



# Sage Estimating (SQL) v18.12

## Creating Sage Estimating Reports with SAP Crystal Reports

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# Creating Sage Estimating Reports with the SAP Crystal Reports Designer

This booklet describes how to use SAP Crystal Reports® to create a report that will print data for a selected estimate in Sage Estimating. It was designed to help users of all versions of Sage Estimating (SQL). Tables and views that were introduced after the initial release of Sage Estimating are indicated in "Appendix: Using Sage Estimating Data on Reports" (page 8).

**Note:** This booklet assumes that you have a Report Designer role and that you understand how to use Crystal Reports Designer.

## Overview

You use Report Manager in the Estimating Management Console to create estimate reports based on Crystal Reports designs.

In Report Manager, you specify a Crystal Reports (RPT) file on which to base the estimate report. Report Manager creates a copy of the report design in a custom reports database, and uses this copy for all subsequent modifications to the report. Whenever you edit the report design, you check it out from the custom reports database. (You do not use the original report design file again.)

Before you can create report designs, you must also use Report Manager to generate report sample data. Report Manager creates tables for the sample data in a separate custom reports database based on one or more representative estimates that you select. You use the tables and the fields contained in this sample database when you set up your Crystal Reports design.

**Note:** An Estimates database can contain many estimates with a mix of features, but you print a report for one estimate at a time. Therefore, you need to set up your report designs to extract data from a single estimate.

## Before you start

Before you can create a report design in Crystal Reports, you must:

1. Create a blank RPT file.
2. Generate sample data for the custom reports database.

3. Identify the **EstimateId** for a representative estimate that you will use when designing the report.

## Creating a blank Crystal Report (RPT) file

**Note:** This step is required only if no other reports exist in Report Manager. If you have existing reports, open the Estimating Management Console, select any report, and then skip to step 4 under "Generating sample data for the custom reports database" (page 2)

One of the steps in the "Using the Standard Report Creation Wizard to Create an Estimate Report" (page 4) section requires you to select a blank Crystal Report (RPT) file.

### If you do not already have a report file, create one as follows:

1. Start **SAP Crystal Reports**.
2. On the **Start Page** tab, click **Blank report**.
3. In the **Database Expert** window that appears, click [**Cancel**].
4. On the main menu, click **File > Save**.
5. In the **File name** text box, type `blank.rpt`.
6. Navigate to an easy-to-access folder.
7. Click [**Save**].
8. Exit the program.

You will select this file, later, in the Report Manager.

## Generating sample data for the custom reports database

### Use the Estimating Management Console to create sample data for your report designs:

1. Click [**Report Manager**] on the toolbar.
2. Click **New Report > Crystal Report**.
3. In the **New Report** window:
  - a. In the **Report** box, type a name for the report you want to create.
  - b. From the **Filename** box, browse to and select the report design file (.RPT) that you saved earlier.
  - c. Click [**OK**].

4. Select one or more estimates from the grid (lower right-hand pane) to use for sample data, and then click [**Generate Data**].
5. When prompted to select options for the report working data, click **OK** to accept the default selection.

Report Manager stores the sample data in a custom reports database, where it is available to use when you are designing reports.

6. Click [**Check In**].

## Identifying a representative estimate in the custom reports database

When creating a Crystal Reports design, you must identify a single estimate that has the characteristics you want to report on. When you *run* an estimate report, Sage Estimating uses the EstimateId of the estimate displayed at run time. However, when designing the report, you need to supply the EstimateId for a specific estimate that you will use to lay out the report elements.

**To find the EstimateId values that are available in the custom reports database, query the values using SQL Management Studio, as follows:**

1. Start **Microsoft SQL Server Management Studio**.
2. In the **Connect to Server** window, connect to the SQL database.
3. For **Server type**, select **Database Engine**.
4. For **Server name**, select your Sage Estimating server.
5. In the **Object Explorer**:
  - a. Expand the **Databases** node.
  - b. Expand the **\*ReportDesign\*** database.
  - c. Expand the **Tables** node.
  - d. Right-click the **Report.Estimate\_v1** line on the table.
  - e. Click **Select top 1000 rows**.

The **Results** tab displays the estimates available in the custom reports database, including the EstimateIds and the names of the estimates.

Write down the EstimateId for the estimate that you want to work with when you design the report.

# Using the Standard Report Creation Wizard to Create an Estimate Report

**Note:** These instructions assume that you are using Crystal Reports 2013 with Support Pack 2. If you use a different version, the workflow may be different.

All of the steps and parameters in this section are required to report on a Sage estimate.

## Step 1: Create a report and connect it to the custom reports database

1. Start Crystal Reports.
2. Select **File > New > StandardReport**.
3. Using the **Standard Report Creation Wizard**:
  - a. Expand **Create New Connection**.
  - b. Expand **OLE DB (ADO)**.
  - c. In the **OLE DB (ADO) Fields OLEDB Provider** window:
    - i. Select **SQL Server Native Client 10.0**.
    - ii. If you are using Microsoft SQL Server 2014, select **SQL Server Native Client 11.0**.
    - iii. Click **[Next]**
  - d. In the **OLE DB (ADO) Connection Information** window:
    - i. In the **Server** field, enter your SQL instance. For example, enter **(local)\SAGE\_ESTIMATING**.
    - ii. Select the **Integrated Security** check box.
    - iii. For the **Database** option, select your custom reports database.
    - iv. Click **[Finish]** to return to the Standard Report Creation Wizard.

## Step 2: Select the tables you want the report to use

**Tip:** For a list of the tables you can link to a report, see "Appendix: Using Sage Estimating Data on Reports" (page 8)

1. On the **Data** tab:
  - a. Expand the database node you just added.
  - b. Expand the **Report** schema node.
  - c. Select the Estimate\_v1 table.

