



PIESE Express

PIES Mapping Software

Software User Manual

Version 1.2

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PIESEXPRESS

Overview

PIES has become the preferred method to exchange product data within the auto care industry. But many companies maintain product data in systems or data structures that are not PIES-aware. **PIESExpress** is a PIES publishing solution for companies that cannot otherwise deliver their data in the PIES xml format.

Installation

The setup program is a Windows Installer package stored in a zip file and downloaded from the PIESExpress product page of our website (the trial version becomes licensed when registered). The installer is digitally signed and should not be used if "Unknown" or has a signer other than "Winsby Group LLC". Two installers are provided, (one for Windows 32bit and another for Windows 64bit OS platforms).:

```
PIESExpress_Setup_x86_v1.0.0.msi  
PIESExpress_Setup_x64_v1.0.0.msi
```

The End User License Agreement is displayed during installation. By using the software, you agree to the terms and conditions of that Agreement.

Running the setup program installs two shortcuts on your desktop, one for PIESExpress and a second for this user manual. A shortcut to "PIESExpress Samples" is created in your **Documents folder** and contains sample projects from various data sources.

NOTE: PIESExpress requires an **Access Database Driver**. if you don't have MS Office installed, or if you do have Office installed, but it is O365 you will need to install it.

Download the proper **Microsoft Access Database Engine 2010 Redistributable** from the link provided below. Use *AccessDatabaseEngine.exe* for x86 setups or *AcessDatabaseEngine_X64.exe* for x64 setups.

```
http://www.microsoft.com/en-us/download/details.aspx?id=13255
```

Software Registration

The program will run in a limited "Trial" mode until it is registered. When you purchase a license, you will receive two pieces of information via email such as.

```
ACME Automotive  
9d91d202-6ce8086c-fc571dc2-3c40ff9a
```

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Start PIESEXPRESS and use the **Help > Register** menu to bring up a dialog screen. Copy and paste the two lines exactly as they are delivered in the email. Press OK to complete the registration process.

AutoCare PCdb

PIES reference codes are provided by AutoCare in the **PCdb** (Part Category Database) and are required for the program to function properly.

This database is updated monthly and is available for free from AutocareVIP (after registering) in several formats. It is a good idea to create a local directory where the latest version is stored and can be accessed by the program (using the MS Access .accdb version).

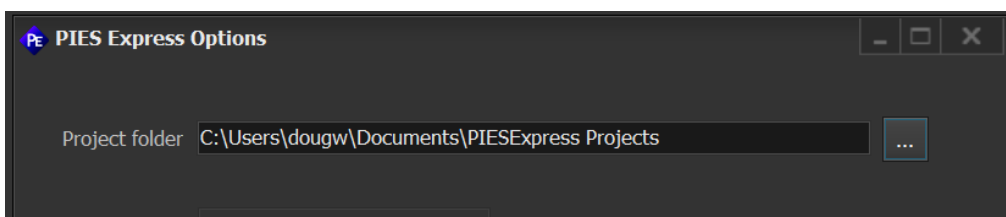
Launching PIESEXPRESS

Double-click on the **PIESEXPRESS** shortcut icon on your desktop to start the program. Alternatively, you can double-click on any .pieexpress file and it will start the program and load that project (just as you might with a Word or Excel document).

Missing Source Data File

If you attempt to open a project where a “source” file (explained below) is not located on your system or network, the program will provide a warning and display the standard **File Open dialog** so you can locate the missing file.

One way to keep this message from occurring is to work under the “Project folder” as defined in the options screen:

