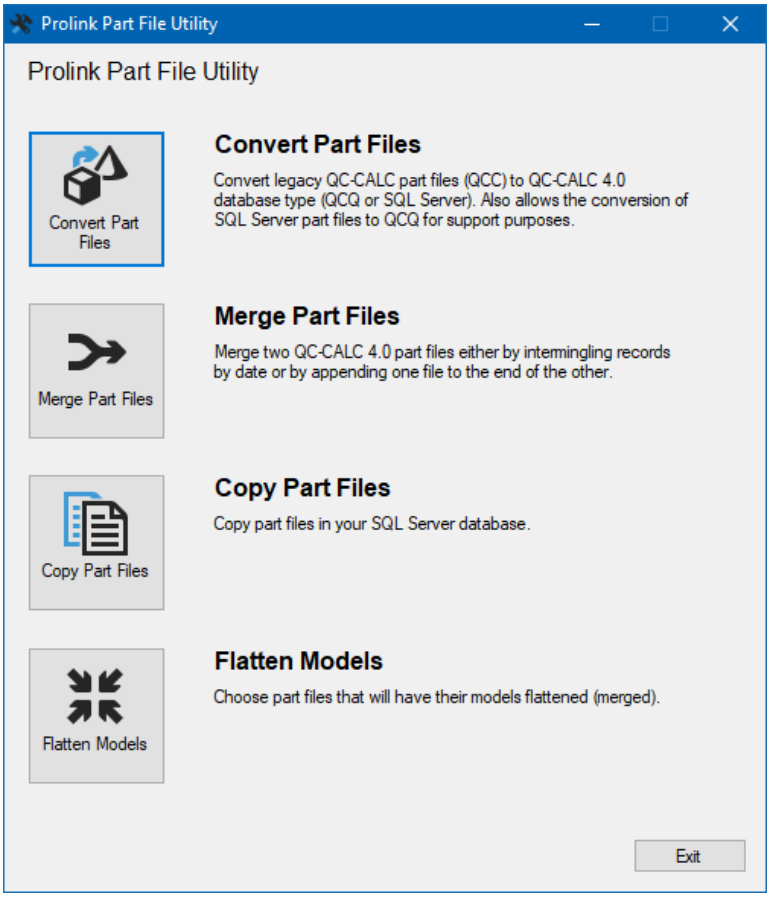
1. Introduction

This utility provides a few file maintenance options. **NOTE:** Any operations within this utility that will impact a SQL database will have a password challenge appear and processing will not proceed until that password information has been validated.

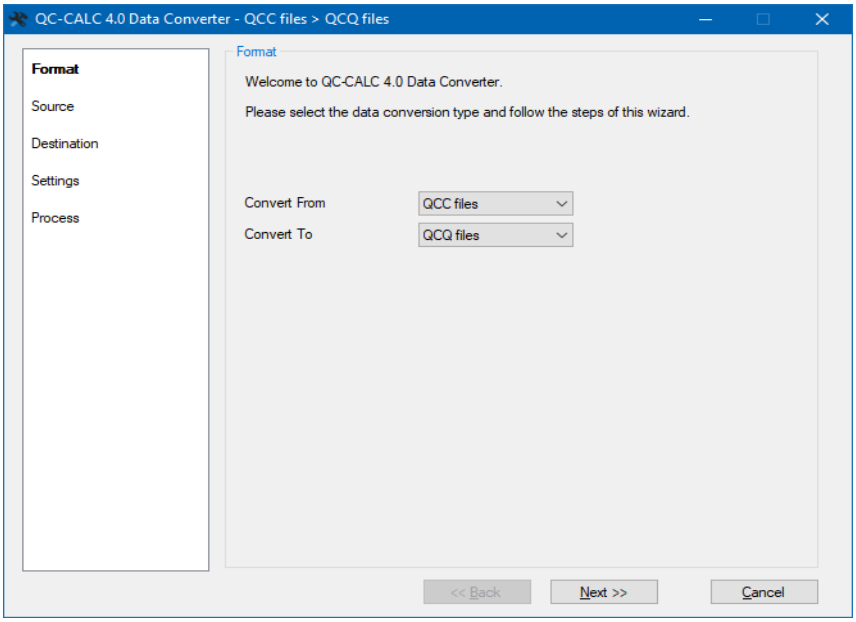


1.1 Convert Part Files

When moving from a previous version of QC-CALC, it is necessary to convert your existing .qcc files to a new database format. This application can also be used to convert part files already stored in a SQL Server database into QCQ files, or to store QCQ files in SQL Server.

1.1.1 Format

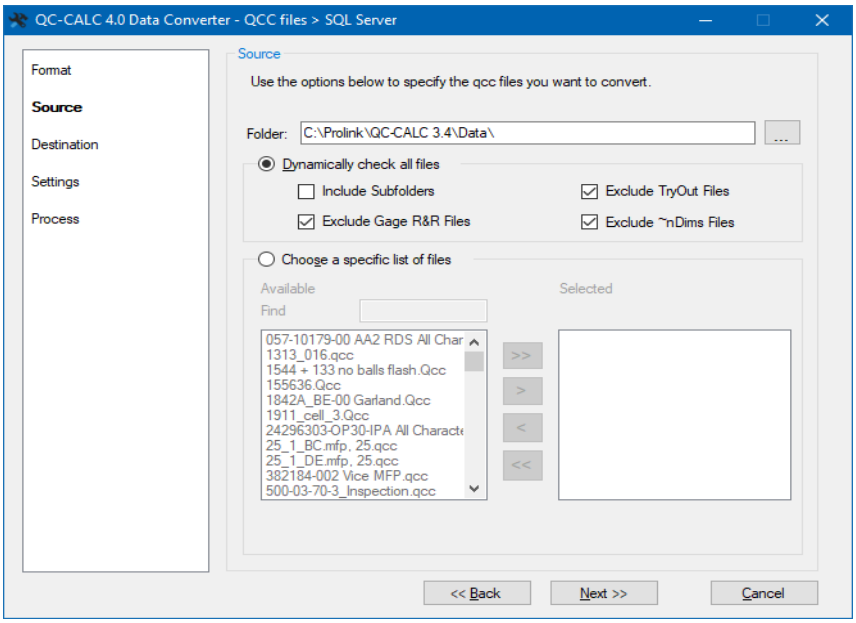
This screen is used to choose the existing data format (QCC files, QCQ files, or SQL Server) and the final format (QCC files are not allowed here).



1.1.2 Source

QCC or QCQ Files

This screen allows you to dynamically, or specifically, choose QCC or QCQ files to convert.



Folder

Choose the location of the files to be converted.

Dynamically check all files

With this option, all files within the Folder specified at the top of the screen that pass the checkable criteria in this area will be converted.

Include Subfolders

When this option is checked, any subfolders will also be checked for QCC/QCQ files.

Exclude TryOut Files

When this option is checked, any QCC/QCQ files with _TryOut at the end of the name will not be converted.

Exclude Gage R&R Files

When this option is checked, any QCC/QCQ files with _GRR at the end of the name will not be converted.

Exclude ~nDims Files

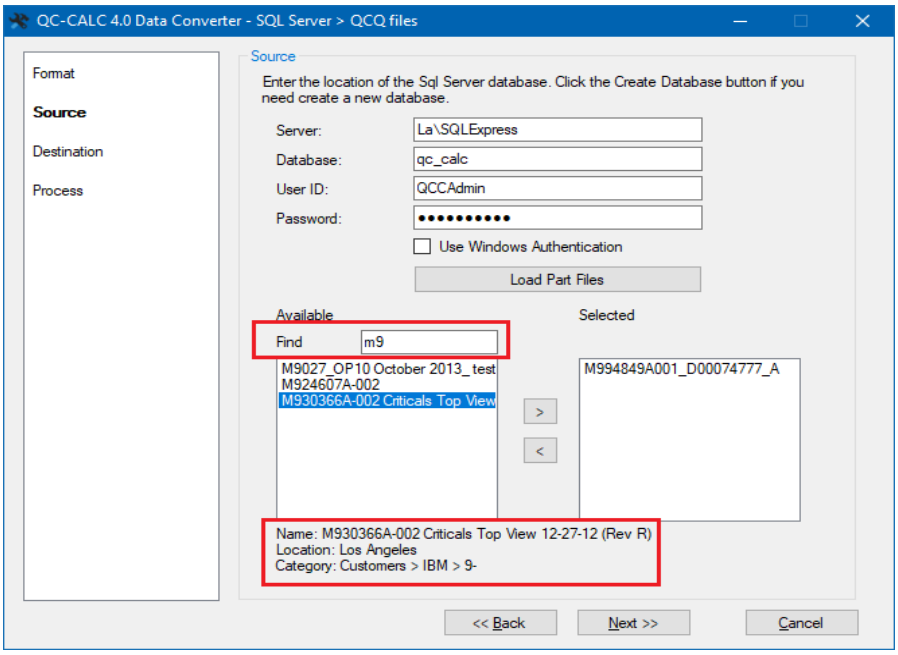
When this option is checked, any QCC/QCQ files with ~nDims (where n is the number of dimensions inside the file) at the end of the name will not be converted.

Choose a specific list of files

With this option, a list of files within the Folder specified at the top of the screen will be shown on the left. Move any files to convert to the list on the right.

