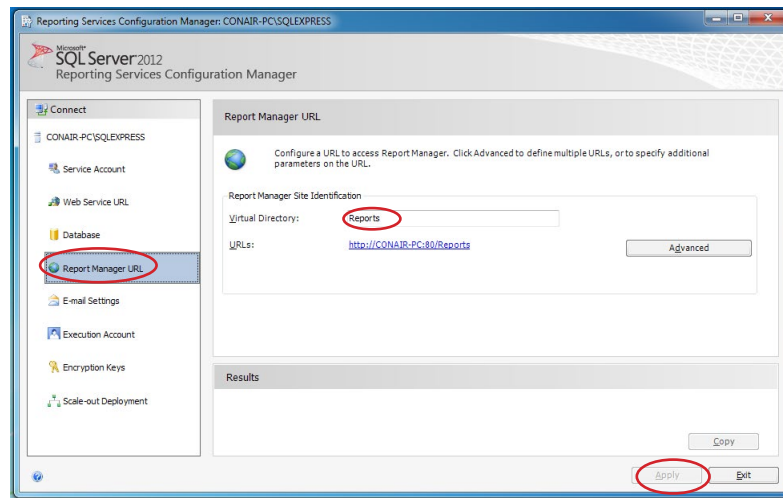
- 10 Click "Apply". If you didn't change anything, the "Apply" button will be grayed out and you won't be able to click on it - go on to the next step.



Report Server - Web URL

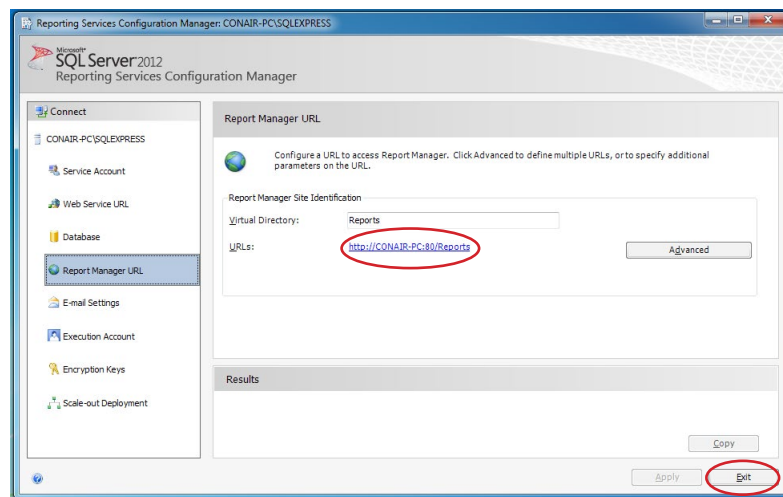
Checking the Server Configuration (continued)

- 11** Click on “Report Manager URL” on the left-hand side of the window. This will present a window similar to the one above.
- 12** Type “Reports” in the “Virtual Directory” field.
- 13** Click “Apply”.



Report Server - Report Manager URL

- 14** Click on the blue text next to “URL”. This will launch a browser and present a page where the report server can be managed using a browser. It may take some time to present the page. If the browser displays an error, then one of the settings is wrong - check the settings in this section, correct anything mission, click “Apply” and try again.
- 15** Press “Exit”. This completed the setup of the report server.



Report Server - Report Manager URL

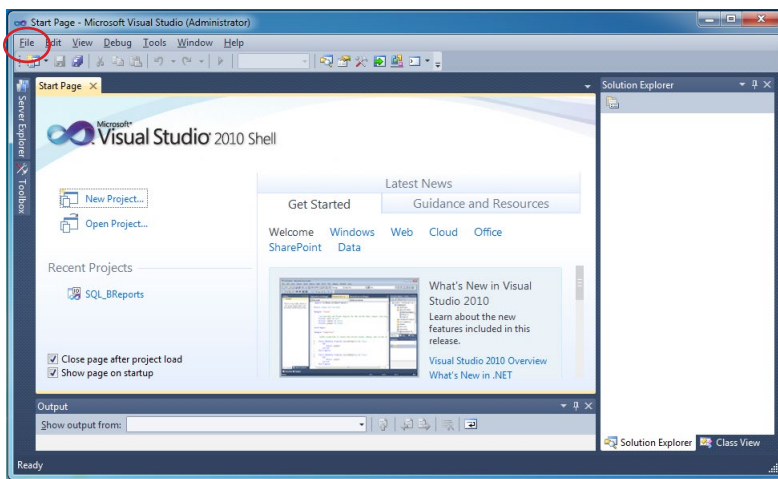
Installing Reports

Now that the SQL Server has been fully installed and configured, you have to configure the Microsoft Visual Studio to be able to make reports. This report solution allows using a browser to access the report server and generate installed reports. This section will cover the installation of the reports into the report server.

Note: This procedure installs reports for several different products. If you do not wish to install all product reports, then individual products can be selected and installed.

In order to install the report solution, the “reporting project” must be built and deployed. This is accomplished by launching the “SQL Server Business Intelligent Development Studio”. This is a special version of Microsoft Visual Studio specific for the generation and deployment of reports. This procedure will outline the steps taken to ‘Deploy’ the reports solution.

- 1** Click the “Start” button on your PC.
- 2** Select “All Programs”.
- 3** Open the “Microsoft Visual Studio 2010” folder.
- 4** Click and open the “Microsoft Visual Studio 2010” program. A window will pop up asking what template to implement.
- 5** Click “Business Intelligent Designer”.
- 6** Click “OK”. A window will pop up similar to the one below.
- 7** Click “File” in the top-left of the window.



Reports Install – Development Studio

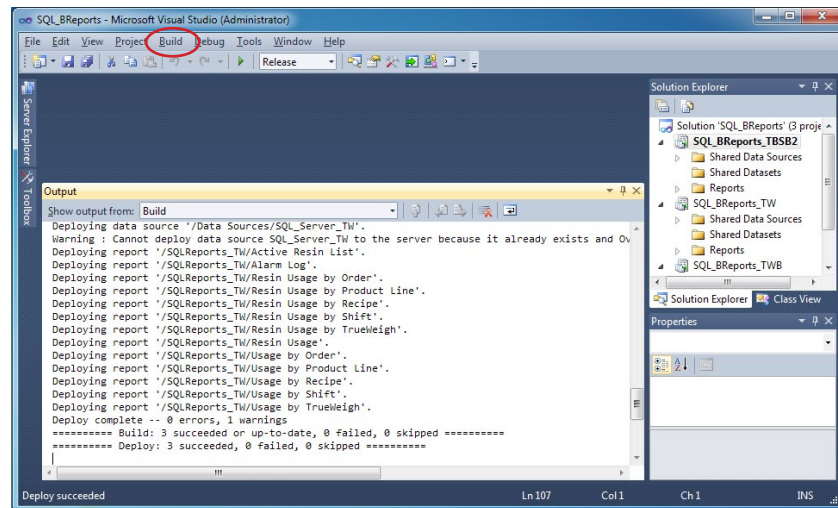
- 8** Click “Open”.
- 9** Click “Project/Solution”.
- 10** Open the **SQL_BReport.sln** file included with the installation media Conair will have provided you with. The file location should be:
 (//Install for Windows 7/SQL_BReports/SQL_BReports.sln)
 The Solution Explorer in the top right will display a list of projects, as pictured on the next page.

(Continued)

Installing Reports (continued)

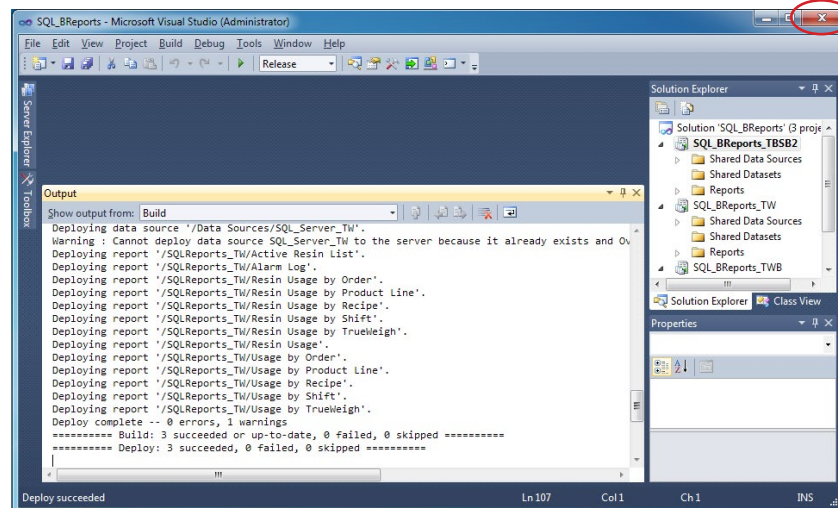
11 Select “Build” from the top menu.

12 Click “Deploy Solution” from the menu that will drop-down. This will start the Build process, which will install the reports into the Microsoft SQL Report Server. The results of the Build and Deploy will appear in the output window . All reports should install without errors.



Reports Install - Reports Deployed

13 Press the X button at the top-right of the window to close the development studio application. The reports are now installed and ready for use.

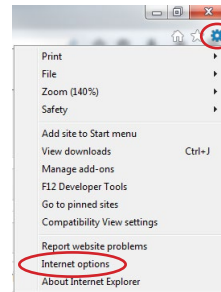


Reports Install - Reports Deployed

Configuring Internet Explorer Security

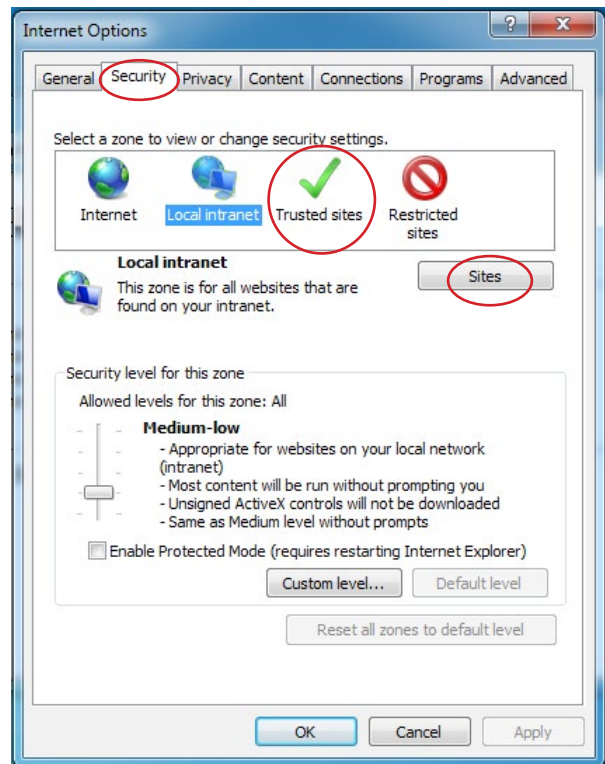
Internet Explorer security must be updated to allow for connection to the report server.

- 1 Click the “Start” button on your PC.
- 2 Select “All Programs”.
- 3 Click on “Internet Explorer” to open it.
- 4 Click on the address bar and type in:
http://localhost/ReportServer.
- 5 Press the Enter key.
- 6 Login using the Windows username and password which you gave administrative permissions earlier in this chapter. The page will load.
- 7 Click on the Internet Explorer Settings button in the top right corner - in most versions this is represented by a cogwheel icon.
- 8 Click “Internet Options” on the menu that will crop down (pictured at right).



Reports Install - Internet Explorer

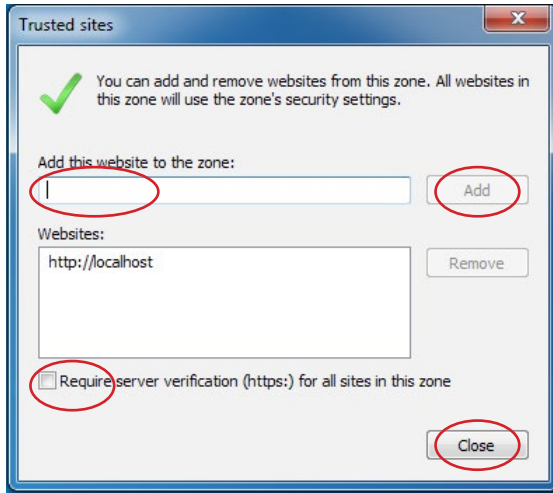
- 9 Click the Security tab in the window that opens.
- 10 Click the Trusted Sites zone (the green check mark) so that it is highlighted.
- 11 Click on the Sites button.



Reports Install - Internet Options

(Continued)

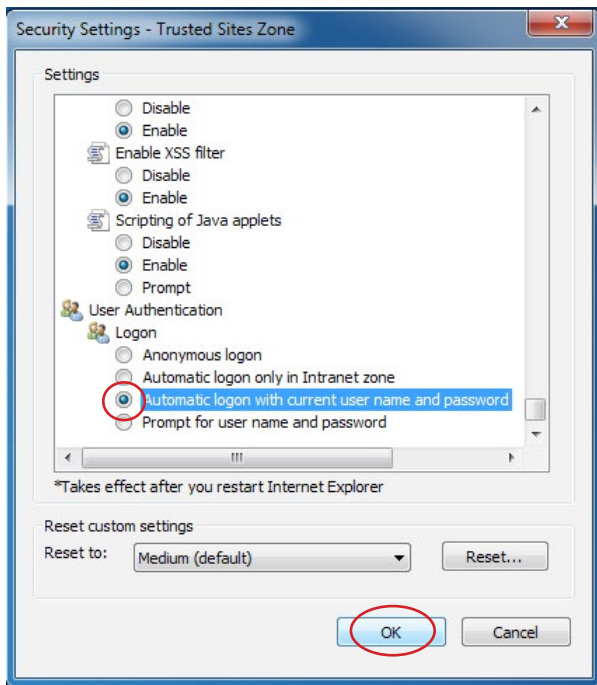
Configuring Internet Explorer Security (continued)



Reports Install - Trusted Sites

- 12** Click to uncheck “Require server verification (https:) for all sites in this zone”. The box should be empty.
- 13** Click on the text box labelled “Add this website to the zone:”.
- 14** Enter the text:
http://localhost/ReportServer.
- 15** Click the “Add” button.
- 16** Click the “Close” button to return to the Security tab of the Internet Options window.