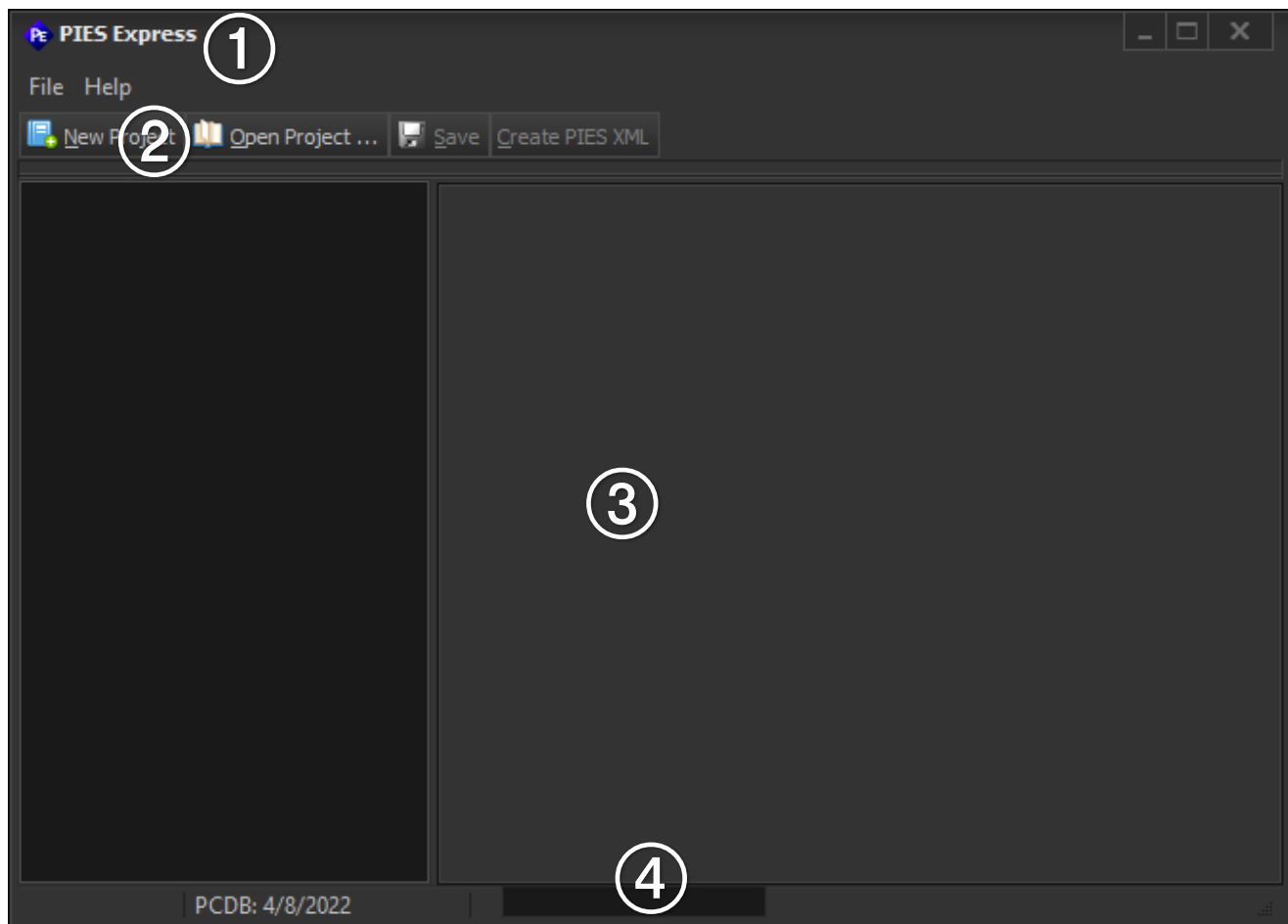


All source files are relative to this folder, and moving a project to another machine is as simple as placing it in their defined “project folder”.

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Main Screen

When you first start the program, you will see the following screen.



The main screen is divided into four areas: (1) Title bar, (2) Menu bar (with associated short-cut toolbar), (3) Current project (or blank as shown above because nothing is open yet), and (4) Status bar. The Title bar shows the program name followed by the currently open project name (if any). The Menu bar includes a “File” menu and “Help” menu.

File Menu. The first “section” of the File menu provides ways to manage your projects. Each PIESEXPRESS project is a separate file on disk with a “.piesexpress” extension. Menu items are provided to create a new project, open an existing project and save the project (optionally with a new name).

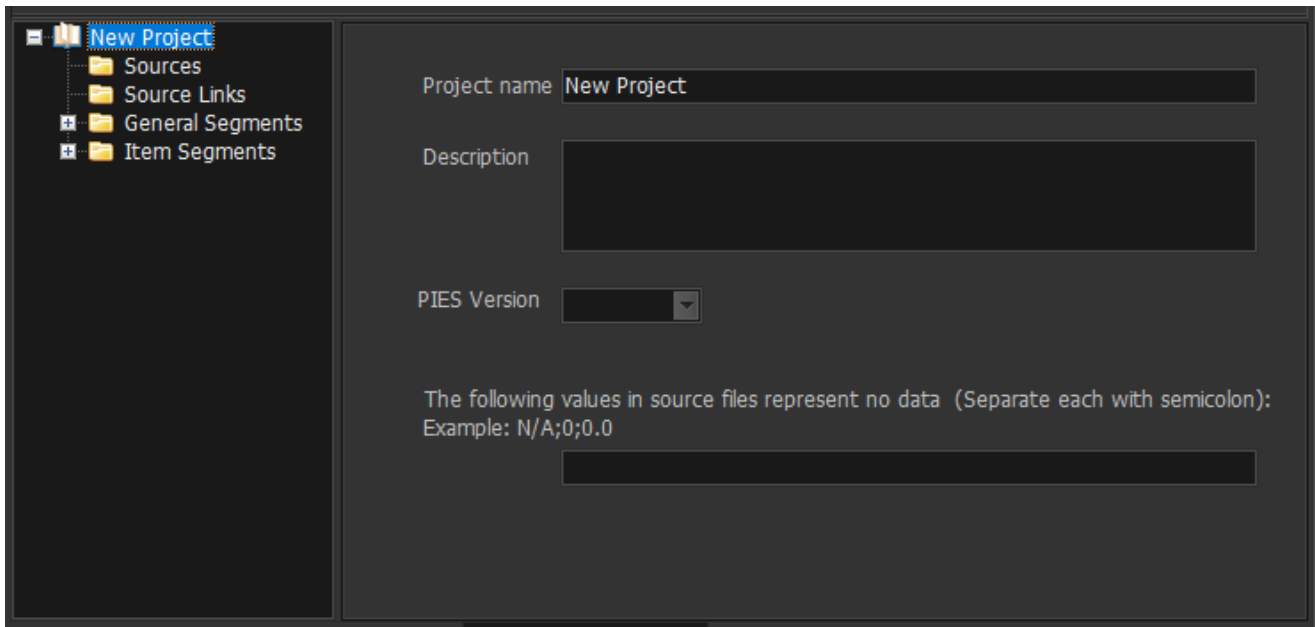
TIP: It’s recommended that you create a new directory for each project you work on, along with sub-directories for your data sources and output files.

Open PCdb. Use this selection to link to a saved PCdb (MS Access database). The location is remembered so you don’t need to open it each time you start the program, but it can be changed at any time. When opened, the “version” is shown in the status bar at the bottom of the screen.

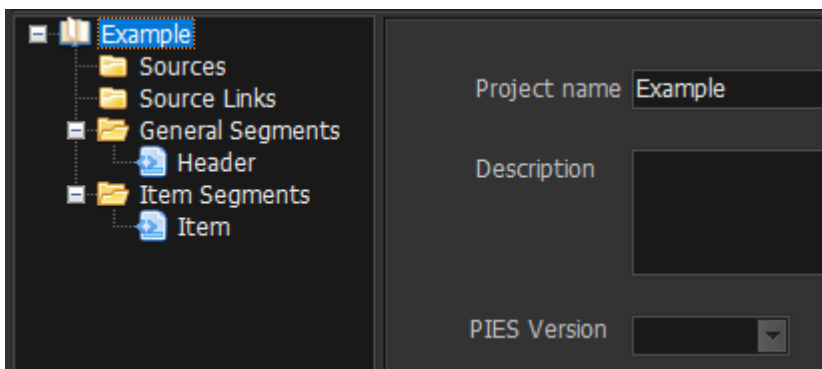
Program Settings (Options). There are currently two user settings available on the Options screen: The “Project Folder” and program “Appearance”. The project folder defines where to find the project definition files you use to control the PIES publishing functions.