SQL Server Part Files

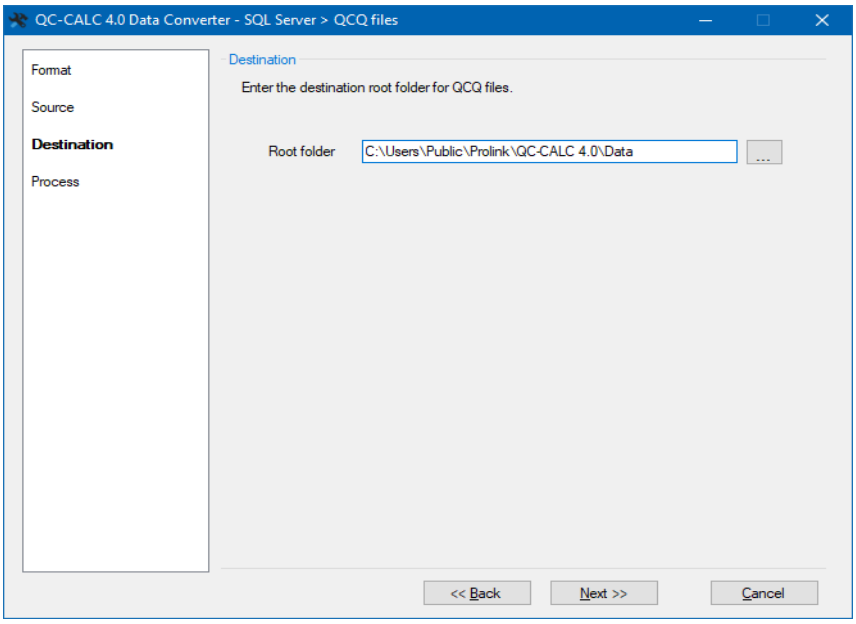
This screen allows you to select part files from your SQL Server database. Enter your database information and click the **Load Part Files** button to start. Use the > and < buttons to move the part files to convert from the **Available** column to the **Selected** column. Use the **Find** box to filter down to the part files that match. Click on a part file in the **Available** list and the full file name along with the **Location** and **Category** information will be displayed at the bottom.



1.1.3 Destination

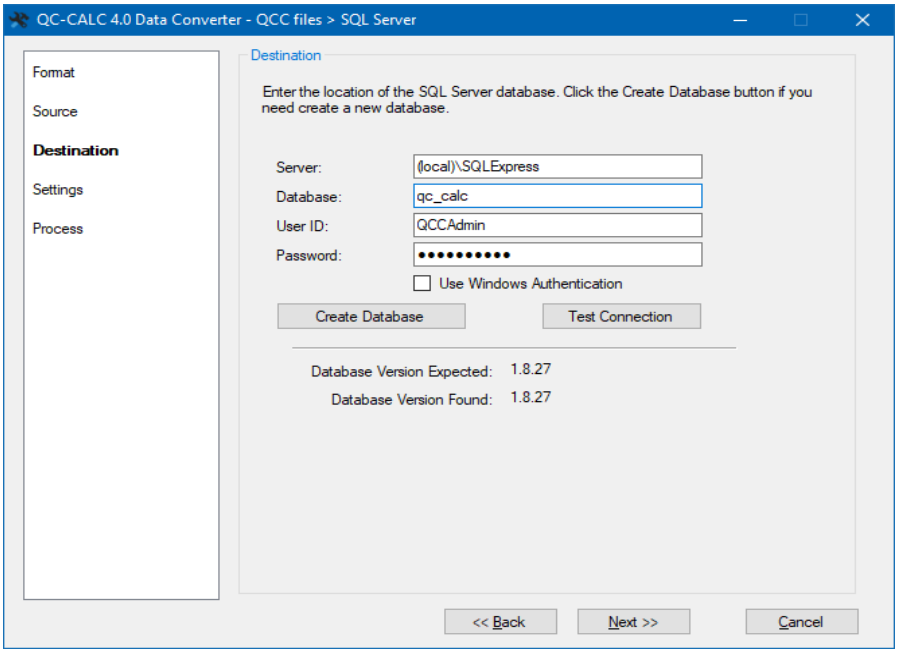
QCQ Files

This screen allows you to set the **Root folder** to store the new QCQ files. If your QCC files were stored in subfolders, this folder structure will be duplicated within the Root folder you specify.



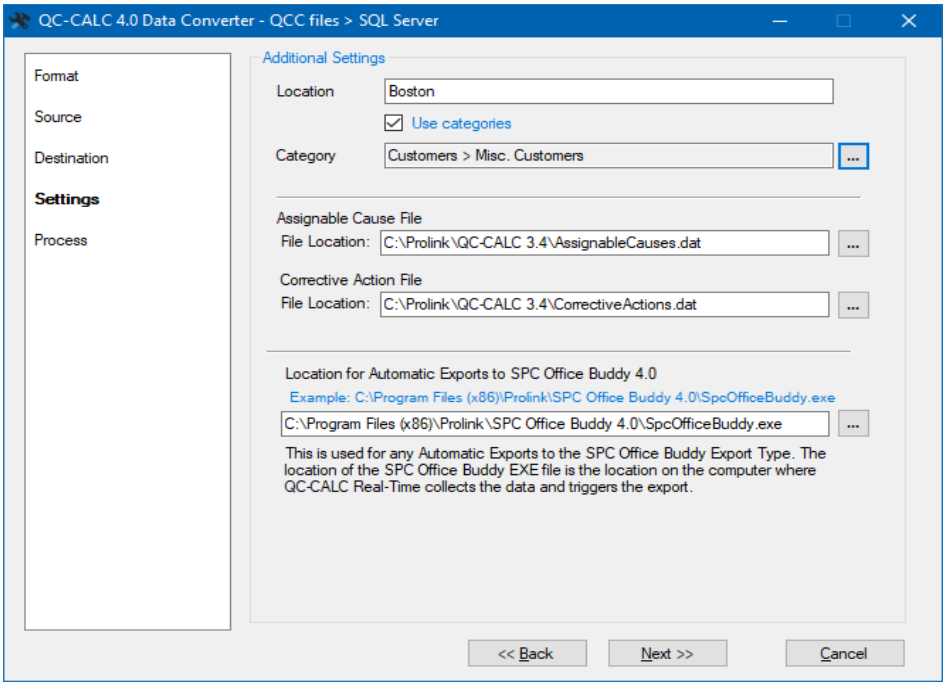
SQL Server Part Files

This screen allows you select the SQL Server database to store the converted part files. Enter your database information and click the **Test Connection** button if your database already exists. Use the **Create Database** button if your database does not yet exist.



1.1.4 Settings

This screen has a few settings that are required for the conversion process to happen. It only appears for QCC file conversions.



Location

SQL Server Only - The Location is a free form text field that can be used for describing the location/origin of the part files.

Assignable Cause/Corrective Action files

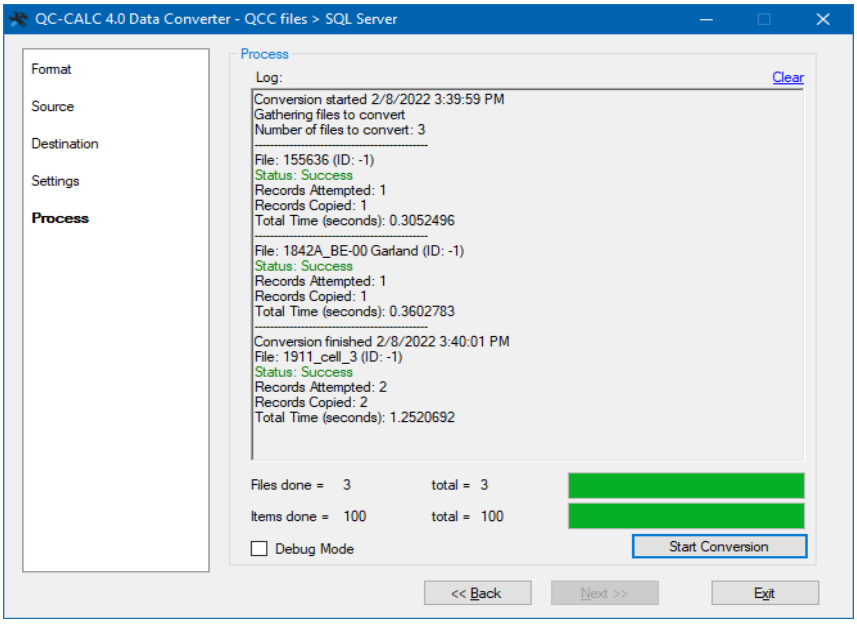
The location of the Cause and Action files is necessary when converting your data from QCC files to 4.1. In QCC files, a number that pointed to a value within the .dat files was stored within the database instead of the text of the Cause/Action being stored. This means the correct .dat file for the QCC files is required to bring the Cause/Action values over in the new database correctly.

Location for Automatic Exports to SPC Office Buddy 4.1

This setting is only necessary if any of your files have been set up to automatically export to an **Excel Job** within SPC Office Buddy. The location for the corresponding 4.1 SPC Office Buddy needs to be entered in this area.

1.1.5 Process

Click the **Start Conversion** button to start the processing of the files. As the files are processed, the **Log:** area at the top of the screen will update to show you the processing that is happening.