- 17** Click on the “Custom Level...” button on the Security tab of the Internet Options window. A list of trusted sites will appear.



Reports Install - Logon Settings

- 18** Scroll to the bottom of the list.
- 19** Under “User Authentication” click “Automatic logon with current user name and password” so the box is filled in as on the left.
- 20** Click OK. A box will appear asking you to confirm your choice.
- 21** Click OK again to close the “Internet Options” window.

Connecting the Touch Screen to the Server

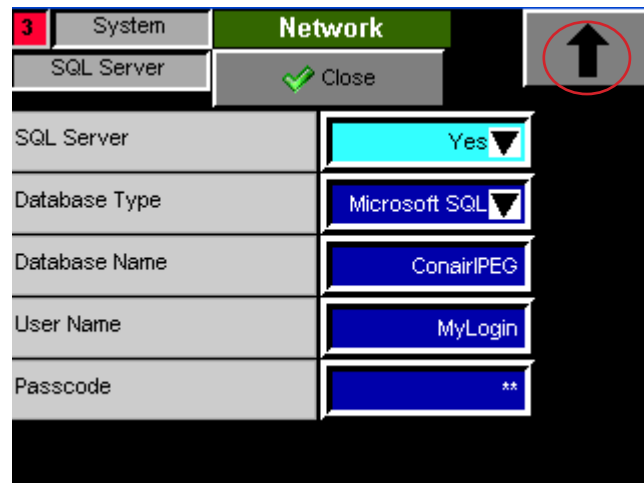
The SQL database interface must be configured on the touch-panel. First, the connection parameters must be setup. Once a connection has been established, the various data logging options must be turned on. The following sections will outline the required settings on the touch-panel.

To activate the blender's connection to the SQL server, you will need an unlock code. Contact Conair Service. You will need to provide Conair with the Station ID for each device to get the unlock code.

Contact Conair Customer Service
1 800 458 1960.
From outside of the United States,
call: +1 814 437 6861

- 1 Go to the Home page of the touch-screen menu.**
- 2 Navigate to the SQL server page - click More, Setup, System, Network, and finally SQL Server.** You will be presented with a screen similar to the one below.
- 3 Configure these options** by pressing on the blue field and selecting the option or typing in the information as follows:

- **SQL Server** – Select Yes to enable the server interface. After selecting Yes, the user will be requested to enter the unlock code for this feature.
- **Database Type** – Currently the SQL Interface is supported for the Microsoft SQL Server, and the Sybase database. (The Sybase interface has not been tested.) Select the appropriate database type - in this guide, we have been using Microsoft SQL Server.
- **Database Name** – Enter the name of the database as was configured in the SQL Server in the earlier section, Creating a Conair SQL Database. In the screenshot, it is “ConairIPEG”.
- **User Name** – Enter the name of the user configured on the server for use with the database and this device.
- **Passcode** – Enter the user passcode for the corresponding login.



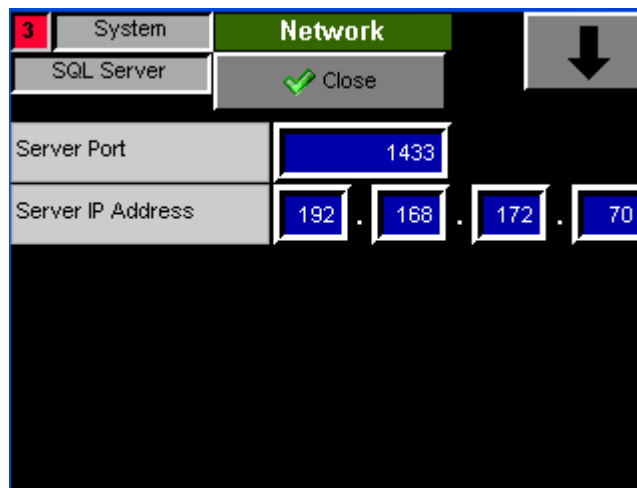
SQL Setup Screen 1

- 4** When you're finished configuring these settings, **press the arrow button on the top-right of the display** to move to the other part of the menu.

Connecting the Touch Screen to the Server (continued)

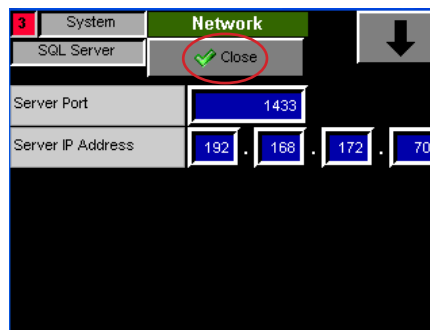
5 Configure this menu the same way as before - by pressing on the blue fields and typing the configuration in using the on-screen keyboard.

- **Server Port** – Enter the Port value used by the server. The default value, as configured earlier in this guide, is 1433.
- **Server IP Address** – Enter the address of the IP server on the network. The touch-panel system must reside on the same network as the SQL Server. (The touch-panel’s own IP address is configured on the “Panel” setup screen. Refer to the product manual for configuring this value or **Establishing the TCP/IP Connection**, earlier in this guide.)



SQL Setup Screen 2

6 Press “Close” to return to the Setup screen. You can now go on to the next section, [Configuring the IP Address](#) - **DO NOT** return to the system’s home page until you have configured the IP address.

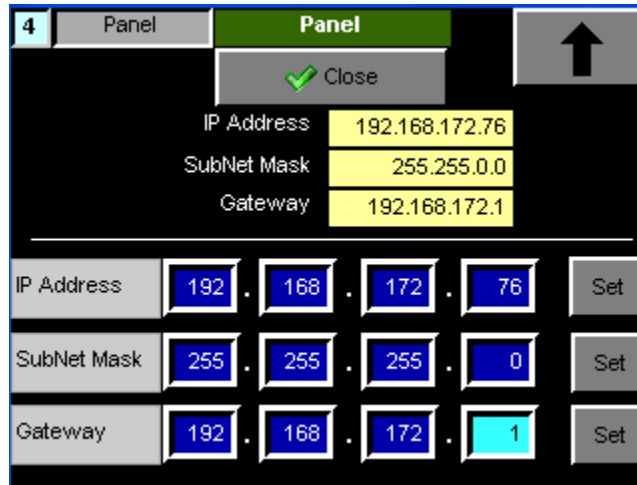


SQL Setup Screen 2

IMPORTANT: Returning to the Home page at this point will force a system restart. The configuration will be saved and the system will perform an automatic reboot of the system. Once the system reboots, it will attempt to connect to the SQL server using these settings. If the settings are not correct, or the connection to the server cannot be made, an alarm will occur. Refer to the Diagnostics section to help resolve any connectivity issues.

Configuring the IP Address

- 1** Navigate to the Setup screen of the touch-screen menu. (You should already be here if you are following this guide in order.)
- 2** Press “Panel”.
- 3** Press “Advanced”. You will find yourself at a menu similar to the screenshot below.



IP Address Setup

- 4** Enter values for the IP address - it does not matter which, as long as the values for the 4 numbers are between 0 and 255.



NOTE: Because the touch-screen is not connected to the internet, IP and SubNet numbers do not really matter - you are only on a private network and there are millions of possible IP addresses, so you are not likely to run out. Standards for IP addresses recommend private network addresses open with 10, such as 10.0.0.0 or 10.255.255.255

- 5** Enter values for the SubNet Mask. Again, they must be between 0 and 255. A common SubNet Mask is 255.255.255.0
- 6** Copy down the value of the IP address and SubNet Mask - although you do not have to input it anywhere else, your network administrator may prefer to have it available.
- 7** Press “Close” to save the new network identity.

When you return to the Home screen, the system will automatically reboot and establish the new values.

Note that until the system reboots, the IP address you input will not respond to “ping” requests (signals sent by the computer to check that there is something at a given IP address), but should afterwards, should you need to check that there is a connection.

Configuring Shifts

The touch-panel has the capability of maintaining inventory data based on operator shift periods. Data stored in the SQL database contains the name of the shift at the time the data logging occurred. Queries can then be performed on a per shift basis.

- 1 Go to the Home page of the touch-screen menu.
- 2 Navigate to the SQL server page - select More, Setup, Panel, Time, and finally Shift. You will be presented with a screen similar to the one below.

	Enable	Name	Start Time [HH:MM]	Duration [HH:MM]
1	<input checked="" type="checkbox"/> Yes	Shift1	0 0	8 0
2	<input checked="" type="checkbox"/> Yes	Shift2	8 0	8 0
3	<input checked="" type="checkbox"/> Yes	Shift3	16 0	8 0

Shift Time Setup

You can define up to 3 shifts. Each shift has a name, start time, and duration. Time and duration values should be entered such that all 24 hours in a day should be defined. If there is a gap in the definition, that gap will be named as “----”, and will be treated as separate shift. If there is an overlap in time, the current shift will take priority over the next shift. This will result in the next shifts’ start time being delayed. The start time values are entered as a 24 hour clock values. A shift can span the midnight hour. As an example:

Example 1: (3 shifts)

- “Shift 1” is from 12:00am to 8:00am (Start time 0:0, Duration 8:00)
- “Shift 2” is from 8:00am to 8:00pm (Start time 8:00, Duration 8:00)
- “Shift 3” is from 8:00pm to midnight (Start time 20:00, Duration 8:00)

Example 2: (2 shifts, 1 spanning the midnight hour)

- “Shift 1” is from 6:30am to 6:30pm (Start Time 6:30, Duration 12:00)
- “Shift 2” is from 6:30pm to 6:30am (Start Time 18:30, Duration 12:00)



NOTE: A shift can span the midnight hour. However, the report calculates material usage on a standard 24 hour day and by shift name. Therefore, **for the shift that spans the midnight hour, a shift that starts before the midnight hour will be calculated in its entirety on the calendar day the shift started and not the day where it ended.** This can be resolved by assigning two shifts on either side of midnight, with different names to denote the part of the shift before midnight and the part after. This will force the reports to total the material usage correctly. The total material usage in the split shift can then be manually calculated by adding the two totals together.

Configuring the System Identifiers

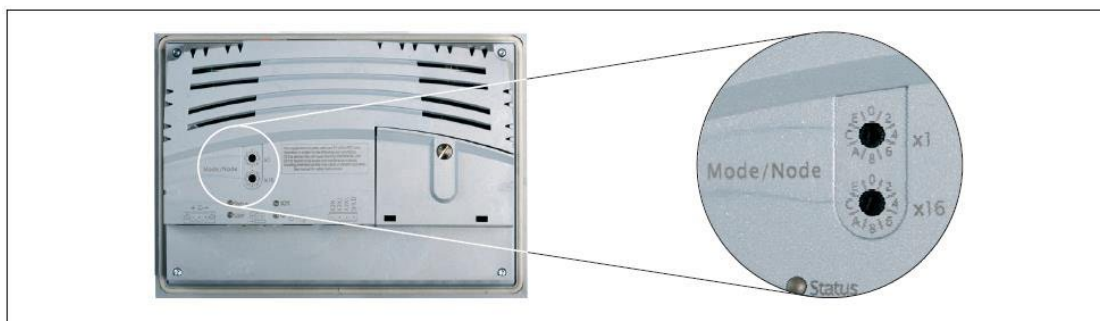
When the blender sends data to the database, it includes multiple identifiers for which blender is sending information - “SID,” “BlenderName,” and “ProdLine”. If you are connecting multiple blenders to the SQL database, this will identify the device or the production line the system resides on. This lets you generate reports for a specific system, or for an entire production line. All of these identifiers can be unique to each machine, or you can assign different machines the same SID or the same BlenderName to make it possible to pull all data from a predetermined group. The SQL information will still log just as well without any names registered, although if you are recording data from more than one blender it will be more helpful to do so.

Defining “BlenderName” and “ProdLine”

These values are defined in the “Panel” setup page, and directions for configuring them should be included in the manual for your specific control panel’s user guide. The “System” name is defined on the main “Setup” – “Panel” page, while the “Line” name is defined under “Advanced” – “PageUp”.

Defining “SID” - System ID

Each touch-panel device has on its reverse-side a physical switch setting that can define a “System ID”. This value can be used to uniquely define the system using a hardware setting. Each logged data entry in the SQL system includes this value (SID). If you wish, it is possible to set these switches. Queries can then be performed on the SID values in the SQL tables. This value is also shown on the main ‘Setup’ page and is labeled as ‘ID’.



Looking at the back of the touch panel device, on the left are 2 rotary position switches. These are used to set the System ID of the panel. A maximum of 256 values can be defined. The switches represent a 2 digit hexadecimal value. The upper switch represents values 0 – 16, while the lower switch represents the 16’s digit. **Do not set a value of 0 for the lower switch.**

The values set for each touch panel must be unique for each touch panel in the system. To that end, it may be easiest to go sequentially - for example values 0,1 for touch panel 1, 0,2 for touch panel 2, 1,0 for touch panel 16 and so on.

SQL Initiation

The SQL tables will initialize themselves automatically when you reboot your unit after following the configuration directions in this chapter. These things will happen automatically, but it might be useful to know what is happening.

Whenever the SQL interface first comes up after a reboot sequence, the SQL driver on the touch-panel will attempt to connect to the database. Once a connection is established, the driver requests a list of tables from the configured database. The driver scans through the list of tables and, if necessary, automatically creates the needed tables and establishes any foreign key relationships necessary.

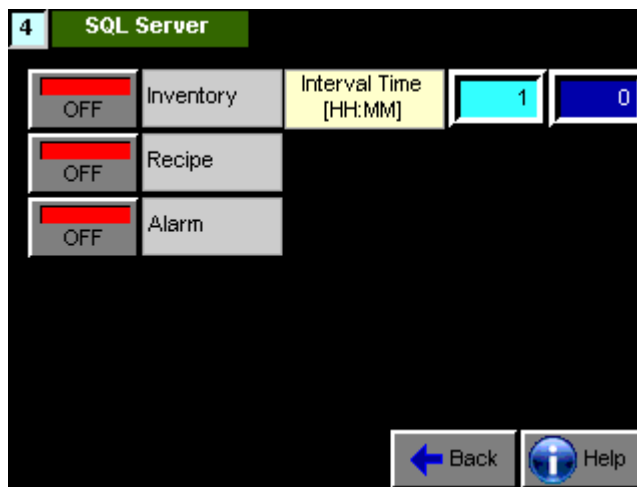
For the Materials table, the initial row of the table is automatically inserted, representing the default material. This material/resin will be referenced if resin tracking is not enabled. **Do not delete this Resin entry**, or else report generation and data logging will generate an error. In addition to the first resin entry, initially the system will add 250 unique resin entries. These can be edited to provide a better description of the resins.