**Important!** You must select Estimate\_v1 or you will not be able to complete Step 4..

- d. If you want to include additional tables, select other tables, such as Item\_v1.
  - e. Click [**Next**].
2. On the **Link** tab, click [**Next**].

### Step 3: Select the fields to include in the report

**Tip:** You can use the SQL Server Management Studio or the Crystal Reports Designer to view the names of fields in each table. For more information, see "Appendix: Using Sage Estimating Data on Reports" (page 8)

1. On the **Field** tab, select fields (columns from the tables)—for example:
  - Estimate\_v1.Name
  - Item\_v1.PhaseCode
  - Item\_v1.ItemCode
  - Item\_v1.Description
  - Item\_v1.TakeoffQuantity
  - Item\_v1.TakeoffUnitName
2. Click [**Finish**]

You return to the main Crystal Reports window, in preview mode.

### Step 4: Set up the EstimateId parameter to target a single estimate

**Note:** For steps on querying the custom reports database to identify valid EstimateId values, see "Before you start" on "Creating Sage Estimating Reports with the SAP Crystal Reports Designer" (page 1).

1. In the **Field Explorer** pane:
  - a. Right click **Parameter Fields**, and then click **New**.
  - b. In the **Name** field, enter **EstimateId**.

This field is case-sensitive.

- c. For the **Type** option, select **Number**.
  - d. For the **Value Field** option, select **Estimate\_v1.EstimateId**.
  - e. Click **[OK]** to return to the preview.
2. With the EstimateId parameter selected, on the **Report** menu, click **Select Expert > Record**.
  3. In the **Select Expert – Record** window:
    - a. On the **Estimate\_v1.EstimateId** tab, in the first drop-down list, select **is equal to**.
    - b. In the drop-down list that appears next, select **EstimateId**.
    - c. Click **[OK]**.
  4. In the **Enter Values** window that appears, type the EstimateId you wrote down for the representative estimate from the custom reports database, and then click **[OK]**.
  5. On the **Report** menu, click **Refresh Report Data**, or press **F5**.
  6. If you entered a valid EstimateId, preview data appears.

### Step 5: Save the Crystal report

1. On the main menu:
  - a. Click **File**.
  - b. If the **Save Data with Report** option is selected, clear it.

This step removes the ID for the estimate you used to create the report. The report can then take on the ID of the current estimate when you run the report in Estimating.

- c. Click **Save As**.
2. In the **Save As** window:
    - a. Navigate to an easy-to-find folder.
    - b. Enter the report file name.
    - c. Click **[Save]**

### Step 6: Add the report to Sage Estimating

1. Open the Estimating Management Console.
2. On the toolbar, click **[Report Manager]**.
3. Click **New Report > Crystal Report**.

4. In the **New Report** window:
  - a. In the **Report** box, type the name to use for the new report in the Sage Estimating.
  - b. From the **Filename** box, browse to and select the new report design file that you saved in "Step 5: Save the Crystal report."
  - c. Click [**OK**].
5. If this is the first report you have created for Sage Estimating, delete the blank report (which is no longer needed) from the Report Manager:
  - a. In the **Reports Catalog** pane, expand the **All Reports** folder.
  - b. Right-click the **blank** report, and then click **Delete**.

# Appendix: Using Sage Estimating Data on Reports

Report Manager can report data from the following tables (in the Report Design database) and views (in the Estimates database):

- Report.Addon\_v1
- Report.AddonBasis\_v1
- Report.Address\_v1
- Report.Alternate\_v1
- Report.AlternateStatus\_v1
- Report.Assembly\_v1
- Report.AssemblyDetail\_v1
- Report.BidGroup\_v1
- Report.CityCostIndex\_v1
- Report.CityCostIndexDetail\_v1
- Report.Company\_v1
- Report.Crew\_v1
- Report.CrewDetail\_v1
- Report.CrewResource\_v1
- Report.Estimate\_v1
- Report.GroupAssembly\_v1
- Report.GroupCrew\_v1
- Report.GroupModel\_v1
- Report.GroupPhase\_v1
- Report.Item\_v1
- Report.ItemAddonAllocation\_v1
- Report.ItemWbsValue\_v1
- Report.MaterialClass\_v1

## Viewing table fields

- Report.Model\_v1
- Report.ModelLine\_v1 (new in v17.12)
- Report.Overline\_v1
- Report.Person\_v1
- Report.Phase\_v1
- Report.ProjectInfo\_v1
- Report.RateTable\_v1
- Report.RateTableColumnHeading\_v1
- Report.RateTableDetail\_v1
- Report.Subcategory\_v1
- Report.SubcontractorBid\_v1
- Report.Unit\_v1
- Report.WbsDefinition\_v1
- Report.WbsValue\_v1

## Viewing table fields

You can use SQL Server Management Studio to view the names of fields in each table in the custom reports database.

### To view tables and fields (columns) using SQL Server Management Studio:

1. Start **Microsoft SQL Server Management Studio**.
2. In the **Connect to Server** window, connect to the SQL database.
3. For the **Server type**, select **Database Engine**.
4. For the **Server name**, select your Sage Estimating server.
5. In the Object Explorer:
  - a. Expand the **Databases** node.
  - b. Expand the **\*ReportDesign\*** database.

This custom reports database is a copy of your data that you use exclusively for creating reports.

## Viewing table fields

### c. Expand **Tables**.

The Object Explorer window displays a list of tables from the custom reports database.

### **To view a list of the fields available in a table:**

1. Expand the table.
2. Expand the Columns folder.