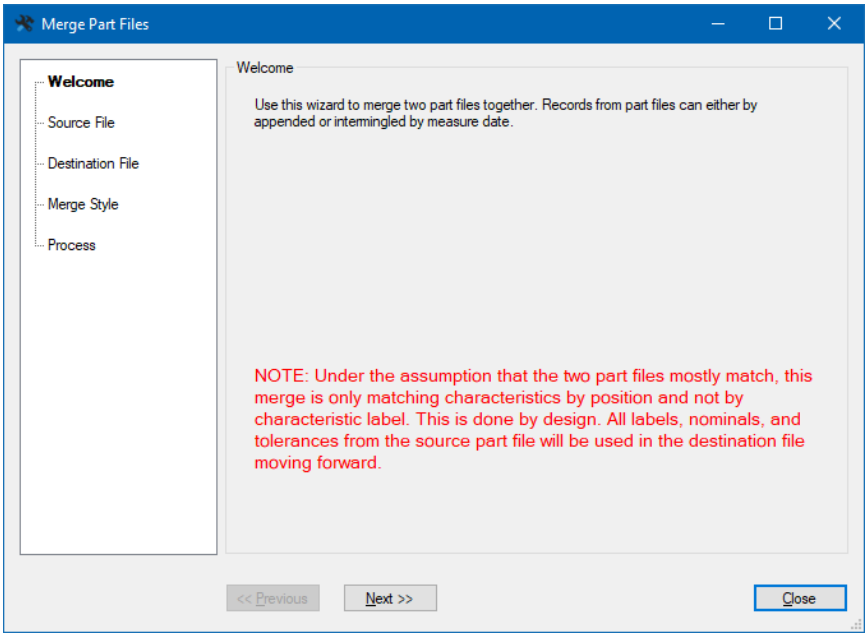


Debug Mode

A Prolink support person may ask you to check this box if you have run into problems converting files.

1.2 Merge Part Files

There are times when a new part file is created by accident and the data from the newly created file needs to be merged into the main file. This tool was created to help with this process. **NOTE:** It is highly recommended that the **Copy Part Files** option is used to make a copy of the destination file before proceeding.



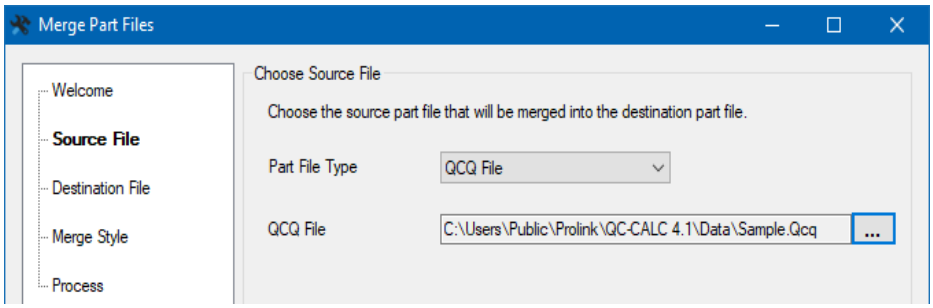
1.2.1 Source File

The part file that you want to merge into another part file is the one that you enter here. This file will still exist after the merging has finished. **NOTE:** The Labels, Nominals, and Tolerances from this file will be used in the final part file when the merge process is finished.

Part File Type

This area allows you to select the type of part file to merge. The options are **QCQ File** or **SQL Server**.

QCQ File

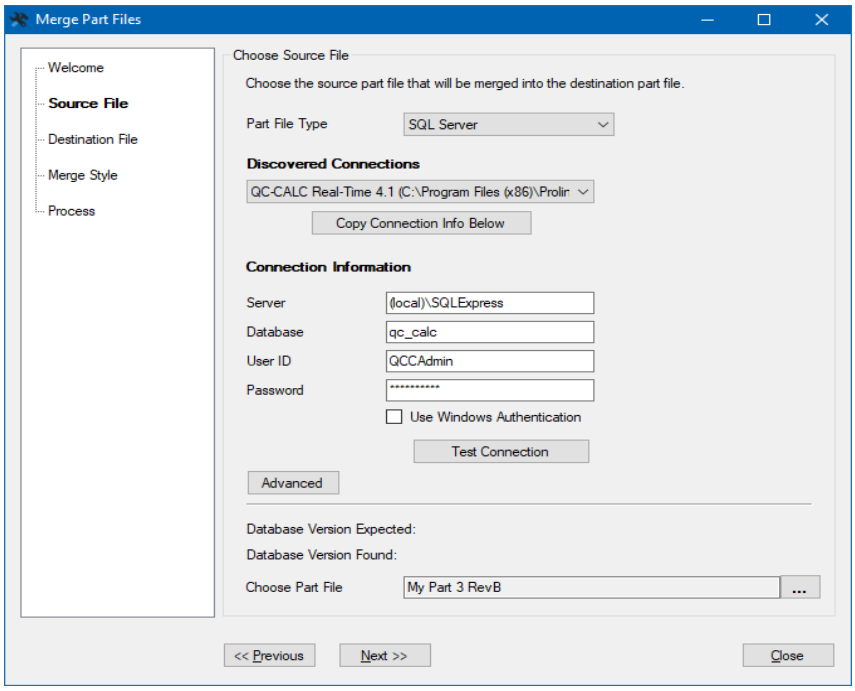


QCQ File

Choose the part file that will be merged into the main file here.

SQL Server

Enter all the typical server information for the database and click the **Test Connection** button to make sure it is all correct.



Choose Part File

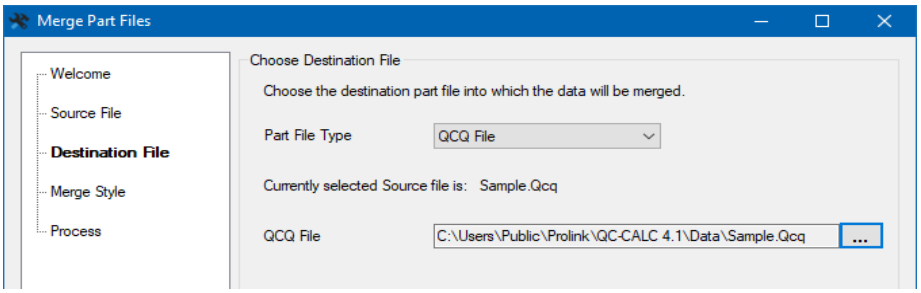
Choose the part file that will be merged into the main part file here.

1.2.2 Destination File

On this screen you will choose the part file to receive the data from the Source File. This is the main file, and the Source File will be merged INTO this file.

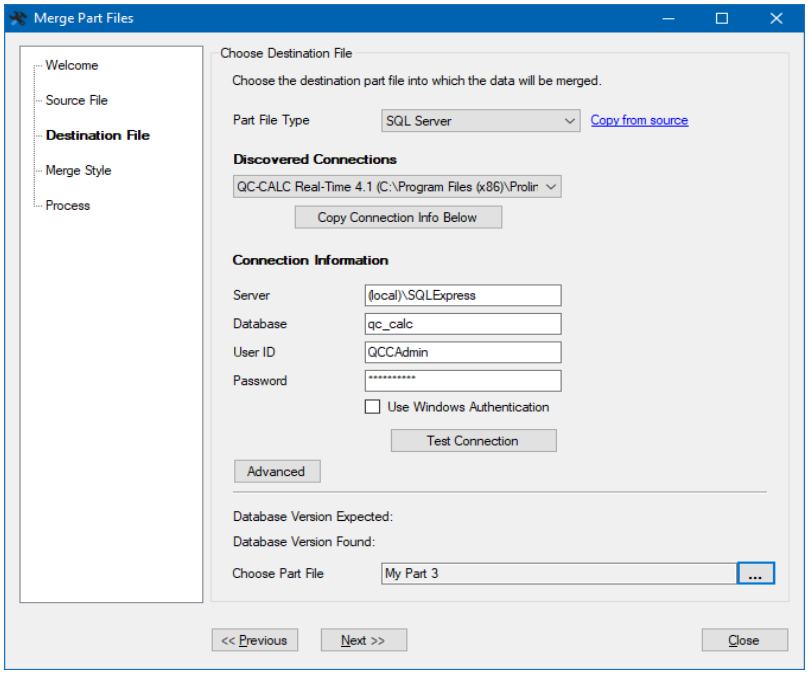
QCQ File

Choose the part file to receive the data in the **QCQ File** area.



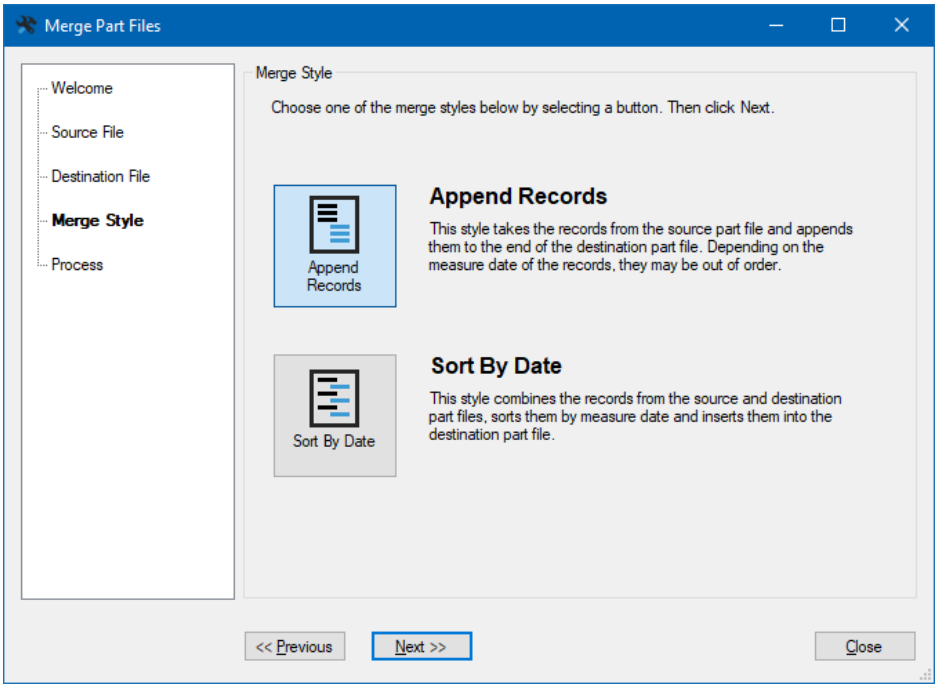
SQL Server

Enter all the typical server information for the database and click the **Test Connection** button to make sure it is all correct. You can use the **Copy from source** link to copy all of the SQL Server settings from the previous screen if needed. Use the ... button to choose the Part File to receive the data.