Once all of the tables have been created and initial table entries have been made, the internal driver will then wait for a command to log data to the database.

Enabling Logging

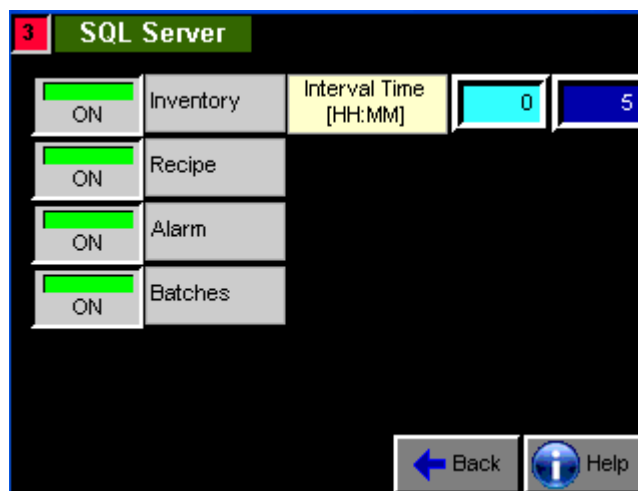
Now, with the connection to the database established and the tables located in the database, you can select the type of data to have recorded.

- 1 Go to your touch panel's home page.
- 2 Select More.
- 3 Select Report.
- 4 Select SQL Server.



TW/TWB - SQL Report

- 5 Each type of data logging can be independently enabled / disabled simply by pressing on them - the button will turn green and say ON when logging is enabled. When you return to the 'Home' page, the data logging selections will be saved, so that they will be restored on power up.



TBSB-2 - SQL Report

Note: For systems capable of inventory logging such as the TrueBlend Ext and the TrueBlend SB-2, the scheduled measurements can also be configured by pressing on the interval time. The minimum interval time is 5 minutes.

Operation

Using the Reports Server..... 4-2

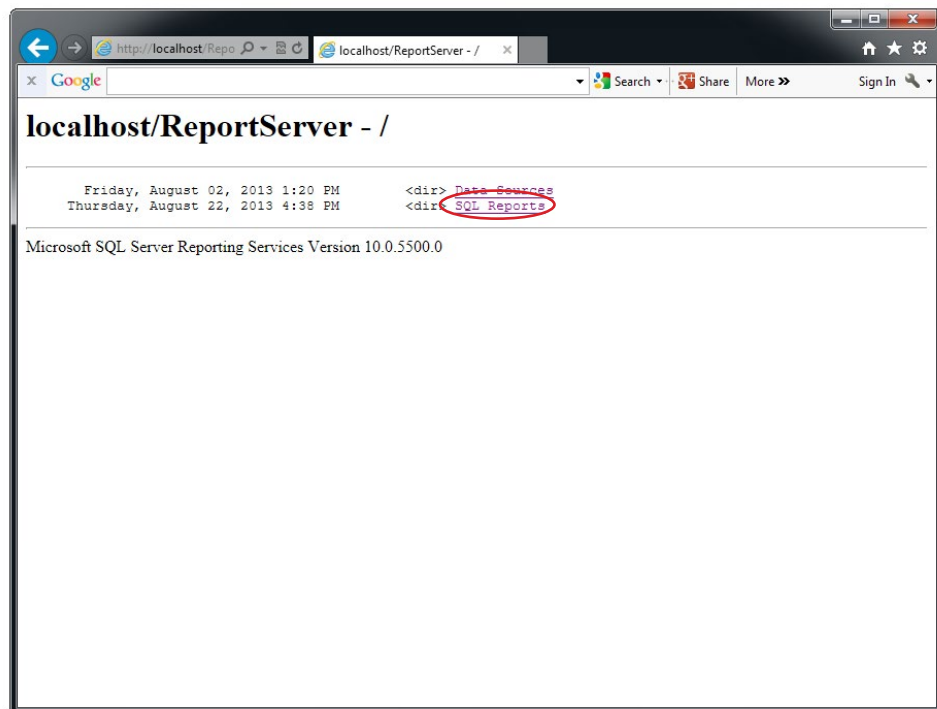
Sample Reports 4-5

Using the Reports Server

This section will highlight the process of generating browser-based reports that have been installed into Microsoft's Report Server. You can access these reports with a simple browser application like Microsoft's Internet Explorer.

Please note that, while this chapter will cover the basics of using our preprogrammed reports, it is possible to create other SQL reports. For more information on how Conair systems store SQL data, please see the next chapter, SQL Table Structure.

- 1 Launch Internet Explorer.**
- 2 In the address bar, enter the following address:**
`http://localhost/ReportServer`
- 3 Press the Enter key.** The browser will attach to the Report Server that is located on the current PC. It will first present the root page which includes the parent directory of all folders located in the report server. The folder 'SQL Reports' is where all the device reports are located.

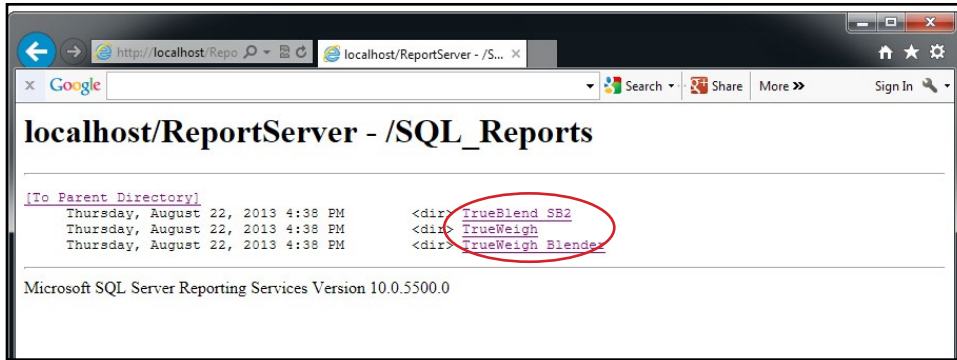


Browser Reports Root

- 4 Select "SQL Reports".** This opens a window that shows links to the devices that have reports installed.

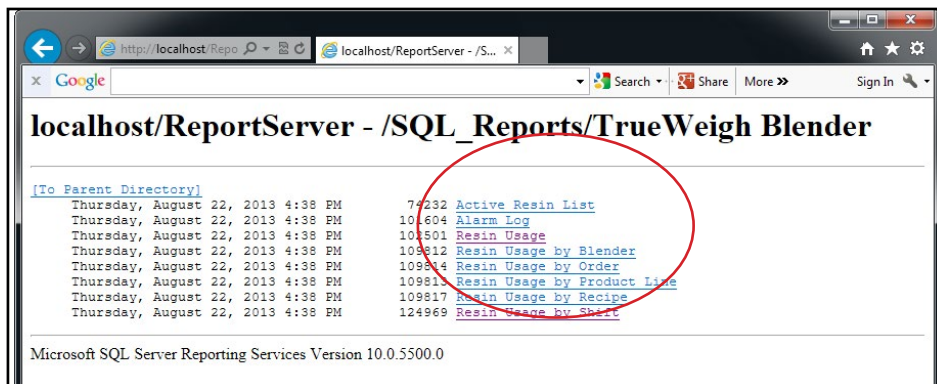
Using the Reports Server (continued)

- 5 Click on the device you want data on from the list of available folders. This will bring up a list of reports available for the current device.




Browser Reports Device Folders

- 6 Select the report you want to have run.

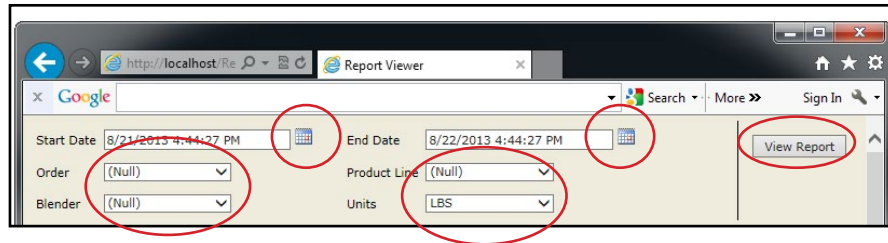


Browser Reports Device Reports

 **NOTE:** The different resin reports show totals for specific resins that are used. If resin tracking is not enabled yet, just select the standard Resin Usage reports. Usage reports total material processed through a component hopper.

Using the Reports Server (continued)

- 7** Fill out the report settings using the drop-down menus and the calendar display.
- 8** Click View Report. It may take a few minutes for the report to generate and be displayed.

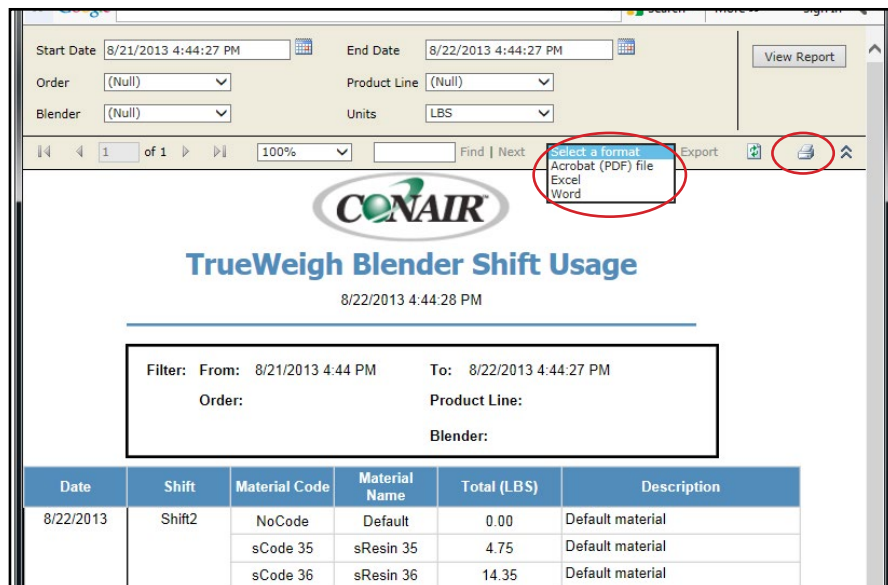


Resin Shift Report

- 9** Report output can be exported in a variety of formats:

TIP: This screenshot shows the output generated for the Resin Usage by Shift Report. This report, like all others, allows for various report filters. With filters, the user can alter the report output to show data that only meets the conditions they want.

- If you want to print the report directly, simply **press the printer icon**.
- If you want an Acrobat .pdf, Microsoft Excel .xls, or Microsoft Word .doc file, **select the appropriate output format in the drop-down menu at the top and press the “Export” button, which will highlight after you select one.**



Resin Shift Report

The TrueBlend SB-2, TrueWeigh, and TrueWeigh Continuous Blender products have the ability to track data by Shift, Resin, Device Name, and Product Line name. Please refer to the standard product manuals for configuration of these settings.

Sample Reports

The following reports were generated for the TrueWeigh Blender product, but similar reports can be made from data saved by the TrueWeigh and TrueBlend SB-2 Blender as well. The TrueBlend SB-2 Blender has an additional report, Batch Diagnostic Data, which is not available for the other products.

Each page of a report has three main areas: a header, a footer, and the body. The header contains the title of the report and the time it was executed. The footer contains a reference to the product tables that were used, the version of the report format, and the page numbers. For the body of the report, the first page includes a “Filter” box. This box outlines what filters were applied when the report was generated. Every report has a time span over which data was gathered. There are additional filters which can be selected for Shift, Order, Product Line, Blender, and Recipe. Not all filters will be available on all reports. With this information it is possible to fully determine when the report was run, and what data filtering was applied to generate the report.

When generating the report, it is possible to select the type of units that will represent the data, English or Metric. If English is selected, then units will be expressed in Lbs. If Metric units are selected, then units will be expressed in kg. The conversion will take place in the report generation process - data logged will not change.

Alarm Log



Alarm Log

Report Time: 9/30/2013 4:48:38 PM

Filter	From: 8/23/2013 4:48 PM	To: 8/29/2013 4:48:20 PM
Shift:	Product Line:	
Order:	Blender:	

Time Stamp	Shift	Product Line	Blender Name	Alarm Source	State	Severity	Alarm Msg
8/26/2013 8:53:04 AM	Shift1	Laboratory	TWB 2 Lab	Central Hopper	Active	Info	Hopper low on material
8/26/2013 8:53:04 AM	Shift1	Laboratory	TWB 2 Lab	Component 1	Active	Info	Hopper low on material
8/26/2013 8:53:04 AM	Shift1	Laboratory	TWB 2 Lab	Component 2	Active	Info	Hopper low on material
8/26/2013 8:53:04 AM	Shift1	Laboratory	TWB 2 Lab	Component 3	Active	Info	Hopper low on material
8/26/2013 8:53:05 AM	Shift1	Laboratory	TWB 2 Lab	Component 4	Active	Info	Hopper low on material
8/26/2013 8:53:05 AM	Shift1	Laboratory	TWB 2 Lab	Component 1	InActive	NA	Hopper low on material
8/26/2013 8:53:05 AM	Shift1	Laboratory	TWB 2 Lab	Component 2	InActive	NA	Hopper low on material
8/26/2013 8:53:05 AM	Shift1	Laboratory	TWB 2 Lab	Component 3	InActive	NA	Hopper low on material
8/26/2013 8:53:05 AM	Shift1	Laboratory	TWB 2 Lab	Component 4	InActive	NA	Hopper low on material
8/26/2013 8:53:19 AM	Shift1	Laboratory	TWB 2 Lab	System	Ack	NA	All alarms have been acknowledged
8/26/2013 8:53:40 AM	Shift1	Laboratory	TWB 2 Lab	Central Hopper	InActive	NA	Hopper low on material
8/26/2013 1:34:28 PM	Shift2	Showroom 2	TWB Laboratory	Central Hopper	Active	Info	Hopper low on material
8/26/2013 1:41:15 PM	Shift2	Showroom 2	TWB Laboratory	Central Hopper	InActive	NA	Hopper low on material
8/26/2013 1:41:31 PM	Shift2	Showroom 2	TWB Laboratory	Central Hopper	Active	Info	p □ □ ? Y □

This report outputs the list of all alarm actions that have occurred during the span of the Filter Time. There is an entry for the time of the activation of an alarm, the acknowledgment of the alarm, and when the alarm condition was cleared.