The Current Project

When you open a project (or create a new one), the main section in the screen will change to show the Project Tree on the left and associated settings for the selected item in the tree on the right. If you press the **New Project** button, for example, you’ll see this:



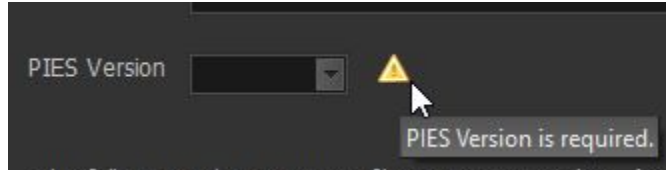
The area on the right relates to the selected root in the project tree with general project settings. Changing the “Project name” field on this form will show that name in the top item in the project tree.



There can be, as in this case, required fields on a form. If you navigate to a different element in the project tree, it will make sure all required fields have been entered. If any problems are found, a message dialog box is shown, and an indicator placed next to the problem field. You can hover your cursor over the indicator to see more about the problem.

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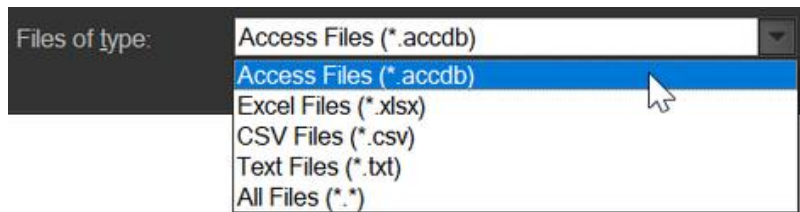
For example:



In the project tree shown above, the **General Segments** and **Item Segments** (expanded here to show default contents) correspond to PIESEXPRESS “segments” as defined in the PIESEXPRESS Standard. General Segments refer to non-item specific segments such as **Header**, **Market Copy** and **Price Sheets**; while Item Segments refer to item-specific segments such as **Item**, **EXPI**, **Attributes**, etc. **Double-click** on a container in the project tree to **expand** it.

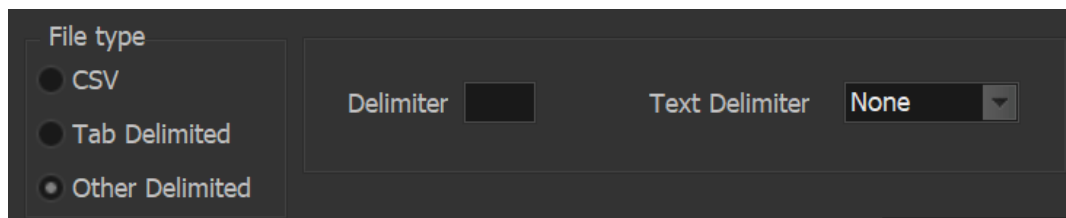
Sources. Each project requires at least one data source. This could be an Access Database (.accdb), an Excel file (.xlsx), a comma-separated-values file (.csv), or a delimited-text file (.txt).

To **add a new data source**, click on “Sources” in the project tree and **right-click** to show the “Add” option. Give the source an internal name (e.g. “Main”) and select the Filename. A standard Windows File Open dialog is displayed. Use the “Files of type” drop-down to select the type you need:



If the file type is not Access, you will probably have a file with column headings. If this is the case, check the “**Has field names**” option to tell the program to use the first row as column headings.

If you select a delimited text file (that is not tabbed-delimited) you will need to fill in some other information as shown here:



You can add as many Sources as required, provided they have a related column in common (so they can be joined together). This is normally done with a **Part Number** column in each source file.

It is a good idea to press the “Test Connection” button after selecting the file to make certain it is accessible by the program.

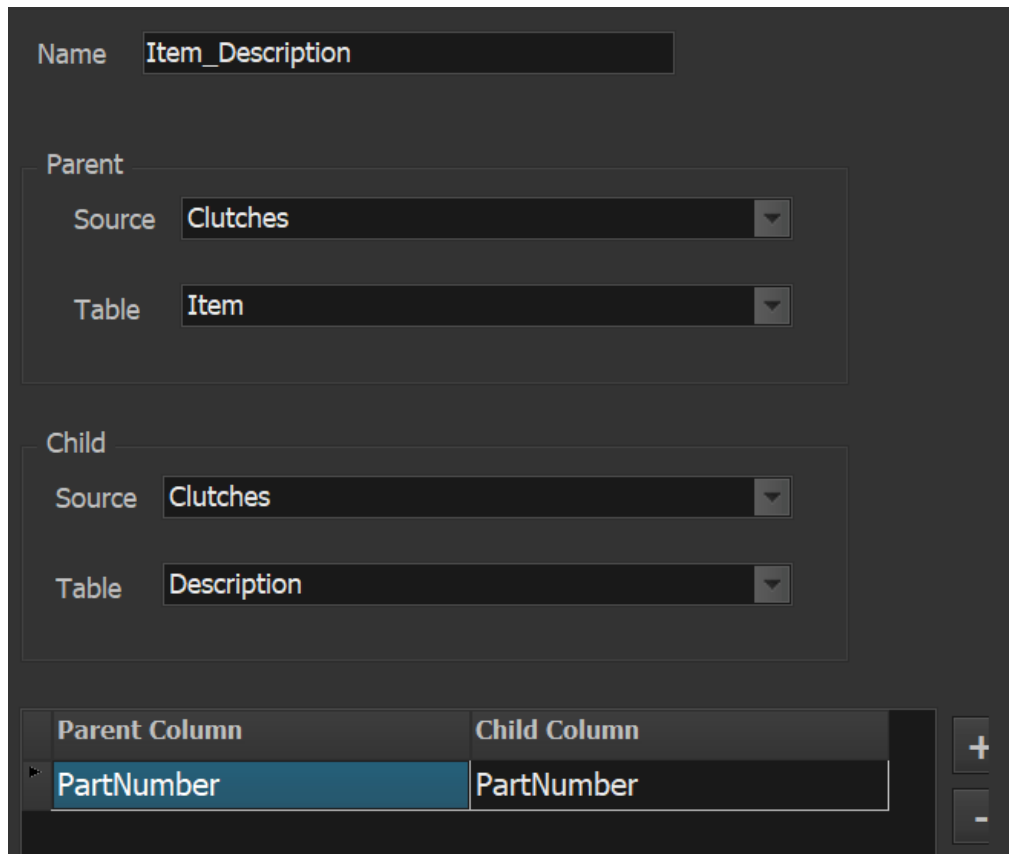
TIP: Save your work periodically using **File > Save** or the “**Save**” button on the toolbar.