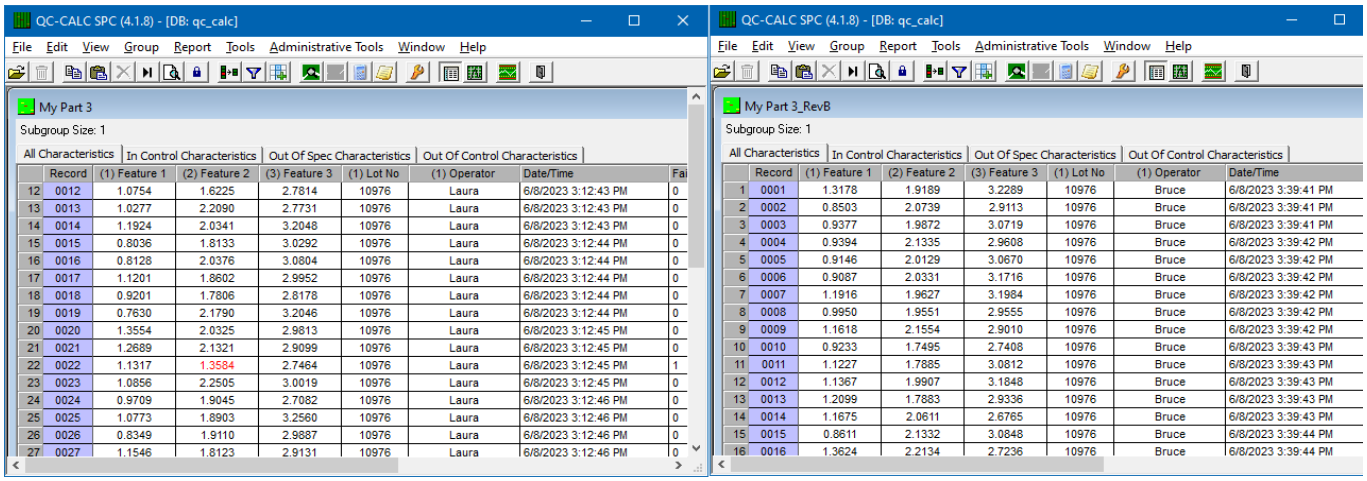
1.2.3 Merge Style

Merge Style allows you to choose how the part files should be merged. See below for an explanation of the options.

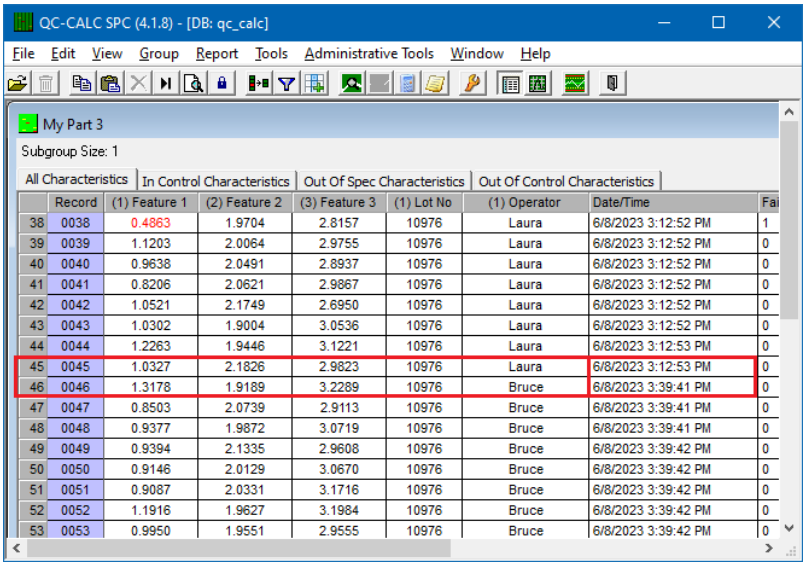


Append Records

The **Append Records** option appends what you are merging. For example, the part files shown below are about to be appended. The part file on the left is the destination file and the right one is the source file.



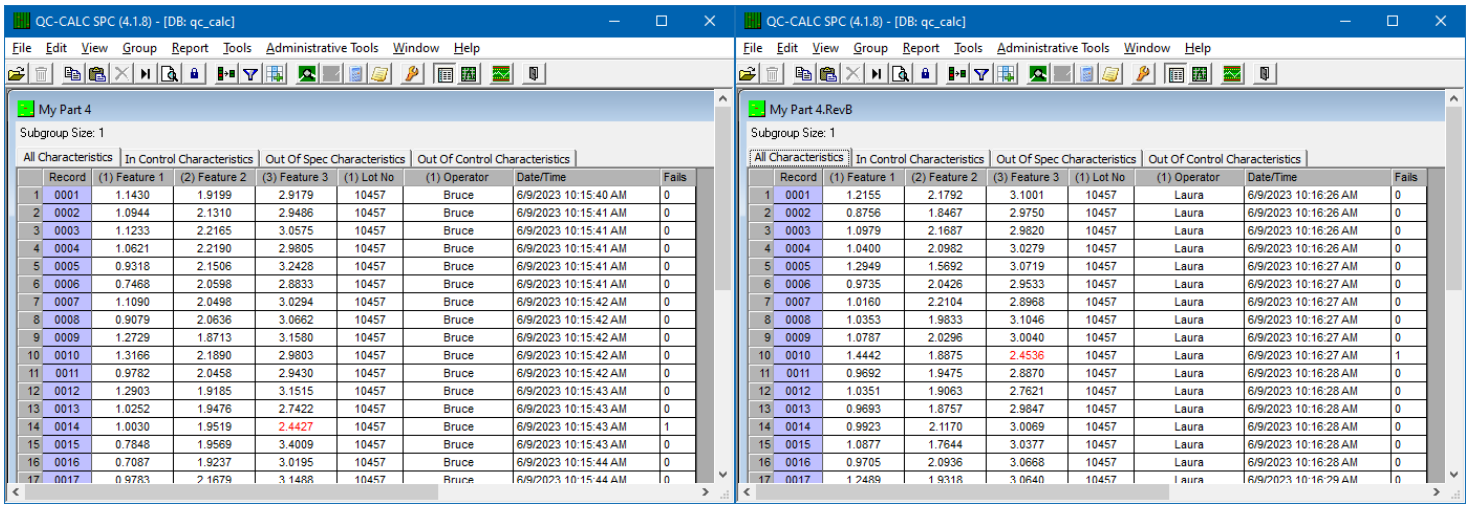
The destination file will be shown at the beginning of the merged part file and the source file will be shown at the end when they are appended. As highlighted in the picture, the time the parts were inspected will not change how the parts are listed.



	Record	(1) Feature 1	(2) Feature 2	(3) Feature 3	(1) Lot No	(1) Operator	Date/Time	Fai
38	0038	0.4863	1.9704	2.8157	10976	Laura	6/8/2023 3:12:52 PM	1
39	0039	1.1203	2.0064	2.9755	10976	Laura	6/8/2023 3:12:52 PM	0
40	0040	0.9638	2.0491	2.8937	10976	Laura	6/8/2023 3:12:52 PM	0
41	0041	0.8206	2.0621	2.9867	10976	Laura	6/8/2023 3:12:52 PM	0
42	0042	1.0521	2.1749	2.6950	10976	Laura	6/8/2023 3:12:52 PM	0
43	0043	1.0302	1.9004	3.0536	10976	Laura	6/8/2023 3:12:52 PM	0
44	0044	1.2263	1.9446	3.1221	10976	Laura	6/8/2023 3:12:53 PM	0
45	0045	1.0327	2.1826	2.9823	10976	Laura	6/8/2023 3:12:53 PM	0
46	0046	1.3178	1.9189	3.2289	10976	Bruce	6/8/2023 3:39:41 PM	0
47	0047	0.8503	2.0739	2.9113	10976	Bruce	6/8/2023 3:39:41 PM	0
48	0048	0.9377	1.9872	3.0719	10976	Bruce	6/8/2023 3:39:41 PM	0
49	0049	0.9394	2.1335	2.9608	10976	Bruce	6/8/2023 3:39:42 PM	0
50	0050	0.9146	2.0129	3.0670	10976	Bruce	6/8/2023 3:39:42 PM	0
51	0051	0.9087	2.0331	3.1716	10976	Bruce	6/8/2023 3:39:42 PM	0
52	0052	1.1916	1.9627	3.1984	10976	Bruce	6/8/2023 3:39:42 PM	0
53	0053	0.9950	1.9551	2.9555	10976	Bruce	6/8/2023 3:39:42 PM	0

Sort By Date

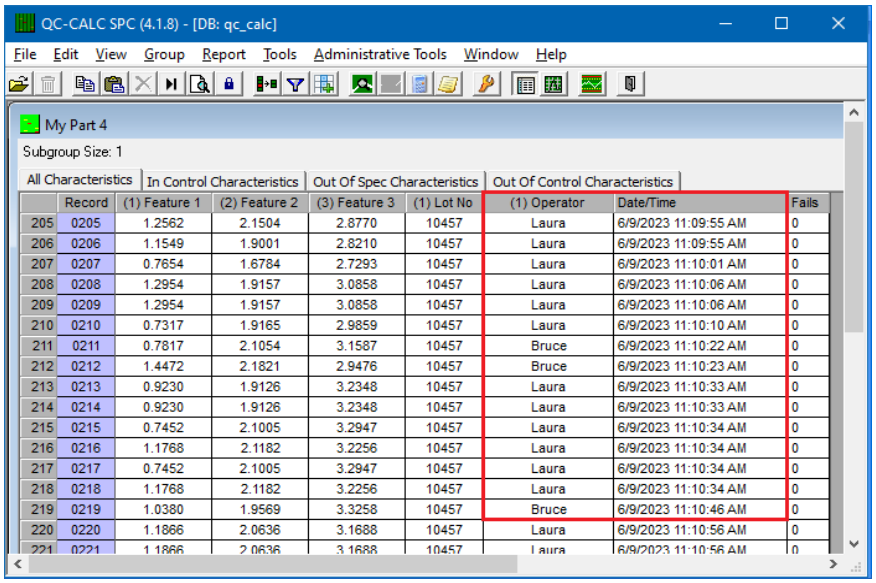
The **Sort By Date** option will organize the merged part file in order of the time that the parts were inspected. For example, the part files shown below are about to be sorted by date. The part file on the left is the destination file and the right one is the source file.