Sample Reports (continued)

Usage by Device (Blender/TrueWeigh)



Resin Usage by Blender

Report Time: 9/30/2013 4:14:31 PM

Filter	From: 8/23/2013 4:14 PM	To: 8/29/2013 4:14:19 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Blender	Material Code	Material Name	Total (LBS)	Description	
TWB 2 Lab	NoCode	Default	6.97	Default material	
	sCode 1	sResin 1	259.17	Default material	
	sCode 12	sResin 12	71.21	Default material	
	sCode 2	sResin 2	152.24	Default material	
	sCode 3	sResin 3	32.39	Default material	
	sCode 30	sResin 30	463.49	Default material	
	sCode 4	sResin 4	22.65	Default material	
	sCode 40	sResin 40	35.59	Default material	
	Total			1043.69	
	TWB Laboratory	NoCode	Default	64.78	Default material
sCode 20		sResin 20	137.26	Default material	
sCode 21		sResin 21	28.84	Default material	
sCode 23		sResin 23	28.89	Default material	
sCode 30		sResin 30	982.93	Default material	
sCode 31		sResin 31	220.43	Default material	
sCode 32		sResin 32	219.52	Default material	
Total			1682.66		
Total			2726.35		

This report breaks down the material usage by blender or TrueWeigh device. For each device, there will be a total calculation for each component hopper or extruder. The total material for that device will also be shown, in the sum of the individual component hoppers and extruders. Finally, there is a grand report total of all material processed during the filter time.

Sample Reports (continued)

Usage by Order



Resin Usage by Order

Report Time: 9/30/2013 4:13:57 PM

Filter	From: 8/23/2013 4:13 PM	To: 8/29/2013 4:13:44 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Order	Material Code	Material Name	Total (LBS)	Description
	NoCode	Default	71.75	Default material
	Total		71.75	
Goodies	sCode 1	sResin 1	259.17	Default material
	sCode 2	sResin 2	9.67	Default material
	sCode 3	sResin 3	32.39	Default material
	sCode 4	sResin 4	22.65	Default material
	Total		323.87	
Order 123	sCode 12	sResin 12	71.21	Default material
	sCode 2	sResin 2	142.57	Default material
	sCode 30	sResin 30	463.49	Default material
	sCode 40	sResin 40	35.59	Default material
	Total		712.85	
TWB Job 1	sCode 20	sResin 20	137.26	Default material
	sCode 21	sResin 21	28.84	Default material
	sCode 23	sResin 23	28.89	Default material
	Total		194.99	
TWB Job 2	sCode 30	sResin 30	982.93	Default material
	sCode 31	sResin 31	220.43	Default material
	sCode 32	sResin 32	219.52	Default material
	Total		1422.88	
Total			2726.35	

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If the remote device has job/order names implemented, then this report breaks down the material usage by order name. Therefore, for any given order, it is possible to see how much material was processed. In addition, there are sub-totals included for each blender or TrueWeigh system. For each device, there will be a total calculation for each component hopper or extruder. Then, the total material for that device will also be shown, which is the sum of the individual component hoppers and extruders. Finally, there is a grand report total of all material processed during the filter time.

If order names are not implemented on the remote system, then there will be no reference to an order name in the SQL data and all data will be totaled under a blank order name.

Sample Reports (continued)

Usage by Product Line



Resin Usage by Product Line

Report Time: 9/30/2013 4:09:46 PM

Filter	From: 8/23/2013 4:09 PM	To: 8/29/2013 4:09:31 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Product Line	Material Code	Material Name	Total (LBS)	Description
Laboratory	NoCode	Default	6.97	Default material
	sCode 1	sResin 1	259.17	Default material
	sCode 12	sResin 12	71.21	Default material
	sCode 2	sResin 2	152.24	Default material
	sCode 3	sResin 3	32.39	Default material
	sCode 30	sResin 30	463.49	Default material
	sCode 4	sResin 4	22.65	Default material
	sCode 40	sResin 40	35.59	Default material
	Total			1043.69
Showroom 2	NoCode	Default	64.78	Default material
	sCode 20	sResin 20	137.26	Default material
	sCode 21	sResin 21	28.84	Default material
	sCode 23	sResin 23	28.89	Default material
	sCode 30	sResin 30	982.93	Default material
	sCode 31	sResin 31	220.43	Default material
	sCode 32	sResin 32	219.52	Default material
	Total			1682.66
Total			2726.35	

If the remote device has a setting to configure a Product Line name, then this report breaks down the material usage by Product Line. Therefore, for a co-extrusion type of system where there are multiple blenders, this report will provide a total sum for all blenders that have the same Product Line name defined. In addition, there are sub-totals included for each blender system. For each device, there will be a total calculation for each component hopper. Then, the total material for that device will also be shown; which is the sum of the individual component hoppers. Finally there is a grand report total of all material processed during the filter time.

If Product Line names are not implemented on the remote system, then there will be no reference to a Product Line name in the SQL data and all data will be totaled under a single total.

Sample Reports (continued)

Usage by Recipe



Resin Usage by Recipe

Report Time: 9/30/2013 4:09:05 PM

Filter	From: 8/23/2013 4:08 PM	To: 8/29/2013 4:08:48 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Recipe Name	Material Code	Material Name	Total (LBS)	Description
	NoCode	Default	71.75	Default material
	Total		71.75	
bookend	sCode 1	sResin 1	259.17	Default material
	sCode 2	sResin 2	9.67	Default material
	sCode 3	sResin 3	32.39	Default material
	sCode 4	sResin 4	22.65	Default material
	Total		323.87	
Recipe 1	sCode 20	sResin 20	1.42	Default material
	sCode 21	sResin 21	0.35	Default material
	sCode 23	sResin 23	0.08	Default material
	Total		1.84	
TWB 1 Showroom	sCode 20	sResin 20	135.84	Default material
	sCode 21	sResin 21	28.50	Default material
	sCode 23	sResin 23	28.82	Default material
	Total		193.15	
TWB 2 Showroom	sCode 30	sResin 30	982.93	Default material
	sCode 31	sResin 31	220.43	Default material
	sCode 32	sResin 32	219.52	Default material
	Total		1422.88	
USS ENT a	sCode 12	sResin 12	71.21	Default material
	sCode 2	sResin 2	142.57	Default material
	sCode 30	sResin 30	463.49	Default material

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If the remote device uses stored recipes and maintains a unique recipe database, then this report breaks down the material usage by recipe name. Therefore, for any given recipe, it is possible to see how much material was processed. In addition, there are sub-totals included for each blender or TrueWeigh system. For each device there will be a total calculation for each component hopper or extruder. Then the total material for that device will also be shown; which is the sum of the individual component hoppers and extruders. Finally, there is a grand report total of all material processed during the filter time.

If stored recipes are not implemented on the remote system, then there will be no reference to a recipe name in the SQL data and all data will be totaled under a blank recipe name.

Sample Reports (continued)

Usage by Shift

Resin Usage by Shift

Report Time: 9/30/2013 4:08:25 PM

Filter	From: 8/23/2013 4:08 PM	To: 8/29/2013 4:08:04 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Date	Shift	Material Code	Material Name	Total (LBS)	Description
8/26/2013	Shift1	sCode 1	sResin 1	22.12	Default material
		sCode 2	sResin 2	0.83	Default material
		sCode 3	sResin 3	2.76	Default material
		sCode 4	sResin 4	1.93	Default material
		Total			27.64
	Shift2	sCode 1	sResin 1	78.33	Default material
		sCode 2	sResin 2	2.92	Default material
		sCode 20	sResin 20	82.36	Default material
		sCode 21	sResin 21	17.43	Default material
		sCode 23	sResin 23	17.40	Default material
		sCode 3	sResin 3	9.79	Default material
		sCode 4	sResin 4	6.84	Default material
		Total			215.07
	Shift3	sCode 1	sResin 1	158.72	Default material
		sCode 2	sResin 2	5.92	Default material
		sCode 20	sResin 20	54.89	Default material
		sCode 21	sResin 21	11.42	Default material
		sCode 23	sResin 23	11.50	Default material
		sCode 3	sResin 3	19.84	Default material
		sCode 4	sResin 4	13.87	Default material
Total			276.15		
Total				518.86	
8/27/2013	Shift1	NoCode	Default	6.97	Default material

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If the remote device maintains shift times/names, then this report will total the material usage by day and shift. Therefore for any given day it is possible to see how much material was processed in each shift. In addition there are sub-totals included for each blender or TrueWeigh system. For each device there will be a total calculation for each component hopper or extruder. Then the total material for that device will also be shown; which is the sum of the individual component hoppers and extruders. Finally there is a grand report total of all material processed during the filter time.

If shift names are not implemented on the remote system, then there will be no reference to a shift name in the SQL data and all data will be totaled under a single shift.

This is a means of getting daily totals of material usage, whether by shift or a single lump total.

Daily calculations are based on a 24 hour clock. If a shift does span the midnight hour, then the report will provide separate values for the part of the shift before midnight, and the one after midnight, and calculate each part with its respective day.

One possible solution to this problem is to assign different names to the morning and evening portions of the split shift. This will total the material usage correctly, but the totals for the split shift will have to be manually calculated.

Sample Reports (continued)

Resin Tracking



Resin Usage

Report Time: 9/30/2013 4:48:02 PM

Filter	From: 8/23/2013 4:47 PM	To: 8/29/2013 4:47:49 PM
Shift:	Product Line:	Recipe:
Order:	Blender:	

Material Code	Material Name	Total (LBS)	Description
NoCode	Default	71.75	Default material
sCode 1	sResin 1	259.17	Default material
sCode 12	sResin 12	71.21	Default material
sCode 2	sResin 2	152.24	Default material
sCode 20	sResin 20	137.26	Default material
sCode 21	sResin 21	28.84	Default material
sCode 23	sResin 23	28.89	Default material
sCode 3	sResin 3	32.39	Default material
sCode 30	sResin 30	1446.42	Default material
sCode 31	sResin 31	220.43	Default material
sCode 32	sResin 32	219.52	Default material
sCode 4	sResin 4	22.65	Default material
sCode 40	sResin 40	35.59	Default material
Total		2726.35	

Some remote devices can maintain a reference to a unique Material Code or resin code. If this feature is implemented, then it is possible to do Resin Usage material reporting. Instead of providing usage totals based on component hopper or extruder, now totals will be provided based on a resin name or material code. For example if the same resin was in multiple component hoppers of a blender, instead of providing a total for each component hopper, a single total will be provided that is the sum of the common resin.

SQL Tables

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SQL Basics

Before you read this chapter, remember that **SQL Reporting will still work straight out of the box** following the procedure outlined in the previous chapter. This chapter provides explanations for the fields in the reports, and some tips if you want to change the way information is recorded.

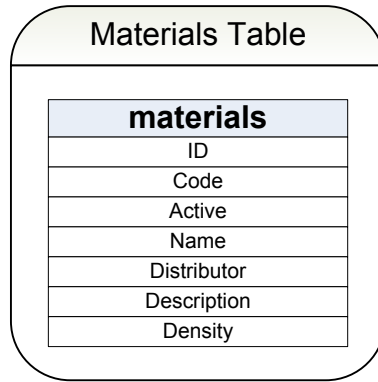
At this point, the system should be properly configured and communicating with the SQL Server. The necessary tables should be created and ready for use. The remaining step is to enable the data logging to the database. This chapter will review the data that can be logged to the SQL Server.

The SQL data kept by a given Conair device is a little different depending on which machine you have. Because of this, you should skip to the section of this chapter discussing your machine to get a quick primer on how your data will look when you download it from the server.

If you want to edit these SQL tables, you should refer to your specific SQL Server software's documentation.

TrueWeigh Continuous Blender SQL

Materials Table



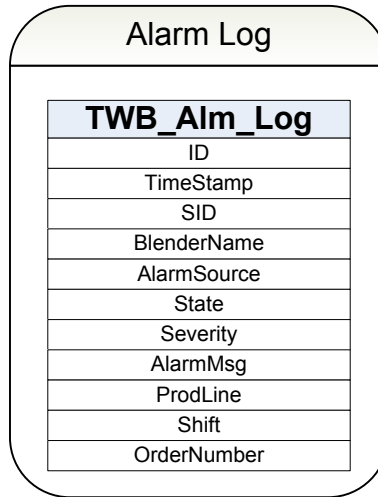
The SQL Database contains a table for maintaining a list of resins. Entries in the table are linked to the various other tables in the system so that resin usage reporting can be performed. This table is shared by all products for referencing materials. It will be created by the remote devices if it is not already present. If you do not wish to be able to search by materials used, or if your processes only use a single material, then you will not need to change this table

If you do wish to define the materials you use, make sure you **do not delete the first entry from the table**, or report generation and data logging will generate an error. The table will have 250 other resin entries. **The other 250 entries can be edited** to provide a better description of the different resins you may use.

SQL Table - Materials		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the material tables.
Code	varchar(11) NOT NULL	This is a code that identifies the resin - which you define while configuring your TrueWeigh.
Active	bit NOT NULL	This flag indicates if the resin has been deleted. The record is maintained for the purpose of reporting.
Name	varchar(11) NOT NULL	This string represents the name of the resin.
Distributor	varchar(11)	This optional text represents the distributor of the resin.
Description	varchar(30)	This optional text represents a description of the resin.
Density	real	This optional value represents the solid density of the resin.

TrueWeigh Continuous Blender SQL

Alarm Logging



The TWB_Alm_Log table contains a list of all alarms that have occurred. Entries are made whenever an alarm activates, clears, and is acknowledged by the operator. Report filtering can be accomplished on a variety of data, including Time, Blender Name, Product Line, Shift, and Order number.

SQL Table - TWB_Alm_Log		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the alarm log entry.
TimeStamp	datetime NOT NULL	The time and date the alarm was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
Shift	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
AlarmSource	varchar(16) NOT NULL	This is the device or component on the blender that caused the alarm to occur.
State	varchar(10) NOT NULL	This is the state of the alarm at the time of the entry.
Severity	varchar(5) NOT NULL	The severity of the alarm at the time the alarm occurred.
AlarmMsg	varchar(60) NOT NULL	The alarm message defining the alarm.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.