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Source Links. If you have more than one Source defined or a Source contains more than one table or worksheet that you need, you must define how they will be linked together.

To create a new Source Link, **right click** on **Source Links** in the project tree and press **Add**.

Create a **Name** that describes the relationship. For example, “Item_Description” for a relationship that links the Item table with the Description table.



Parent Column	Child Column
PartNumber	PartNumber

This describes a relationship between two tables in an Access (or Excel) file. The Table for an Excel file refers to a worksheet.

Press the Plus button to add a link field. Here (as in most cases) they refer to a common Part Number column in both the Item and Description tables.

General Segments. As mentioned above, the General Segments container is used for PIES segments that are not driven by the Item (Part Number).

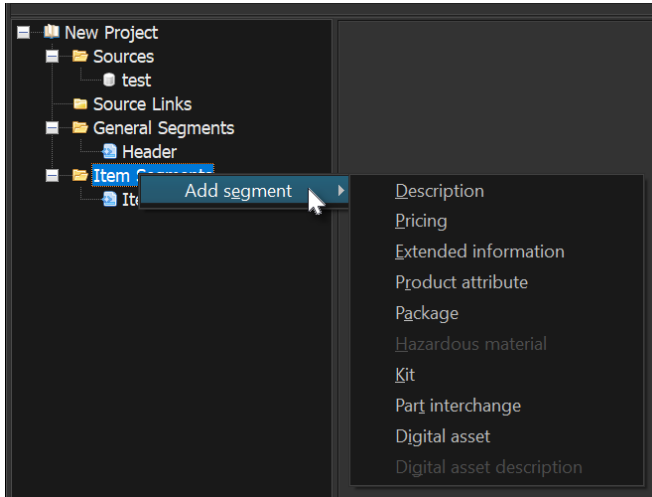
Header. The header segment is required, but does not necessarily require an external source. The only elements that you must supply are **PIES Version**, **Brand Owner DUNS** (or **Brand Owner GLN**), and **PCdb Version Date**.

These requirements are displayed on the details page when you select the Header item in the project tree. In fact, all mapping tables are structured (and maintained) similarly. Let’s discuss that first.

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Item Segments. The “Item” segments manage mapping for all PIES segments driven by part number. “Item” is required and so automatically added.

To add additional item segments, right-click on the “Item Segments” container and press the “Add segment” button (**note:** you must have a Source defined first):



Then select the desired segment you want to add (such as “Description”). There are a few segments which depend on other segments being defined first. You can see above that “Digital asset descriptions” cannot be added before the “Digital asset” segment.

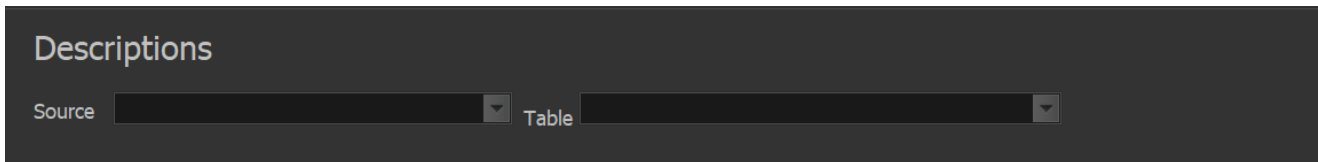
To remove a segment (except for the required Header and Item segments), **right-click** and press **Delete**.

Once a segment has been added, you will be presented with that segment’s mapping screen.

Mapping Screens

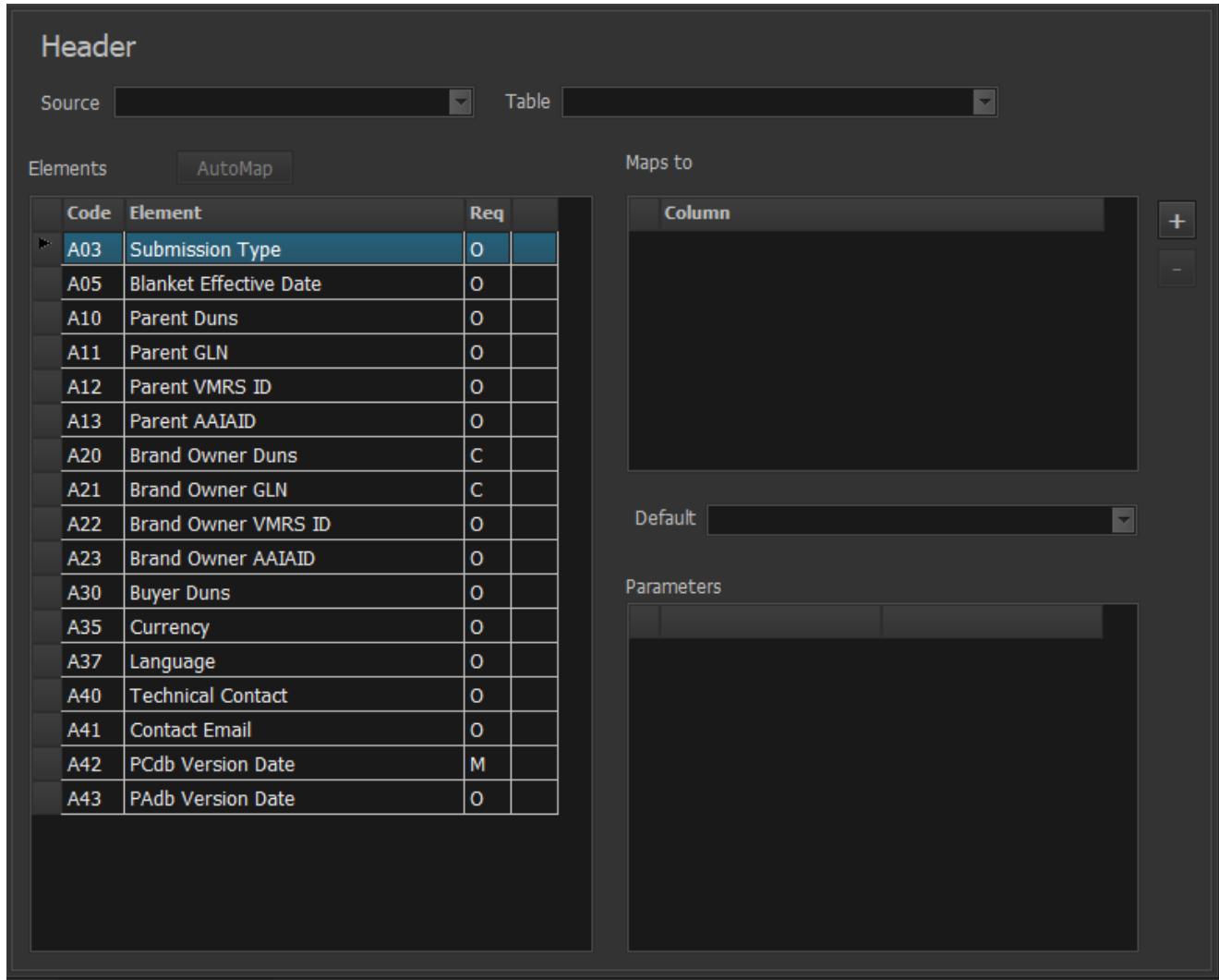
The main job of PIESEXpress is to “map” your source data to PIES terminology.