	Record	(1) Feature 1	(2) Feature 2	(3) Feature 3	(1) Lot No	(1) Operator	Date/Time	Fails
1	0001	1.1430	1.9199	2.9179	10457	Bruce	6/9/2023 10:15:40 AM	0
2	0002	1.0944	2.1310	2.9486	10457	Bruce	6/9/2023 10:15:41 AM	0
3	0003	1.1233	2.2165	3.0575	10457	Bruce	6/9/2023 10:15:41 AM	0
4	0004	1.0621	2.2190	2.9805	10457	Bruce	6/9/2023 10:15:41 AM	0
5	0005	0.9318	2.1506	3.2428	10457	Bruce	6/9/2023 10:15:41 AM	0
6	0006	0.7468	2.0598	2.8833	10457	Bruce	6/9/2023 10:15:41 AM	0
7	0007	1.1090	2.0498	3.0294	10457	Bruce	6/9/2023 10:15:42 AM	0
8	0008	0.9079	2.0636	3.0662	10457	Bruce	6/9/2023 10:15:42 AM	0
9	0009	1.2729	1.8713	3.1580	10457	Bruce	6/9/2023 10:15:42 AM	0
10	0010	1.3166	2.1890	2.9803	10457	Bruce	6/9/2023 10:15:42 AM	0
11	0011	0.9782	2.0458	2.9430	10457	Bruce	6/9/2023 10:15:42 AM	0
12	0012	1.2903	1.9185	3.1515	10457	Bruce	6/9/2023 10:15:43 AM	0
13	0013	1.0252	1.9476	2.7422	10457	Bruce	6/9/2023 10:15:43 AM	0
14	0014	1.0030	1.9519	2.4427	10457	Bruce	6/9/2023 10:15:43 AM	1
15	0015	0.7848	1.9569	3.4009	10457	Bruce	6/9/2023 10:15:43 AM	0
16	0016	0.7087	1.9237	3.0195	10457	Bruce	6/9/2023 10:15:44 AM	0
17	0017	0.9783	2.1679	3.1488	10457	Bruce	6/9/2023 10:15:44 AM	0

	Record	(1) Feature 1	(2) Feature 2	(3) Feature 3	(1) Lot No	(1) Operator	Date/Time	Fails
1	0001	1.2155	2.1792	3.1001	10457	Laura	6/9/2023 10:16:26 AM	0
2	0002	0.8756	1.8467	2.9750	10457	Laura	6/9/2023 10:16:26 AM	0
3	0003	1.0979	2.1687	2.9820	10457	Laura	6/9/2023 10:16:26 AM	0
4	0004	1.0400	2.0982	3.0279	10457	Laura	6/9/2023 10:16:26 AM	0
5	0005	1.2949	1.5692	3.0719	10457	Laura	6/9/2023 10:16:27 AM	0
6	0006	0.9735	2.0426	2.9533	10457	Laura	6/9/2023 10:16:27 AM	0
7	0007	1.0160	2.2104	2.8968	10457	Laura	6/9/2023 10:16:27 AM	0
8	0008	1.0353	1.9833	3.1046	10457	Laura	6/9/2023 10:16:27 AM	0
9	0009	1.0787	2.0296	3.0040	10457	Laura	6/9/2023 10:16:27 AM	0
10	0010	1.4442	1.8875	2.4536	10457	Laura	6/9/2023 10:16:27 AM	1
11	0011	0.9692	1.9475	2.8870	10457	Laura	6/9/2023 10:16:28 AM	0
12	0012	1.0351	1.9063	2.7621	10457	Laura	6/9/2023 10:16:28 AM	0
13	0013	0.9693	1.8757	2.9847	10457	Laura	6/9/2023 10:16:28 AM	0
14	0014	0.9923	2.1170	3.0069	10457	Laura	6/9/2023 10:16:28 AM	0
15	0015	1.0877	1.7644	3.0377	10457	Laura	6/9/2023 10:16:28 AM	0
16	0016	0.9705	2.0936	3.0668	10457	Laura	6/9/2023 10:16:28 AM	0
17	0017	1.2489	1.9318	3.0640	10457	Laura	6/9/2023 10:16:29 AM	0

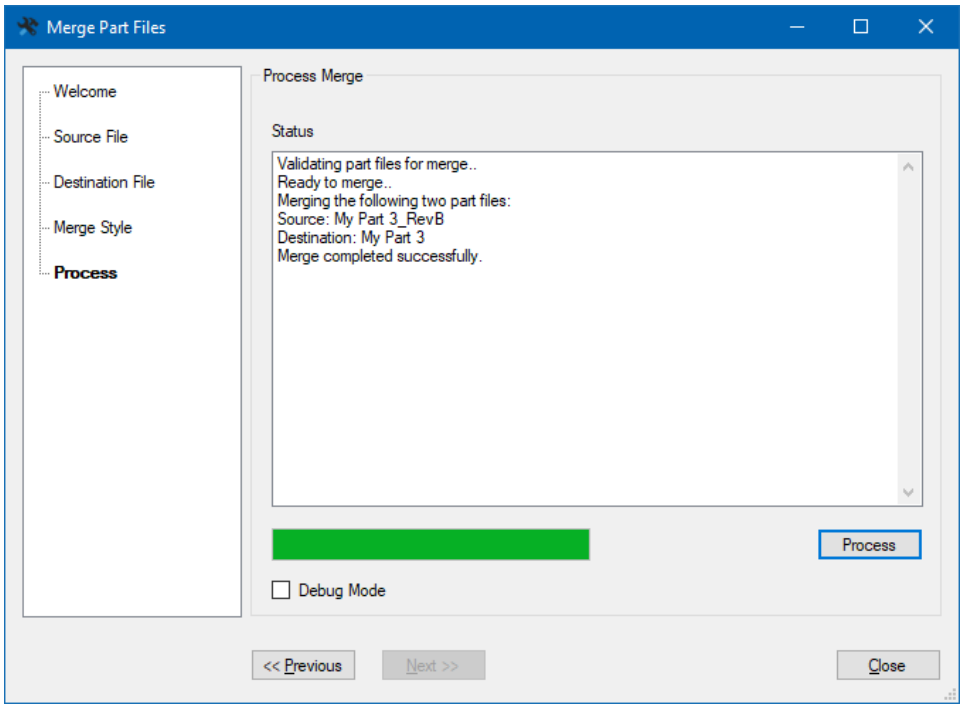
When the part files are merged, they are sorted by what time the parts were inspected as shown in the example. The data is mixed unlike how it would be if it were appended.



	Record	(1) Feature 1	(2) Feature 2	(3) Feature 3	(1) Lot No	(1) Operator	Date/Time	Fails
205	0205	1.2562	2.1504	2.8770	10457	Laura	6/9/2023 11:09:55 AM	0
206	0206	1.1549	1.9001	2.8210	10457	Laura	6/9/2023 11:09:55 AM	0
207	0207	0.7654	1.6784	2.7293	10457	Laura	6/9/2023 11:10:01 AM	0
208	0208	1.2954	1.9157	3.0858	10457	Laura	6/9/2023 11:10:06 AM	0
209	0209	1.2954	1.9157	3.0858	10457	Laura	6/9/2023 11:10:06 AM	0
210	0210	0.7317	1.9165	2.9859	10457	Laura	6/9/2023 11:10:10 AM	0
211	0211	0.7817	2.1054	3.1587	10457	Bruce	6/9/2023 11:10:22 AM	0
212	0212	1.4472	2.1821	2.9476	10457	Bruce	6/9/2023 11:10:23 AM	0
213	0213	0.9230	1.9126	3.2348	10457	Laura	6/9/2023 11:10:33 AM	0
214	0214	0.9230	1.9126	3.2348	10457	Laura	6/9/2023 11:10:33 AM	0
215	0215	0.7452	2.1005	3.2947	10457	Laura	6/9/2023 11:10:34 AM	0
216	0216	1.1768	2.1182	3.2256	10457	Laura	6/9/2023 11:10:34 AM	0
217	0217	0.7452	2.1005	3.2947	10457	Laura	6/9/2023 11:10:34 AM	0
218	0218	1.1768	2.1182	3.2256	10457	Laura	6/9/2023 11:10:34 AM	0
219	0219	1.0380	1.9569	3.3258	10457	Bruce	6/9/2023 11:10:46 AM	0
220	0220	1.1866	2.0636	3.1688	10457	Laura	6/9/2023 11:10:56 AM	0
221	0221	1.1866	2.0636	3.1688	10457	Laura	6/9/2023 11:10:56 AM	0

1.2.4 Process

The Process step is the final part of **Merge Part Files** where the part files will be merged. Click the **Process** button to start the processing of the files. As the files are processed, the **Status** area at the top of the screen will update to show you the processing that is happening.