TrueWeigh Continuous Blender SQL

Alarm Logging (continued)

TWB - Alarm States	
State	Value
Active	The alarm has occurred and is currently active
InActive	The alarm has cleared and is no longer active
Ack	The alarms have been acknowledged by an operator at the touch-panel.

The alarm severity for each alarm is represented as a text value. The relationship between the column value and the alarm severity is shown the table below. For further information on alarm severity refer to the product documentation for the blender.

TWB - Alarm Severity	
Severity	Value
NA	No associated severity for this entry.
Info	Information alarm
Gen	General alarm
Shut	Shutdown alarm

TrueWeigh Continuous Blender SQL

Inventory Logging

With inventory logging, periodic material usage data is recorded in the database. With resin tracking enabled, material usage based on a unique resin can be determined. Resin tracking is accomplished by mapping a component hopper's Resin Number to a unique resin stored in the Materials table. Without resin tracking, all usage data is logged to a single resin (Resin Number = 0). Therefore all reports will show a grand total of Resin as though a single resin was used. Material usage reports for a component hopper are still possible.

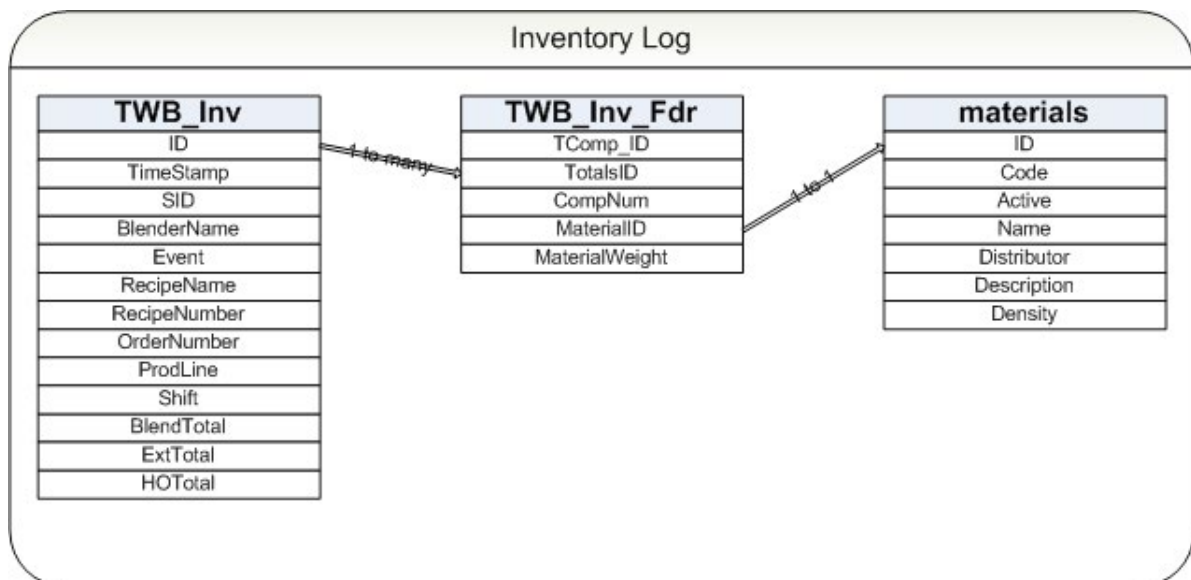
An entry into the SQL tables is made whenever:

- The blending process is placed into Automatic.
- The blending process is Stopped.
- Periodically based on a user configurable time slice.
- Whenever the inventory totals are cleared. The entry is made before the totals are cleared to ensure accurate reporting.

The material usage values entered into the table reflect the amount of material processed since the last entry was made into the table. Therefore when generating reports it is a simple process to sum the total values to generate a grand total.

The database inventory log is comprised of 3 related tables. The primary table, TWB_Inv, maintains information of when the log entry occurred and the state of the system at the time of the entry. The second table, TWB_Inv_Fdr, contains the amount of material processed at the component hopper and identifies what material is in the component at the time of data entry. The third table, Materials, represents the material resin itself. For information regarding this table, refer to the earlier section on Materials Logging.

Material usage and length through-put of the system is reported in metric values (kgs, m) regardless of the units settings of the touch-panels. This is forced to insure consistency across all devices reporting to SQL. The resolution of the data is to 4 decimal places.



TrueWeigh Continuous Blender SQL

Inventory Logging (continued)

SQL Table - TWB_Inv		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the system inventory log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
Shift	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.
BlendTotal	real NOT NULL	This is the total amount of material processed by the blender at the time of entry.
ExtTotal	real	This is the total amount of material that was processed by the extruder at the time of entry. (kgs)
HOTotal	real	This is the amount of material that was processed by the hauloff device at the time of the log entry. (m)

TrueWeigh Continuous Blender SQL

Inventory Logging (continued)

TWB - Inventory Log Events

Event	Value
Power Up	Entry occurred when power first applied
Blend Stop	The blender has been stopped
Blend Auto	The blender has been started
Ext Auto	The extruder has been started in automatic
Ext Stop	The extruder has been stopped
Ext Man	The extruder has been started in manual
Cleared	The inventory totals have been cleared
Schedule	Scheduled log entry has occurred

SQL Table - TWB_Inv_Fdr

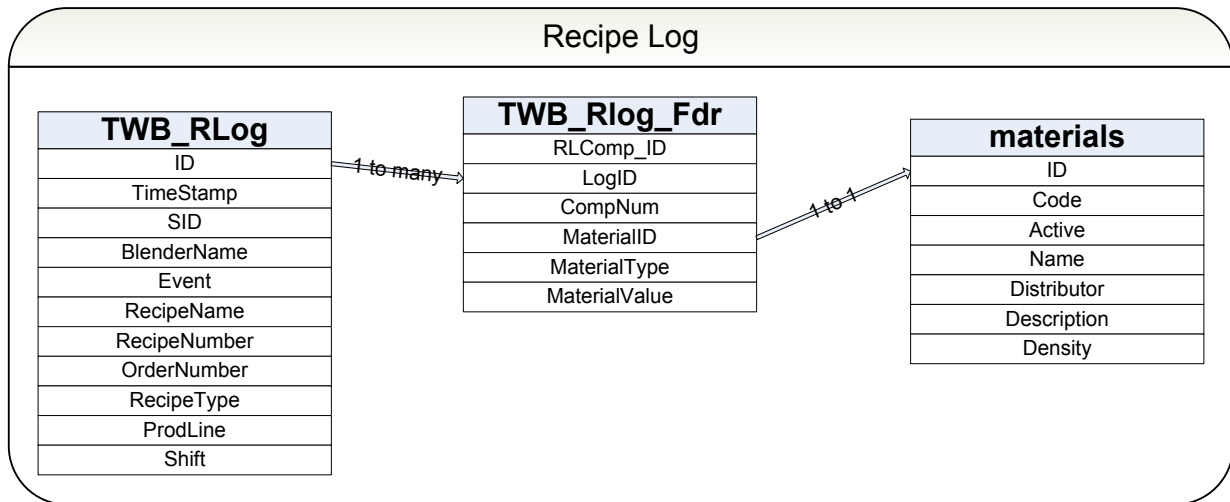
Column Heading	Data Type	Description
TComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
TotalsID	int NOT NULL	This is the foreign key relationship to the TBSB-2_INV table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialWeight	real NOT NULL	This is the amount of material that was processed by this component hopper at the time of the log entry. (kgs)

TrueWeigh Continuous Blender SQL

Recipe Logging

When enabled, recipe logging will make an entry in the recipe log whenever the blender starts or stops processing a new recipe. The recipe that is logged is the current Set recipe. This information can then be used to track any changes made to the recipe during production. With resin tracking enabled, it is possible to determine which resins were selected as part of the recipe. Note that if the recipe that was entered at the touch-panel was invalid, the blender could not start processing this recipe, and an entry in the log will not be made.

The database recipe log is comprised of 3 related tables. The primary table, TWB_RLog, maintains information of when the log entry occurred and the state of the system at the time of the entry. The secondary table, TBSB-2_RLog_Fdr, contains information defining the material present in the component hopper at the time of the log entry. The third table, Materials, represents the material resin itself, discussed in the Materials Table heading earlier in this chapter.



TrueWeigh Continuous Blender SQL

Recipe Logging (continued)

SQL Table – TWB_RLog		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
Shift	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeType	varchar(10) NOT NULL	This field indicates the type of recipe this entry represents.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.

TWB - Recipe Log Events	
RecipeType	Value
SB-2	The recipe is a blender only recipe
TBE	The recipe contains extrusion settings

TrueWeigh Continuous Blender SQL

Recipe Logging (continued)

SQL Table - TWB_RLog_Fdr		
Column Heading	Data Type	Description
RLComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
LogID	int NOT NULL	This is the foreign key relationship to the TBSB-2_RLog table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialType	Int NOT NULL	This is the type of material that is in the hopper at the time of the log entry.
MaterialValue	real NOT NULL	This is the percentage of material for this component in the recipe at the time of the log entry.
FeedOrder	int	This is the sequence in the feed order for the component at the time of the log entry.

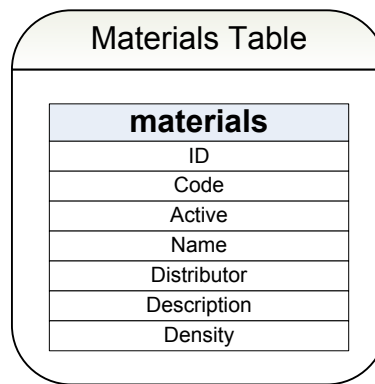
TWB - Recipe Material Types	
MaterialType	Value
1	Regrind
2	Natural

TrueBlend EXT/SB-2 SQL

The following tables are used for the TrueBlend Ext/SB-2 product. The TrueBlend Batch Blender system utilizes several tables for the recording of inventory, recipe, batch, and alarm data. This section will highlight the tables that are created and the data stored in each. For clarity, references to the SB-2 product will refer the Ext product as well.

At this point, the system should be properly configured and communicating with the SQL Server. The necessary tables for this type of device should be created and ready for use. The remaining step is to enable the data logging to the database. The following section will review the data that can be logged to the SQL Server.

Materials Table



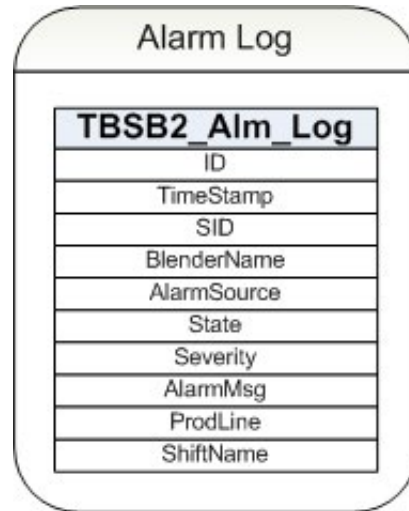
The SQL Database contains a table for maintaining a list of resins. Entries in the table are linked to the various other tables in the system so that resin usage reporting can be performed. This table is shared by all products for referencing of materials. It will be created by the remote devices if it is not already present.

If you only use browser-based reporting, then the references to the Resins used will show the default data placed into the Materials table when it was first created. In order to show resin information that is not the default, this table must be manually edited.

SQL Table - materials		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the material tables.
Code	varchar(11) NOT NULL	A customer defined code that identifies the resin.
Active	bit NOT NULL	A flag that indicates if this resin has been deleted. The record is maintained for the purpose of reporting.
Name	varchar(11) NOT NULL	String representing the name of the resin.
Distributor	varchar(11)	Optional text representing the distributor of the resin.
Description	Varchar(30)	Optional text representing a description of the resin.
Density	real	An optional value representing the solid density of the resin.

TrueBlend EXT/SB-2 SQL

Alarm Logging



The table TBSB-2_Alm_Log contains a list of all alarms that have occurred. Entries are made whenever an alarm activates, clears, and is acknowledged by the operator.

SQL Table - TBSB-2_Alm_Log		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the alarm log entry.
TimeStamp	datetime NOT NULL	The time and date the alarm was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
AlarmSource	varchar(16) NOT NULL	This is the device or component on the blender that caused the alarm to occur.
State	varchar(10) NOT NULL	This is the state of the alarm at the time of the entry.
Severity	varchar(5) NOT NULL	The severity of the alarm at the time the alarm occurred.
AlarmMsg	varchar(60) NOT NULL	The alarm message defining the alarm.

TrueBlend EXT/SB-2 SQL

Alarm Logging (continued)

TBSB-2 - Alarm States	
State	Value
Active	The alarm has occurred and is currently active
InActive	The alarm has cleared and is no longer active
Ack	The alarms have been acknowledged by an operator at the touch-panel.

The alarm severity for each alarm is represented as a text value. The relationship between the column value and the alarm severity is shown in the table below. For further information on alarm severity, refer to the product documentation for the blender.

TBSB-2 - Alarm Severity	
Severity	Value
NA	No associated severity for this entry.
Info	Information alarm
Gen	General alarm
Shut	Shutdown alarm

TrueBlend EXT/SB-2 SQL

Inventory Logging

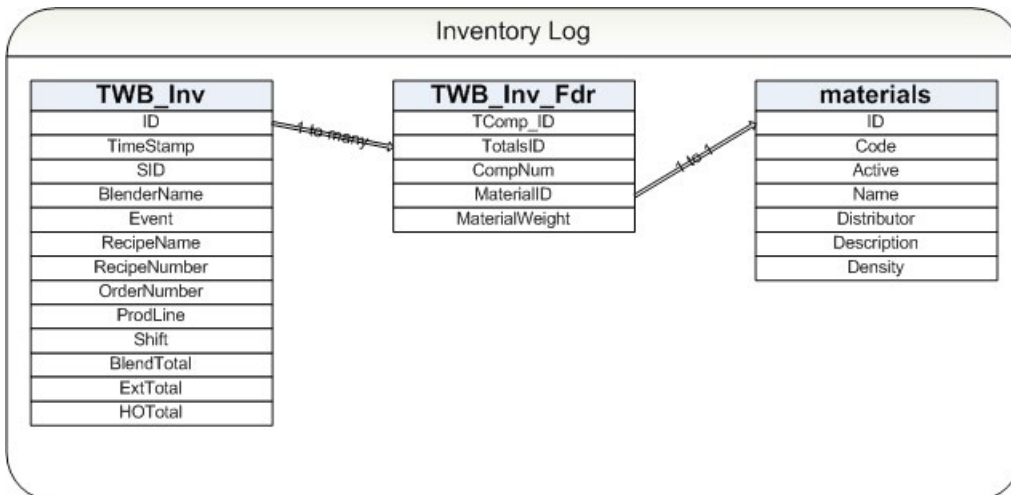
With inventory logging, periodic material usage data is recorded in the database. With resin tracking enabled, material usage down to the unique resin can be determined. Whenever the blender is turned on, or the blending process started or stopped, an entry in the logs is created. Data is also logged periodically while the blender is turned on, regardless of its state. The frequency of the interval is defined by settings on the touch-panel.