Each mapping screen looks similar. Each will have a section at the top with section title and two drop-downs to define the data to be mapped:



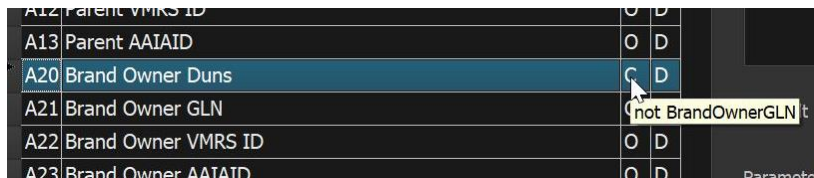
Here is an example of the **Header** mapping screen when it’s first displayed (before any maintenance has been performed).

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The **Source** drop-down is populated from defined Sources. The **Table** drop-down is populated from available source tables (or Excel sheets and named-ranges). Excel sheets will have a “\$” suffix.

The **Elements** grid displays all PIES elements that could be mapped to the source columns (or provided with a “default” value). This grid contains four columns: **Code** relates to the PIES specification, **Element** is the PIES element name, Req defines that element’s requirement setting (**M** = Mandatory, **O** = Optional, **C** = Conditionally required if another field is not included, **K** = Mandatory or optional Key field). Hover your cursor over a “C” type to show the other related field. For example:



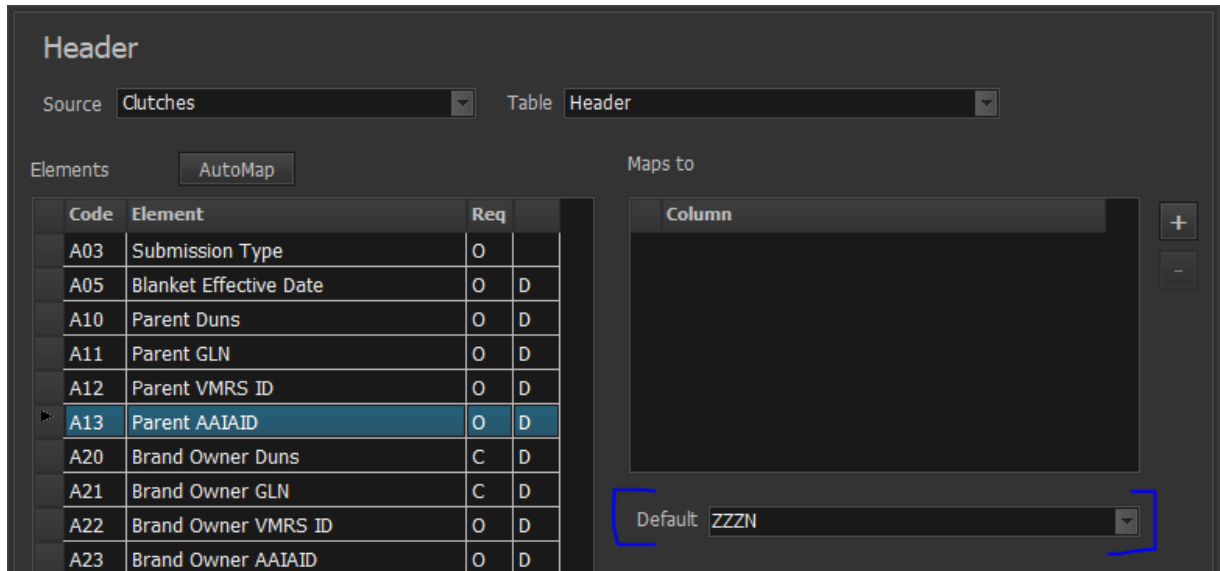
The **final (right-most) column** in the Elements grid does not have a header, but indicates whether or not the PIES element has been mapped (either to a source data column or with a default value). A “**D**” indicates a standard data mapping. A “**P**” indicates a mapping that requires parameters (described further below).

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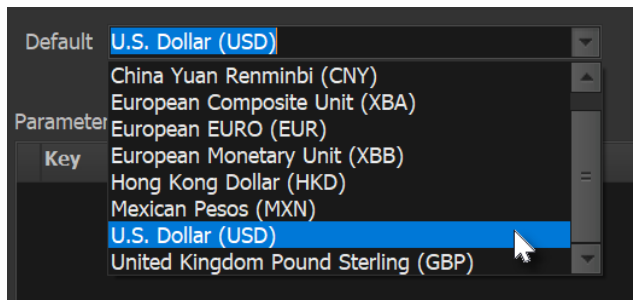
Default Values. A value entered or selected in the **Default** combo-box will apply if there is no mapping defined for an Element, or if a mapping is defined, but the source column has “no data” as defined on the main project page:

```
The following values in source files represent no data (Separate each with semicolon):  
Example: N/A;0;0.0  
0;0.0;N/A;NUL
```

Here is an example of a Default value being supplied for a Mandatory PIES element without mapping to a data source column. This means that A03 will always have “UPDATE”:



Some PIES Elements have a “list of values” defined which are then used to populate the Default drop-down, as shown here for A35 “Currency”:

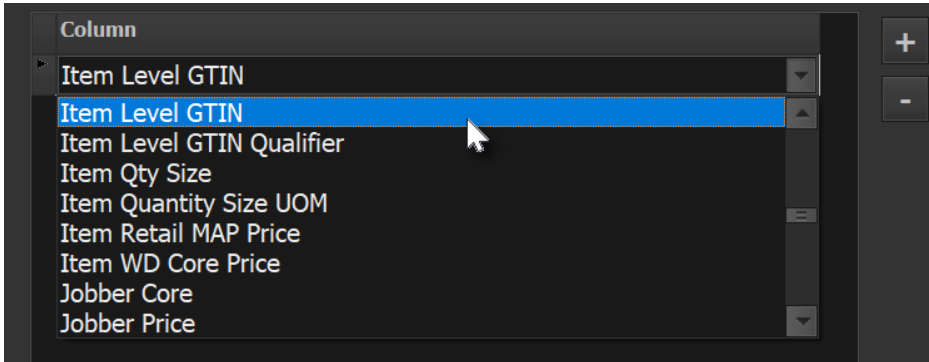


AutoMap Button. Each mapping screen has an “AutoMap” button above the Elements grid. This is designed for the simple case where your source data columns match the PIES element names exactly. Pressing this button will create a “Maps To” column entry for columns that match.

Mapping Elements (D). To map a column in the source table to an element in PIES, select the desired PIES element and then press the **plus (+) button** in the **Maps to** area. Pressing the plus button creates a **new blank row** in the column list. Selecting the blank row loads a drop-down list of available columns from the selected Table for you to complete the mapping.

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Typing in the column list starts a quick search within the list. For example, the following shows the drop-down after typing “it”:

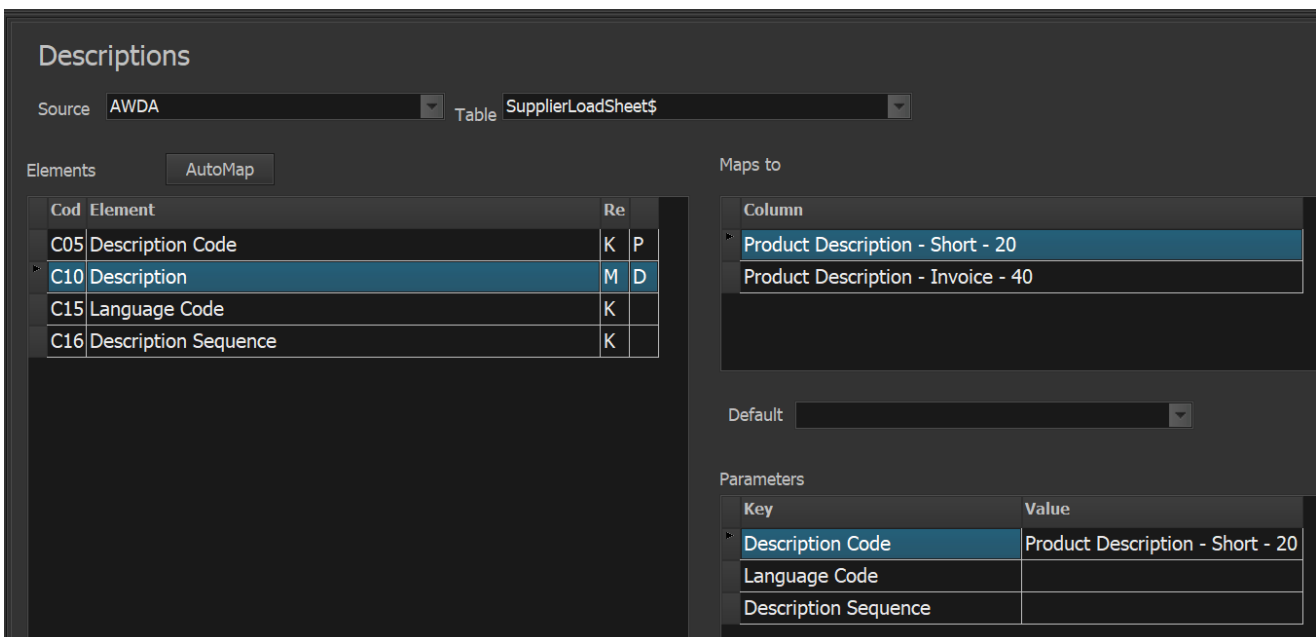


This search is not a “Filter” but simply positions you to the first column name that matches what you entered. (A pause in typing will reset the search. So “i” [pause] “t” will position at the first column starting with a “t”.)

Parameter-Based Map (P). There are cases when a column in your source table needs more information to complete the map. For example, your data may include two Product Description columns, such as:

V	W
Product Description - Short - 20	Product Description - Invoice - 40
TBI Tune-Up Kit	Throttle Body Injection Tune-Up Kit
TBI Gasket Pack	Throttle Body Injection Gasket Pack

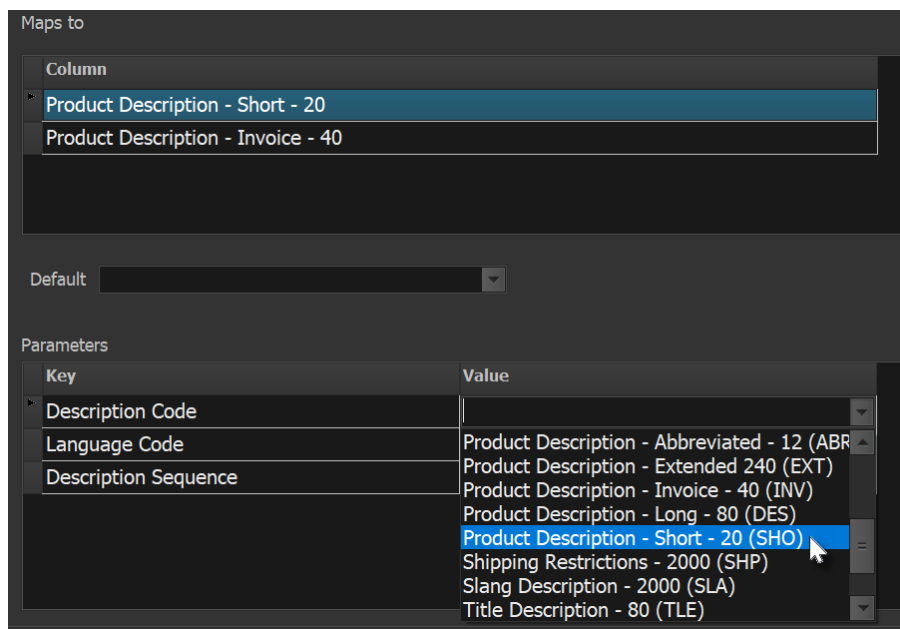
The “Descriptions” mapping screen looks like the following. Notice that the source data above does not include a “Description Code” (C05), and it is a required Key.