Status

The **Status** box shows the status of the merging. If there is an error, a message will appear in this section saying that there was an error, and the part files cannot be merged along with an explanation as to why. This means that you will have to go back and change either the source file or the destination file to correct the error.

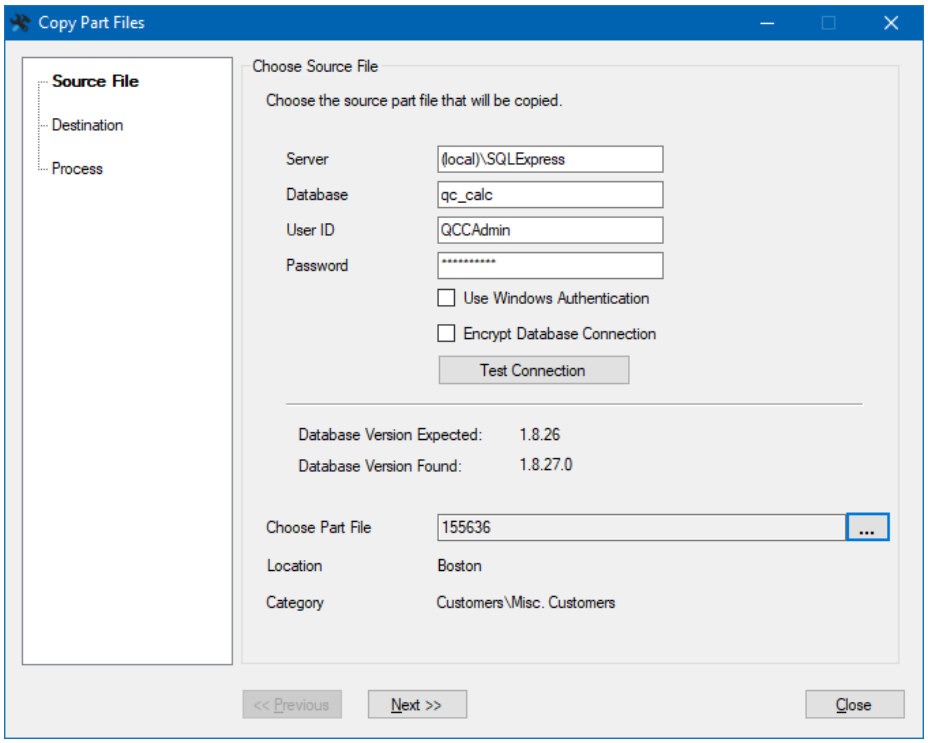
Debug Mode

A Prolink support person may ask you to check this box if you have run into problems merging files.

1.3 Copy Part Files

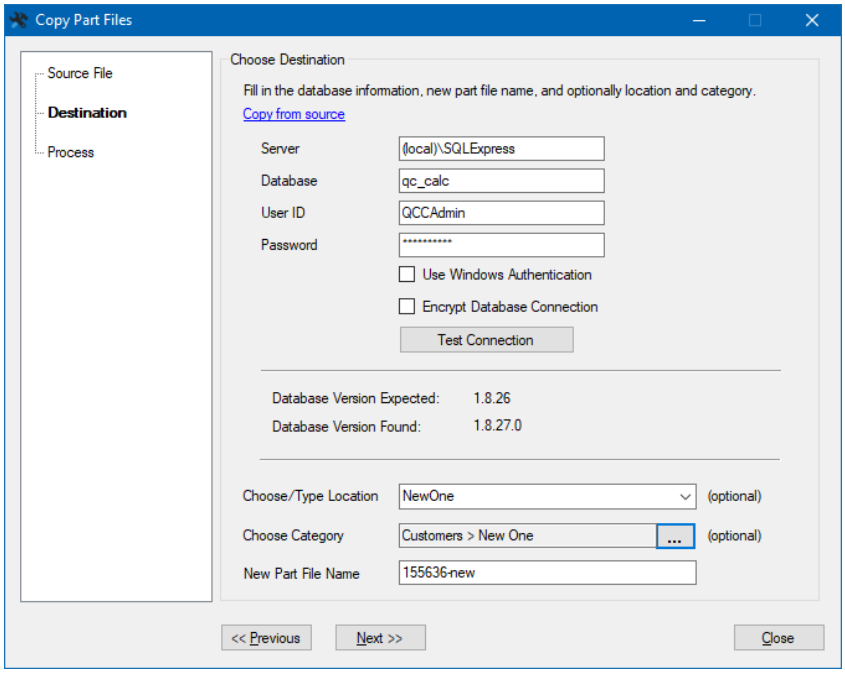
1.3.1 Source File

This utility is used to copy part files from within SQL Server only. The regular Windows interface should be used to copy QCQ files. Enter all the typical server information for the database and click the **Test Connection** button to make sure it is all correct. Once that is done use the ... button to choose the part file you wish to copy. If used, the **Location** and **Category** will be displayed.



1.3.2 Destination

This screen is used to choose where the copy of the part file will be made. Enter all the typical server information for the database and click the **Test Connection** button to make sure it is all correct. You can use the **Copy from source** link to copy all of the SQL Server settings from the previous screen if needed.



Choose/Type Location

You can choose to put the new part file into an existing **Location**, type a new file to create a new Location within the database, or leave this area blank to keep the part file out of any Location at all.

Choose Category

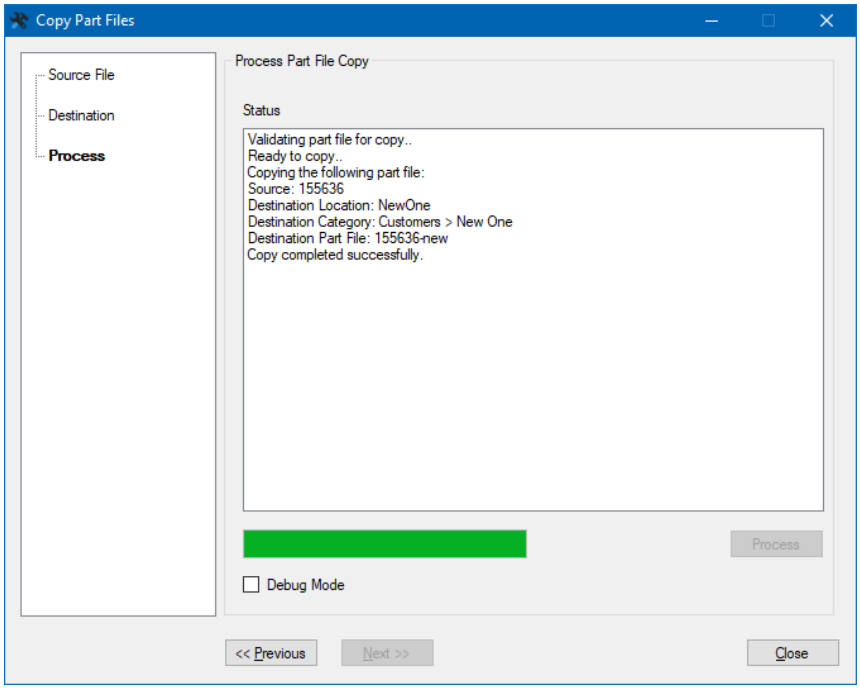
Use the ... button to choose a **Category** for the new part file or leave this area blank to not use a Category at all.

New Part File Name

The previous part file name will be shown here automatically, but if you would like to rename the file in the process of making the copy this is where the new name would be entered.

1.3.3 Process

Click the **Process** button to start the processing of the files. The **Status** area at the top of the screen will update to show you the processing that is happening.



Status

The **Status** box shows the process of the copying. If there is an error, a message will appear in this section saying that and the part file cannot be copied along with an explanation as to why. This means that you will have to go back and change either the source file or the destination file to correct the error.

Debug Mode

A Prolink support person may ask you to check this box if you have run into problems copying files.

1.4 Flatten Models

As part files are changed over time, behind the scenes models may be created to keep track of these changes. For example, if you change the nominal and tolerances for a specific characteristic a new model would be created, and the old data would be in the old model along with the old nominals and tolerances. The new model would mark the point where those values were changed, and all new data would be saved into that model. QC-CALC is not model aware, and you will just see the new nominal and tolerances applied to all data in the file, but if you use ERS you will see the different models over time.

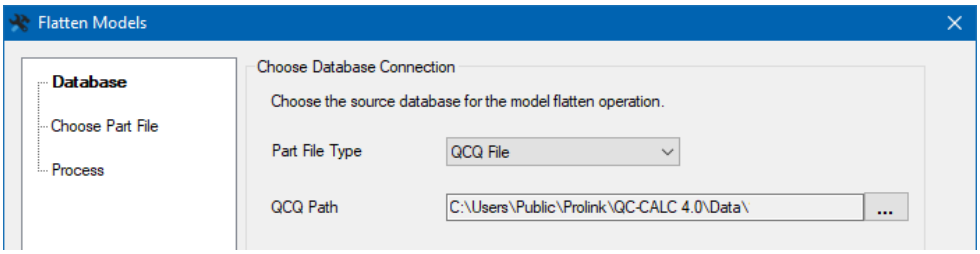
It is possible to have models created that do not actually contain any data. If you changed the nominals or tolerances within a part file twice without collecting any data in the middle, then you would have 2 new models created, but only the last model would end up with data (as new data is collected). When QC-CALC, SPC Office Buddy, or ERS are gathering up data to run a report (for example) the data from the different models needs to be joined so the same characteristic is kept together. This process of gathering up the data will get slower and slower over time as more and more models are added to a part file.