Note that entries in the log reflect the totals shown at the touch-panel. The values are not cumulative from the last log entry but rather the last time they were cleared at the touch-panel. For example, in order to determine the material used between Time A and Time B, the material used at Time A must be subtracted from the material used at Time B. When the inventory totals have been cleared at the touch-panel, a log entry is made before the totals are cleared. This is to insure that all material usage is reported by the blender, when the totals are cleared.

The database inventory log is comprised of 3 related tables. The main table, TBSB-2_Inv, maintains information of when the log entry occurred and the state of the system at the time of the entry. The secondary table, TBSB-2_Inv_Fdr, contains the amount of material processed at the component hopper and identifies what material is in the component at the time of data entry. The third table, Materials, represents the material of the resin itself. For information regarding this table refer to the earlier section on the Materials Table.

Note with Batch Logging, every batch processed is recorded into the database. SQL Reports uses these tables when generating inventory usage. The Inventory logging tables are available on the TrueBlend SB-2 in order to maintain consistency with similar products. Note when performing Material usage queries at the recipe/resin level, it is not sufficient to just look at the system material usage at the Start time and the End time. During the period, the recipe and hence resins may have changed.

Material usage and length through-put of the system is reported in metric values (kgs, m) regardless of the units settings of the touch-panels. This is forced to insure consistency across all devices reporting to SQL.



TrueBlend EXT/SB-2 SQL

Inventory Logging (continued)

SQL Table - TBSB-2_Inv		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the system inventory log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	Int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.
BatchCount	real NOT NULL	This value represents the number of the last batch processed at the time of the log entry.
BlendTotal	real NOT NULL	This is the total amount of material processed by the blender at the time of entry.
ExtTotal	real	This is the total amount of material that was processed by the extruder at the time of entry.
HOTotal	real	This is the amount of material that was processed by the hauloff device at the time of the log entry.

TrueBlend EXT/SB-2 SQL

Inventory Logging (continued)

TBSB-2 - Inventory Log Events	
Event	Value
Power Up	Entry occurred when power first applied
Blend Stop	The blender has been stopped
Blend Auto	The blender has been started
Ext Auto	The extruder has been started in automatic
Ext Stop	The extruder has been stopped
Ext Man	The extruder has been started in manual
Cleared	The inventory totals have been cleared
Schedule	Scheduled log entry has occurred

SQL Table - TBSB-2_Inv_Fdr		
Column Heading	Data Type	Description
TComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
TotalsID	int NOT NULL	This is the foreign key relationship to the TBSB-2_INV table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialWeight	real NOT NULL	This is the amount of material that was processed by this component hopper at the time of the log entry.

TrueBlend EXT/SB-2 SQL

Recipe Logging

When enabled, recipe logging will make an entry in the recipe log whenever the blender starts processing a new recipe. The current set recipe is logged whenever the blender Start button or extruder Automatic button is pressed. Note that if the recipe that was entered was invalid, the blender could not start processing this recipe, and an entry in the log will not be made. This information can then be used to track any changes made to the recipe for production. With resin tracking enabled, it is possible to determine which resins were processed.

The database recipe log is comprised of 3 related tables. The primary table, TBSB-2_RLog, maintains information of when the log entry occurred and the state of the system at the time of the entry. The secondary table, TBSB-2_RLog_Fdr, contains information defining the material present in the component hopper at the time of the log entry. The third table, Materials, represents the material of the resin itself. For information regarding this table, refer to the Materials Table heading earlier in this section.

TrueBlend EXT/SB-2 SQL

Recipe Logging (continued)

SQL Table – TBSB-2_RLog		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeType	varhcar(10) NOT NULL	This field indicates the type of recipe this entry represents.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	Int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.

TrueBlend EXT/SB-2 SQL

Recipe Logging (continued)

TBSB-2 - Recipe Type	
RecipeType	Value
SB-2	The recipe is a blender only recipe
TBE	The recipe contains extrusion settings

TBSB-2 - Recipe Log Events	
Event	Value
2	The blender has been started
3	The extruder has been started in automatic

SQL Table - TBSB-2_RLog_Fdr		
Column Heading	Data Type	Description
RLComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
LogID	int NOT NULL	This is the foreign key relationship to the TBSB-2_RLog table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialType	int NOT NULL	This is the type of material that is in the hopper at the time of the log entry.
MaterialValue	real NOT NULL	This is the percentage of material for this component in the recipe at the time of the log entry.
FeedOrder	int	This is the sequence in the feed order for the component at the time of the log entry.

TrueBlend EXT/SB-2 SQL

Recipe Logging (continued)

TBSB-2 - Recipe Material Types	
MaterialType	Value
1	Regrind
2	Natural
3	Additive Batch
4	Additive Natural
5	Precision

SQL Table - TBSB-2_RLog_TW		
Column Heading	Data Type	Description
RLTW_ID	int Primary Key NOT NULL	This is the unique primary key for the extruder log entry.
LogID	int NOT NULL	This is the foreign key relationship to the TBSB-2_RLog table.
FirstParam	real NOT NULL	This is the first parameter used for extrusion recipe entry.
SecondParam	real NOT NULL	This is the second parameter used for extrusion recipe entry.
ThirdParam	real NOT NULL	This is the third parameter used for extrusion recipe entry.
StretchFactor	real	This is the stretch factor value for the HO.
HOGearNum	int	This is gear number used by the HO device.
HODroolSpd	real	This is the drool speed used for the HO device.
HOStartSpd	real	This is the manual start speed used for the HO device.
ExtScrap	real	This is the percentage of scrap used by the extruder.
ExtMatID	int	This is the material id used for the extruder.
ExtParts	real	This is the parts value for the extruder. This is typically 100% for a mono-extrusion system.
ExtStartSpd	real	This is the manual start speed for the extruder.

TrueBlend EXT/SB-2 SQL

Recipe Logging (continued)

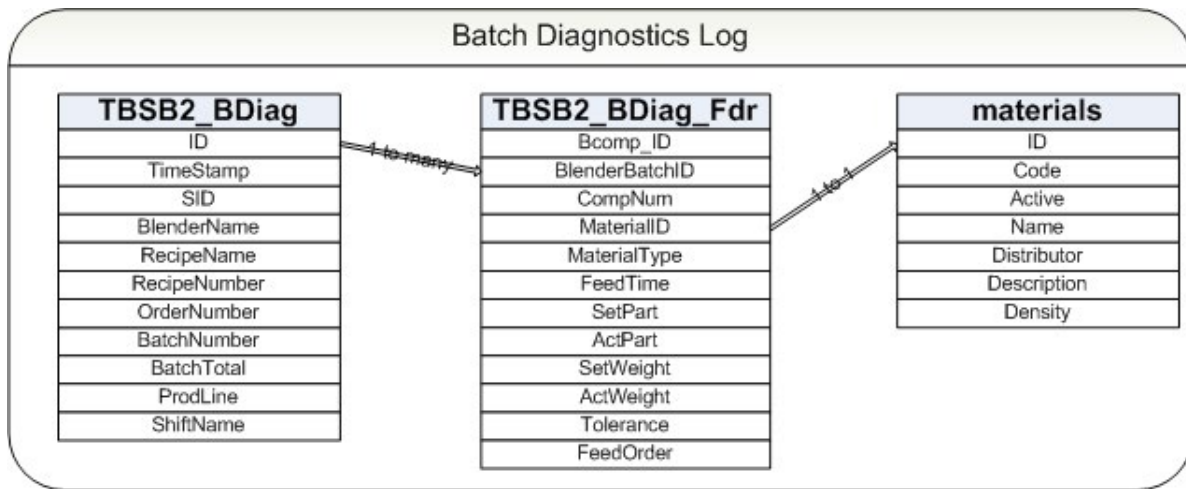
SQL Table - TBSB-2_RLog_TW		
Column Heading	Data Type	Description
Hop0Parts	real	This is the parts value for the main extruder relationship used for comparison with additives residing on this layer.
Hop0StartSpd	real	This is the start speed for the main extruder.
Hop0MatID	int	This is the material id for the main extruder.
Hop1Parts	real	This is parts value for the first additive residing on the extruder.
Hop1StartSpd	real	This is the start speed for the first additive.
Hop1MatID	int	This is the material id for the first additive.
Hop2Parts	real	This is the parts value for the secondary additive residing on the extruder.
Hop2StartSpd	real	This is the start speed for the secondary additive.
Hop2MatID	int	This is the material ID for the secondary additive.

TrueBlend EXT/SB-2 SQL

Batch Logging/Diagnostics

The TrueBlend Ext/SB-2 system processes material on a batch to batch basis. The results of each batch processed can be logged to the database. This data can be used to review the quality of the blending process. It is also possible to calculate material usage for the blender, for each component, and down to individual resins.

The database batch log is comprised of 3 related tables. The primary table, TBSB-2_BDiag, maintains information of when the log entry occurred and of the system at the time of entry. The secondary table, TBSB-2_BDiag_Fdr, contains information defining the amount of material fed for the component hopper at the time of the log entry. The third table, Materials, represents the material resin itself. For information regarding this table refer to the Materials Table heading earlier in this section.



SQL Table – TBSB-2_BDiag		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.
BatchNumber	int NOT NULL	The number of the current batch.
BatchTotal	real NOT NULL	The total material process by the batch in grams.

(Continued)

TrueBlend EXT/SB-2 SQL

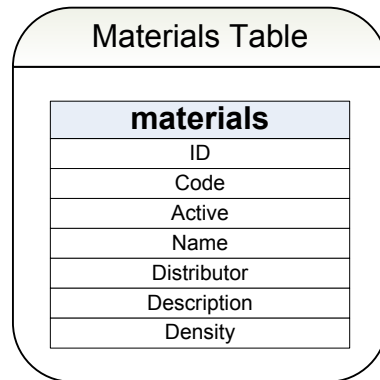
Batch Logging/Diagnostics (continued)

SQL Table - TBSB-2_RLog_Fdr		
Column Heading	Data Type	Description
BComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
BlenderBatchID	int NOT NULL	This is the foreign key relationship to the TBSB-2_INV table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialType	Int NOT NULL	This is the type of material that is in the hopper at the time of the log entry.
FeedTime	real NOT NULL	This is the time in milliseconds that material was fed.
SetPart	real NOT NULL	This is the set percentage amount of material to be fed defined by the recipe.
ActPart	real NOT NULL	This is the actual percent amount of material fed based on the actual weighed material amount.
SetWeight	real NOT NULL	This is the set amount of material in grams that is requested should be fed.
ActWeight	real NOT NULL	This is the actual amount of material in grams that was fed for the component.
Tolerance	real NOT NULL	This is the defined tolerance for the component the material feed algorithm will use.

TBSB-2 - Recipe Material Types	
MaterialType	Value
1	Regrind
2	Natural
3	Additive Batch
4	Additive Natural
5	Precision

TrueWeigh Blender SQL

Materials Table



The following tables are used for the TrueWeigh product. The TrueWeigh Extrusion Control system utilizes several tables for the recording of inventory, recipe, and alarm data. This section will highlight the tables that are created and the data stored in each.

The SQL Database contains a table for maintaining a list of resins. Entries in the table are linked to the various other tables in the system so that resin usage reporting can be performed. This table is shared by all products for referencing materials. It will be created by the remote devices if it is not already present.

If you only use browser-based reporting, then the references to the resins used will show the default data placed into the Materials table when it was first created. In order to show resin information that is not the default, this table must be manually edited.

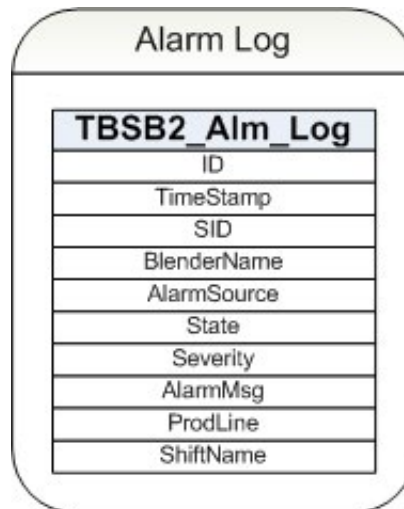
SQL Table - Materials		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the material tables.
Code	varchar(11) NOT NULL	A customer defined code that identifies the resin.
Active	bit NOT NULL	A flag that indicates if this resin has been deleted. The record is maintained for the purpose of reporting.
Name	varchar(11) NOT NULL	String representing the name of the resin.
Distributor	varchar(11)	Optional text representing the distributor of the resin.
Description	Varchar(30)	Optional text representing a description of the resin.
Density	real	An optional value representing the solid density of the resin.

TrueWeigh Blender SQL

Alarm Logging

The TBSB-2_Alm_Log table contains a list of all alarms that have occurred. Entries are made whenever an alarm activates, clears, and is acknowledged by the operator.

SQL Table - TW_Alm_Log		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the alarm log entry.
TimeStamp	datetime NOT NULL	The time and date the alarm was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
AlarmSource	varchar(16) NOT NULL	This is the device or component on the blender that caused the alarm to occur.
State	varchar(10) NOT NULL	This is the state of the alarm at the time of the entry.
Severity	varchar(5) NOT NULL	The severity of the alarm at the time the alarm occurred.
AlarmMsg	varchar(60) NOT NULL	The alarm message defining the alarm.



TrueWeigh Blender SQL

Alarm Logging (continued)

TW - Alarm States	
State	Value
Active	The alarm has occurred and is currently active
InActive	The alarm has cleared and is no longer active
Ack	The alarms have been acknowledged by an operator at the touch-panel.

The alarm severity for each alarm is represented as a text value. The relationship between the column value and the alarm severity is shown in the table below. For further information on alarm severity refer to the product documentation for the blender.