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The way to handle this is to map each of the source description columns (“short” and “invoice”) to the **Description (C10)** element. You now have **two columns** in the Maps to list (as seen above). But we need more information to tell the system how to code these two columns’ values. This is accomplished using the **Parameters** grid.

We selected the first source Column (“Product Description - Short - 20” in this case) and then clicked in the Description Code **Parameter Value**. It showed all of the Description Codes as defined in PIES:



It was then a simple matter to match the code to the type of description that is being supplied. In this case (SHO).

Note that we did not map anything directly for the C05 Description Code Element. PIESEXPRESS generates the proper PIES xml with the required Description Code automatically. That is why it shows that the value is supplied by the Parameters (as indicated by a “P”).

One way to remember that you probably need a parameter is if a key value (“K”) element is not included in your source data as a separate column. This often happens when you have de-normalized (i.e., “flattened”) data with repeating columns instead of normalized data with repeating rows. You often see this in wide Excel sheets where you have multiple prices or multiple packaging levels for one part number.

Here is a similar example for Extended Information (EXPI) since it is often handled as one row of fields:

Extended Information

Source: AWDA Table: SupplierLoadSheet\$

Elements: AutoMap

Cod	Element	Re
E05	EXPI Code	K P
E10	EXPI Data	M D
E15	Language Code	K

Maps to

Column

- Part Number Superseded To
- Country of Origin (Primary)
- Harmonized Tariff Code (Schedule B)
- Life Cycle Status
- MSDS FLAG
- National Popularity Code
- Part Number - Old
- Taxable Y/N

Default

Parameters

Key	Value
EXPI Code	Part Number Superseded To
Language Code	

Note also that the **Parameters grid** changes depending on the Segment. Here is an example of the Packages segment. Notice that several Elements depend on Package UOM (H15) and that you might need to also supply a "Quantity of Eaches" as a parameter (e.g. "1" for the "Each Package Level").

Packages

Source: AWDA Table: SupplierLoadSheet\$

Elements: AutoMap

Code	Element	Re
H05	Package Level GTIN	O D
H07	Electronic Product Code	O
H10	Package Bar Code Characters	O D
H15	Package UOM	K P
H20	Quantity of Eaches	K D
H21	Inner Quantity	O D
H22	Inner Quantity UOM	C D
H24	Orderable Package	O
H25	Merchandising Height (Height)	O D
H30	Merchandising Width (Width)	O D
H35	Merchandising Length (Length)	O D
H36	Shipping Height	O
H37	Shipping Width	O
H38	Shipping Length	O
H39	UOM for Dimensions	O D
H45	Weight	O D
H46	UOM for Weight	C D
H47	Weight Variance (%)	O
H50	Dimensional Weight	O
H55	Stacking Factor	O

Maps to

Column

- Each Package Level GTIN

Default

Parameters

Key	Value
Package UOM	Smallest Pack (Consumer Level)
Quantity of Eaches	1

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In this case, you also need more than one parameter assisted map. The “Quantity of Eaches (H20)”, looks like this:

Code	Element	Re
H05	Package Level GTIN	O D
H07	Electronic Product Code	O
H10	Package Bar Code Characters	O D
H15	Package UOM	K P
H20	Quantity of Eaches	K D
H21	Inner Quantity	O D
H22	Inner Quantity UOM	C D
H24	Orderable Package	O
H25	Merchandising Height (Height)	O D
H30	Merchandising Width (Width)	O D
H35	Merchandising Length (Length)	O D
H36	Shipping Height	O
H37	Shipping Width	O
H38	Shipping Length	O

Column
Each Package Inner Quantity
Quantity of Eaches in Case
Pallet Quantity of Eaches in Package

Default:

Key	Value
Package UOM	Smallest Pack (Consumer Level)
Quantity of Eaches	1

Code	Element	Re
H05	Package Level GTIN	O D
H07	Electronic Product Code	O
H10	Package Bar Code Characters	O D
H15	Package UOM	K P
H20	Quantity of Eaches	K D
H21	Inner Quantity	O D
H22	Inner Quantity UOM	C D
H24	Orderable Package	O
H25	Merchandising Height (Height)	O D
H30	Merchandising Width (Width)	O D
H35	Merchandising Length (Length)	O D
H36	Shipping Height	O
H37	Shipping Width	O
H38	Shipping Length	O

Column
Each Package Inner Quantity
Quantity of Eaches in Case
Pallet Quantity of Eaches in Package

Default:

Key	Value
Package UOM	Case (CA)
Quantity of Eaches	

Code	Element	Re
H05	Package Level GTIN	O D
H07	Electronic Product Code	O
H10	Package Bar Code Characters	O D
H15	Package UOM	K P
H20	Quantity of Eaches	K D
H21	Inner Quantity	O D
H22	Inner Quantity UOM	C D
H24	Orderable Package	O
H25	Merchandising Height (Height)	O D
H30	Merchandising Width (Width)	O D
H35	Merchandising Length (Length)	O D
H36	Shipping Height	O
H37	Shipping Width	O
H38	Shipping Length	O

Column
Each Package Inner Quantity
Quantity of Eaches in Case
Pallet Quantity of Eaches in Package