The Flatten operation will use the information (Labels, nominals, tolerances, …) from the latest model and bring all data forward into that model. At this point it will remove the old models and the speed for that file should be faster. **NOTE:** It is highly recommended that you use the **Copy Part Files** operation to make copies of any files you plan on flattening before doing anything else. It is always safer to have copies of part files before doing any operations like this.

1.4.1 Database

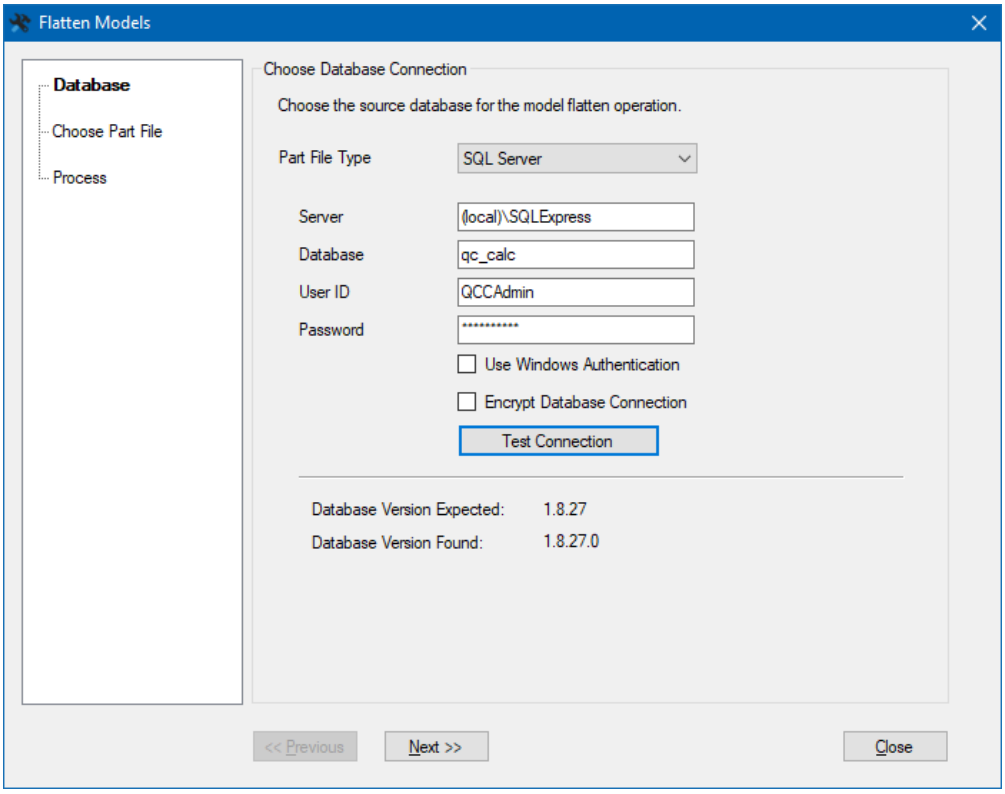
QCQ File

Choose the folder containing your QCQ files on the **Database** screen.



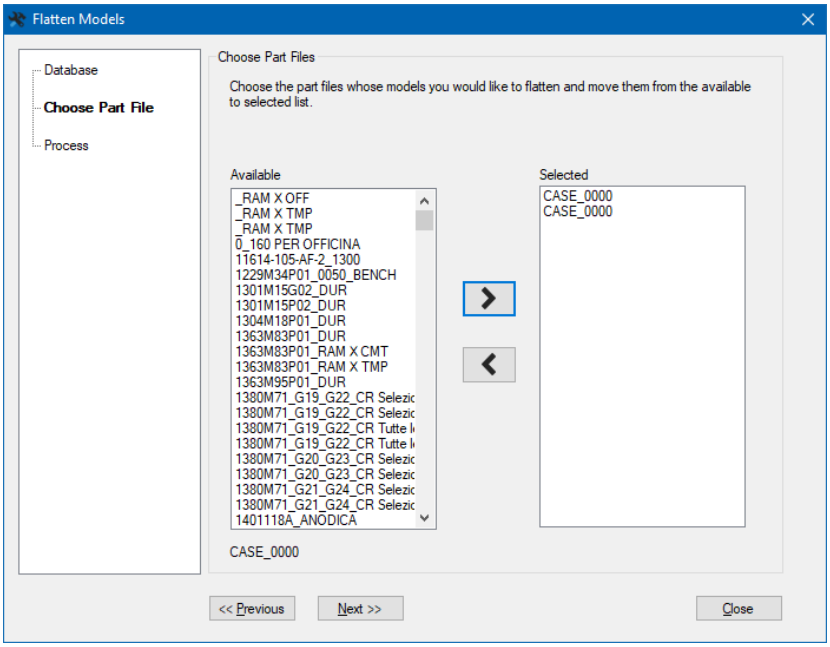
SQL Server

Enter all the typical server information for the database containing the part files to be flattened and click the **Test Connection** button to make sure it is all correct.



1.4.2 Choose Part File

The **Choose Part File** section is where you choose the part files with the model that you will be flattening (or merging).

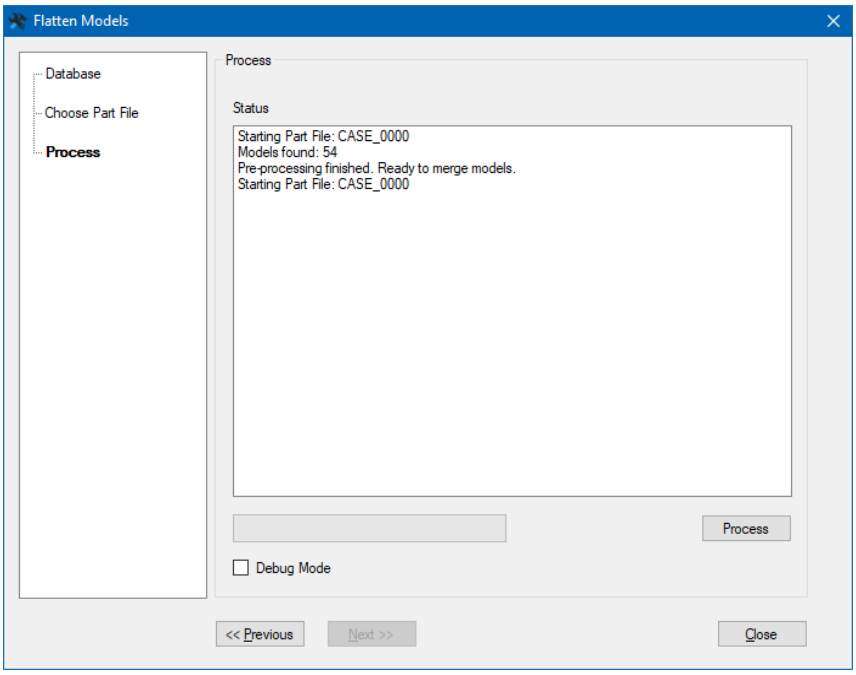


Available

The available section shows the part files that you gave the information for in the following section

1.4.3 Process

The Process step is the final part of **Flatten Models** area where the models will be flattened. Click the **Process** button to start the processing of the files. The **Status** area at the top of the screen will update to show you what is happening.



Status

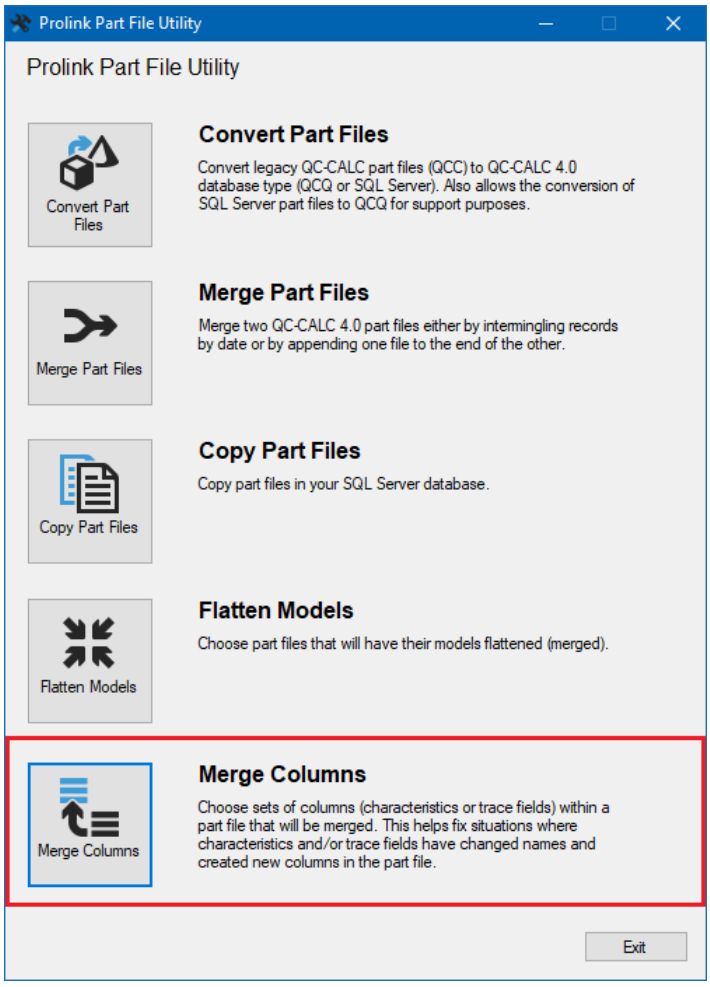
The **Status** box shows the process of the flattening. If there is an error, a message will appear in this section saying that there was an error and the model could not be flattened along with an explanation as to why.