TW - Alarm Severity	
Severity	Value
NA	No associated severity for this entry.
Info	Information alarm
Gen	General alarm
Shut	Shutdown alarm

TrueWeigh Blender SQL

Inventory Logging

With inventory logging, periodic material usage data is recorded in the database. With resin tracking enabled, material usage down to the unique resin can be determined. Whenever the blender is turned on, the blending process is started, or blending is stopped, an entry in the logs is created. Data is also logged on a periodic basis whenever the blender is turned on regardless of its state. The frequency of the interval is defined by settings on the touch-panel.

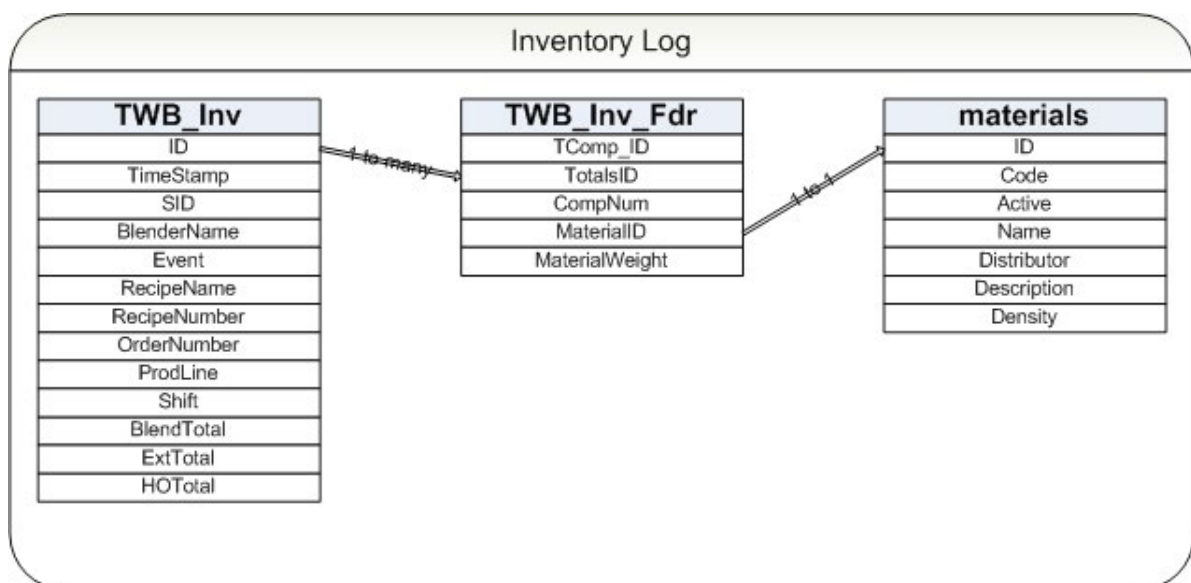
Note that entries in the log reflect the totals shown at the touch-panel. The values are not cumulative from the last log entry but rather the last time they were cleared at the touch-panel. For example, in order to determine the material used between Time A and Time B, the material used at Time A must be subtracted from the material used at Time B.

When the inventory totals have been cleared at the touch-panel, a log entry is made before the totals are cleared. This is to insure that all material usage is reported by the blender, when the totals are cleared.

The database inventory log is comprised of 3 related tables. The primary table, TWB_Inv, maintains information of when the log entry occurred and the state of the system at the time of the entry. The secondary table, TWB_Inv_Fdr, contains the amount of material processed at the component hopper and identifies what material is in the component at the time of data entry. The third table, Materials, represents the material resin itself. For information regarding this table, refer to the Materials Table heading earlier in this section.

Remember that when performing material usage queries at the recipe/resin level, it is not sufficient to just look at the system material usage at the start time and the end time. During the period, the recipe may have changed.

Material usage and length through-put of the system is reported in metric values (kgs, m) regardless of the units settings of the touch-panels. This ensures consistency across all devices reporting to SQL.



TrueWeigh Blender SQL

Inventory Logging (continued)

SQL Table - TW_Inv		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the system inventory log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	Int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.
BatchCount	real NOT NULL	This value represents the number of the last batch processed at the time of the log entry.
BlendTotal	real NOT NULL	This is the total amount of material processed by the blender at the time of entry.
ExtTotal	real	This is the total amount of material that was processed by the extruder at the time of entry.
HOTotal	real	This is the amount of material that was processed by the hauloff device at the time of the log entry.

TrueWeigh Blender SQL

Inventory Logging (continued)

TW - Inventory Log Events	
Event	Value
Power Up	Entry occurred when power first applied
Blend Stop	The blender has been stopped
Blend Auto	The blender has been started
Ext Auto	The extruder has been started in automatic
Ext Stop	The extruder has been stopped
Ext Man	The extruder has been started in manual
Cleared	The inventory totals have been cleared
Schedule	Scheduled log entry has occurred

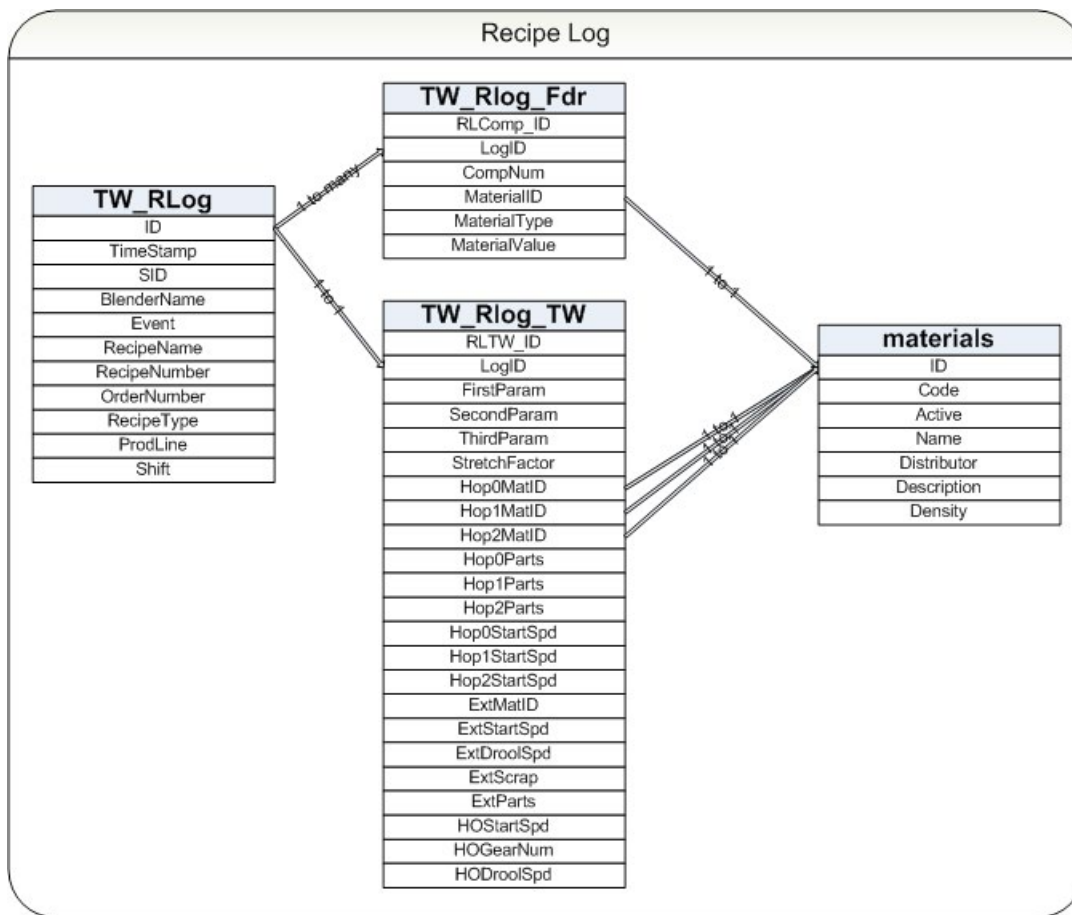
Table 34 SQL Table - TW_Inv_Fdr		
Column Heading	Data Type	Description
TComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
TotalsID	int NOT NULL	This is the foreign key relationship to the TBSB-2_INV table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialWeight	real NOT NULL	This is the amount of material that was processed by this component hopper at the time of the log entry.

TrueWeigh Blender SQL

Recipe Logging

When enabled, recipe logging will make an entry in the recipe log whenever the blender starts processing a new recipe. The current set recipe is logged whenever the blender Start button or extruder Automatic button is pressed. Note that if the recipe that was entered was invalid, the blender could not start processing this recipe, and an entry in the log will not be made. This information can then be used to track any changes made to the recipe for production. With resin tracking enabled, it is possible to determine which resins were processed.

The database recipe log is comprised of 3 related tables. The primary table, TBSB-2_RLog, maintains information of when the log entry occurred and the state of the system at the time of the entry. The secondary table, TBSB-2_RLog_Fdr, contains information defining the material present in the component hopper at the time of the log entry. The third table, Materials, represents the material resin itself. For information regarding this table refer to the Materials Table heading earlier in this section.



TrueWeigh Blender SQL

Recipe Logging (continued)

SQL Table – TW_RLog		
Column Heading	Data Type	Description
ID	int Primary Key NOT NULL	This is the unique primary key for the log entry.
TimeStamp	datetime NOT NULL	The time and date the log entry was entered into the database.
ProdLine	varchar(16) NOT NULL	The name of the product line the blender is installed on.
ShiftName	varchar(16) NOT NULL	The name of the shift that is defined at the time of the event.
SID	int NOT NULL	This is the device ID of the touch-panel. This value is set by the switch settings of the touch-panel.
BlenderName	varchar(16) NOT NULL	This is the name of the blender as it is set in the setup of the touch-panel for the device.
Event	int NOT NULL	This is an integer value representing why the log entry was made.
RecipeType	varhcar(10) NOT NULL	This field indicates the type of recipe this entry represents.
RecipeName	varchar(16) NOT NULL	This is the name of the recipe which was currently set at the time of the log entry.
RecipeNumber	Int NOT NULL	This is the number of the recipe which was currently set at the time of the log entry.
OrderNumber	varchar(16)	This is the order or job that was set at the time of the recipe entry.

TW - Recipe Log Events	
RecipeType	Value
SB-2	The recipe is a blender only recipe
TBE	The recipe contains extrusion settings

TrueWeigh Blender SQL

Recipe Logging (continued)

TW - Recipe Log Events	
Event	Value
2	The blender has been started
3	The extruder has been started in automatic

SQL Table - TW_RLog_Fdr		
Column Heading	Data Type	Description
RLComp_ID	int Primary Key NOT NULL	This is the unique primary key for the component log entry.
LogID	int NOT NULL	This is the foreign key relationship to the TBSB-2_RLog table.
CompNum	int NOT NULL	This is the ID number of the component for this log entry.
MaterialID	int NOT NULL	This is the unique ID of the resin in the hopper at the time of the log entry.
MaterialType	Int NOT NULL	This is the type of material that is in the hopper at the time of the log entry.
MaterialValue	real NOT NULL	This is the percentage of material for this component in the recipe at the time of the log entry.
FeedOrder	int	This is the sequence in the feed order for the component at the time of the log entry.

TW - Recipe Material Types	
MaterialType	Value
1	Regrind
2	Natural
3	Additive Batch
4	Additive Natural
5	Precision

TrueWeigh Blender SQL

Recipe Logging (continued)

SQL Table - TW_RLog_TW		
Column Heading	Data Type	Description
RLTW_ID	int Primary Key NOT NULL	This is the unique primary key for the extruder log entry.
LogID	int NOT NULL	This is the foreign key relationship to the TBSB-2_RLog table.
FirstParam	real NOT NULL	This is the first parameter used for extrusion recipe entry.
SecondParam	real NOT NULL	This is the second parameter used for extrusion recipe entry.
ThirdParam	real NOT NULL	This is the third parameter used for extrusion recipe entry.
StretchFactor	real	This is the stretch factor value for the HO.
HOGearNum	int	This is gear number used by the HO device.
HODroolSpd	real	This is the drool speed used for the HO device.
HOStartSpd	real	This is the manual start speed used for the HO device.
ExtScrap	real	This is the percentage of scrap used by the extruder.
ExtMatID	int	This is the material id used for the extruder.
ExtParts	real	This is the parts value for the extruder. This is typically 100% for a mono-extrusion system.
ExtStartSpd	real	This is the manual start speed for the extruder.
Hop0Parts	real	This is the parts value for the main extruder relationship used for comparison with additives residing on this layer.
Hop0StartSpd	real	This is the start speed for the main extruder.
Hop0MatID	int	This is the material id for the main extruder.
Hop1Parts	real	This is parts value for the first additive residing on the extruder.
Hop1StartSpd	real	This is the start speed for the first additive.
Hop1MatID	int	This is the material id for the first additive.
Hop2Parts	real	This is the parts value for the secondary additive residing on the extruder.
Hop2StartSpd	real	This is the start speed for the secondary additive.
Hop2MatID	int	This is the material ID for the secondary additive.

Troubleshooting

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Before Beginning

You can avoid most problems by following the recommended installation, operation and maintenance procedures outlined in this User Guide. If you have a problem, this section will help you determine the cause and tell you how to fix it.

Before you begin troubleshooting:

- Find any wiring, parts, and assembly diagrams that were shipped with your equipment. These are the best reference for correcting a problem. The diagrams will note any custom features or options not covered in this User Guide.
- Verify that you have all instructional materials related to the equipment. Additional details about troubleshooting and repairing specific components are found in these materials.
- Check that you have manual for other equipment connected in the system. Troubleshooting may require investigating other equipment attached to, or connected with the system.

A Few Words of Caution



WARNING: Improper installation, operation or servicing may result in equipment damage or personal injury.

This equipment should only be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring, disconnects, and fuses should be installed and adjusted by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.



WARNING: Electrical hazard



Before performing maintenance or repairs on TrueBlend and TrueWeigh products connected to the SQL server, disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

Identifying the Cause of a Problem

The Troubleshooting section covers problems directly related to the operation and maintenance of the Conair SQL Reporting Software. This section does not provide solutions to problems that originate with other equipment. Additional troubleshooting help can be found in manuals supplied with the other equipment.

The main problems you will see with the reporting software are **problems with the blender accessing the database**, which will generate an alarm in the blender's standard alarm dialogs. If such problems occur, the connection to the database will close and try to re-connect.