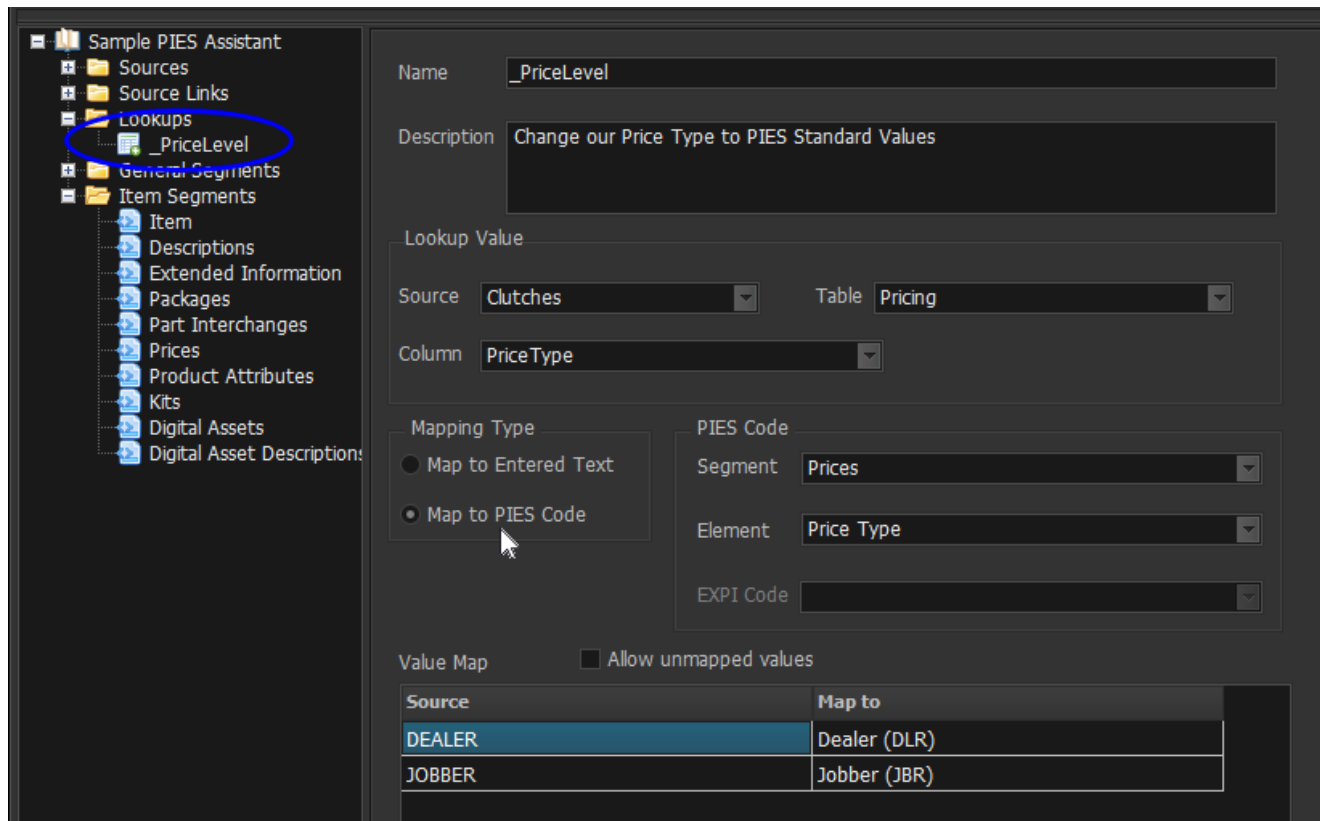
Default:

Key	Value
Package UOM	Pallet (PL)
Quantity of Eaches	

Notice we didn't need to enter a “Quantity of Eaches” parameter in the second or third case.

User-Defined Lookup Columns

When source data is not stored exactly as needed by the PIES standard, you can create a “Lookup” column to change it. The concept is similar to Excel’s VLOOKUP feature in that you can define a source column as a key to a lookup table, and substitute another value from that table which matches the key.



The “Source” column in the Value Map (lookup table) is populated from the Lookup Value column of the source table.

There are two ways to fill in the Map To column of the Value Map: (1) Enter text values, or (2) Pull actual PIES codes from the PCdb. The example above shows this second approach. Using this method will probably be the most common choice because it ensures the correct codes are used.

If the PIES Code “Element” is set to “EXPI Data”, the EXPI Code dropdown is populated for selection.

We recommend using a **leading underscore** for user-defined lookup column names to distinguish them from actual data source columns. You then use that name in the other mapping screens just as you would normal source data columns.

Publishing PIES

Once all of the mappings are completed, press the “**Create PIES XML**” button to generate the PIES file. A standard Windows Save Dialog screen will let you create the file (with a default name provided).

PIESEXPRESS

A list of errors (if any) will be presented in a grid for your review:

Code	Segment	Element	Key	Value	Error Message
Missing Conditional Value	Header	Brand Owner Duns			Missing value for conditionally required element Brand Owner Duns
Missing Conditional Value	Header	Brand Owner GLN			Missing value for conditionally required element Brand Owner GLN
Invalid Code	Kits	Component ID Qualifier	A1001	UP	Invalid code UP for Component ID Qualifier.
Invalid Code	Kits	Component ID Qualifier	A1001	UP	Invalid code UP for Component ID Qualifier.
Invalid Code	Kits	Component ID Qualifier	A1001	UP	Invalid code UP for Component ID Qualifier.
Invalid Code	Kits	Component ID Qualifier	A1001	UP	Invalid code UP for Component ID Qualifier.
Invalid Character	Item	PartNumber	C1010 A 10	C1010 A 10	Value contains invalid character " ".
Invalid Code	Hazardous Material	UN/NA ID Code	D1001;EA;1	UN0001	Invalid code UN0001 for UN/NA ID Code.
Invalid Code	Hazardous Material	WHMIS Code	D1001;EA;1	WH01	Invalid code WH01 for WHMIS Code.
Invalid Code	Hazardous Material	Regulations Exemption Code	D1001;EA;1	I	Invalid code I for Regulations Exemption Code.
Invalid Code	Hazardous Material	UN/NA ID Code	D1001;EA;1	UN0001	Invalid code UN0001 for UN/NA ID Code.
Invalid Code	Hazardous Material	WHMIS Code	D1001;EA;1	WH01	Invalid code WH01 for WHMIS Code.

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It is important to note that data validation errors (such as these) do not keep the program from producing PIES output for any reported elements.