Debug Mode

A Prolink support person may ask you to check this box if you have run into problems merging models.

1.5 Merge Columns

When there is a change in the name of a characteristic or trace field, new columns will be created in the part file that will not have data from the prior name. Both names will exist in the same part file and the overlapping data will be turned into golden dots. This area merges these columns so that all of the data is in the new name and the old column is removed.

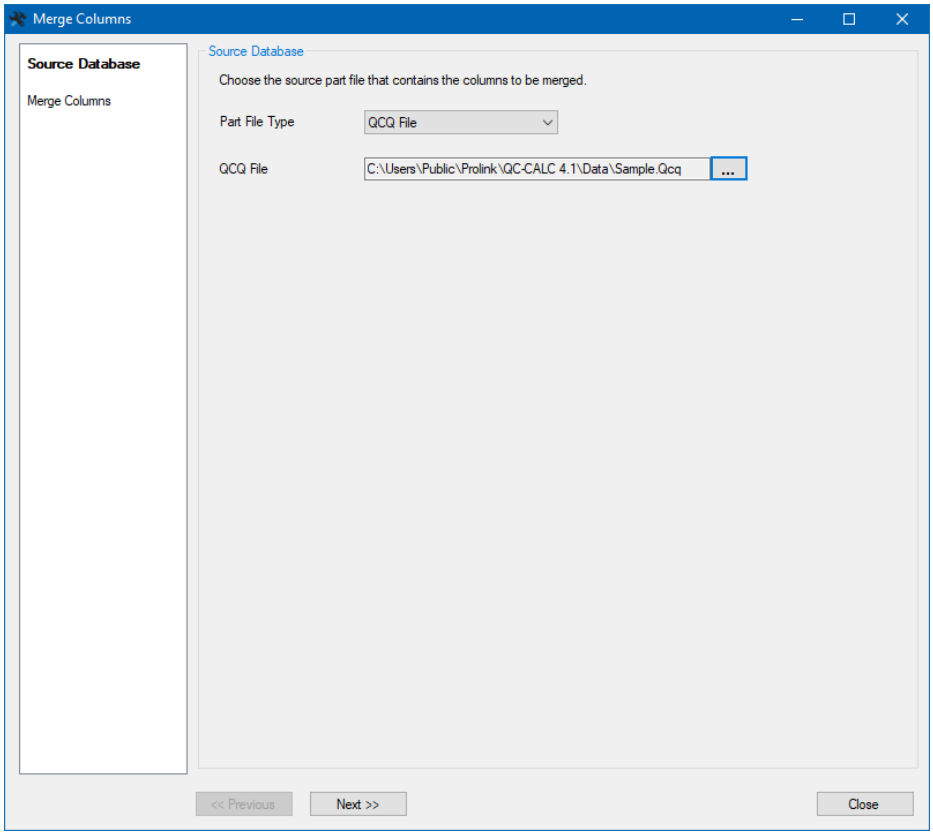


1.5.1 Source Database

This is where the part file that has the columns that will be merged is selected.

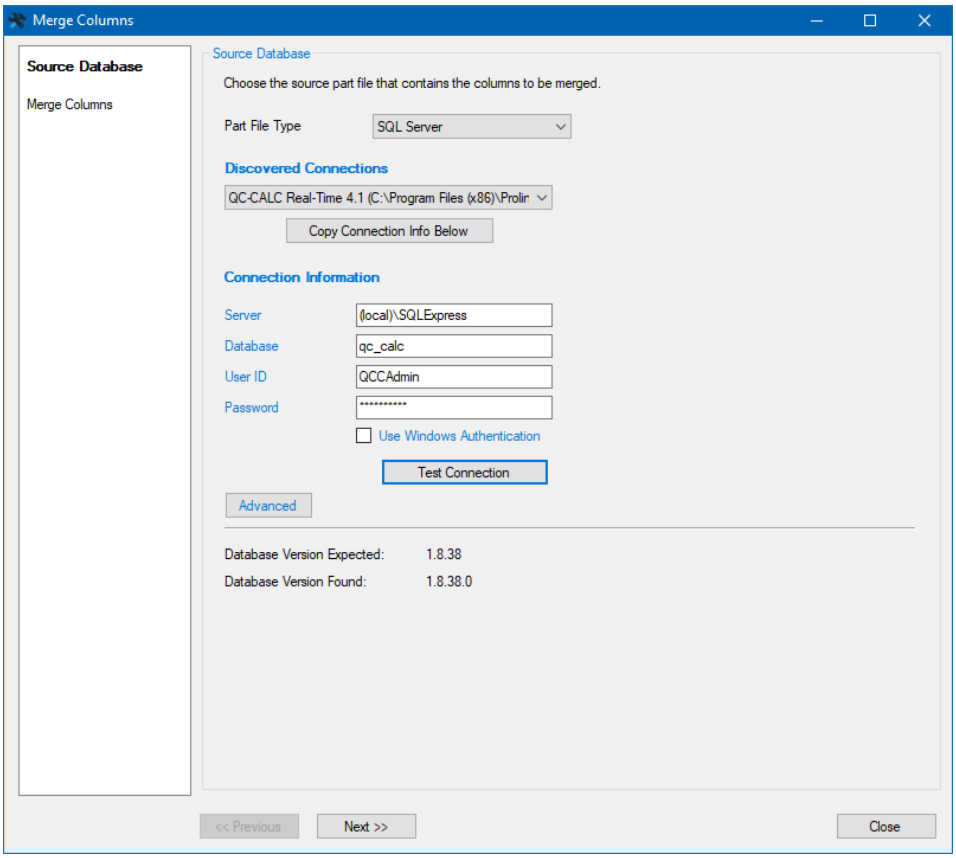
QCQ

If the part file type is a QCQ file, select QCQ File in the **Part File Type** area. Input the QCQ part file path that you would like to use in the **QCQ File** by clicking the **…** button or typing in the path.



SQL

If the part file is from SQL Server, select SQL Server in the **Part File Type** area.

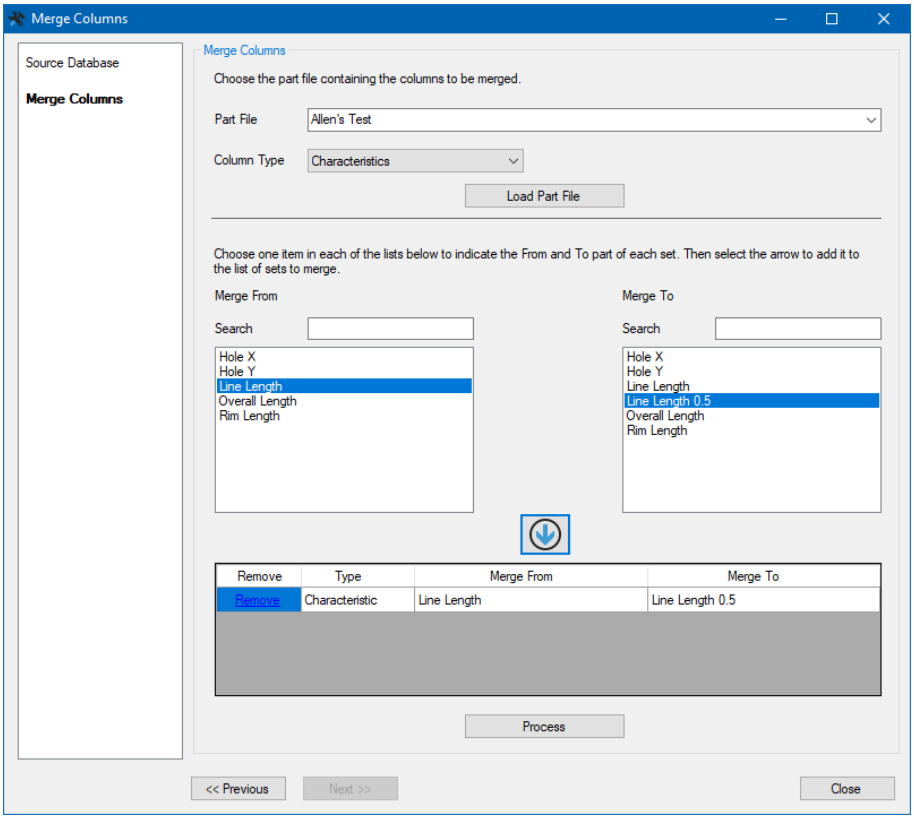


Discovered Connections
In this area, other Prolink software are looked at in order to fill in the server information from them. This makes it so you do not have to fill in the SQL server information again if you plan to get data from the same server you are on another program.

Connection Information
This is where the SQL Server information is filled out for the server that has the part file that will be changed.

2. Merge Columns

This is where the part file will be selected and merged.



Part File
All of the part files from either the area specified in the **Source Database** are shown in the list from this area. Select the part file that has the column you wish to merge from the list.

Column Type
Changes to characteristics, text trace fields, and numeric trace fields all cause the creation of a new column. Here you can specify which of these should be merged.

Load Part File
Click this to load the part files in the file specified.

Merge From
Select the original name of the part file. This will be removed when the merge is completed.

Merge To

Select the new name of the part file. This will be the name of the column after the merge. Below shows the end result. The data that was split is merged into one column with the new name.