Additional troubleshooting help can be found in the documentation manuals included with this User Guide, or with your SQL Server software.

Contact Conair
Parts and Service
Phone: 800-458-1960
From outside of the
United States,
Call: +1 814 437 6861

SQL Reporting Problems

The TrueWeigh, TrueBlend SB-2, and TrueWeigh Blender generate a GENERAL or INFORMATION alarm if there is a problem connecting with the remote SQL Server. This alarm could be generated for a number of reasons however it signals that the touch-panel is unable to connect with the SQL Server. There is a diagnostic screen that will provide more information on the problem.

Navigate to the Diagnostic screen from the **Home** screen by pressing on **More – Setup – Diagnostic – More – Network – SQL Server**.

Symptom	Possible Cause	Solution
SQL Server diagnostic says, 34935 - Unable to connect: Adaptive Server is unavailable...	The unit cannot connect to the SQL server.	From the SQL Server PC, try to “ping” the touch-panel device. Open your PC’s DOS window, “cmd.exe”, and at the prompt, type “ping 10.1.42.1” (or whatever is the panel’s correct IP address). You should get a reply. If the ping fails, there is either a problem with the cable, or the assignments of IP addresses on the touch-panel or the PC. The touch-panel must respond to a “ping” request.
	The touch-panel interface is using the wrong IP address for accessing the SQL server.	Check the IP address of your PC - the procedure is different depending on your device, but . This IP value is entered into the touch-panel’s SQL Server setup page. If this address is incorrect, the touch-panel will not be able to connect to the server. Note that if the PC is set to change its IP address dynamically, it may break the connection to the touch-panels regularly. We recommend you always use a static IP address on the PC.
	The TCP/IP port configurations weren’t set according to “Establishing the TCP/IP Settings” in the Installation section of this User Guide.	Verify the TCIP/IP settings defined in the SQL Setup procedure in the Installation section of this guide. The port configuration must be properly configured in order to make a connection.

(Continued)

SQL Reporting Problems (Continued)

The TrueWeigh, TrueBlend SB-2, and TrueWeigh Blender generate a GENERAL or INFORMATION alarm if there is a problem connecting with the remote SQL Server. This alarm could be generated for a number of reasons however it signals that the touch-panel is unable to connect with the SQL Server. There is a diagnostic screen that will provide more information on the problem.

Navigate to the Diagnostic screen from the **Home** screen by pressing on **More – Setup – Diagnostic – More – Network – SQL Server**.

Symptom	Possible Cause	Solution
SQL Server diagnostic says, 34935 - Unable to connect: Adaptive Server is unavailable...	The database name may be different in either the server or the touch panel configuration.	Make sure that the database name is correctly defined both in the server, and in the touch-panel SQL Server configuration.
	User login info may have been entered incorrectly.	Make sure that the user login and password are correct, both in the server and on the touch-panel configuration.
	Windows Firewall may be blocking access to the database from remote devices.	Disable the firewall, or open communications for the SQL Server port 1433.
	The remote devices may not have sufficient security rights to be able to create tables as well as read and write data into the database.	Make sure that the user login has “db_owner” privileges.
The report generator says, The current action cannot be completed. The user data source credentials do not meet the requirements to run this report or shared dataset. (rsInvalidDataSourceCredentialsSetting)	Windows security is blocking your connection.	<i>Refer to (rsInvalidDataSourceCredentialsSetting) in the Common Solutions section, which follows this one.</i>

SQL Reporting Problems

(Continued)

The TrueWeigh, TrueBlend SB-2, and TrueWeigh Blender generate a GENERAL or INFORMATION alarm if there is a problem connecting with the remote SQL Server. This alarm could be generated for a number of reasons however it signals that the touch-panel is unable to connect with the SQL Server. There is a diagnostic screen that will provide more information on the problem.

Navigate to the Diagnostic screen from the **Home** screen by pressing on **More – Setup – Diagnostic – More – Network – SQL Server**.

Symptom

When attempting to access or deploy Reporting Services, it says, The permissions granted to user 'domain\username' are insufficient for performing this operation. (rsAccessDenied).

When attempting to deploy the reports from the Visual Studio software, it says, The specified report server URL http://localhost/reportserver could not be found. Verify the syntax of the URL and that the report server exists. The URL path to the report server cannot be found.

Possible Cause

The username you have input needs administrator privileges.

The Target Server URL has been input incorrectly.

Solution

Refer to (rsAccessDenied) Connection Error later in this section.

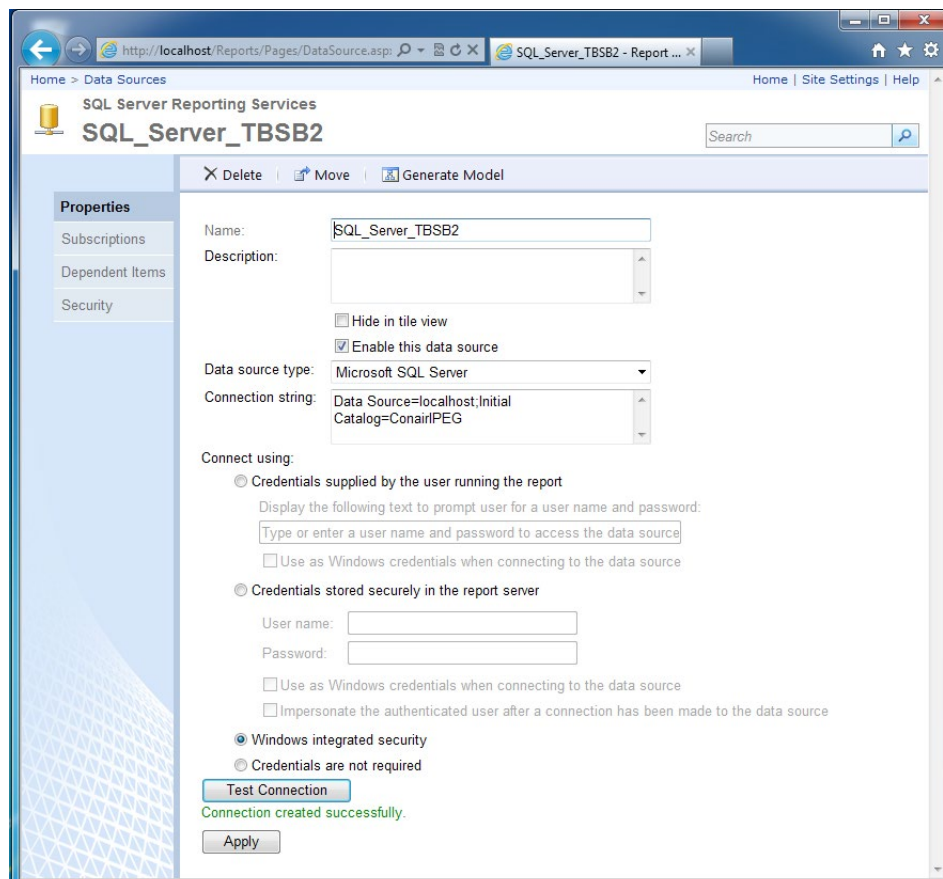
Refer to Cannot Deploy Reports – Report server not found later in this section.

Common Solutions

(rsInvalidDataSourceCredentialSetting)

The (rsInvalidDataSourceCredentialSetting) error may occur while trying to access the reports deployed in the report servers. The full error reads as: “The current action cannot be completed. The user data source credentials do not meet the requirements to run this report or shared dataset. (rsInvalidDataSourceCredentialsSetting).”

- 1 Enter the URL http://localhost/reports** (You may have to login to the server using the PC’s username and password.) The report server should direct the page to http://localhost/reports/pages/folder.aspx
- 2 Select the “Data Sources” folder.**
- 3 Select the Data Source, followed by the properties section.**
- 4 For the “Connect Using” options, select “Windows Integrated Security” and then “Apply”.**
- 5 Press the “Test Connection” button** to verify the connection.
- 6 Return to the reports section and generate the report as normal.**



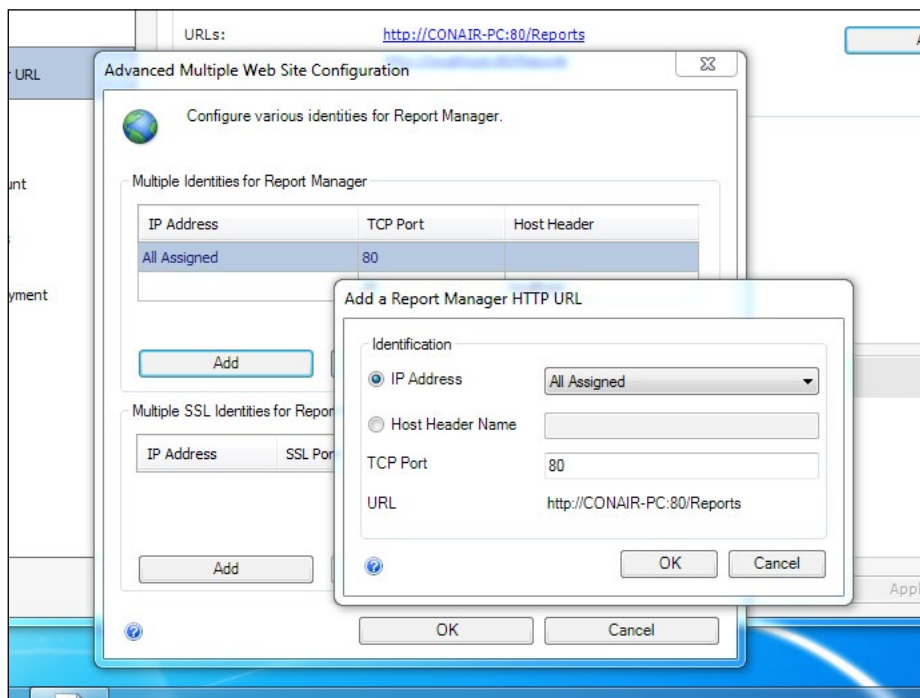
Data Source Credentials

Common Solutions

(rsAccessDenied) Connection Error

The (rsAccessDenied) error may occur while trying to access or deploy the Reporting Services. The full error reads as: “The permissions granted to user ‘domain\username’ are insufficient for performing this operation. (rsAccessDenied).” Make sure you have finished the Configuring Internet Explorer Security section in chapter 3, and have allowed access to the URL <http://localhost/reports> first.

- 1** Open the Reporting Services Configuration Manager.
- 2** Click “Connect to the report server instance”.
- 3** Click on the Report Manager URL.
- 4** In the Report Manager URL window, click the “Advanced” button.
- 5** Click the “Add” button in the Multiple Identities for Report Manager section.
- 6** Enter “localhost” for the Host Header.
- 7** Click Ok to save your changes.



Report Manager - Add URL

(Continued)

Common Solutions

(rsAccessDenied) Connection Error (continued)

8 Run Internet Explorer, using “Run as Administrator”.

9 Enter the URL: `http://localhost/reports`

The report server should automatically direct the page to:
`http://localhost/reports/pages/folder.aspx`.



NOTE: You may have to login to the server using the PC's username and password.

10 Select the **Properties** tab (Site Settings Link).

11 Select the “**New Role Assignment**” option. This selection may be under the Security Section.

12 In the Group or User Name text box, **type in the domain\username which was shown in the error message** - the one you used to log in.

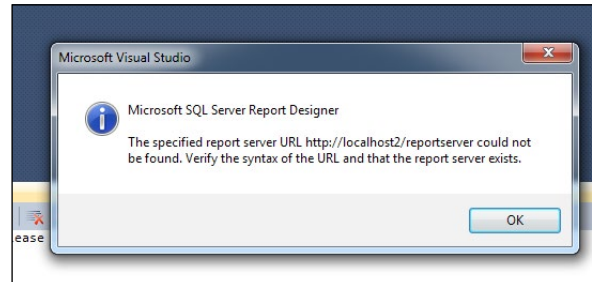
13 Now check all of the privilege check boxes.

14 Select **OK**.

The Domain\Username should now be added to the Roles assignments for the report server, and the connection should be able to proceed without a problem.

Common Solutions

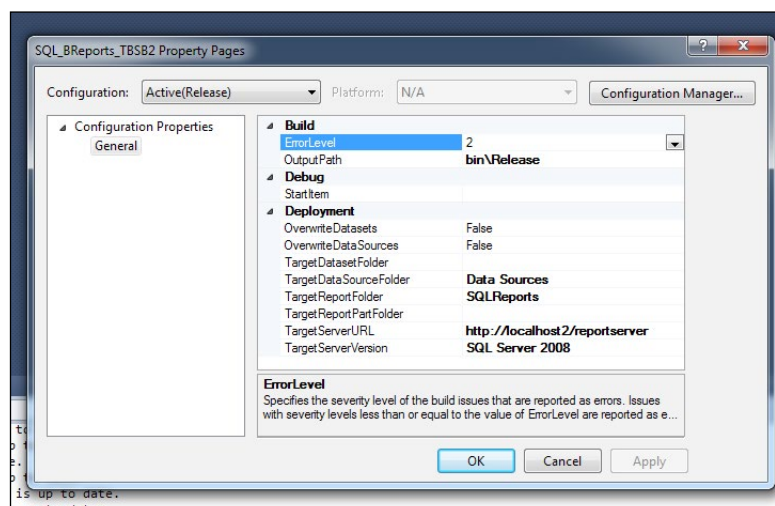
Cannot Deploy Reports – Report server not found



Deploy Report Fail

When attempting to deploy the reports from the Visual Studio development environment an error might be generated. The error reads as: “The specified report server URL http://localhost/reportserver could not be found. Verify the syntax of the URL and that the report server exists. The URL path to the report server cannot be found.” To correct this problem:

- 1** Select the report project in the Solution Explorer.
- 2** Select Properties from the Project pull-down menu.
- 3** For the “Target Server URL”, enter the appropriate URL for the report server. This is the URL that is configured in the Report Services Configuration (Web Services URL).
- 4** Click OK.



Deploy Report URL

We're Here to Help


Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee.

How to Contact Customer Service

To contact Customer Service personnel, call:



 **NOTE:** Normal operating hours are 8:00 am - 5:00 pm EST. After-hours emergency service is available at the same phone number.

From outside the United States, call: 814 437 6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- Make sure power is supplied to the equipment.
- Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- Check the troubleshooting guide of this manual for a solution.
- Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.